

AirSched

0.1.4

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## 1 AirSched Documentation

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- [Users Guide](#)
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- [People](#)

### 1.2 AirSched at SourceForge

- [Project page](#)
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- [Mailing lists](#)
- [Forums](#)
  - [Discuss about Development issues](#)
  - [Ask for Help](#)
  - [Discuss AirSched](#)

### 1.3 AirSched Development

- [Git Repository](#) (Subversion is deprecated)
- [Coding Rules](#)
- [Documentation Rules](#)
- [Test Rules](#)

### 1.4 External Libraries

- [Boost](#) (C++ STL extensions)
- [Python](#)
- [MySQL client](#)
- [SOI](#) (C++ DB API)

### 1.5 Support AirSched

#### 1.6 About AirSched

AirSched is a C++ library of classes and functions modeling airline schedules, for instance allowing to retrieve all the flight-based travel solutions corresponding to a given pair of origin and destination points. AirSched mainly targets simulation purposes. [N](#)

AirSched makes an extensive use of existing open-source libraries for increased functionality, speed and accuracy. In particular [Boost](#) (*C++ STL Extensions*) library is used.

The AirSched project originates from the department of Operational Research and Innovation at [Amadeus](#), Sophia Antipolis, France. AirSched is released under the terms of the [GNU Lesser General Public License](#) (LGPLv2.1) for you to enjoy.

AirSched should work on [GNU/Linux](#), [Sun Solaris](#), Microsoft Windows (with [Cygwin](#), [MinGW/MSYS](#), or [Microsoft Visual C++ .NET](#)) and [Mac OS X](#) operating systems.

#### Note

(N) - The AirSched library is **NOT** intended, in any way, to be used by airlines for production systems. If you want to report issue, bug or feature request, or if you just want to give feedback, have a look on the right-hand side of this page for the preferred reporting methods. In any case, please do not contact Amadeus directly for any matter related to AirSched.

## 2 Configuration helper for AirSched programs

```
*/
#ifndef __AIRSCHED_PATHS_HPP__
#define __AIRSCHED_PATHS_HPP__
```

```

#define PACKAGE "airsched"
#define PACKAGE_NAME "AIRSCHEd"
#define PACKAGE_VERSION "0.1.4"
#define PREFIXDIR "/usr"
#define EXEC_PREFIX "/usr"
#define BINDIR "/usr/bin"
#define LIBDIR "/usr/lib"
#define LIBEXECDIR "/usr/libexec"
#define SBINDIR "/usr/sbin"
#define SYSCONFDIR "/usr/etc"
#define INCLUDEDIR "/usr/include"
#define DATAROOTDIR "/usr/share"
#define DATADIR "/usr/share"
#define DOCDIR "/usr/share/doc/airsched-0.1.4"
#define MANDIR "/usr/share/man"
#define INFODIR "/usr/share/info"
#define HTMLDIR "/usr/share/doc/airsched-0.1.4/html"
#define PDFDIR "/usr/share/doc/airsched-0.1.4/html"
#define STDAIR_SAMPLE_DIR "/usr/share/stdair/samples"

#endif // __AIRSCHEd_PATHS_HPP__

/*

*/
#ifndef __AIRSCHEd_PATHS_HPP__
#define __AIRSCHEd_PATHS_HPP__

#define PACKAGE "@PACKAGE@"
#define PACKAGE_NAME "@PACKAGE_NAME@"
#define PACKAGE_VERSION "@PACKAGE_VERSION@"
#define PREFIXDIR "@prefix@"
#define EXEC_PREFIX "@exec_prefix@"
#define BINDIR "@bindir@"
#define LIBDIR "@libdir@"
#define LIBEXECDIR "@libexecdir@"
#define SBINDIR "@sbindir@"
#define SYSCONFDIR "@sysconfdir@"
#define INCLUDEDIR "@includedir@"
#define DATAROOTDIR "@datarootdir@"
#define DATADIR "@datadir@"
#define DOCDIR "@docdir@"
#define MANDIR "@mandir@"
#define INFODIR "@infodir@"
#define HTMLDIR "@htmldir@"
#define PDFDIR "@pdfdir@"
#define STDAIR_SAMPLE_DIR "@sampledir@"

#endif // __AIRSCHEd_PATHS_HPP__

/*

```

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- **Fedora/RedHat**: Denis Arnaud [denis\\_arnaud@users.sourceforge.net](mailto:denis_arnaud@users.sourceforge.net) (N)
- **Debian**: Emmanuel Bastien [ebastien@users.sourceforge.net](mailto:ebastien@users.sourceforge.net) (N)

#### Note

(N) - **Amadeus** employees.

## 4 Coding Rules

In the following sections we describe the naming conventions which are used for files, classes, structures, local variables, and global variables.

### 4.1 Default Naming Rules for Variables

Variables names follow Java naming conventions. Examples:

- `lNumberOfPassengers`
- `lSeatAvailability`

### 4.2 Default Naming Rules for Functions

Function names follow Java naming conventions. Example:

- `int myFunctionName (const int& a, int b)`

### 4.3 Default Naming Rules for Classes and Structures

Each new word in a class or structure name should always start with a capital letter and the words should be separated with an under-score. Abbreviations are written with capital letters. Examples:

- `MyClassName`
- `MyStructName`

## 4.4 Default Naming Rules for Files

Files are named after the C++ class names.

Source files are named using `.cpp` suffix, whereas header files end with `.hpp` extension. Examples:

- `FlightDate.hpp`
- `SegmentDate.cpp`

## 4.5 Default Functionality of Classes

All classes that are configured by input parameters should include:

- default empty constructor
- one or more additional constructor(s) that takes input parameters and initializes the class instance
- setup function, preferably named `'setup'` or `'set_parameters'`

Explicit destructor functions are not required, unless they are needed. It shall not be possible to use any of the other member functions unless the class has been properly initiated with the input parameters.

# 5 Copyright and License

## 5.1 GNU LESSER GENERAL PUBLIC LICENSE

### 5.1.1 Version 2.1, February 1999

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as the successor of the GNU Library Public License, version 2, hence  
the version number 2.1.]

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#### 5.3.2 END OF TERMS AND CONDITIONS

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To apply these terms, attach the following notices to the library. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

```
<one line to give the library's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

This library is free software; you can redistribute it and/or
modify it under the terms of the GNU Lesser General Public
License as published by the Free Software Foundation; either
version 2.1 of the License, or (at your option) any later version.

This library is distributed in the hope that it will be useful,
but WITHOUT ANY WARRANTY; without even the implied warranty of
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You should have received a copy of the GNU Lesser General Public
License along with this library; if not, write to the Free Software
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```

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the library, if necessary. Here is a sample; alter the names:

```
Yoyodyne, Inc., hereby disclaims all copyright interest in the
library 'Frob' (a library for tweaking knobs) written by James Random Hacker.

<signature of Ty Coon>, 1 April 1990
Ty Coon, President of Vice
```

That's all there is to it!

[Source](#)

## 6 Documentation Rules

### 6.1 General Rules

All classes in AirSched should be properly documented with Doxygen comments in include (.hpp) files. Source (.cpp) files should be documented according to a normal standard for well documented C++ code.

An example of how the interface of a class shall be documented in AirSched is shown here:

```
/*!
 * \brief Brief description of MyClass here
 *
 * Detailed description of MyClass here. With example code if needed.
 */
class MyClass {
public:
    /*! Default constructor
     * MyClass(void) { setup_done = false; }
     */
    /*!
     * \brief Constructor that initializes the class with parameters
     *
     * Detailed description of the constructor here if needed
     */
```

```

*
* \param[in] param1 Description of \a param1 here
* \param[in] param2 Description of \a param2 here
*/
MyClass(TYPE1 param1, TYPE2 param2) { setup(param1, param2); }

/*!
* \brief Setup function for MyClass
*
* Detailed description of the setup function here if needed
*
* \param[in] param1 Description of \a param1 here
* \param[in] param2 Description of \a param2 here
*/
void setup(TYPE1 param1, TYPE2 param2);

/*!
* \brief Brief description of memberFunction1
*
* Detailed description of memberFunction1 here if needed
*
* \param[in]      param1 Description of \a param1 here
* \param[in]      param2 Description of \a param2 here
* \param[in,out]  param3 Description of \a param3 here
* \return         Description of the return value here
*/
TYPE4 memberFunction1(TYPE1 param1, TYPE2 param2, TYPE3 &param3);

private:

    bool _setUpDone;          /*!< Variable that checks if the class is properly
                               initialized with parameters */
    TYPE1 _privateVariable1; /*!< Short description of _privateVariable1 here
    TYPE2 _privateVariable2; /*!< Short description of _privateVariable2 here
};

```

## 6.2 File Header

All files should start with the following header, which include Doxygen's `\file`, `\brief` and `\author` tags, `$Date$` and `$Revisions$` CVS tags, and a common copyright note:

```

/*!
* \file
* \brief Brief description of the file here
* \author Names of the authors who contributed to this code
* \date Date
*
* Detailed description of the file here if needed.
*
* -----
*
* AirSched - C++ Airline Schedule Management Library
*
* Copyright (C) 2009-2010 (\see authors file for a list of contributors)
*
* \see copyright file for license information
*
* -----
*/

```

## 6.3 Grouping Various Parts

All functions must be added to a Doxygen group in order to appear in the documentation. The following code example defines the group `'my_group'`:

```

/*!
* \defgroup my_group Brief description of the group here

```

```

*
* Detailed description of the group here
*/

```

The following example shows how to document the function `myFunction` and how to add it to the group `my_group`:

```

/*!
 * \brief Brief description of myFunction here
 * \ingroup my_group
 *
 * Detailed description of myFunction here
 *
 * \param[in] param1 Description of \a param1 here
 * \param[in] param2 Description of \a param2 here
 * \return Description of the return value here
 */
TYPE3 myFunction(TYPE1 param1, TYPE2 &param2);

```

## 7 Main features

A short list of the main features of AirSched is given below sorted in different categories. Many more features and functions exist and for these we refer to the reference documentation.

### 7.1 Network generation

- Network/graph generation

### 7.2 Finding travel solutions

- Matching of travel solutions with user requests

### 7.3 Other features

- CSV input file parsing
- Memory handling

## 8 Make a Difference

**Do not ask what AirSched can do for you. Ask what you can do for AirSched.**

You can help us to develop the AirSched library. There are always a lot of things you can do:

- Start using AirSched
- Tell your friends about AirSched and help them to get started using it
- If you find a bug, report it to us. Without your help we can never hope to produce a bug free code.
- Help us to improve the documentation by providing information about documentation bugs
- Answer support requests in the AirSched discussion forums on SourceForge. If you know the answer to a question, help others to overcome their AirSched problems.
- Help us to improve our algorithms. If you know of a better way (e.g. that is faster or requires less memory) to implement some of our algorithms, then let us know.



- Help us to port AirSched to new platforms. If you manage to compile AirSched on a new platform, then tell us how you did it.
- Send us your code. If you have a good AirSched compatible code, which you can release under the LGPLv2.1, and you think it should be included in AirSched, then send it to us.
- Become an AirSched developer. Send us an e-mail and tell what you can do for AirSched.

## 9 Make a new release

### 9.1 Introduction

This document describes briefly the recommended procedure of releasing a new version of AirSched using a Linux development machine and the SourceForge project site.

The following steps are required to make a release of the distribution package.

### 9.2 Initialisation

Clone locally the full [Git project](#):

```
cd ~
mkdir -p dev/sim
cd ~/dev/sim
git clone git://air-sched.git.sourceforge.net/gitroot/air-sched/air-sched airschedgit
cd airschedgit
git checkout trunk
```

### 9.3 Release branch maintenance

Switch to the release branch, on your local clone, and merge the latest updates from the trunk. Decide about the new version to be released.

```
cd ~/dev/sim/airschedgit
git checkout releases
git merge trunk
```

Update the version in the various build system files, replacing the old version numbers by the correct ones:

```
vi CMakeLists.txt
vi autogen.sh
vi README
```

Update the version, add some news in the NEWS file, add a change-log in the ChangeLog file and in the RPM specification files:

```
vi NEWS
vi ChangeLog
vi airsched.spec
```

### 9.4 Commit and publish the release branch

Commit the new release:

```
cd ~/dev/sim/airschedgit
git add -A
git commit -m "[Release 0.5.0] Release of the 0.5.0 version of AirSched."
git push
```

## 9.5 Create distribution packages

Create the distribution packages using the following command:

```
cd ~/dev/sim/airschedgit
git checkout releases
rm -rf build && mkdir -p build
cd build
export INSTALL_BASEDIR=/home/user/dev/deliveries
export LIBSUFFIX_4_CMAKE="-DLIB_SUFFIX=64"
cmake -DCMAKE_INSTALL_PREFIX=${INSTALL_BASEDIR}/airsched-0.5.0 \
  -DCMAKE_BUILD_TYPE:String=Debug -DINSTALL_DOC:BOOL=ON \
  ${LIBSUFFIX_4_CMAKE} ..
make check && make dist
make install
```

This will configure, compile and check the package. The output packages will be named, for instance, `airsched-0.5.0.tar.gz` and `airsched-0.5.0.tar.bz2`.

## 9.6 Upload the HTML documentation to SourceForge

In order to update the Web site files, either:

- **synchronise them with rsync and SSH:** Upload the just generated HTML (and PDF) documentation onto the **SourceForge Web site**.

```
cd ~/dev/sim/airschedgit/build
git checkout releases
rsync -aiv ${INSTALL_BASEDIR}/airsched-0.5.0/share/doc/airsched-0.5.0/html/ \
  your_sf_user,air-sched@web.sourceforge.net:htdocs/
```

where `-aiv` options mean:

- `-a`: archive/mirror mode; equals `-rlptgoD` (no `-H`, `-A`, `-X`)
- `-v`: increase verbosity
- `-i`: output a change-summary for all updates
- Note the trailing slashes (/) at the end of both the source and target directories. It means that the content of the source directory (`doc/html`), rather than the directory itself, has to be copied into the content of the target directory.

- or use the **SourceForge Shell service**.

## 9.7 Generate the RPM packages

Optionally, generate the RPM package (for instance, for **Fedora/RedHat**):

```
cd ~/dev/sim/airschedgit/build
git checkout releases
make dist
```

To perform this step, `rpm-build`, `rpmlint` and `rpmdevtools` have to be available on the system.

```
cp ../airsched.spec ~/dev/packages/SPECS \
  && cp airsched-0.5.0.tar.bz2 ~/dev/packages/SOURCES
cd ~/dev/packages/SPECS
rpmbuild -ba airsched.spec
cd ~/dev/packages
rpmlint -i SPECS/airsched.spec SRPMS/airsched-0.5.0-1.fc16.src.rpm \
  RPMS/noarch/airsched-* RPMS/i686/airsched-*
```

## 9.8 Update distributed change log

Update the `NEWS` and `ChangeLog` files with appropriate information, including what has changed since the previous release. Then commit and push the changes into the [AirSched's Git repository](#).

## 9.9 Create the binary package, including the documentation

Create the binary package, which includes HTML and PDF documentation, using the following command:

```
cd ~/dev/sim/airschedgit/build
git checkout releases
make package
```

The output binary package will be named, for instance, `airsched-0.5.0-Linux.tar.bz2`. That package contains both the HTML and PDF documentation. The binary package contains also the executables and shared libraries, as well as C++ header files, but all of those do not interest us for now.

## 9.10 Upload the files to SourceForge

Upload the distribution and documentation packages to the SourceForge server. Check [SourceForge help page on uploading software](#).

## 9.11 Make a new post

- submit a new entry in the [SourceForge project-related news feed](#)
- make a new post on the [SourceForge hosted WordPress blog](#)
- and update, if necessary, [Trac tickets](#).

## 9.12 Send an email on the announcement mailing-list

Finally, you should send an announcement to [airsched-announce@lists.sourceforge.net](mailto:airsched-announce@lists.sourceforge.net) (see <https://lists.sourceforge.net/lists/listinfo/airsched-announce> for the archives)

# 10 Installation

## 10.1 Table of Contents

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## 10.2 Fedora/RedHat Linux distributions

Note that on [Fedora/RedHat](#) Linux distributions, RPM packages are available and can be installed with your usual package manager. For instance:

```
yum -y install airsched-devel airsched-doc
```

RPM packages can also be available on the [SourceForge download site](#).

## 10.3 AirSched Requirements

AirSched should compile without errors or warnings on most GNU/Linux systems, on UNIX systems like Solaris SunOS, and on POSIX based environments for Microsoft Windows like Cygwin or MinGW with MSYS. It can be also built on Microsoft Windows NT/2000/XP/Vista/7 using Microsoft's Visual C++ .NET, but our support for this compiler is limited. For GNU/Linux, SunOS, Cygwin and MinGW we assume that you have at least the following GNU software installed on your computer:

- GNU Autotools:
  - [autoconf](#),
  - [automake](#),
  - [libtool](#),
  - [make](#), version 3.72.1 or later (check version with ``make --version``)
- [GCC](#) - GNU C++ Compiler (g++), version 4.3.x or later (check version with ``gcc --version``)
- [Boost](#) - C++ STL extensions, version 1.35 or later (check version with ``grep "define BOOST_LIB_VERSION" /usr/include/boost/version.hpp``)
- [MySQL](#) - Database client libraries, version 5.0 or later (check version with ``mysql --version``)
- [SOXI](#) - C++ database client library wrapper, version 3.0.0 or later (check version with ``soci-config --version``)

Optionally, you might need a few additional programs: [Doxygen](#), [LaTeX](#), [Dvips](#) and [Ghostscript](#), to generate the HTML and PDF documentation.

We strongly recommend that you use recent stable releases of the GCC, if possible. We do not actively work on supporting older versions of the GCC, and they may therefore (without prior notice) become unsupported in future releases of AirSched.

## 10.4 Basic Installation

Briefly, the shell commands `./cmake .. && make install` should configure, build, and install this package. The following more-detailed instructions are generic; see the `'README'` file for instructions specific to this package. Some packages provide this `'INSTALL'` file but do not implement all of the features documented below. The lack of an optional feature in a given package is not necessarily a bug. More recommendations for GNU packages can be found in the info page corresponding to "Makefile Conventions: (standards)Makefile Conventions".

The `'cmake'` shell script attempts to guess correct values for various system-dependent variables used during compilation. It uses those values to create a `'Makefile'` in each directory of the package. It may also create one or more ``.h'` files containing system-dependent definitions. Finally, it creates a `'CMakeCache.txt'` cache file that

you can refer to in the future to recreate the current configuration, and a file `'CMakeFiles'` containing compiler output (useful mainly for debugging `'cmake'`).

It can also use an optional file (typically called `'config.cache'` and enabled with `'-cache-file=config.cache'` or simply `'-C'`) that saves the results of its tests to speed up reconfiguring. Caching is disabled by default to prevent problems with accidental use of stale cache files.

If you need to do unusual things to compile the package, please try to figure out how `'configure'` could check whether to do them, and mail diffs or instructions to the address given in the `'README'` so they can be considered for the next release. If you are using the cache, and at some point `'config.cache'` contains results you don't want to keep, you may remove or edit it.

The file `<tt>'CMakeLists.txt'</tt>` is used to create the `\c 'Makefile'`

files.

The simplest way to compile this package is:

1. `'cd'` to the directory containing the package's source code and type `'./cmake .'` to configure the package for your system. Running `'cmake'` is generally fast. While running, it prints some messages telling which features it is checking for.
2. Type `'make'` to compile the package.
3. Optionally, type `'make check'` to run any self-tests that come with the package, generally using the just-built uninstalled binaries.
4. Type `'make install'` to install the programs and any data files and documentation. When installing into a prefix owned by root, it is recommended that the package be configured and built as a regular user, and only the `'make install'` phase executed with root privileges.
5. You can remove the program binaries and object files from the source code directory by typing `'make clean'`. To also remove the files that `'configure'` created (so you can compile the package for a different kind of computer), type `'make distclean'`. There is also a `'make maintainer-clean'` target, but that is intended mainly for the package's developers. If you use it, you may have to get all sorts of other programs in order to regenerate files that came with the distribution.
6. Often, you can also type `'make uninstall'` to remove the installed files again. In practice, not all packages have tested that uninstallation works correctly, even though it is required by the GNU Coding Standards.

## 10.5 Compilers and Options

Some systems require unusual options for compilation or linking that the `'cmake'` script does not know about. Run `'./cmake -help'` for details on some of the pertinent environment variables.

You can give `'cmake'` initial values for configuration parameters by setting variables in the command line or in the environment. Here is an example:

```
./cmake CC=c99 CFLAGS=-g LIBS=-lposix
```

### See Also

[Defining Variables](#) for more details.

## 10.6 Compiling For Multiple Architectures

You can compile the package for more than one kind of computer at the same time, by placing the object files for each architecture in their own directory. To do this, you can use GNU 'make'. 'cd' to the directory where you want the object files and executables to go and run the 'configure' script. 'configure' automatically checks for the source code in the directory that 'configure' is in and in '..'. This is known as a "VPATH" build.

With a non-GNU 'make', it is safer to compile the package for one architecture at a time in the source code directory. After you have installed the package for one architecture, use 'make distclean' before reconfiguring for another architecture.

On MacOS X 10.5 and later systems, you can create libraries and executables that work on multiple system types-known as "fat" or "universal" binaries-by specifying multiple '-arch' options to the compiler but only a single '-arch' option to the preprocessor. Like this:

```
./configure CC="gcc -arch i386 -arch x86_64 -arch ppc -arch ppc64" \
           CXX="g++ -arch i386 -arch x86_64 -arch ppc -arch ppc64" \
           CPP="gcc -E" CXXCPP="g++ -E"
```

This is not guaranteed to produce working output in all cases, you may have to build one architecture at a time and combine the results using the 'lipo' tool if you have problems.

## 10.7 Installation Names

By default, 'make install' installs the package's commands under '/usr/local/bin', include files under '/usr/local/include', etc. You can specify an installation prefix other than '/usr/local' by giving 'configure' the option '-prefix=P-PREFIX', where PREFIX must be an absolute file name.

You can specify separate installation prefixes for architecture-specific files and architecture-independent files. If you pass the option '-exec-prefix=P-PREFIX' to 'configure', the package uses PREFIX as the prefix for installing programs and libraries. Documentation and other data files still use the regular prefix.

In addition, if you use an unusual directory layout you can give options like '-bindir=DIR' to specify different values for particular kinds of files. Run 'configure -help' for a list of the directories you can set and what kinds of files go in them. In general, the default for these options is expressed in terms of '\${prefix}', so that specifying just '-prefix' will affect all of the other directory specifications that were not explicitly provided.

The most portable way to affect installation locations is to pass the correct locations to 'configure'; however, many packages provide one or both of the following shortcuts of passing variable assignments to the 'make install' command line to change installation locations without having to reconfigure or recompile.

The first method involves providing an override variable for each affected directory. For example, 'make install prefix=/alternate/directory' will choose an alternate location for all directory configuration variables that were expressed in terms of '\${prefix}'. Any directories that were specified during 'configure', but not in terms of '\${prefix}', must each be overridden at install time for the entire installation to be relocated. The approach of makefile variable overrides for each directory variable is required by

the GNU Coding Standards, and ideally causes no recompilation. However, some platforms have known limitations with the semantics of shared libraries that end up requiring recompilation when using this method, particularly noticeable in packages that use GNU Libtool.

The second method involves providing the 'DESTDIR' variable. For example, 'make install DESTDIR=/alternate/directory' will prepend '/alternate/directory' before all installation names. The approach of 'DESTDIR' overrides is not required by the GNU Coding Standards, and does not work on platforms that have drive letters. On the other hand, it does better at avoiding recompilation issues, and works well even when some directory options were not specified in terms of '\${prefix}' at 'configure' time.

## 10.8 Optional Features

If the package supports it, you can cause programs to be installed with an extra prefix or suffix on their names by giving 'cmake' the option '-program-prefix=PREFIX' or '-program-suffix=SUFFIX'.

Some packages pay attention to '-enable-FEATURE' options to 'configure', where FEATURE indicates an optional part of the package. They may also pay attention to '-with-PACKAGE' options, where PACKAGE is something like 'gnu-as' or 'x' (for the X Window System). The 'README' should mention any '-enable-' and '-with-' options that the package recognizes.

For packages that use the X Window System, 'configure' can usually find the X include and library files automatically, but if it doesn't, you can use the 'configure' options '-x-includes=DIR' and '-x-libraries=DIR' to specify their locations.

Some packages offer the ability to configure how verbose the execution of 'make' will be. For these packages, running './configure -enable-silent-rules' sets the default to minimal output, which can be overridden with 'make V=1'; while running './configure -disable-silent-rules' sets the default to verbose, which can be overridden with 'make V=0'.

## 10.9 Particular systems

On HP-UX, the default C compiler is not ANSI C compatible. If GNU CC is not installed, it is recommended to use the following options in order to use an ANSI C compiler:

```
./configure CC="cc -Ae -D_XOPEN_SOURCE=500"
```

and if that doesn't work, install pre-built binaries of GCC for HP-UX.

On OSF/1 a.k.a. Tru64, some versions of the default C compiler cannot parse its '<wchar.h>' header file. The option '-nodtk' can be used as a workaround. If GNU CC is not installed, it is therefore recommended to try

```
./configure CC="cc"
```

and if that doesn't work, try

```
./configure CC="cc -nodtk"
```

On Solaris, don't put '/usr/ucb' early in your 'PATH'. This directory contains several dysfunctional programs; working variants of these programs are available

in `"/usr/bin"`. So, if you need `"/usr/ucb"` in your `"PATH"`, put it *after* `"/usr/bin"`.

On Haiku, software installed for all users goes in `"/boot/common"`, not `"/usr/local"`. It is recommended to use the following options:

```
./cmake -DCMAKE_INSTALL_PREFIX=/boot/common
```

## 10.10 Specifying the System Type

There may be some features `'configure'` cannot figure out automatically, but needs to determine by the type of machine the package will run on. Usually, assuming the package is built to be run on the *same* architectures, `'configure'` can figure that out, but if it prints a message saying it cannot guess the machine type, give it the `'-build=TYPE'` option. TYPE can either be a short name for the system type, such as `'sun4'`, or a canonical name which has the form CPU-COMPANY-SYSTEM

where SYSTEM can have one of these forms:

- OS
- KERNEL-OS

See the file `'config.sub'` for the possible values of each field. If `'config.sub'` isn't included in this package, then this package doesn't need to know the machine type.

If you are *building* compiler tools for cross-compiling, you should use the option `'-target=TYPE'` to select the type of system they will produce code for.

If you want to use a cross compiler, that generates code for a platform different from the build platform, you should specify the "host" platform (i.e., that on which the generated programs will eventually be run) with `'-host=TYPE'`.

## 10.11 Sharing Defaults

If you want to set default values for `'configure'` scripts to share, you can create a site shell script called `'config.site'` that gives default values for variables like `'CC'`, `'cache_file'`, and `'prefix'`. `'configure'` looks for `'PREFIX/share/config.site'` if it exists, then `'PREFIX/etc/config.site'` if it exists. Or, you can set the `'CONFIG_SITE'` environment variable to the location of the site script. A warning: not all `'configure'` scripts look for a site script.

## 10.12 Defining Variables

Variables not defined in a site shell script can be set in the environment passed to `'configure'`. However, some packages may run configure again during the build, and the customized values of these variables may be lost. In order to avoid this problem, you should set them in the `'configure'` command line, using `'VAR=value'`. For example:

```
./configure CC=/usr/local2/bin/gcc
```

causes the specified `'gcc'` to be used as the C compiler (unless it is overridden in the site shell script).

Unfortunately, this technique does not work for `'CONFIG_SHELL'` due to an Autoconf bug. Until the bug is fixed you can use this workaround:



```
CONFIG_SHELL=/bin/bash /bin/bash ./configure CONFIG_SHELL=/bin/bash
```

## 10.13 'cmake' Invocation

'cmake' recognizes the following options to control how it operates.

- '-help', '-h' print a summary of all of the options to 'cmake', and exit.
- '-help=short', '-help=recursive' print a summary of the options unique to this package's 'configure', and exit. The 'short' variant lists options used only in the top level, while the 'recursive' variant lists options also present in any nested packages.
- '-version', '-V' print the version of Autoconf used to generate the 'configure' script, and exit.
- '-cache-file=FILE' enable the cache: use and save the results of the tests in FILE, traditionally 'config.cache'. FILE defaults to '/dev/null' to disable caching.
- '-config-cache', '-C' alias for '-cache-file=config.cache'.
- '-quiet', '-silent', '-q' do not print messages saying which checks are being made. To suppress all normal output, redirect it to '/dev/null' (any error messages will still be shown).
- '-srcdir=DIR' look for the package's source code in directory DIR. Usually 'configure' can determine that directory automatically.
- '-prefix=DIR' use DIR as the installation prefix.

### See Also

[Installation Names](#) for more details, including other options available for fine-tuning the installation locations.

- '-no-create', '-n' run the configure checks, but stop before creating any output files.

'cmake' also accepts some other, not widely useful, options. Run 'cmake' -help' for more details.

The 'cmake' script produces an output like this:

```
-- Requires Git without specifying any version
cmake -DCMAKE_INSTALL_PREFIX=/home/user/dev/deliveries/airsched-99.99.99 -DLIB_SUFFIX=64 -DCMAKE_BUILD_TYPE:ST
-- The C compiler identification is GNU
-- The CXX compiler identification is GNU
-- Check for working C compiler: /usr/lib64/ccache/gcc
-- Check for working C compiler: /usr/lib64/ccache/gcc -- works
-- Detecting C compiler ABI info
-- Detecting C compiler ABI info - done
-- Check for working CXX compiler: /usr/lib64/ccache/c++
-- Check for working CXX compiler: /usr/lib64/ccache/c++ -- works
-- Detecting CXX compiler ABI info
-- Detecting CXX compiler ABI info - done
-- Requires Git without specifying any version
-- Current Git revision name: 6100bb1479e9c72f807a60067138dfelb71cbec7 trunk
-- Requires Boost-1.41
-- Boost version: 1.46.0
-- Found the following Boost libraries:
--   regex
--   program_options
--   date_time
```

```

-- iostreams
-- serialization
-- filesystem
-- unit_test_framework
-- python
-- Found Boost version: 1.46.0
-- Found BoostWrapper: /usr/include (Required is at least version "1.41")
-- Requires MySQL without specifying any version
-- Using mysql-config: /usr/bin/mysql_config
-- Found MySQL: /usr/lib64/mysql/libmysqlclient.so
-- Found MySQL version: 5.5.14
-- Requires SOCI-3.0
-- Using soci-config: /usr/bin/soci-config
-- SOCI headers are buried
-- Found SOCI: /usr/lib64/libsoci_core.so (Required is at least version "3.0")
-- Found SOCIMySQL: /usr/lib64/libsoci_mysql.so (Required is at least version "3.0")
-- Found SOCI with MySQL back-end support version: 3.0.0
-- Requires StdAir-0.35
-- Found StdAir version: 0.38.0
-- Requires Doxygen without specifying any version
-- Found Doxygen: /usr/bin/doxygen
-- Found DoxygenWrapper: /usr/bin/doxygen
-- Found Doxygen version: 1.7.4
-- Had to set the linker language for 'airschedlib' to CXX
-- Test 'AirlineScheduleTestSuite' to be built with 'AirlineScheduleTestSuite.cpp'
--
-- =====
-- -----
-- ---      Project Information      ---
-- -----
-- PROJECT_NAME ..... : aairsched
-- PACKAGE_PRETTY_NAME ..... : AirSched
-- PACKAGE ..... : aairsched
-- PACKAGE_NAME ..... : AIRSCHED
-- PACKAGE_BRIEF ..... : C++ Simulated Airline Schedule Manager Library
-- PACKAGE_VERSION ..... : 99.99.99
-- GENERIC_LIB_VERSION ..... : 99.99.99
-- GENERIC_LIB_SOVERSION ..... : 99.99
--
-- -----
-- ---      Build Configuration      ---
-- -----
-- Modules to build ..... : aairsched
-- Libraries to build/install ..... : aairschedlib
-- Binaries to build/install ..... : aairsched
-- Modules to test ..... : aairsched
-- Binaries to test ..... : AirlineScheduleTestSuitetst
--
-- * Module ..... : aairsched
--   + Layers to build ..... : .;basic;bom;factory;command;service
--   + Dependencies on other layers :
--   + Libraries to build/install . : aairschedlib
--   + Executables to build/install: aairsched
--   + Tests to perform ..... : AirlineScheduleTestSuitetst
--
-- BUILD_SHARED_LIBS ..... : ON
-- CMAKE_BUILD_TYPE ..... : Debug
-- * CMAKE_C_FLAGS ..... :
-- * CMAKE_CXX_FLAGS ..... : -Wall -Werror
-- * BUILD_FLAGS ..... :
-- * COMPILE_FLAGS ..... :
-- CMAKE_MODULE_PATH ..... : /home/user/dev/sim/airsched/airschedgithub/config/
-- CMAKE_INSTALL_PREFIX ..... : /home/user/dev/deliveries/airsched-99.99.99
--
-- * Doxygen:
--   - DOXYGEN_VERSION ..... : 1.7.4
--   - DOXYGEN_EXECUTABLE ..... : /usr/bin/doxygen
--   - DOXYGEN_DOT_EXECUTABLE ..... : /usr/bin/dot
--   - DOXYGEN_DOT_PATH ..... : /usr/bin
--
-- -----
-- ---      Installation Configuration      ---
-- -----

```

```

-- INSTALL_LIB_DIR ..... : /home/user/dev/deliveries/airsched-99.99.99/lib64
-- INSTALL_BIN_DIR ..... : /home/user/dev/deliveries/airsched-99.99.99/bin
-- INSTALL_INCLUDE_DIR ..... : /home/user/dev/deliveries/airsched-99.99.99/include
-- INSTALL_DATA_DIR ..... : /home/user/dev/deliveries/airsched-99.99.99/share
-- INSTALL_SAMPLE_DIR ..... : /home/user/dev/deliveries/airsched-99.99.99/share/airsched/samples
-- INSTALL_DOC ..... : ON
--
-- -----
-- --- Packaging Configuration ---
-- -----
-- CPACK_PACKAGE_CONTACT ..... : Denis Arnaud <denis_arnaud - at - users dot sourceforge dot net>
-- CPACK_PACKAGE_VENDOR ..... : Denis Arnaud
-- CPACK_PACKAGE_VERSION ..... : 99.99.99
-- CPACK_PACKAGE_DESCRIPTION_FILE . : /home/user/dev/sim/airsched/airschedgithub/README
-- CPACK_RESOURCE_FILE_LICENSE .... : /home/user/dev/sim/airsched/airschedgithub/COPYING
-- CPACK_GENERATOR ..... : TBZ2
-- CPACK_DEBIAN_PACKAGE_DEPENDS ... :
-- CPACK_SOURCE_GENERATOR ..... : TBZ2;TGZ
-- CPACK_SOURCE_PACKAGE_FILE_NAME . : airsched-99.99.99
--
-- -----
-- --- External libraries ---
-- -----
--
-- * Boost:
--   - Boost_VERSION ..... : 104600
--   - Boost_LIB_VERSION ..... : 1_46
--   - Boost_HUMAN_VERSION ..... : 1.46.0
--   - Boost_INCLUDE_DIRS ..... : /usr/include
--   - Boost required components .. : regex;program_options;date_time;iostreams;serialization;filesystem;unit_
--   - Boost required libraries ... : optimized;/usr/lib64/libboost_regex-mt.so;debug;/usr/lib64/libboost_rege
--
-- * MySQL:
--   - MYSQL_VERSION ..... : 5.5.14
--   - MYSQL_INCLUDE_DIR ..... : /usr/include/mysql
--   - MYSQL_LIBRARIES ..... : /usr/lib64/mysql/libmysqlclient.so
--
-- * SOCI:
--   - SOCI_VERSION ..... : 3.0.0
--   - SOCI_INCLUDE_DIR ..... : /usr/include/soci
--   - SOCI_MYSQL_INCLUDE_DIR ..... : /usr/include/soci
--   - SOCI_LIBRARIES ..... : /usr/lib64/libsoci_core.so
--   - SOCI_MYSQL_LIBRARIES ..... : /usr/lib64/libsoci_mysql.so
--
-- * StdAir:
--   - STDAIR_VERSION ..... : 0.38.0
--   - STDAIR_BINARY_DIRS ..... : /home/user/dev/deliveries/stdair-0.38.0/bin
--   - STDAIR_EXECUTABLES ..... : stdair
--   - STDAIR_LIBRARY_DIRS ..... : /home/user/dev/deliveries/stdair-0.38.0/lib64
--   - STDAIR_LIBRARIES ..... : stdairlib;stdairuiclib
--   - STDAIR_INCLUDE_DIRS ..... : /home/user/dev/deliveries/stdair-0.38.0/include
--   - STDAIR_SAMPLE_DIR ..... : /home/user/dev/deliveries/stdair-0.38.0/share/stdair/samples
--
-- Change a value with: cmake -D<Variable>=<Value>
-- =====
--
-- Configuring done
-- Generating done
-- Build files have been written to: /home/user/dev/sim/airsched/airschedgithub/build

```

It is recommended that you check if your library has been compiled and linked properly and works as expected. To do so, you should execute the testing process 'make check'. As a result, you should obtain a similar report:

```

[ 0%] Built target hdr_cfg_airsched
[ 96%] Built target airschedlib
[100%] Built target AirlineScheduleTestSuitetst
Scanning dependencies of target check_airschedtst
Test project /home/dan/dev/sim/airsched/airschedgithub/build/test/airsched
  Start 1: AirlineScheduleTestSuitetst
1/1 Test #1: AirlineScheduleTestSuitetst ..... Passed    0.15 sec

100% tests passed, 0 tests failed out of 1

```

```
Total Test time (real) = 0.40 sec
[100%] Built target check_airschedtst
Scanning dependencies of target check
[100%] Built target check
```

Check if all the executed tests PASSED. If not, please contact us by filling a [bug-report](#).

Finally, you should install the compiled and linked library, include files and (optionally) HTML and PDF documentation by typing:

```
make install
```

Depending on the PREFIX settings during configuration, you might need the root (administrator) access to perform this step.

Eventually, you might invoke the following command

```
make clean
```

to remove all files created during compilation process, or even

```
cd ~/dev/sim/airschedgit
rm -rf build && mkdir build
cd build
```

to remove everything.

## 11 Linking with AirSched

### 11.1 Table of Contents

- [Introduction](#)
- [Dependencies](#)
- [Using the pkg-config command](#)
- [Using the airsched-config script](#)
- [M4 macro for the GNU Autotools](#)
- [Using AirSched with dynamic linking](#)

### 11.2 Introduction

There are two convenient methods of linking your programs with the AirSched library. The first one employs the 'pkg-config' command (see <http://pkgconfig.freedesktop.org/>), whereas the second one uses 'airsched-config' script. These methods are shortly described below.

### 11.3 Dependencies

The AirSched library depends on several other C++ components.

### 11.3.1 StdAir

Among them, as for now, only StdAir has been packaged. The support for StdAir is taken in charge by a dedicated M4 macro file (namely, `'stdair.m4'`), from the configuration script (generated thanks to `'configure.ac'`).

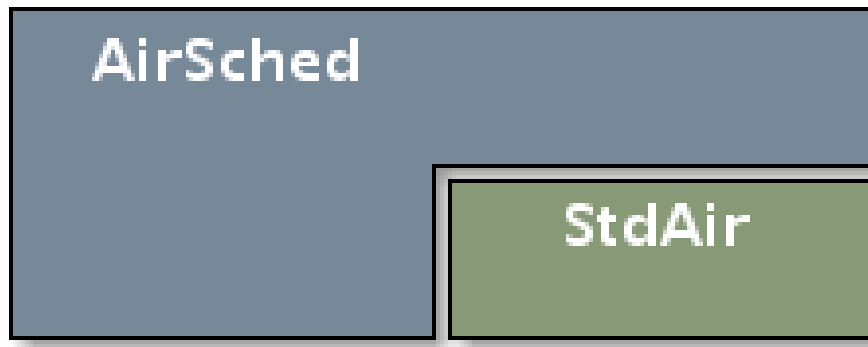


Figure 1: AirSched Dependencies

## 11.4 Using the pkg-config command

`'pkg-config'` is a helper tool used when compiling applications and libraries. It helps you insert the correct compiler and linker options. The syntax of the `'pkg-config'` is as follows:

```
pkg-config <options> <library_name>
```

For instance, assuming that you need to compile an AirSched based program `'my_prog.cpp'`, you should use the following command:

```
g++ 'pkg-config --cflags airsched' -o my_prog my_prog.cpp 'pkg-config --libs
    airsched'
```

For more information see the `'pkg-config'` man pages.

## 11.5 Using the airsched-config script

AirSched provides a shell script called `airsched-config`, which is installed by default in `'$prefix/bin'` (`'/usr/local/bin'`) directory. It can be used to simplify compilation and linking of AirSched based programs. The usage of this script is quite similar to the usage of the `'pkg-config'` command.

Assuming that you need to compile the program `'my_prog.cpp'` you can now do that with the following command:

```
g++ 'airsched-config --cflags' -o my_prog_opt my_prog.cpp 'airsched-config --
    libs'
```

A list of `'airsched-config'` options can be obtained by typing:

```
airsched-config --help
```

If the `'airsched-config'` command is not found by your shell, you should add its location `'$prefix/bin'` to the `PATH` environment variable, e.g.:

```
export PATH=/usr/local/bin:$PATH
```

## 11.6 M4 macro for the GNU Autotools

A M4 macro file is delivered with AirSched, namely `'airsched.m4'`, which can be found in, e.g., `'/usr/share/aclocal'`. When used by a `'configure'` script, thanks to the `'AM_PATH_AirSched'` macro (specified in the M4 macro file), the following Makefile variables are then defined:

- `'AirSched_VERSION'` (e.g., defined to 0.23.0)
- `'AirSched_CFLAGS'` (e.g., defined to `'-I${prefix}/include'`)
- `'AirSched_LIBS'` (e.g., defined to `'-L${prefix}/lib -lairsched'`)

## 11.7 Using AirSched with dynamic linking

When using static linking some of the library routines in AirSched are copied into your executable program. This can lead to unnecessary large executables. To avoid having too large executable files you may use dynamic linking instead. Dynamic linking means that the actual linking is performed when the program is executed. This requires that the system is able to locate the shared AirSched library file during your program execution. If you install the AirSched library using a non-standard prefix, the `'LD_LIBRARY_PATH'` environment variable might be used to inform the linker of the dynamic library location, e.g.:

```
export LD_LIBRARY_PATH=<AirSched installation prefix>/lib:$LD_LIBRARY_PATH
```

# 12 Test Rules

This section describes rules how the functionality of the IT++ library should be verified. In the `'tests'` subdirectory test files are provided. All functionality should be tested using these test files.

## 12.1 The Test File

Each new IT++ module/class should be accompanied with a test file. The test file is an implementation in C++ that tests the functionality of a function/class or a group of functions/classes called modules. The test file should test relevant parameter settings and input/output relations to guarantee correct functionality of the corresponding classes/functions. The test files should be maintained using version control and updated whenever new functionality is added to the IT++ library.

The test file should print relevant data to a standard output that can be used to verify the functionality. All relevant parameter settings should be tested.

The test file should be placed in the `'tests'` subdirectory and should have a name ending with `'_test.cpp'`.

## 12.2 The Reference File

Consider a test file named `'module_test.cpp'`. A reference file named `'module_test.ref'` should accompany the test file. The reference file contains a reference printout of the standard output generated when running the test program. The reference file should be maintained using version control and updated according to the test file.

## 12.3 Testing IT++ Library

One can compile and execute all test programs from `'tests'` subdirectory by typing

```
% make check
```

after successful compilation of the IT++ library.

## 13 Users Guide

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  - [Airline Network BOM Tree](#)
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### 13.2 Introduction

The `AirSched` library contains classes for airline business management. This document does not cover all the aspects of the `AirSched` library. It does however explain the most important things you need to know in order to start using `AirSched`.

### 13.3 Get Started

#### 13.3.1 Get the AirSched library

Clone locally the full `Git` project:

```
cd ~
mkdir -p dev/sim
cd ~/dev/sim
git clone git://air-sched.git.sourceforge.net/gitroot/air-sched/air-sched airschedgit
cd airschedgit
git checkout trunk
```

### 13.3.2 Build the AirSched project

Link with StdAir, create the distribution package (say, 0.5.0) and compile using the following commands:

```
cd ~/dev/sim/airschedgit
rm -rf build && mkdir -p build
cd build
cmake -DCMAKE_INSTALL_PREFIX=~/.dev/deliveries/airsched-0.5.0 \
  -DWITH_STDAIR_PREFIX=~/.dev/deliveries/stdair-stable \
  -DCMAKE_BUILD_TYPE:String=Debug -DINSTALL_DOC:BOOL=ON ..
make
```

### 13.3.3 Build and Run the Tests

After building the AirSched project, the following commands run the tests:

```
cd ~/dev/sim/airschedgit
cd build
make check
```

As a result, you should obtain a similar report:

```
[ 0%] Built target hdr_cfg_airsched
[ 96%] Built target airschedlib
[100%] Built target AirlineScheduleTestSuitetst
Scanning dependencies of target check_airschedtst
Test project /home/dan/dev/sim/airsched/airschedgithub/build/test/airsched
  Start 1: AirlineScheduleTestSuitetst
1/1 Test #1: AirlineScheduleTestSuitetst ..... Passed    0.15 sec

100% tests passed, 0 tests failed out of 1

Total Test time (real) = 0.40 sec
[100%] Built target check_airschedtst
Scanning dependencies of target check
[100%] Built target check
```

### 13.3.4 Install the AirSched Project (Binaries, Documentation)

After the step [Build the AirSched project](#), to install the library and its header files, type:

```
cd ~/dev/sim/airschedgit
cd build
make install
```

You can check that the executables and other required files have been copied into the given final directory:

```
cd ~/.dev/deliveries/airsched-0.5.0
```

To generate the AirSched project documentation, the commands are:

```
cd ~/dev/sim/airschedgit
cd build
make doc
```

The AirSched project documentation is available in the following formats: HTML, LaTeX. Those documents are available in a subdirectory:

```
cd ~/dev/sim/airschedgit
cd build
cd doc
```



## 13.4 Input file of AirSched Project

The schedule input file structure should look like the following sample:

```
// Flights:   AirlineCode; FlightNumber; Date-Range; ; DOW; Legs; Segments;
// Legs:      BoardPoint; OffPoint; BoardTime; ArrivalDateOffSet; ArrivalTime;
//            ElapsedTime; LegCabins;
// LegCabins: CabinCode; Capacity;
// Segments: Specific;
BA; 9; 2007-04-20; 2007-06-30; 0000011; LHR; BKK; 22:00; 15:15 / +1; 11:15; F;
    5; J; 12; W; 20; Y; 300; BKK; SYD; 18:10 / +1; 06:05 / +2; 08:55; F; 5; J; 12; W
    ; 20; Y; 300; 0; F; FA; 1; FA; J; JCIDI; 1; JCIDI; W; WT; 1; WT; Y; YBHKMLSQ; 1;
    YBHKMLSQ;
BA; 9; 2007-04-20; 2007-06-30; 1111100; LHR; BKK; 22:00; 15:15 / +1; 11:15; F;
    5; J; 12; W; 20; Y; 300; BKK; SYD; 18:10 / +1; 06:05 / +2; 08:55; F; 5; J; 12; W
    ; 20; Y; 300; 1; LHR; BKK; F; FA; J; JCIDI; W; WT; Y; YBHKMLSQ; BKK; SYD; F; FA;
    J; JCIDI; W; WT; Y; YBHKMLSQ; LHR; SYD; F; FA; 1; FA; J; JCIDI; 1; JCIDI; W; WT; 1;
    WT; Y; YBHKMLSQ; 1; YBHKMLSQ;
BA; 117; 2007-04-20; 2007-06-30; 1111111; LHR; JFK; 08:20; 11:00; 07:40; F; 5;
    J; 12; W; 20; Y; 300; 0; F; FA; 1; FA; J; JCIDI; 1; JCIDI; W; WT; 1; WT; Y; YBHKM;
    1; YBHKM;
BA; 175; 2007-04-20; 2007-06-30; 1111111; LHR; JFK; 10:55; 13:35; 07:40; F; 5;
    J; 12; W; 20; Y; 300; 0; F; FA; 1; FA; J; JCIDI; 1; JCIDI; W; WT; 1; WT; Y;
    YBHKMRL; 1; YBHKMRL;
BA; 179; 2007-04-20; 2007-06-30; 1111111; LHR; JFK; 18:05; 20:45; 07:40; F; 5;
    J; 12; W; 20; Y; 300; 0; F; FA; 1; FA; J; JCIDI; 1; JCIDI; W; WT; 1; WT; Y;
    YBHKMRVNELSQO; 1; YBHKMRVNELSQO;
BA; 207; 2007-04-20; 2007-06-30; 1111111; LHR; MIA; 09:40; 14:25; 09:45; F; 5;
    J; 12; W; 20; Y; 300; 0; F; FA; 1; FA; J; JCIDI; 1; JCIDI; W; WT; 1; WT; Y;
    YBHKMRVNELSQO; 1; YBHKMRVNELSQO;
BA; 279; 2007-04-20; 2007-06-30; 1111111; LHR; LAX; 10:05; 13:10; 11:05; F; 5;
    J; 12; W; 20; Y; 300; 0; F; FA; 1; FA; J; JCIDI; 1; JCIDI; W; WT; 1; WT; Y;
    YBHKMRVNELSQO; 1; YBHKMRVNELSQO;
```

Each line, beyond the header, represents a schedule entry, i.e., the specification of a given flight-period (see [AIR-SCHED::FlightPeriodStruct](#)). The fields are as follows:

- Flights section
  - AirlineCode (e.g., BA)
  - FlightNumber (e.g., 9)
  - Start of the flight departure period (e.g., 2007-04-20)
  - End of the flight departure period (e.g., 2007-06-30)
  - Day-Of-the-Week for the flight departure period (DOW) (e.g., 0000011)
  - Leg section
  - Segment section
- Leg section
  - BoardPoint (e.g., LHR)
  - OffPoint (e.g., BKK)
  - BoardTime (e.g., 22:00)
  - ArrivalTime (e.g., 15:15)
  - ArrivalDateOffSet (e.g., +1)
  - ElapsedTime (e.g., 11:15)
  - Leg-cabin section
- Leg-cabin section
  - Cabin code (e.g., F, J, W or Y)
  - Capacity (e.g., respectively 5, 12, 20 or 300)
- Segment section
  - Specificity flag:

- \* 0 means that all the segments behave the same way, i.e., have got the same dressing (distribution and order of the booking classes per cabin)
- \* 1 means that each segment behave differently. The full specification of each of those segments must therefore be given.
- Segment-cabin section
- Fare family section
- Segment-cabin section
  - Cabin code (e.g., F, J, W or Y)
  - List of (one-letter-code) booking classes for the cabin (e.g, respectively FA, JC DI, WT or YBHKMLSQ)
- Fare family section
  - Fare family code (e.g., 1)
  - List of (one-letter-code) booking classes for the fare family (e.g, respectively FA, JC DI, WT or YBHKMLSQ)

Some fare input examples (including the example above named `schedule03.csv`) are given in the `StdAir` project.

## 13.5 The schedule BOM Tree

The schedule-related Business Object Model (BOM) tree is a structure allowing to store all the `AIRSCHEDED::FlightPeriodStruct` objects of the simulation. That is why parsing an input file, containing the specification for all the flight-periods, is more convenient (

### See Also

the previous section [Input file of AirSched Project](#)).

As it may be time consuming, and it for sure requires some know-how, to first build such a schedule input file, a small sample BOM tree is provided by default when needed.

### 13.5.1 Build of the schedule BOM tree

First, a BOM root object (i.e., a root for all the classes in the project) is instantiated by the `stdair::STDAIR_ServiceContext` context object, when the `stdair::STDAIR_Service` is itself instantiated (during the instantiation of the `AIRSCHEDED::AIRSCHEDED_Service` object).

The corresponding type (class) `stdair::BomRoot` is defined in the `StdAir` library.

Then, the BOM root can be either constructed thanks to the `AIRSCHEDED::AIRSCHEDED_Service::buildSampleBom()` method:

```
void buildSampleBom();
```

or can be constructed using the schedule input file described above thanks to the `AIRSCHEDED::AIRSCHEDED_Service::parseAndLoad` (`const stdair::Filename_T&`) method:

```
void parseAndLoad (const stdair::Filename_T& iScheduleInputFilename);
```

## 13.5.2 Display of the schedule BOM tree

## Note

That feature (of BOM tree display) has not been implemented yet. Do not hesitate to [open a ticket](#) if you would like to have it implemented more quickly.

The schedule BOM tree can be displayed as done in the `batches::airsched.cpp` program:

When the default BOM tree is used (`-b/-builtin` option of the main program `airsched.cpp`), the schedule BOM tree display (for now, corresponding to `schedule01.csv` parsed by `AIRINV::parseInventory`) should look like:

```
=====
BomRoot:  -- ROOT --
=====
+++++
Inventory: SQ
+++++
*****
FlightDate: SQ11, 2010-Jan-15
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
      Elapsed, Distance, Capacity,
SQ11 2010-Jan-15, SIN-BKK, 2010-Jan-15, 08:20:00, 2010-Jan-15, 11:00:00, 07:40:
      00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
      CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 2010-Jan-15, SIN-BKK 2010-Jan-15, Y, 300, 300, 0, 0, 0, 0, 0, 0, 0, 2, 298
      , 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ11 2010-Jan-15, SIN-BKK 2010-Jan-15, Y, 1, 0, 0, 0, 2, 298, 0,
SQ11 2010-Jan-15, SIN-BKK 2010-Jan-15, Y, 2, 0, 0, 0, 2, 298, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
      GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ11 2010-Jan-15, SIN-BKK 2010-Jan-15, Y, 1, Y, 300 (0), 0, 0, 0, 2, 0 (0), 0,
      0, 0, 0, 0, 0,
SQ11 2010-Jan-15, SIN-BKK 2010-Jan-15, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
      0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ11, 2010-Jan-16
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
      Elapsed, Distance, Capacity,
SQ11 2010-Jan-16, SIN-BKK, 2010-Jan-16, 08:20:00, 2010-Jan-16, 11:00:00, 07:40:
      00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
      CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 2010-Jan-16, SIN-BKK 2010-Jan-16, Y, 300, 300, 0, 0, 0, 0, 0, 0, 0, 0, 300
      , 9, 1.83244e-319, 0, 0, 0, 0,
```

```
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ11 2010-Jan-16, SIN-BKK 2010-Jan-16, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 2010-Jan-16, SIN-BKK 2010-Jan-16, Y, 2, 0, 0, 0, 0, 300, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ11 2010-Jan-16, SIN-BKK 2010-Jan-16, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQ11 2010-Jan-16, SIN-BKK 2010-Jan-16, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ11, 2010-Jan-17
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQ11 2010-Jan-17, SIN-BKK, 2010-Jan-17, 08:20:00, 2010-Jan-17, 11:00:00, 07:40:
00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 2010-Jan-17, SIN-BKK 2010-Jan-17, Y, 300, 300, 0, 0, 0, 0, 0, 0, 0, 0, 300
, 9, 1.58896e-319, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ11 2010-Jan-17, SIN-BKK 2010-Jan-17, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 2010-Jan-17, SIN-BKK 2010-Jan-17, Y, 2, 0, 0, 0, 0, 300, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ11 2010-Jan-17, SIN-BKK 2010-Jan-17, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQ11 2010-Jan-17, SIN-BKK 2010-Jan-17, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ11, 2010-Jan-18
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQ11 2010-Jan-18, SIN-BKK, 2010-Jan-18, 08:20:00, 2010-Jan-18, 11:00:00, 07:40:
00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 2010-Jan-18, SIN-BKK 2010-Jan-18, Y, 300, 300, 0, 0, 0, 0, 0, 0, 0, 0, 300
, 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
```

```

*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ11 2010-Jan-18, SIN-BKK 2010-Jan-18, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 2010-Jan-18, SIN-BKK 2010-Jan-18, Y, 2, 0, 0, 0, 0, 300, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
  GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ11 2010-Jan-18, SIN-BKK 2010-Jan-18, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
  0, 0, 0, 0, 0,
SQ11 2010-Jan-18, SIN-BKK 2010-Jan-18, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
  0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ11, 2010-Jan-19
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
  Elapsed, Distance, Capacity,
SQ11 2010-Jan-19, SIN-BKK, 2010-Jan-19, 08:20:00, 2010-Jan-19, 11:00:00, 07:40:
  00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
  CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 2010-Jan-19, SIN-BKK 2010-Jan-19, Y, 300, 300, 0, 0, 0, 0, 0, 0, 0, 0, 300
  , 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ11 2010-Jan-19, SIN-BKK 2010-Jan-19, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 2010-Jan-19, SIN-BKK 2010-Jan-19, Y, 2, 0, 0, 0, 0, 300, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
  GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ11 2010-Jan-19, SIN-BKK 2010-Jan-19, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
  0, 0, 0, 0, 0,
SQ11 2010-Jan-19, SIN-BKK 2010-Jan-19, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
  0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ11, 2010-Jan-20
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
  Elapsed, Distance, Capacity,
SQ11 2010-Jan-20, SIN-BKK, 2010-Jan-20, 08:20:00, 2010-Jan-20, 11:00:00, 07:40:
  00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
  CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 2010-Jan-20, SIN-BKK 2010-Jan-20, Y, 300, 300, 0, 0, 0, 0, 0, 0, 0, 0, 300
  , 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,

```

```
SQ11 2010-Jan-20, SIN-BKK 2010-Jan-20, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 2010-Jan-20, SIN-BKK 2010-Jan-20, Y, 2, 0, 0, 0, 0, 300, 0,
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
      GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ11 2010-Jan-20, SIN-BKK 2010-Jan-20, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
      0, 0, 0, 0, 0,
SQ11 2010-Jan-20, SIN-BKK 2010-Jan-20, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
      0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ11, 2010-Jan-21
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
      Elapsed, Distance, Capacity,
SQ11 2010-Jan-21, SIN-BKK, 2010-Jan-21, 08:20:00, 2010-Jan-21, 11:00:00, 07:40:
      00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
      CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 2010-Jan-21, SIN-BKK 2010-Jan-21, Y, 300, 300, 0, 0, 0, 0, 0, 0, 0, 300
      , 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ11 2010-Jan-21, SIN-BKK 2010-Jan-21, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 2010-Jan-21, SIN-BKK 2010-Jan-21, Y, 2, 0, 0, 0, 0, 300, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
      GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ11 2010-Jan-21, SIN-BKK 2010-Jan-21, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
      0, 0, 0, 0, 0,
SQ11 2010-Jan-21, SIN-BKK 2010-Jan-21, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
      0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ11, 2010-Jan-22
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
      Elapsed, Distance, Capacity,
SQ11 2010-Jan-22, SIN-BKK, 2010-Jan-22, 08:20:00, 2010-Jan-22, 11:00:00, 07:40:
      00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
      CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 2010-Jan-22, SIN-BKK 2010-Jan-22, Y, 300, 300, 0, 0, 0, 0, 0, 0, 0, 300
      , 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ11 2010-Jan-22, SIN-BKK 2010-Jan-22, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 2010-Jan-22, SIN-BKK 2010-Jan-22, Y, 2, 0, 0, 0, 0, 300, 0,
*****
*****
Subclasses:
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-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
    GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ11 2010-Jan-22, SIN-BKK 2010-Jan-22, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
    0, 0, 0, 0, 0,
SQ11 2010-Jan-22, SIN-BKK 2010-Jan-22, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
    0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ11, 2010-Jan-23
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
    Elapsed, Distance, Capacity,
SQ11 2010-Jan-23, SIN-BKK, 2010-Jan-23, 08:20:00, 2010-Jan-23, 11:00:00, 07:40:
    00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
    CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 2010-Jan-23, SIN-BKK 2010-Jan-23, Y, 300, 300, 0, 0, 0, 0, 0, 0, 6.64029e-
    319, 0, 300, 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ11 2010-Jan-23, SIN-BKK 2010-Jan-23, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 2010-Jan-23, SIN-BKK 2010-Jan-23, Y, 2, 0, 0, 0, 0, 300, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
    GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ11 2010-Jan-23, SIN-BKK 2010-Jan-23, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
    0, 0, 0, 0, 0,
SQ11 2010-Jan-23, SIN-BKK 2010-Jan-23, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
    0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ11, 2010-Jan-24
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
    Elapsed, Distance, Capacity,
SQ11 2010-Jan-24, SIN-BKK, 2010-Jan-24, 08:20:00, 2010-Jan-24, 11:00:00, 07:40:
    00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
    CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 2010-Jan-24, SIN-BKK 2010-Jan-24, Y, 300, 300, 0, 0, 0, 0, 0, 0, 300
    , 9, 0, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ11 2010-Jan-24, SIN-BKK 2010-Jan-24, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 2010-Jan-24, SIN-BKK 2010-Jan-24, Y, 2, 0, 0, 0, 0, 300, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
    GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ11 2010-Jan-24, SIN-BKK 2010-Jan-24, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
    0, 0, 0, 0, 0,

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SQL11 2010-Jan-24, SIN-BKK 2010-Jan-24, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
*****
*****
FlightDate: SQL11, 2010-Jan-25
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQL11 2010-Jan-25, SIN-BKK, 2010-Jan-25, 08:20:00, 2010-Jan-25, 11:00:00, 07:40:
00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhycAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQL11 2010-Jan-25, SIN-BKK 2010-Jan-25, Y, 300, 300, 0, 0, 0, 0, 0, 0, 0, 0, 300
, 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQL11 2010-Jan-25, SIN-BKK 2010-Jan-25, Y, 1, 0, 0, 0, 0, 300, 0,
SQL11 2010-Jan-25, SIN-BKK 2010-Jan-25, Y, 2, 0, 0, 0, 0, 300, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQL11 2010-Jan-25, SIN-BKK 2010-Jan-25, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQL11 2010-Jan-25, SIN-BKK 2010-Jan-25, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
*****
*****
FlightDate: SQL11, 2010-Jan-26
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQL11 2010-Jan-26, SIN-BKK, 2010-Jan-26, 08:20:00, 2010-Jan-26, 11:00:00, 07:40:
00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhycAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQL11 2010-Jan-26, SIN-BKK 2010-Jan-26, Y, 300, 300, 0, 0, 0, 0, 0, 0, 0, 0, 300
, 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQL11 2010-Jan-26, SIN-BKK 2010-Jan-26, Y, 1, 0, 0, 0, 0, 300, 0,
SQL11 2010-Jan-26, SIN-BKK 2010-Jan-26, Y, 2, 0, 0, 0, 0, 300, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQL11 2010-Jan-26, SIN-BKK 2010-Jan-26, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQL11 2010-Jan-26, SIN-BKK 2010-Jan-26, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
*****
*****
FlightDate: SQL11, 2010-Jan-27
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*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQ11 2010-Jan-27, SIN-BKK, 2010-Jan-27, 08:20:00, 2010-Jan-27, 11:00:00, 07:40:
00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhycAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 2010-Jan-27, SIN-BKK 2010-Jan-27, Y, 300, 300, 0, 0, 0, 0, 0, 0, 0, 300
, 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ11 2010-Jan-27, SIN-BKK 2010-Jan-27, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 2010-Jan-27, SIN-BKK 2010-Jan-27, Y, 2, 0, 0, 0, 0, 300, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ11 2010-Jan-27, SIN-BKK 2010-Jan-27, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQ11 2010-Jan-27, SIN-BKK 2010-Jan-27, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ11, 2010-Jan-28
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQ11 2010-Jan-28, SIN-BKK, 2010-Jan-28, 08:20:00, 2010-Jan-28, 11:00:00, 07:40:
00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhycAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 2010-Jan-28, SIN-BKK 2010-Jan-28, Y, 300, 300, 0, 0, 0, 0, 0, 0, 0, 300
, 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ11 2010-Jan-28, SIN-BKK 2010-Jan-28, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 2010-Jan-28, SIN-BKK 2010-Jan-28, Y, 2, 0, 0, 0, 0, 300, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ11 2010-Jan-28, SIN-BKK 2010-Jan-28, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQ11 2010-Jan-28, SIN-BKK 2010-Jan-28, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ11, 2010-Jan-29
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
```

```
      Elapsed, Distance, Capacity,
SQ11 2010-Jan-29, SIN-BKK, 2010-Jan-29, 08:20:00, 2010-Jan-29, 11:00:00, 07:40:
      00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 2010-Jan-29, SIN-BKK 2010-Jan-29, Y, 300, 300, 0, 0, 0, 0, 0, 0, 0, 0, 300
      , 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ11 2010-Jan-29, SIN-BKK 2010-Jan-29, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 2010-Jan-29, SIN-BKK 2010-Jan-29, Y, 2, 0, 0, 0, 0, 300, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
      GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ11 2010-Jan-29, SIN-BKK 2010-Jan-29, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
      0, 0, 0, 0, 0,
SQ11 2010-Jan-29, SIN-BKK 2010-Jan-29, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
      0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ11, 2010-Jan-30
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
      Elapsed, Distance, Capacity,
SQ11 2010-Jan-30, SIN-BKK, 2010-Jan-30, 08:20:00, 2010-Jan-30, 11:00:00, 07:40:
      00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 2010-Jan-30, SIN-BKK 2010-Jan-30, Y, 300, 300, 0, 0, 0, 0, 0, 0, 300
      , 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ11 2010-Jan-30, SIN-BKK 2010-Jan-30, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 2010-Jan-30, SIN-BKK 2010-Jan-30, Y, 2, 0, 0, 0, 0, 300, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
      GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ11 2010-Jan-30, SIN-BKK 2010-Jan-30, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
      0, 0, 0, 0, 0,
SQ11 2010-Jan-30, SIN-BKK 2010-Jan-30, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
      0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ11, 2010-Jan-31
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
      Elapsed, Distance, Capacity,
SQ11 2010-Jan-31, SIN-BKK, 2010-Jan-31, 08:20:00, 2010-Jan-31, 11:00:00, 07:40:
      00, 0, -05:00:00, 6300, 0,
*****
*****
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LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhycAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 2010-Jan-31, SIN-BKK 2010-Jan-31, Y, 300, 300, 0, 0, 0, 0, 0, 0, 0, 0, 300
, 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ11 2010-Jan-31, SIN-BKK 2010-Jan-31, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 2010-Jan-31, SIN-BKK 2010-Jan-31, Y, 2, 0, 0, 0, 0, 300, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ11 2010-Jan-31, SIN-BKK 2010-Jan-31, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQ11 2010-Jan-31, SIN-BKK 2010-Jan-31, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ11, 2010-Feb-01
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQ11 2010-Feb-01, SIN-BKK, 2010-Feb-01, 08:20:00, 2010-Feb-01, 11:00:00, 07:40:
00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhycAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 2010-Feb-01, SIN-BKK 2010-Feb-01, Y, 300, 300, 0, 0, 0, 0, 0, 0, 0, 0, 300
, 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ11 2010-Feb-01, SIN-BKK 2010-Feb-01, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 2010-Feb-01, SIN-BKK 2010-Feb-01, Y, 2, 0, 0, 0, 0, 300, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ11 2010-Feb-01, SIN-BKK 2010-Feb-01, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQ11 2010-Feb-01, SIN-BKK 2010-Feb-01, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ11, 2010-Feb-02
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQ11 2010-Feb-02, SIN-BKK, 2010-Feb-02, 08:20:00, 2010-Feb-02, 11:00:00, 07:40:
00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhycAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 2010-Feb-02, SIN-BKK 2010-Feb-02, Y, 300, 300, 0, 0, 0, 0, 0, 0, 0, 0, 300

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, 9, 0, 0, 0, 0, 0,
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ11 2010-Feb-02, SIN-BKK 2010-Feb-02, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 2010-Feb-02, SIN-BKK 2010-Feb-02, Y, 2, 0, 0, 0, 0, 300, 0,
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
  GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ11 2010-Feb-02, SIN-BKK 2010-Feb-02, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
  0, 0, 0, 0, 0,
SQ11 2010-Feb-02, SIN-BKK 2010-Feb-02, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
  0, 0, 0, 0, 0,
*****
FlightDate: SQ11, 2010-Feb-03
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
  Elapsed, Distance, Capacity,
SQ11 2010-Feb-03, SIN-BKK, 2010-Feb-03, 08:20:00, 2010-Feb-03, 11:00:00, 07:40:
  00, 0, -05:00:00, 6300, 0,
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
  CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 2010-Feb-03, SIN-BKK 2010-Feb-03, Y, 300, 300, 0, 0, 0, 0, 0, 0, 0, 0, 300
  , 9, 0, 0, 0, 0, 0,
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ11 2010-Feb-03, SIN-BKK 2010-Feb-03, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 2010-Feb-03, SIN-BKK 2010-Feb-03, Y, 2, 0, 0, 0, 0, 300, 0,
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
  GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ11 2010-Feb-03, SIN-BKK 2010-Feb-03, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
  0, 0, 0, 0, 0,
SQ11 2010-Feb-03, SIN-BKK 2010-Feb-03, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
  0, 0, 0, 0, 0,
*****
FlightDate: SQ11, 2010-Feb-04
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
  Elapsed, Distance, Capacity,
SQ11 2010-Feb-04, SIN-BKK, 2010-Feb-04, 08:20:00, 2010-Feb-04, 11:00:00, 07:40:
  00, 0, -05:00:00, 6300, 0,
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
  CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 2010-Feb-04, SIN-BKK 2010-Feb-04, Y, 300, 300, 0, 0, 0, 0, 0, 0, 0, 0, 300
  , 9, 0, 0, 0, 0, 0,
*****
Buckets:
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Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ11 2010-Feb-04, SIN-BKK 2010-Feb-04, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 2010-Feb-04, SIN-BKK 2010-Feb-04, Y, 2, 0, 0, 0, 0, 300, 0,
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
      GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ11 2010-Feb-04, SIN-BKK 2010-Feb-04, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
      0, 0, 0, 0, 0,
SQ11 2010-Feb-04, SIN-BKK 2010-Feb-04, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
      0, 0, 0, 0, 0,
*****
FlightDate: SQ11, 2010-Feb-05
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
      Elapsed, Distance, Capacity,
SQ11 2010-Feb-05, SIN-BKK, 2010-Feb-05, 08:20:00, 2010-Feb-05, 11:00:00, 07:40:
      00, 0, -05:00:00, 6300, 0,
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhycAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
      CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 2010-Feb-05, SIN-BKK 2010-Feb-05, Y, 300, 300, 0, 0, 0, 0, 0, 0, 0, 300
      , 9, 0, 0, 0, 0, 0,
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ11 2010-Feb-05, SIN-BKK 2010-Feb-05, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 2010-Feb-05, SIN-BKK 2010-Feb-05, Y, 2, 0, 0, 0, 0, 300, 0,
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
      GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ11 2010-Feb-05, SIN-BKK 2010-Feb-05, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
      0, 0, 0, 0, 0,
SQ11 2010-Feb-05, SIN-BKK 2010-Feb-05, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
      0, 0, 0, 0, 0,
*****
FlightDate: SQ11, 2010-Feb-06
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
      Elapsed, Distance, Capacity,
SQ11 2010-Feb-06, SIN-BKK, 2010-Feb-06, 08:20:00, 2010-Feb-06, 11:00:00, 07:40:
      00, 0, -05:00:00, 6300, 0,
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhycAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
      CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 2010-Feb-06, SIN-BKK 2010-Feb-06, Y, 300, 300, 0, 0, 0, 0, 0, 0, 0, 300
      , 9, 0, 0, 0, 0, 0,
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
SegmentCabins:
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Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ11 2010-Feb-06, SIN-BKK 2010-Feb-06, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 2010-Feb-06, SIN-BKK 2010-Feb-06, Y, 2, 0, 0, 0, 0, 300, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
    GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ11 2010-Feb-06, SIN-BKK 2010-Feb-06, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
    0, 0, 0, 0, 0,
SQ11 2010-Feb-06, SIN-BKK 2010-Feb-06, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
    0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ11, 2010-Feb-07
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
    Elapsed, Distance, Capacity,
SQ11 2010-Feb-07, SIN-BKK, 2010-Feb-07, 08:20:00, 2010-Feb-07, 11:00:00, 07:40:
    00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
    CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 2010-Feb-07, SIN-BKK 2010-Feb-07, Y, 300, 300, 0, 0, 0, 0, 0, 0, 0, 0, 300
    , 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ11 2010-Feb-07, SIN-BKK 2010-Feb-07, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 2010-Feb-07, SIN-BKK 2010-Feb-07, Y, 2, 0, 0, 0, 0, 300, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
    GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ11 2010-Feb-07, SIN-BKK 2010-Feb-07, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
    0, 0, 0, 0, 0,
SQ11 2010-Feb-07, SIN-BKK 2010-Feb-07, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
    0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ11, 2010-Feb-08
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
    Elapsed, Distance, Capacity,
SQ11 2010-Feb-08, SIN-BKK, 2010-Feb-08, 08:20:00, 2010-Feb-08, 11:00:00, 07:40:
    00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
    CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 2010-Feb-08, SIN-BKK 2010-Feb-08, Y, 300, 300, 0, 0, 0, 0, 0, 0, 0, 0, 300
    , 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ11 2010-Feb-08, SIN-BKK 2010-Feb-08, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 2010-Feb-08, SIN-BKK 2010-Feb-08, Y, 2, 0, 0, 0, 0, 300, 0,
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Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
  GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ11 2010-Feb-08, SIN-BKK 2010-Feb-08, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
  0, 0, 0, 0, 0,
SQ11 2010-Feb-08, SIN-BKK 2010-Feb-08, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
  0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ11, 2010-Feb-09
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
  Elapsed, Distance, Capacity,
SQ11 2010-Feb-09, SIN-BKK, 2010-Feb-09, 08:20:00, 2010-Feb-09, 11:00:00, 07:40:
  00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhycAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
  CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 2010-Feb-09, SIN-BKK 2010-Feb-09, Y, 300, 300, 0, 0, 0, 0, 0, 0, 0, 0, 300
  , 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ11 2010-Feb-09, SIN-BKK 2010-Feb-09, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 2010-Feb-09, SIN-BKK 2010-Feb-09, Y, 2, 0, 0, 0, 0, 300, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
  GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ11 2010-Feb-09, SIN-BKK 2010-Feb-09, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
  0, 0, 0, 0, 0,
SQ11 2010-Feb-09, SIN-BKK 2010-Feb-09, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
  0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ11, 2010-Feb-10
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
  Elapsed, Distance, Capacity,
SQ11 2010-Feb-10, SIN-BKK, 2010-Feb-10, 08:20:00, 2010-Feb-10, 11:00:00, 07:40:
  00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhycAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
  CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 2010-Feb-10, SIN-BKK 2010-Feb-10, Y, 300, 300, 0, 0, 0, 0, 0, 0, 0, 0, 300
  , 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ11 2010-Feb-10, SIN-BKK 2010-Feb-10, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 2010-Feb-10, SIN-BKK 2010-Feb-10, Y, 2, 0, 0, 0, 0, 300, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
  GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ11 2010-Feb-10, SIN-BKK 2010-Feb-10, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
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0, 0, 0, 0, 0,
SQ11 2010-Feb-10, SIN-BKK 2010-Feb-10, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ11, 2010-Feb-11
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQ11 2010-Feb-11, SIN-BKK, 2010-Feb-11, 08:20:00, 2010-Feb-11, 11:00:00, 07:40:
00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 2010-Feb-11, SIN-BKK 2010-Feb-11, Y, 300, 300, 0, 0, 0, 0, 0, 0, 0, 0, 300
, 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ11 2010-Feb-11, SIN-BKK 2010-Feb-11, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 2010-Feb-11, SIN-BKK 2010-Feb-11, Y, 2, 0, 0, 0, 0, 300, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ11 2010-Feb-11, SIN-BKK 2010-Feb-11, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQ11 2010-Feb-11, SIN-BKK 2010-Feb-11, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ11, 2010-Feb-12
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQ11 2010-Feb-12, SIN-BKK, 2010-Feb-12, 08:20:00, 2010-Feb-12, 11:00:00, 07:40:
00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 2010-Feb-12, SIN-BKK 2010-Feb-12, Y, 300, 300, 0, 0, 0, 0, 0, 0, 0, 0, 300
, 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ11 2010-Feb-12, SIN-BKK 2010-Feb-12, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 2010-Feb-12, SIN-BKK 2010-Feb-12, Y, 2, 0, 0, 0, 0, 300, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ11 2010-Feb-12, SIN-BKK 2010-Feb-12, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQ11 2010-Feb-12, SIN-BKK 2010-Feb-12, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
*****
*****

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FlightDate: SQ11, 2010-Feb-13
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQ11 2010-Feb-13, SIN-BKK, 2010-Feb-13, 08:20:00, 2010-Feb-13, 11:00:00, 07:40:
00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 2010-Feb-13, SIN-BKK 2010-Feb-13, Y, 300, 300, 0, 0, 0, 0, 0, 0, 0, 0, 300
, 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ11 2010-Feb-13, SIN-BKK 2010-Feb-13, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 2010-Feb-13, SIN-BKK 2010-Feb-13, Y, 2, 0, 0, 0, 0, 300, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ11 2010-Feb-13, SIN-BKK 2010-Feb-13, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQ11 2010-Feb-13, SIN-BKK 2010-Feb-13, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ11, 2010-Feb-14
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQ11 2010-Feb-14, SIN-BKK, 2010-Feb-14, 08:20:00, 2010-Feb-14, 11:00:00, 07:40:
00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 2010-Feb-14, SIN-BKK 2010-Feb-14, Y, 300, 300, 0, 0, 0, 0, 0, 0, 0, 0, 300
, 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ11 2010-Feb-14, SIN-BKK 2010-Feb-14, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 2010-Feb-14, SIN-BKK 2010-Feb-14, Y, 2, 0, 0, 0, 0, 300, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ11 2010-Feb-14, SIN-BKK 2010-Feb-14, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQ11 2010-Feb-14, SIN-BKK 2010-Feb-14, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ11, 2010-Feb-15
*****
*****
Leg-Dates:
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Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQ11 2010-Feb-15, SIN-BKK, 2010-Feb-15, 08:20:00, 2010-Feb-15, 11:00:00, 07:40:
00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhycAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 2010-Feb-15, SIN-BKK 2010-Feb-15, Y, 300, 300, 0, 0, 0, 0, 0, 0, 0, 0, 300
, 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ11 2010-Feb-15, SIN-BKK 2010-Feb-15, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 2010-Feb-15, SIN-BKK 2010-Feb-15, Y, 2, 0, 0, 0, 0, 300, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ11 2010-Feb-15, SIN-BKK 2010-Feb-15, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQ11 2010-Feb-15, SIN-BKK 2010-Feb-15, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ11, 2010-Feb-16
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQ11 2010-Feb-16, SIN-BKK, 2010-Feb-16, 08:20:00, 2010-Feb-16, 11:00:00, 07:40:
00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhycAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 2010-Feb-16, SIN-BKK 2010-Feb-16, Y, 300, 300, 0, 0, 0, 0, 0, 0, 0, 0, 300
, 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ11 2010-Feb-16, SIN-BKK 2010-Feb-16, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 2010-Feb-16, SIN-BKK 2010-Feb-16, Y, 2, 0, 0, 0, 0, 300, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ11 2010-Feb-16, SIN-BKK 2010-Feb-16, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQ11 2010-Feb-16, SIN-BKK 2010-Feb-16, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ11, 2010-Feb-17
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQ11 2010-Feb-17, SIN-BKK, 2010-Feb-17, 08:20:00, 2010-Feb-17, 11:00:00, 07:40:
00, 0, -05:00:00, 6300, 0,
*****
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*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhycAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 2010-Feb-17, SIN-BKK 2010-Feb-17, Y, 300, 300, 0, 0, 0, 0, 0, 0, 0, 0, 300
, 9, 0, 0, 0, 0, 0,
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ11 2010-Feb-17, SIN-BKK 2010-Feb-17, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 2010-Feb-17, SIN-BKK 2010-Feb-17, Y, 2, 0, 0, 0, 0, 300, 0,
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ11 2010-Feb-17, SIN-BKK 2010-Feb-17, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQ11 2010-Feb-17, SIN-BKK 2010-Feb-17, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
*****
FlightDate: SQ11, 2010-Feb-18
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQ11 2010-Feb-18, SIN-BKK, 2010-Feb-18, 08:20:00, 2010-Feb-18, 11:00:00, 07:40:
00, 0, -05:00:00, 6300, 0,
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhycAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 2010-Feb-18, SIN-BKK 2010-Feb-18, Y, 300, 300, 0, 0, 0, 0, 0, 0, 0, 0, 300
, 9, 0, 0, 0, 0, 0,
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ11 2010-Feb-18, SIN-BKK 2010-Feb-18, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 2010-Feb-18, SIN-BKK 2010-Feb-18, Y, 2, 0, 0, 0, 0, 300, 0,
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ11 2010-Feb-18, SIN-BKK 2010-Feb-18, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQ11 2010-Feb-18, SIN-BKK 2010-Feb-18, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
*****
FlightDate: SQ11, 2010-Feb-19
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQ11 2010-Feb-19, SIN-BKK, 2010-Feb-19, 08:20:00, 2010-Feb-19, 11:00:00, 07:40:
00, 0, -05:00:00, 6300, 0,
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhycAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,

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SQL11 2010-Feb-19, SIN-BKK 2010-Feb-19, Y, 300, 300, 0, 0, 0, 0, 0, 0, 0, 0, 300
, 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQL11 2010-Feb-19, SIN-BKK 2010-Feb-19, Y, 1, 0, 0, 0, 0, 300, 0,
SQL11 2010-Feb-19, SIN-BKK 2010-Feb-19, Y, 2, 0, 0, 0, 0, 300, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQL11 2010-Feb-19, SIN-BKK 2010-Feb-19, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQL11 2010-Feb-19, SIN-BKK 2010-Feb-19, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
*****
*****
FlightDate: SQL11, 2010-Feb-20
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQL11 2010-Feb-20, SIN-BKK, 2010-Feb-20, 08:20:00, 2010-Feb-20, 11:00:00, 07:40:
00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhycAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQL11 2010-Feb-20, SIN-BKK 2010-Feb-20, Y, 300, 300, 0, 0, 0, 0, 0, 0, 0, 300
, 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQL11 2010-Feb-20, SIN-BKK 2010-Feb-20, Y, 1, 0, 0, 0, 0, 300, 0,
SQL11 2010-Feb-20, SIN-BKK 2010-Feb-20, Y, 2, 0, 0, 0, 0, 300, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQL11 2010-Feb-20, SIN-BKK 2010-Feb-20, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQL11 2010-Feb-20, SIN-BKK 2010-Feb-20, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
*****
*****
FlightDate: SQL11, 2010-Feb-21
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQL11 2010-Feb-21, SIN-BKK, 2010-Feb-21, 08:20:00, 2010-Feb-21, 11:00:00, 07:40:
00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhycAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQL11 2010-Feb-21, SIN-BKK 2010-Feb-21, Y, 300, 300, 0, 0, 0, 0, 0, 0, 0, 300
, 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:

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-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ11 2010-Feb-21, SIN-BKK 2010-Feb-21, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 2010-Feb-21, SIN-BKK 2010-Feb-21, Y, 2, 0, 0, 0, 0, 300, 0,
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
      GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ11 2010-Feb-21, SIN-BKK 2010-Feb-21, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
      0, 0, 0, 0, 0,
SQ11 2010-Feb-21, SIN-BKK 2010-Feb-21, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
      0, 0, 0, 0, 0,
*****
FlightDate: SQ11, 2010-Feb-22
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
      Elapsed, Distance, Capacity,
SQ11 2010-Feb-22, SIN-BKK, 2010-Feb-22, 08:20:00, 2010-Feb-22, 11:00:00, 07:40:
      00, 0, -05:00:00, 6300, 0,
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
      CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 2010-Feb-22, SIN-BKK 2010-Feb-22, Y, 300, 300, 0, 0, 0, 0, 0, 0, 0, 0, 300
      , 9, 0, 0, 0, 0, 0,
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ11 2010-Feb-22, SIN-BKK 2010-Feb-22, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 2010-Feb-22, SIN-BKK 2010-Feb-22, Y, 2, 0, 0, 0, 0, 300, 0,
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
      GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ11 2010-Feb-22, SIN-BKK 2010-Feb-22, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
      0, 0, 0, 0, 0,
SQ11 2010-Feb-22, SIN-BKK 2010-Feb-22, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
      0, 0, 0, 0, 0,
*****
FlightDate: SQ11, 2010-Feb-23
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
      Elapsed, Distance, Capacity,
SQ11 2010-Feb-23, SIN-BKK, 2010-Feb-23, 08:20:00, 2010-Feb-23, 11:00:00, 07:40:
      00, 0, -05:00:00, 6300, 0,
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
      CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 2010-Feb-23, SIN-BKK 2010-Feb-23, Y, 300, 300, 0, 0, 0, 0, 0, 0, 0, 0, 300
      , 9, 0, 0, 0, 0, 0,
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
SegmentCabins:

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-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ11 2010-Feb-23, SIN-BKK 2010-Feb-23, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 2010-Feb-23, SIN-BKK 2010-Feb-23, Y, 2, 0, 0, 0, 0, 300, 0,
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
  GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ11 2010-Feb-23, SIN-BKK 2010-Feb-23, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
  0, 0, 0, 0, 0,
SQ11 2010-Feb-23, SIN-BKK 2010-Feb-23, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
  0, 0, 0, 0, 0,
*****
FlightDate: SQ11, 2010-Feb-24
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
  Elapsed, Distance, Capacity,
SQ11 2010-Feb-24, SIN-BKK, 2010-Feb-24, 08:20:00, 2010-Feb-24, 11:00:00, 07:40:
  00, 0, -05:00:00, 6300, 0,
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhycAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
  CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 2010-Feb-24, SIN-BKK 2010-Feb-24, Y, 300, 300, 0, 0, 0, 0, 0, 0, 0, 0, 300
  , 9, 0, 0, 0, 0, 0,
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ11 2010-Feb-24, SIN-BKK 2010-Feb-24, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 2010-Feb-24, SIN-BKK 2010-Feb-24, Y, 2, 0, 0, 0, 0, 300, 0,
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
  GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ11 2010-Feb-24, SIN-BKK 2010-Feb-24, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
  0, 0, 0, 0, 0,
SQ11 2010-Feb-24, SIN-BKK 2010-Feb-24, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
  0, 0, 0, 0, 0,
*****
FlightDate: SQ11, 2010-Feb-25
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
  Elapsed, Distance, Capacity,
SQ11 2010-Feb-25, SIN-BKK, 2010-Feb-25, 08:20:00, 2010-Feb-25, 11:00:00, 07:40:
  00, 0, -05:00:00, 6300, 0,
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhycAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
  CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 2010-Feb-25, SIN-BKK 2010-Feb-25, Y, 300, 300, 0, 0, 0, 0, 0, 0, 0, 0, 300
  , 9, 0, 0, 0, 0, 0,
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ11 2010-Feb-25, SIN-BKK 2010-Feb-25, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 2010-Feb-25, SIN-BKK 2010-Feb-25, Y, 2, 0, 0, 0, 0, 300, 0,
*****

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*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
    GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ11 2010-Feb-25, SIN-BKK 2010-Feb-25, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
    0, 0, 0, 0, 0,
SQ11 2010-Feb-25, SIN-BKK 2010-Feb-25, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
    0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ11, 2010-Feb-26
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
    Elapsed, Distance, Capacity,
SQ11 2010-Feb-26, SIN-BKK, 2010-Feb-26, 08:20:00, 2010-Feb-26, 11:00:00, 07:40:
    00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
    CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 2010-Feb-26, SIN-BKK 2010-Feb-26, Y, 300, 300, 0, 0, 0, 0, 0, 0, 0, 300
    , 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ11 2010-Feb-26, SIN-BKK 2010-Feb-26, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 2010-Feb-26, SIN-BKK 2010-Feb-26, Y, 2, 0, 0, 0, 0, 300, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
    GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ11 2010-Feb-26, SIN-BKK 2010-Feb-26, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
    0, 0, 0, 0, 0,
SQ11 2010-Feb-26, SIN-BKK 2010-Feb-26, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
    0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ11, 2010-Feb-27
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
    Elapsed, Distance, Capacity,
SQ11 2010-Feb-27, SIN-BKK, 2010-Feb-27, 08:20:00, 2010-Feb-27, 11:00:00, 07:40:
    00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
    CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 2010-Feb-27, SIN-BKK 2010-Feb-27, Y, 300, 300, 0, 0, 0, 0, 0, 0, 0, 300
    , 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ11 2010-Feb-27, SIN-BKK 2010-Feb-27, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 2010-Feb-27, SIN-BKK 2010-Feb-27, Y, 2, 0, 0, 0, 0, 300, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
    GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
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SQ11 2010-Feb-27, SIN-BKK 2010-Feb-27, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
    0, 0, 0, 0, 0,
SQ11 2010-Feb-27, SIN-BKK 2010-Feb-27, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
    0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ11, 2010-Feb-28
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
    Elapsed, Distance, Capacity,
SQ11 2010-Feb-28, SIN-BKK, 2010-Feb-28, 08:20:00, 2010-Feb-28, 11:00:00, 07:40:
    00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
    CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 2010-Feb-28, SIN-BKK 2010-Feb-28, Y, 300, 300, 0, 0, 0, 0, 0, 0, 0, 0, 300
    , 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ11 2010-Feb-28, SIN-BKK 2010-Feb-28, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 2010-Feb-28, SIN-BKK 2010-Feb-28, Y, 2, 0, 0, 0, 0, 300, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
    GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ11 2010-Feb-28, SIN-BKK 2010-Feb-28, Y, 1, Y, 300 (0), 0, 0, 0, 0, 0 (0), 0,
    0, 0, 0, 0, 0,
SQ11 2010-Feb-28, SIN-BKK 2010-Feb-28, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0,
    0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ12, 2010-Jan-15
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
    Elapsed, Distance, Capacity,
SQ12 2010-Jan-15, SIN-HND, 2010-Jan-15, 09:20:00, 2010-Jan-15, 12:00:00, 07:40:
    00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
    CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 2010-Jan-15, SIN-HND 2010-Jan-15, Y, 200, 200, 2.082e+121, 5.53287e-48, 5.
    20268e-90, 0, 1.31346e-47, 1.05119e-153, 2.78986e+179, 0, 200, 9, 3.66962e-62, 1
    .0854e-71, 6.74783e-67, 6.9835e-77, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
    GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ12 2010-Jan-15, SIN-HND 2010-Jan-15, Y, 1, Y13856, 200 (0), 0, 0, 0, 0, 0 (0)
    , 0, 0, 0, 0, 0, 0,
SQ12 2010-Jan-15, SIN-HND 2010-Jan-15, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
    0, 0, 0, 0, 0,

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*****
*****
FlightDate: SQ12, 2010-Jan-16
*****
*****
Leg-Dates:
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Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQ12 2010-Jan-16, SIN-HND, 2010-Jan-16, 09:20:00, 2010-Jan-16, 12:00:00, 07:40:
00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 2010-Jan-16, SIN-HND 2010-Jan-16, Y, 200, 200, 0, 0, 0, 0, 0, 0, 200
, 9, 2.63638e-319, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ12 2010-Jan-16, SIN-HND 2010-Jan-16, Y, 1, 0, 0, 0, 0, 200, 0,
SQ12 2010-Jan-16, SIN-HND 2010-Jan-16, Y, 2, 0, 0, 0, 0, 200, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ12 2010-Jan-16, SIN-HND 2010-Jan-16, Y, 1, Y, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQ12 2010-Jan-16, SIN-HND 2010-Jan-16, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ12, 2010-Jan-17
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQ12 2010-Jan-17, SIN-HND, 2010-Jan-17, 09:20:00, 2010-Jan-17, 12:00:00, 07:40:
00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 2010-Jan-17, SIN-HND 2010-Jan-17, Y, 200, 200, 0, 0, 0, 0, 0, 0, 200
, 9, 2.39291e-319, 0, 0, 0, 0,
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*****
Buckets:
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Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
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Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ12 2010-Jan-17, SIN-HND 2010-Jan-17, Y, 1, 0, 0, 0, 0, 200, 0,
SQ12 2010-Jan-17, SIN-HND 2010-Jan-17, Y, 2, 0, 0, 0, 0, 200, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ12 2010-Jan-17, SIN-HND 2010-Jan-17, Y, 1, Y, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQ12 2010-Jan-17, SIN-HND 2010-Jan-17, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ12, 2010-Jan-18
*****
*****
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Leg-Dates:
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Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQ12 2010-Jan-18, SIN-HND, 2010-Jan-18, 09:20:00, 2010-Jan-18, 12:00:00, 07:40:
00, 0, -05:00:00, 6300, 0,
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*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 2010-Jan-18, SIN-HND 2010-Jan-18, Y, 200, 200, 0, 0, 0, 0, 0, 0, 0, 200
, 9, 2.14469e-319, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
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Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ12 2010-Jan-18, SIN-HND 2010-Jan-18, Y, 1, 0, 0, 0, 0, 200, 0,
SQ12 2010-Jan-18, SIN-HND 2010-Jan-18, Y, 2, 0, 0, 0, 0, 200, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ12 2010-Jan-18, SIN-HND 2010-Jan-18, Y, 1, Y, 200 (0), 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQ12 2010-Jan-18, SIN-HND 2010-Jan-18, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ12, 2010-Jan-19
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQ12 2010-Jan-19, SIN-HND, 2010-Jan-19, 09:20:00, 2010-Jan-19, 12:00:00, 07:40:
00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 2010-Jan-19, SIN-HND 2010-Jan-19, Y, 200, 200, 0, 0, 0, 0, 0, 0, 200
, 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ12 2010-Jan-19, SIN-HND 2010-Jan-19, Y, 1, 0, 0, 0, 0, 200, 0,
SQ12 2010-Jan-19, SIN-HND 2010-Jan-19, Y, 2, 0, 0, 0, 0, 200, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ12 2010-Jan-19, SIN-HND 2010-Jan-19, Y, 1, Y, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQ12 2010-Jan-19, SIN-HND 2010-Jan-19, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ12, 2010-Jan-20
*****
*****
Leg-Dates:
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Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQ12 2010-Jan-20, SIN-HND, 2010-Jan-20, 09:20:00, 2010-Jan-20, 12:00:00, 07:40:
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00, 0, -05:00:00, 6300, 0,
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*****
LegCabins:
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Flight, Leg, Cabin, OffedCAP, PhycAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 2010-Jan-20, SIN-HND 2010-Jan-20, Y, 200, 200, 0, 0, 0, 0, 0, 0, 0, 200
, 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ12 2010-Jan-20, SIN-HND 2010-Jan-20, Y, 1, 0, 0, 0, 0, 200, 0,
SQ12 2010-Jan-20, SIN-HND 2010-Jan-20, Y, 2, 0, 0, 0, 0, 200, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ12 2010-Jan-20, SIN-HND 2010-Jan-20, Y, 1, Y, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQ12 2010-Jan-20, SIN-HND 2010-Jan-20, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ12, 2010-Jan-21
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQ12 2010-Jan-21, SIN-HND, 2010-Jan-21, 09:20:00, 2010-Jan-21, 12:00:00, 07:40:
00, 0, -05:00:00, 6300, 0,
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*****
LegCabins:
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Flight, Leg, Cabin, OffedCAP, PhycAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 2010-Jan-21, SIN-HND 2010-Jan-21, Y, 200, 200, 0, 0, 0, 0, 0, 0, 0, 200
, 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ12 2010-Jan-21, SIN-HND 2010-Jan-21, Y, 1, 0, 0, 0, 0, 200, 0,
SQ12 2010-Jan-21, SIN-HND 2010-Jan-21, Y, 2, 0, 0, 0, 0, 200, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ12 2010-Jan-21, SIN-HND 2010-Jan-21, Y, 1, Y, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQ12 2010-Jan-21, SIN-HND 2010-Jan-21, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ12, 2010-Jan-22
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQ12 2010-Jan-22, SIN-HND, 2010-Jan-22, 09:20:00, 2010-Jan-22, 12:00:00, 07:40:
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*****
*****
LegCabins:
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Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 2010-Jan-22, SIN-HND 2010-Jan-22, Y, 200, 200, 0, 0, 0, 0, 0, 0, 0, 200
, 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ12 2010-Jan-22, SIN-HND 2010-Jan-22, Y, 1, 0, 0, 0, 0, 200, 0,
SQ12 2010-Jan-22, SIN-HND 2010-Jan-22, Y, 2, 0, 0, 0, 0, 200, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ12 2010-Jan-22, SIN-HND 2010-Jan-22, Y, 1, Y, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQ12 2010-Jan-22, SIN-HND 2010-Jan-22, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ12, 2010-Jan-23
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQ12 2010-Jan-23, SIN-HND, 2010-Jan-23, 09:20:00, 2010-Jan-23, 12:00:00, 07:40:
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*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 2010-Jan-23, SIN-HND 2010-Jan-23, Y, 200, 200, 0, 0, 0, 0, 0, 0, 0, 200
, 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ12 2010-Jan-23, SIN-HND 2010-Jan-23, Y, 1, 0, 0, 0, 0, 200, 0,
SQ12 2010-Jan-23, SIN-HND 2010-Jan-23, Y, 2, 0, 0, 0, 0, 200, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ12 2010-Jan-23, SIN-HND 2010-Jan-23, Y, 1, Y, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQ12 2010-Jan-23, SIN-HND 2010-Jan-23, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ12, 2010-Jan-24
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQ12 2010-Jan-24, SIN-HND, 2010-Jan-24, 09:20:00, 2010-Jan-24, 12:00:00, 07:40:
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*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 2010-Jan-24, SIN-HND 2010-Jan-24, Y, 200, 200, 0, 0, 0, 0, 0, 0, 0, 200
, 9, 0, 0, 0, 0, 0,
*****
*****
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*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ12 2010-Jan-24, SIN-HND 2010-Jan-24, Y, 1, 0, 0, 0, 0, 200, 0,
SQ12 2010-Jan-24, SIN-HND 2010-Jan-24, Y, 2, 0, 0, 0, 0, 200, 0,
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
      GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ12 2010-Jan-24, SIN-HND 2010-Jan-24, Y, 1, Y, 200 (0), 0, 0, 0, 0, 0 (0), 0,
      0, 0, 0, 0, 0,
SQ12 2010-Jan-24, SIN-HND 2010-Jan-24, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
      0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ12, 2010-Jan-25
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
      Elapsed, Distance, Capacity,
SQ12 2010-Jan-25, SIN-HND, 2010-Jan-25, 09:20:00, 2010-Jan-25, 12:00:00, 07:40:
      00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhycAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
      CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 2010-Jan-25, SIN-HND 2010-Jan-25, Y, 200, 200, 0, 0, 0, 0, 0, 0, 0, 200
      , 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ12 2010-Jan-25, SIN-HND 2010-Jan-25, Y, 1, 0, 0, 0, 0, 200, 0,
SQ12 2010-Jan-25, SIN-HND 2010-Jan-25, Y, 2, 0, 0, 0, 0, 200, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
      GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ12 2010-Jan-25, SIN-HND 2010-Jan-25, Y, 1, Y, 200 (0), 0, 0, 0, 0, 0 (0), 0,
      0, 0, 0, 0, 0,
SQ12 2010-Jan-25, SIN-HND 2010-Jan-25, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
      0, 0, 0, 0, 0,
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*****
FlightDate: SQ12, 2010-Jan-26
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
      Elapsed, Distance, Capacity,
SQ12 2010-Jan-26, SIN-HND, 2010-Jan-26, 09:20:00, 2010-Jan-26, 12:00:00, 07:40:
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*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhycAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
      CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 2010-Jan-26, SIN-HND 2010-Jan-26, Y, 200, 200, 0, 0, 0, 0, 0, 0, 0, 200
      , 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
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*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ12 2010-Jan-26, SIN-HND 2010-Jan-26, Y, 1, 0, 0, 0, 0, 200, 0,
SQ12 2010-Jan-26, SIN-HND 2010-Jan-26, Y, 2, 0, 0, 0, 0, 200, 0,
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
      GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ12 2010-Jan-26, SIN-HND 2010-Jan-26, Y, 1, Y, 200 (0), 0, 0, 0, 0, 0 (0), 0,
      0, 0, 0, 0, 0,
SQ12 2010-Jan-26, SIN-HND 2010-Jan-26, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
      0, 0, 0, 0, 0,
*****
FlightDate: SQ12, 2010-Jan-27
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
      Elapsed, Distance, Capacity,
SQ12 2010-Jan-27, SIN-HND, 2010-Jan-27, 09:20:00, 2010-Jan-27, 12:00:00, 07:40:
      00, 0, -05:00:00, 6300, 0,
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
      CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 2010-Jan-27, SIN-HND 2010-Jan-27, Y, 200, 200, 0, 0, 0, 0, 0, 0, 0, 0, 200
      , 9, 0, 0, 0, 0, 0,
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ12 2010-Jan-27, SIN-HND 2010-Jan-27, Y, 1, 0, 0, 0, 0, 200, 0,
SQ12 2010-Jan-27, SIN-HND 2010-Jan-27, Y, 2, 0, 0, 0, 0, 200, 0,
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
      GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ12 2010-Jan-27, SIN-HND 2010-Jan-27, Y, 1, Y, 200 (0), 0, 0, 0, 0, 0 (0), 0,
      0, 0, 0, 0, 0,
SQ12 2010-Jan-27, SIN-HND 2010-Jan-27, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
      0, 0, 0, 0, 0,
*****
FlightDate: SQ12, 2010-Jan-28
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
      Elapsed, Distance, Capacity,
SQ12 2010-Jan-28, SIN-HND, 2010-Jan-28, 09:20:00, 2010-Jan-28, 12:00:00, 07:40:
      00, 0, -05:00:00, 6300, 0,
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
      CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 2010-Jan-28, SIN-HND 2010-Jan-28, Y, 200, 200, 0, 0, 0, 0, 0, 0, 0, 0, 200
      , 9, 0, 0, 0, 0, 0,
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ12 2010-Jan-28, SIN-HND 2010-Jan-28, Y, 1, 0, 0, 0, 0, 200, 0,

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SQL12 2010-Jan-28, SIN-HND 2010-Jan-28, Y, 2, 0, 0, 0, 0, 200, 0,
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
  GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQL12 2010-Jan-28, SIN-HND 2010-Jan-28, Y, 1, Y, 200 (0), 0, 0, 0, 0, 0 (0), 0,
  0, 0, 0, 0, 0,
SQL12 2010-Jan-28, SIN-HND 2010-Jan-28, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
  0, 0, 0, 0, 0,
*****
*****
FlightDate: SQL12, 2010-Jan-29
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
  Elapsed, Distance, Capacity,
SQL12 2010-Jan-29, SIN-HND, 2010-Jan-29, 09:20:00, 2010-Jan-29, 12:00:00, 07:40:
  00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
  CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQL12 2010-Jan-29, SIN-HND 2010-Jan-29, Y, 200, 200, 0, 0, 0, 0, 0, 0, 0, 0, 200
  , 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQL12 2010-Jan-29, SIN-HND 2010-Jan-29, Y, 1, 0, 0, 0, 0, 200, 0,
SQL12 2010-Jan-29, SIN-HND 2010-Jan-29, Y, 2, 0, 0, 0, 0, 200, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
  GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQL12 2010-Jan-29, SIN-HND 2010-Jan-29, Y, 1, Y, 200 (0), 0, 0, 0, 0, 0 (0), 0,
  0, 0, 0, 0, 0,
SQL12 2010-Jan-29, SIN-HND 2010-Jan-29, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
  0, 0, 0, 0, 0,
*****
*****
FlightDate: SQL12, 2010-Jan-30
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
  Elapsed, Distance, Capacity,
SQL12 2010-Jan-30, SIN-HND, 2010-Jan-30, 09:20:00, 2010-Jan-30, 12:00:00, 07:40:
  00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
  CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQL12 2010-Jan-30, SIN-HND 2010-Jan-30, Y, 200, 200, 0, 0, 0, 0, 0, 0, 0, 0, 200
  , 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQL12 2010-Jan-30, SIN-HND 2010-Jan-30, Y, 1, 0, 0, 0, 0, 200, 0,
SQL12 2010-Jan-30, SIN-HND 2010-Jan-30, Y, 2, 0, 0, 0, 0, 200, 0,
*****
*****
Subclasses:
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Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
  GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ12 2010-Jan-30, SIN-HND 2010-Jan-30, Y, 1, Y, 200 (0), 0, 0, 0, 0, 0 (0), 0,
  0, 0, 0, 0, 0,
SQ12 2010-Jan-30, SIN-HND 2010-Jan-30, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
  0, 0, 0, 0, 0,
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FlightDate: SQ12, 2010-Jan-31
*****
*****
Leg-Dates:
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Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
  Elapsed, Distance, Capacity,
SQ12 2010-Jan-31, SIN-HND, 2010-Jan-31, 09:20:00, 2010-Jan-31, 12:00:00, 07:40:
  00, 0, -05:00:00, 6300, 0,
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*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
  CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 2010-Jan-31, SIN-HND 2010-Jan-31, Y, 200, 200, 0, 0, 0, 0, 0, 0, 0, 200
  , 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ12 2010-Jan-31, SIN-HND 2010-Jan-31, Y, 1, 0, 0, 0, 0, 200, 0,
SQ12 2010-Jan-31, SIN-HND 2010-Jan-31, Y, 2, 0, 0, 0, 0, 200, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
  GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ12 2010-Jan-31, SIN-HND 2010-Jan-31, Y, 1, Y, 200 (0), 0, 0, 0, 0, 0 (0), 0,
  0, 0, 0, 0, 0,
SQ12 2010-Jan-31, SIN-HND 2010-Jan-31, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
  0, 0, 0, 0, 0,
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*****
FlightDate: SQ12, 2010-Feb-01
*****
*****
Leg-Dates:
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Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
  Elapsed, Distance, Capacity,
SQ12 2010-Feb-01, SIN-HND, 2010-Feb-01, 09:20:00, 2010-Feb-01, 12:00:00, 07:40:
  00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
  CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 2010-Feb-01, SIN-HND 2010-Feb-01, Y, 200, 200, 0, 0, 0, 0, 0, 0, 0, 200
  , 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ12 2010-Feb-01, SIN-HND 2010-Feb-01, Y, 1, 0, 0, 0, 0, 200, 0,
SQ12 2010-Feb-01, SIN-HND 2010-Feb-01, Y, 2, 0, 0, 0, 0, 200, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
  GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ12 2010-Feb-01, SIN-HND 2010-Feb-01, Y, 1, Y, 200 (0), 0, 0, 0, 0, 0 (0), 0,
  0, 0, 0, 0, 0,
SQ12 2010-Feb-01, SIN-HND 2010-Feb-01, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
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0, 0, 0, 0, 0,
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FlightDate: SQ12, 2010-Feb-02
*****
*****
Leg-Dates:
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Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQ12 2010-Feb-02, SIN-HND, 2010-Feb-02, 09:20:00, 2010-Feb-02, 12:00:00, 07:40:
00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 2010-Feb-02, SIN-HND 2010-Feb-02, Y, 200, 200, 0, 0, 0, 0, 0, 0, 0, 0, 200
, 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ12 2010-Feb-02, SIN-HND 2010-Feb-02, Y, 1, 0, 0, 0, 0, 200, 0,
SQ12 2010-Feb-02, SIN-HND 2010-Feb-02, Y, 2, 0, 0, 0, 0, 200, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ12 2010-Feb-02, SIN-HND 2010-Feb-02, Y, 1, Y, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQ12 2010-Feb-02, SIN-HND 2010-Feb-02, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ12, 2010-Feb-03
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQ12 2010-Feb-03, SIN-HND, 2010-Feb-03, 09:20:00, 2010-Feb-03, 12:00:00, 07:40:
00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 2010-Feb-03, SIN-HND 2010-Feb-03, Y, 200, 200, 0, 0, 0, 0, 0, 0, 0, 200
, 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ12 2010-Feb-03, SIN-HND 2010-Feb-03, Y, 1, 0, 0, 0, 0, 200, 0,
SQ12 2010-Feb-03, SIN-HND 2010-Feb-03, Y, 2, 0, 0, 0, 0, 200, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ12 2010-Feb-03, SIN-HND 2010-Feb-03, Y, 1, Y, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQ12 2010-Feb-03, SIN-HND 2010-Feb-03, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
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*****
FlightDate: SQ12, 2010-Feb-04
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Leg-Dates:
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Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQ12 2010-Feb-04, SIN-HND, 2010-Feb-04, 09:20:00, 2010-Feb-04, 12:00:00, 07:40:
00, 0, -05:00:00, 6300, 0,
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*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhycAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 2010-Feb-04, SIN-HND 2010-Feb-04, Y, 200, 200, 0, 0, 0, 0, 0, 0, 0, 200
, 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ12 2010-Feb-04, SIN-HND 2010-Feb-04, Y, 1, 0, 0, 0, 0, 200, 0,
SQ12 2010-Feb-04, SIN-HND 2010-Feb-04, Y, 2, 0, 0, 0, 0, 200, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ12 2010-Feb-04, SIN-HND 2010-Feb-04, Y, 1, Y, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQ12 2010-Feb-04, SIN-HND 2010-Feb-04, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ12, 2010-Feb-05
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQ12 2010-Feb-05, SIN-HND, 2010-Feb-05, 09:20:00, 2010-Feb-05, 12:00:00, 07:40:
00, 0, -05:00:00, 6300, 0,
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*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhycAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 2010-Feb-05, SIN-HND 2010-Feb-05, Y, 200, 200, 0, 0, 0, 0, 0, 0, 0, 200
, 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ12 2010-Feb-05, SIN-HND 2010-Feb-05, Y, 1, 0, 0, 0, 0, 200, 0,
SQ12 2010-Feb-05, SIN-HND 2010-Feb-05, Y, 2, 0, 0, 0, 0, 200, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ12 2010-Feb-05, SIN-HND 2010-Feb-05, Y, 1, Y, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQ12 2010-Feb-05, SIN-HND 2010-Feb-05, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ12, 2010-Feb-06
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,

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SQL12 2010-Feb-06, SIN-HND, 2010-Feb-06, 09:20:00, 2010-Feb-06, 12:00:00, 07:40:
00, 0, -05:00:00, 6300, 0,
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*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhycAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQL12 2010-Feb-06, SIN-HND 2010-Feb-06, Y, 200, 200, 0, 0, 0, 0, 0, 0, 0, 200
, 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQL12 2010-Feb-06, SIN-HND 2010-Feb-06, Y, 1, 0, 0, 0, 0, 200, 0,
SQL12 2010-Feb-06, SIN-HND 2010-Feb-06, Y, 2, 0, 0, 0, 0, 200, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQL12 2010-Feb-06, SIN-HND 2010-Feb-06, Y, 1, Y, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQL12 2010-Feb-06, SIN-HND 2010-Feb-06, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
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*****
FlightDate: SQL12, 2010-Feb-07
*****
*****
Leg-Dates:
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Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQL12 2010-Feb-07, SIN-HND, 2010-Feb-07, 09:20:00, 2010-Feb-07, 12:00:00, 07:40:
00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhycAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQL12 2010-Feb-07, SIN-HND 2010-Feb-07, Y, 200, 200, 0, 0, 0, 0, 0, 0, 0, 200
, 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQL12 2010-Feb-07, SIN-HND 2010-Feb-07, Y, 1, 0, 0, 0, 0, 200, 0,
SQL12 2010-Feb-07, SIN-HND 2010-Feb-07, Y, 2, 0, 0, 0, 0, 200, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQL12 2010-Feb-07, SIN-HND 2010-Feb-07, Y, 1, Y, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQL12 2010-Feb-07, SIN-HND 2010-Feb-07, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
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*****
FlightDate: SQL12, 2010-Feb-08
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQL12 2010-Feb-08, SIN-HND, 2010-Feb-08, 09:20:00, 2010-Feb-08, 12:00:00, 07:40:
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*****
LegCabins:
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-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 2010-Feb-08, SIN-HND 2010-Feb-08, Y, 200, 200, 0, 0, 0, 0, 0, 0, 0, 0, 200
, 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ12 2010-Feb-08, SIN-HND 2010-Feb-08, Y, 1, 0, 0, 0, 0, 200, 0,
SQ12 2010-Feb-08, SIN-HND 2010-Feb-08, Y, 2, 0, 0, 0, 0, 200, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ12 2010-Feb-08, SIN-HND 2010-Feb-08, Y, 1, Y, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQ12 2010-Feb-08, SIN-HND 2010-Feb-08, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ12, 2010-Feb-09
*****
*****
Leg-Dates:
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Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQ12 2010-Feb-09, SIN-HND, 2010-Feb-09, 09:20:00, 2010-Feb-09, 12:00:00, 07:40:
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*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 2010-Feb-09, SIN-HND 2010-Feb-09, Y, 200, 200, 0, 0, 0, 0, 0, 0, 0, 200
, 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ12 2010-Feb-09, SIN-HND 2010-Feb-09, Y, 1, 0, 0, 0, 0, 200, 0,
SQ12 2010-Feb-09, SIN-HND 2010-Feb-09, Y, 2, 0, 0, 0, 0, 200, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ12 2010-Feb-09, SIN-HND 2010-Feb-09, Y, 1, Y, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQ12 2010-Feb-09, SIN-HND 2010-Feb-09, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
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*****
FlightDate: SQ12, 2010-Feb-10
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQ12 2010-Feb-10, SIN-HND, 2010-Feb-10, 09:20:00, 2010-Feb-10, 12:00:00, 07:40:
00, 0, -05:00:00, 6300, 0,
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*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 2010-Feb-10, SIN-HND 2010-Feb-10, Y, 200, 200, 0, 0, 0, 0, 0, 0, 0, 200
, 9, 0, 0, 0, 0, 0,
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Buckets:
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Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ12 2010-Feb-10, SIN-HND 2010-Feb-10, Y, 1, 0, 0, 0, 0, 200, 0,
SQ12 2010-Feb-10, SIN-HND 2010-Feb-10, Y, 2, 0, 0, 0, 0, 200, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
  GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ12 2010-Feb-10, SIN-HND 2010-Feb-10, Y, 1, Y, 200 (0), 0, 0, 0, 0, 0 (0), 0,
  0, 0, 0, 0, 0,
SQ12 2010-Feb-10, SIN-HND 2010-Feb-10, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
  0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ12, 2010-Feb-11
*****
*****
Leg-Dates:
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Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
  Elapsed, Distance, Capacity,
SQ12 2010-Feb-11, SIN-HND, 2010-Feb-11, 09:20:00, 2010-Feb-11, 12:00:00, 07:40:
  00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhycAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
  CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 2010-Feb-11, SIN-HND 2010-Feb-11, Y, 200, 200, 0, 0, 0, 0, 0, 0, 0, 0, 200
  , 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ12 2010-Feb-11, SIN-HND 2010-Feb-11, Y, 1, 0, 0, 0, 0, 200, 0,
SQ12 2010-Feb-11, SIN-HND 2010-Feb-11, Y, 2, 0, 0, 0, 0, 200, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
  GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ12 2010-Feb-11, SIN-HND 2010-Feb-11, Y, 1, Y, 200 (0), 0, 0, 0, 0, 0 (0), 0,
  0, 0, 0, 0, 0,
SQ12 2010-Feb-11, SIN-HND 2010-Feb-11, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
  0, 0, 0, 0, 0,
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*****
FlightDate: SQ12, 2010-Feb-12
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
  Elapsed, Distance, Capacity,
SQ12 2010-Feb-12, SIN-HND, 2010-Feb-12, 09:20:00, 2010-Feb-12, 12:00:00, 07:40:
  00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhycAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
  CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 2010-Feb-12, SIN-HND 2010-Feb-12, Y, 200, 200, 0, 0, 0, 0, 0, 0, 0, 0, 200
  , 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,

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SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ12 2010-Feb-12, SIN-HND 2010-Feb-12, Y, 1, 0, 0, 0, 0, 200, 0,
SQ12 2010-Feb-12, SIN-HND 2010-Feb-12, Y, 2, 0, 0, 0, 0, 200, 0,
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ12 2010-Feb-12, SIN-HND 2010-Feb-12, Y, 1, Y, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQ12 2010-Feb-12, SIN-HND 2010-Feb-12, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ12, 2010-Feb-13
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQ12 2010-Feb-13, SIN-HND, 2010-Feb-13, 09:20:00, 2010-Feb-13, 12:00:00, 07:40:
00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 2010-Feb-13, SIN-HND 2010-Feb-13, Y, 200, 200, 0, 0, 0, 0, 0, 0, 0, 0, 200
, 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ12 2010-Feb-13, SIN-HND 2010-Feb-13, Y, 1, 0, 0, 0, 0, 200, 0,
SQ12 2010-Feb-13, SIN-HND 2010-Feb-13, Y, 2, 0, 0, 0, 0, 200, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ12 2010-Feb-13, SIN-HND 2010-Feb-13, Y, 1, Y, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQ12 2010-Feb-13, SIN-HND 2010-Feb-13, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
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FlightDate: SQ12, 2010-Feb-14
*****
*****
Leg-Dates:
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Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQ12 2010-Feb-14, SIN-HND, 2010-Feb-14, 09:20:00, 2010-Feb-14, 12:00:00, 07:40:
00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 2010-Feb-14, SIN-HND 2010-Feb-14, Y, 200, 200, 0, 0, 0, 0, 0, 0, 0, 0, 200
, 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
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SQL2 2010-Feb-14, SIN-HND 2010-Feb-14, Y, 1, 0, 0, 0, 0, 200, 0,
SQL2 2010-Feb-14, SIN-HND 2010-Feb-14, Y, 2, 0, 0, 0, 0, 200, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
      GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQL2 2010-Feb-14, SIN-HND 2010-Feb-14, Y, 1, Y, 200 (0), 0, 0, 0, 0, 0 (0), 0,
      0, 0, 0, 0, 0,
SQL2 2010-Feb-14, SIN-HND 2010-Feb-14, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
      0, 0, 0, 0, 0,
*****
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FlightDate: SQL2, 2010-Feb-15
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
      Elapsed, Distance, Capacity,
SQL2 2010-Feb-15, SIN-HND, 2010-Feb-15, 09:20:00, 2010-Feb-15, 12:00:00, 07:40:
      00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
      CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQL2 2010-Feb-15, SIN-HND 2010-Feb-15, Y, 200, 200, 0, 0, 0, 0, 0, 0, 0, 200
      , 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQL2 2010-Feb-15, SIN-HND 2010-Feb-15, Y, 1, 0, 0, 0, 0, 200, 0,
SQL2 2010-Feb-15, SIN-HND 2010-Feb-15, Y, 2, 0, 0, 0, 0, 200, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
      GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQL2 2010-Feb-15, SIN-HND 2010-Feb-15, Y, 1, Y, 200 (0), 0, 0, 0, 0, 0 (0), 0,
      0, 0, 0, 0, 0,
SQL2 2010-Feb-15, SIN-HND 2010-Feb-15, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
      0, 0, 0, 0, 0,
*****
*****
FlightDate: SQL2, 2010-Feb-16
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
      Elapsed, Distance, Capacity,
SQL2 2010-Feb-16, SIN-HND, 2010-Feb-16, 09:20:00, 2010-Feb-16, 12:00:00, 07:40:
      00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
      CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQL2 2010-Feb-16, SIN-HND 2010-Feb-16, Y, 200, 200, 0, 0, 0, 0, 0, 0, 0, 200
      , 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQL2 2010-Feb-16, SIN-HND 2010-Feb-16, Y, 1, 0, 0, 0, 0, 200, 0,
SQL2 2010-Feb-16, SIN-HND 2010-Feb-16, Y, 2, 0, 0, 0, 0, 200, 0,
*****
*****
Subclasses:
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Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
    GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ12 2010-Feb-16, SIN-HND 2010-Feb-16, Y, 1, Y, 200 (0), 0, 0, 0, 0, 0 (0), 0,
    0, 0, 0, 0, 0,
SQ12 2010-Feb-16, SIN-HND 2010-Feb-16, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
    0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ12, 2010-Feb-17
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
    Elapsed, Distance, Capacity,
SQ12 2010-Feb-17, SIN-HND, 2010-Feb-17, 09:20:00, 2010-Feb-17, 12:00:00, 07:40:
    00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
    CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 2010-Feb-17, SIN-HND 2010-Feb-17, Y, 200, 200, 0, 0, 0, 0, 0, 0, 0, 0, 200
    , 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ12 2010-Feb-17, SIN-HND 2010-Feb-17, Y, 1, 0, 0, 0, 0, 200, 0,
SQ12 2010-Feb-17, SIN-HND 2010-Feb-17, Y, 2, 0, 0, 0, 0, 200, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
    GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ12 2010-Feb-17, SIN-HND 2010-Feb-17, Y, 1, Y, 200 (0), 0, 0, 0, 0, 0 (0), 0,
    0, 0, 0, 0, 0,
SQ12 2010-Feb-17, SIN-HND 2010-Feb-17, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
    0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ12, 2010-Feb-18
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
    Elapsed, Distance, Capacity,
SQ12 2010-Feb-18, SIN-HND, 2010-Feb-18, 09:20:00, 2010-Feb-18, 12:00:00, 07:40:
    00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
    CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 2010-Feb-18, SIN-HND 2010-Feb-18, Y, 200, 200, 0, 0, 0, 0, 0, 0, 0, 200
    , 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ12 2010-Feb-18, SIN-HND 2010-Feb-18, Y, 1, 0, 0, 0, 0, 200, 0,
SQ12 2010-Feb-18, SIN-HND 2010-Feb-18, Y, 2, 0, 0, 0, 0, 200, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
    GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ12 2010-Feb-18, SIN-HND 2010-Feb-18, Y, 1, Y, 200 (0), 0, 0, 0, 0, 0 (0), 0,
    0, 0, 0, 0, 0,

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SQL12 2010-Feb-18, SIN-HND 2010-Feb-18, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
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*****
FlightDate: SQL12, 2010-Feb-19
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQL12 2010-Feb-19, SIN-HND, 2010-Feb-19, 09:20:00, 2010-Feb-19, 12:00:00, 07:40:
00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhycAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQL12 2010-Feb-19, SIN-HND 2010-Feb-19, Y, 200, 200, 0, 0, 0, 0, 0, 0, 0, 0, 200
, 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQL12 2010-Feb-19, SIN-HND 2010-Feb-19, Y, 1, 0, 0, 0, 0, 200, 0,
SQL12 2010-Feb-19, SIN-HND 2010-Feb-19, Y, 2, 0, 0, 0, 0, 200, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQL12 2010-Feb-19, SIN-HND 2010-Feb-19, Y, 1, Y, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQL12 2010-Feb-19, SIN-HND 2010-Feb-19, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
*****
*****
FlightDate: SQL12, 2010-Feb-20
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQL12 2010-Feb-20, SIN-HND, 2010-Feb-20, 09:20:00, 2010-Feb-20, 12:00:00, 07:40:
00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhycAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQL12 2010-Feb-20, SIN-HND 2010-Feb-20, Y, 200, 200, 0, 0, 0, 0, 0, 0, 0, 0, 200
, 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQL12 2010-Feb-20, SIN-HND 2010-Feb-20, Y, 1, 0, 0, 0, 0, 200, 0,
SQL12 2010-Feb-20, SIN-HND 2010-Feb-20, Y, 2, 0, 0, 0, 0, 200, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQL12 2010-Feb-20, SIN-HND 2010-Feb-20, Y, 1, Y, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQL12 2010-Feb-20, SIN-HND 2010-Feb-20, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
*****
*****
FlightDate: SQL12, 2010-Feb-21
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*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQ12 2010-Feb-21, SIN-HND, 2010-Feb-21, 09:20:00, 2010-Feb-21, 12:00:00, 07:40:
00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhycAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 2010-Feb-21, SIN-HND 2010-Feb-21, Y, 200, 200, 0, 0, 0, 0, 0, 0, 0, 200
, 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ12 2010-Feb-21, SIN-HND 2010-Feb-21, Y, 1, 0, 0, 0, 0, 200, 0,
SQ12 2010-Feb-21, SIN-HND 2010-Feb-21, Y, 2, 0, 0, 0, 0, 200, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ12 2010-Feb-21, SIN-HND 2010-Feb-21, Y, 1, Y, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQ12 2010-Feb-21, SIN-HND 2010-Feb-21, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ12, 2010-Feb-22
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQ12 2010-Feb-22, SIN-HND, 2010-Feb-22, 09:20:00, 2010-Feb-22, 12:00:00, 07:40:
00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhycAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 2010-Feb-22, SIN-HND 2010-Feb-22, Y, 200, 200, 0, 0, 0, 0, 0, 0, 0, 200
, 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ12 2010-Feb-22, SIN-HND 2010-Feb-22, Y, 1, 0, 0, 0, 0, 200, 0,
SQ12 2010-Feb-22, SIN-HND 2010-Feb-22, Y, 2, 0, 0, 0, 0, 200, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ12 2010-Feb-22, SIN-HND 2010-Feb-22, Y, 1, Y, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQ12 2010-Feb-22, SIN-HND 2010-Feb-22, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ12, 2010-Feb-23
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
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      Elapsed, Distance, Capacity,
SQ12 2010-Feb-23, SIN-HND, 2010-Feb-23, 09:20:00, 2010-Feb-23, 12:00:00, 07:40:
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*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
      CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 2010-Feb-23, SIN-HND 2010-Feb-23, Y, 200, 200, 0, 0, 0, 0, 0, 0, 0, 0, 200
      , 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ12 2010-Feb-23, SIN-HND 2010-Feb-23, Y, 1, 0, 0, 0, 0, 200, 0,
SQ12 2010-Feb-23, SIN-HND 2010-Feb-23, Y, 2, 0, 0, 0, 0, 200, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
      GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ12 2010-Feb-23, SIN-HND 2010-Feb-23, Y, 1, Y, 200 (0), 0, 0, 0, 0, 0 (0), 0,
      0, 0, 0, 0, 0,
SQ12 2010-Feb-23, SIN-HND 2010-Feb-23, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
      0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ12, 2010-Feb-24
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
      Elapsed, Distance, Capacity,
SQ12 2010-Feb-24, SIN-HND, 2010-Feb-24, 09:20:00, 2010-Feb-24, 12:00:00, 07:40:
      00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
      CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 2010-Feb-24, SIN-HND 2010-Feb-24, Y, 200, 200, 0, 0, 0, 0, 0, 0, 200
      , 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ12 2010-Feb-24, SIN-HND 2010-Feb-24, Y, 1, 0, 0, 0, 0, 200, 0,
SQ12 2010-Feb-24, SIN-HND 2010-Feb-24, Y, 2, 0, 0, 0, 0, 200, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
      GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ12 2010-Feb-24, SIN-HND 2010-Feb-24, Y, 1, Y, 200 (0), 0, 0, 0, 0, 0 (0), 0,
      0, 0, 0, 0, 0,
SQ12 2010-Feb-24, SIN-HND 2010-Feb-24, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
      0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ12, 2010-Feb-25
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
      Elapsed, Distance, Capacity,
SQ12 2010-Feb-25, SIN-HND, 2010-Feb-25, 09:20:00, 2010-Feb-25, 12:00:00, 07:40:
      00, 0, -05:00:00, 6300, 0,
*****
*****
```

```
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhycAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 2010-Feb-25, SIN-HND 2010-Feb-25, Y, 200, 200, 0, 0, 0, 0, 0, 0, 0, 200
, 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ12 2010-Feb-25, SIN-HND 2010-Feb-25, Y, 1, 0, 0, 0, 0, 200, 0,
SQ12 2010-Feb-25, SIN-HND 2010-Feb-25, Y, 2, 0, 0, 0, 0, 200, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ12 2010-Feb-25, SIN-HND 2010-Feb-25, Y, 1, Y, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQ12 2010-Feb-25, SIN-HND 2010-Feb-25, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ12, 2010-Feb-26
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQ12 2010-Feb-26, SIN-HND, 2010-Feb-26, 09:20:00, 2010-Feb-26, 12:00:00, 07:40:
00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhycAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 2010-Feb-26, SIN-HND 2010-Feb-26, Y, 200, 200, 0, 0, 0, 0, 0, 0, 0, 200
, 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ12 2010-Feb-26, SIN-HND 2010-Feb-26, Y, 1, 0, 0, 0, 0, 200, 0,
SQ12 2010-Feb-26, SIN-HND 2010-Feb-26, Y, 2, 0, 0, 0, 0, 200, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ12 2010-Feb-26, SIN-HND 2010-Feb-26, Y, 1, Y, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQ12 2010-Feb-26, SIN-HND 2010-Feb-26, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ12, 2010-Feb-27
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQ12 2010-Feb-27, SIN-HND, 2010-Feb-27, 09:20:00, 2010-Feb-27, 12:00:00, 07:40:
00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhycAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 2010-Feb-27, SIN-HND 2010-Feb-27, Y, 200, 200, 0, 0, 0, 0, 0, 0, 0, 200
```

```

, 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ12 2010-Feb-27, SIN-HND 2010-Feb-27, Y, 1, 0, 0, 0, 0, 200, 0,
SQ12 2010-Feb-27, SIN-HND 2010-Feb-27, Y, 2, 0, 0, 0, 0, 200, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ12 2010-Feb-27, SIN-HND 2010-Feb-27, Y, 1, Y, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQ12 2010-Feb-27, SIN-HND 2010-Feb-27, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
*****
*****
FlightDate: SQ12, 2010-Feb-28
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset,
Elapsed, Distance, Capacity,
SQ12 2010-Feb-28, SIN-HND, 2010-Feb-28, 09:20:00, 2010-Feb-28, 12:00:00, 07:40:
00, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group,
CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 2010-Feb-28, SIN-HND 2010-Feb-28, Y, 200, 200, 0, 0, 0, 0, 0, 0, 0, 0, 200
, 9, 0, 0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ12 2010-Feb-28, SIN-HND 2010-Feb-28, Y, 1, 0, 0, 0, 0, 200, 0,
SQ12 2010-Feb-28, SIN-HND 2010-Feb-28, Y, 2, 0, 0, 0, 0, 200, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs,
GrpBks (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
SQ12 2010-Feb-28, SIN-HND 2010-Feb-28, Y, 1, Y, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
SQ12 2010-Feb-28, SIN-HND 2010-Feb-28, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0,
0, 0, 0, 0, 0,
*****

```

## 13.6 Exploring the Predefined BOM Tree

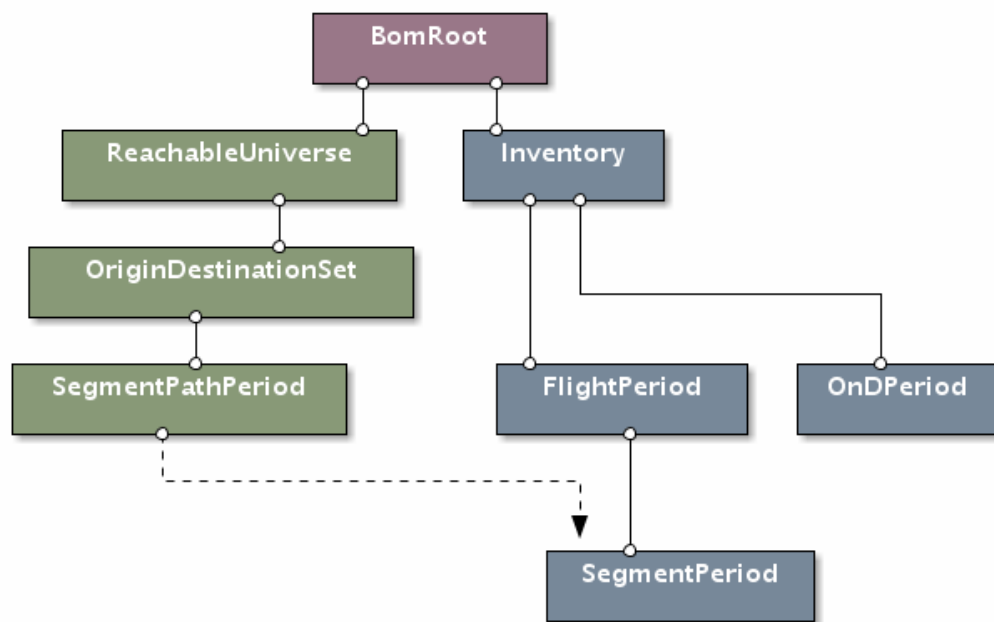


Figure 2: AirSched BOM tree

AirSched predefines a BOM (Business Object Model) tree specific to the airline IT arena.

### 13.6.1 Airline Network BOM Tree

- `AIRSCHEd::ReachableUniverse`
- `AIRSCHEd::OriginDestinationSet`
- `AIRSCHEd::SegmentPathPeriod`

### 13.6.2 Airline Schedule BOM Tree

- `stdair::Inventory`
- `stdair::FlightPeriod`
- `stdair::SegmentPeriod`
- `stdair::OnDPeriod`

## 13.7 Extending the BOM Tree

## 13.8 The travel solution calculation procedure

The project AirSched aims at calculating a list of **travel solutions** for every incoming **booking request**.

## 14 Supported Systems

### 14.1 Table of Contents

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  - [Linux Systems](#)
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    - \* [Gentoo Linux with ACML](#)
    - \* [Gentoo Linux with ATLAS](#)
    - \* [Gentoo Linux with MKL](#)
    - \* [Gentoo Linux with NetLib's BLAS and LAPACK](#)
    - \* [Red Hat Enterprise Linux with AirSched External](#)
    - \* [SUSE Linux 10.0 with NetLib's BLAS and LAPACK](#)
    - \* [SUSE Linux 10.0 with MKL](#)
  - [Windows Systems](#)
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    - \* [Microsoft Windows XP with MinGW, MSYS and ACML](#)
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    - \* [Microsoft Windows XP with MS Visual C++ and Intel MKL](#)
  - [Unix Systems](#)
    - \* [SunOS 5.9 with AirSched External](#)
- [AirSched 3.9.1](#)
- [AirSched 3.9.0](#)
- [AirSched 3.8.1](#)

### 14.2 Introduction

This page is intended to provide a list of AirSched supported systems, i.e. the systems on which configuration, installation and testing process of the AirSched library has been successful. Results are grouped based on minor release number. Therefore, only the latest tests for bug-fix releases are included. Besides, the information on this page is divided into sections dependent on the operating system.

Where necessary, some extra information is given for each tested configuration, e.g. external libraries installed, configuration commands used, etc.

If you manage to compile, install and test the AirSched library on a system not mentioned below, please let us know, so we could update this database.

### 14.3 AirSched 0.2.x

#### 14.3.1 Linux Systems

##### 14.3.1.1 Fedora Core 4 with ATLAS

- **Platform:** Intel Pentium 4
- **Operating System:** Fedora Core 4 (x86)

- **Compiler:** g++ (GCC) 4.0.2 20051125
- **AirSched release:** 0.2.0
- **External Libraries:** From FC4 distribution:
  - fftw3.i386-3.0.1-3
  - fftw3-devel.i386-3.0.1-3
  - atlas-sse2.i386-3.6.0-8.fc4
  - atlas-sse2-devel.i386-3.6.0-8.fc4
  - blas.i386-3.0-35.fc4
  - lapack.i386-3.0-35.fc4
- **Tests Status:** All tests PASSED
- **Comments:** AirSched configured with:

```
% CXXFLAGS="-O3 -pipe -march=pentium4" ./configure
```
- **Date:** March 7, 2006
- **Tester:** Tony Ottosson

#### 14.3.1.2 Gentoo Linux with ACML

- **Platform:** AMD Sempron 3000+
- **Operating System:** Gentoo Linux 2006.0 (x86 arch)
- **Compiler(s):** g++ (GCC) 3.4.5
- **AirSched release:** 0.2.1
- **External Libraries:** Compiled and installed from portage tree:
  - sci-libs/acml-3.0.0
- **Tests Status:** All tests PASSED
- **Comments:** BLAS and LAPACK libs set by using the following system commands:

```
% eselect blas set ACML
% eselect lapack set ACML
```

AirSched configured with:

```
% export CPPFLAGS="-I/usr/include/acml"
% ./configure --with-blas="-lblas"
```
- **Date:** March 31, 2006
- **Tester:** Adam Piatyszek (ediap)



## 14.3.1.3 Gentoo Linux with ATLAS

- **Platform:** Intel Pentium M Centrino
- **Operating System:** Gentoo Linux 2006.0 (x86)
- **Compiler:** g++ (GCC) 3.4.5
- **AirSched release:** 0.2.1
- **External Libraries:** Compiled and installed from portage tree:
  - sci-libs/fftw-3.1
  - sci-libs/blas-atlas-3.6.0-r1
  - sci-libs/lapack-atlas-3.6.0
- **Tests Status:** All tests PASSED
- **Comments:** BLAS and LAPACK libs set by using the following system commands:

```
% eselect blas set ATLAS
% eselect lapack set ATLAS
```

AirSched configured with:

```
% ./configure --with-blas="-lblas"
```

- **Date:** March 31, 2006
- **Tester:** Adam Piatyszek (ediap)

## 14.3.1.4 Gentoo Linux with MKL

- **Platform:** Intel Pentium M Centrino
- **Operating System:** Gentoo Linux 2006.0 (x86 arch)
- **Compiler:** g++ (GCC) 3.4.5
- **AirSched release:** 0.2.0
- **External Libraries:** Intel Math Kernel Library (MKL) 8.0.1 installed manually in the following directory:  
/opt/intel/mkl/8.0.1
- **Tests Status:** All tests PASSED
- **Comments:** AirSched configured using the following commands:

```
% export LDFLAGS="-L/opt/intel/mkl/8.0.1/lib/32"
% export CPPFLAGS="-I/opt/intel/mkl/8.0.1/include"
% ./configure
```

- **Date:** February 28, 2006
- **Tester:** Adam Piatyszek (ediap)

## 14.3.1.5 Gentoo Linux with NetLib's BLAS and LAPACK

- **Platform:** Intel Pentium M Centrino
- **Operating System:** Gentoo Linux 2006.0 (x86)
- **Compiler:** g++ (GCC) 3.4.5
- **AirSched release:** 0.2.1
- **External Libraries:** Compiled and installed from portage tree:
  - sci-libs/fftw-3.1
  - sci-libs/blas-reference-19940131-r2
  - sci-libs/cblas-reference-20030223
  - sci-libs/lapack-reference-3.0-r2
- **Tests Status:** All tests PASSED
- **Comments:** BLAS and LAPACK libs set by using the following system commands:

```
% blas-config reference
% lapack-config reference
```

AirSched configured with:

```
% ./configure --with-blas="-lblas"
```

- **Date:** March 31, 2006
- **Tester:** Adam Piatyszek (ediap)

## 14.3.1.6 Red Hat Enterprise Linux with AirSched External

- **Platform:** Intel Pentium 4
- **Operating System:** Red Hat Enterprise Linux AS release 4 (Nahant Update 2)
- **Compiler:** g++ (GCC) 3.4.4 20050721 (Red Hat 3.4.4-2)
- **AirSched release:** 0.2.0
- **External Libraries:** BLAS, CBLAS, LAPACK and FFTW libraries from AirSched External 2.1.1 package
- **Tests Status:** All tests PASSED
- **Date:** March 7, 2006
- **Tester:** Erik G. Larsson

## 14.3.1.7 SUSE Linux 10.0 with NetLib's BLAS and LAPACK

- **Platform:** Intel Pentium 4 CPU 3.20GHz (64-bit)
- **Operating System:** SUSE Linux 10.0 (x86\_64)
- **Compiler(s):** g++ (GCC) 4.0.2
- **AirSched release:** 0.2.0
- **External Libraries:** BLAS, LAPACK and FFTW libraries installed from OpenSuse 10.0 RPM repository:
  - blas-3.0-926
  - lapack-3.0-926
  - fftw3-3.0.1-114

- fftw3-threads-3.0.1-114
- fftw3-devel-3.0.1-114

- **Tests Status:** All tests PASSED
- **Comments:** AirSched configured with:

```
% export CXXFLAGS="-m64 -march=nocona -O3 -pipe"
% ./configure --with-lapack="/usr/lib64/liblapack.so.3"
```

- **Date:** March 1, 2006
- **Tester:** Adam Piatyszek (ediap)

#### 14.3.1.8 SUSE Linux 10.0 with MKL

- **Platform:** Intel Pentium 4 CPU 3.20GHz (64-bit)
- **Operating System:** SUSE Linux 10.0 (x86\_64)
- **Compiler(s):** g++ (GCC) 4.0.2
- **AirSched release:** 0.2.0
- **External Libraries:** Intel Math Kernel Library (MKL) 8.0.1 installed manually in the following directory:  
/opt/intel/mkl/8.0.1
- **Tests Status:** All tests PASSED
- **Comments:** AirSched configured with:

```
% export CXXFLAGS="-m64 -march=nocona -O3 -pipe"
% export LDFLAGS="-L/opt/intel/mkl/8.0.1/lib/em64t"
% export CPPFLAGS="-I/opt/intel/mkl/8.0.1/include"
% ./configure
```

- **Date:** March 1, 2006
- **Tester:** Adam Piatyszek (ediap)

### 14.3.2 Windows Systems

#### 14.3.2.1 Microsoft Windows XP with Cygwin

- **Platform:** AMD Sempron 3000+
- **Operating System:** Microsoft Windows XP SP2, Cygwin 1.5.19-4
- **Compiler(s):** g++ (GCC) 3.4.4 (cygming special)
- **AirSched release:** 0.2.1
- **External Libraries:** Installed from Cygwin's repository:
  - fftw-3.0.1-2
  - fftw-dev-3.0.1-1
  - lapack-3.0-4
- **Tests Status:** All tests PASSED
- **Comments:** Only static library can be built. AirSched configured with:

```
% ./configure
```

- **Date:** March 31, 2006
- **Tester:** Adam Piatyszek (ediap)

## 14.3.2.2 Microsoft Windows XP with Cygwin and ATLAS

- **Platform:** AMD Sempron 3000+
- **Operating System:** Microsoft Windows XP SP2, Cygwin 1.5.19-4
- **Compiler(s):** g++ (GCC) 3.4.4 (cygming special)
- **AirSched release:** 0.2.1
- **External Libraries:** Installed from Cygwin's repository:
  - fftw-3.0.1-2
  - fftw-dev-3.0.1-1

ATLAS BLAS and LAPACK libraries from AirSched External 2.1.1 package configured using:

```
% ./configure --enable-atlas --disable-fftw
```

- **Tests Status:** All tests PASSED
- **Comments:** Only static library can be built. AirSched configured with:

```
% export LDFLAGS="-L/usr/local/lib"
% ./configure
```

- **Date:** March 31, 2006
- **Tester:** Adam Piatyszek (ediap)

## 14.3.2.3 Microsoft Windows XP with Cygwin and ACML

- **Platform:** AMD Sempron 3000+
- **Operating System:** Microsoft Windows XP SP2, Cygwin 1.5.19-4
- **Compiler(s):** g++ (GCC) 3.4.4 (cygming special)
- **AirSched release:** 0.2.2
- **External Libraries:** ACML version 3.1.0 (acml3.1.0-32-win32-g77.exe) installed into a default directory, i.e. "c:\Program Files\AMD\acml3.1.0"
- **Tests Status:** All tests PASSED
- **Comments:** Only static library can be built. AirSched configured with:

```
% export LDFLAGS="-L/cygdrive/c/Progra~1/AMD/acml3.1.0/gnu32/lib"
% export CPPFLAGS="-I/cygdrive/c/Progra~1/AMD/acml3.1.0/gnu32/include"
% ./configure --enable-debug
```

- **Date:** May 15, 2006
- **Tester:** Adam Piatyszek (ediap)

## 14.3.2.4 Microsoft Windows XP with MinGW, MSYS and ACML

- **Platform:** AMD Sempron 3000+
- **Operating System:** Microsoft Windows XP SP2, MinGW 5.0.2, MSYS 1.0.10
- **Compiler(s):** g++ (GCC) 3.4.4 (mingw special)
- **AirSched release:** 0.2.2
- **External Libraries:** ACML version 3.1.0 (acml3.1.0-32-win32-g77.exe) installed into a default directory, i.e. "c:\Program Files\AMD\acml3.1.0"
- **Tests Status:** All tests PASSED
- **Comments:** Only static library can be built. AirSched configured with:

```
% export LDFLAGS="-L/c/Program Files/AMD/acml3.1.0/gnu32/lib"
% export CPPFLAGS="-I/c/Program Files/AMD/acml3.1.0/gnu32/include"
% ./configure --enable-debug
```

- **Date:** May 15, 2006
- **Tester:** Adam Piatyszek (ediap)

## 14.3.2.5 Microsoft Windows XP with MinGW, MSYS and AirSched External

- **Platform:** AMD Sempron 3000+
- **Operating System:** Microsoft Windows XP SP2, MinGW 5.0.2, MSYS 1.0.10
- **Compiler(s):** g++ (GCC) 3.4.4 (mingw special)
- **AirSched release:** 0.2.5
- **External Libraries:** BLAS, CBLAS, LAPACK and FFTW libraries from AirSched External 2.2.0 package
- **Tests Status:** All tests PASSED
- **Comments:** Only static library can be built. AirSched configured with:

```
% export LDFLAGS="-L/usr/local/lib"
% export CPPFLAGS="-I/usr/local/include"
% export CXXFLAGS="-Wall -O3 -march=athlon-tbird -pipe"
% ./configure --disable-html-doc
```

- **Date:** August 11, 2006
- **Tester:** Adam Piatyszek (ediap)

## 14.3.2.6 Microsoft Windows XP with MS Visual C++ and Intel MKL

- **Platform:** AMD Sempron 3000+
- **Operating System:** Microsoft Windows XP SP2
- **Compiler(s):** Microsoft Visual C++ 2005 .NET
- **AirSched release:** 0.2.5
- **External Libraries:** Intel Math Kernel Library (MKL) 8.1 installed manually in the following directory: "C:\Program Files\Intel\MKL\8.1"
- **Tests Status:** Not fully tested. Some AirSched based programs compiled and run with success.
- **Comments:** Only static library can be built. AirSched built by opening the "win32\airsched.vcproj" project file in MSVC++ and executing "Build -> Build Solution" command from menu.
- **Date:** August 11, 2006
- **Tester:** Adam Piatyszek (ediap)

### 14.3.3 Unix Systems

#### 14.3.3.1 SunOS 5.9 with AirSched External

- **Platform:** SUNW, Sun-Blade-100 (SPARC)
- **Operating System:** SunOS 5.9 Generic\_112233-10
- **Compiler(s):** g++ (GCC) 3.4.5
- **AirSched release:** 0.2.2
- **External Libraries:** BLAS, CBLAS, LAPACK and FFTW libraries from AirSched External 2.1.1 package. The following configuration command has been used:

```
% export CFLAGS="-mcpu=ultrasparc -O2 -pipe -funroll-all-loops"
% ./configure
```

- **Tests Status:** All tests PASSED
- **Comments:** AirSched configured with:

```
% export LDFLAGS="-L/usr/local/lib"
% export CPPFLAGS="-I/usr/local/include"
% export CXXFLAGS="-mcpu=ultrasparc -O2 -pipe"
% ./configure --enable-debug
```

- **Date:** May 15, 2006
- **Tester:** Adam Piatyszek (ediap)

## 15 AirSched Supported Systems (Previous Releases)

### 15.1 AirSched 3.9.1

### 15.2 AirSched 3.9.0

### 15.3 AirSched 3.8.1

## 16 Tutorials

### 16.1 Table of Contents

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- [Your first networkBuilde](#)
  - [Summary of the different steps](#)
  - [Result of the Batch Program](#)
- [Network building with an input file](#)
  - [How to build a network input file?](#)
  - [Building the BOM tree with an input file](#)
  - [Result of the Batch Program](#)

## 16.2 Preparing the AirSched Project for Development

The source code for these examples can be found in the `batches` and `test/airsched` directories. They are compiled along with the rest of the `AirSched` project. See the [Users Guide](#) for more details on how to build the `AirSched` project.

### 16.3 Your first networkBuild

#### 16.3.1 Summary of the different steps

All the steps below can be found in the same order in the batch `AirSched.cpp` program.

First, we instantiate the `AIRSCHEM_Service` object:

Then, we construct a default sample list of travel solutions and a default booking request (as mentioned in `ug_procedure_bookingrequest` and `ug_procedure_travelsolution` parts):

```
stdair::TravelSolutionList_T lTravelSolutionList;  
airschedService.buildSegmentPathList (lTravelSolutionList, lBookingRequest);
```

For basic use, the default BOM tree can be built using:

The main step is the network building (see [The travel solution calculation procedure](#)):

#### 16.3.2 Result of the Batch Program

When the `AirSched.cpp` program is run (with the `-b` option), the log output file should look like:

What is interesting is to compare the travel solution list (here reduced to a single travel solution) displayed before:

and after the network building:

Between the two groups of dashes, we can see that a network option structure has been added by the network builder: the price is 450 EUR for the Y class, the ticket is refundable but there are exchange fees and the customer must stay over on Saturday night.

Let's return to our default BOM tree display: the only network rule stored was a match for the travel solution into consideration (same origin airport, same destination airport, flight date included in the network rule date range, same airline "BA", ...).

By looking at the network rule trip type "RT", we can guess we face a round trip network: that means the price given in the default bom tree construction in `stdair::CmdBomManager.hpp` has been divided by 2 because we are considering either an inbound trip or an outbound one.

## 16.4 Network building with an input file

### 16.4.1 How to build a network input file?

The objective here is to build a network input file to network build the default travel solution list built using:

This travel solution list, reduced to a singleton, can be displayed as done before:

We deduce:

- we need a network rule whose origin-destination couple is "LHR, SYD".
- the date range must include the date "2011-06-10".
- the time range must include the time "21:45".
- the airline operating is "BA", so it must be the airline pricing.

We can deduce a part of our network rule file :

```
// Fares: fare ID; OriginCity; DestinationCity; TripType; DateRangeStart;
      DateRangeEnd; DepartureTimeRangeStart; DepartureTimeRangeEnd; POS; CabinCode;
      Channel; AdvancePurchase; SaturdayNight; ChangeFees; NonRefundable; MinimumStay; Price;
      nb Segments
// Segment: AirlineCode; Class;
1; LHR; SYD; ??; 2011-01-01; 2011-12-31; 00:00; 23:59; ???; ?; ??; ?; ?; ?; ?;
  ?; ???; BA; ?;
```

We have no information about stay duration and advance purchase (such information are contained into the booking request): so let us put "0" to embrace all the requests possible.

No information for the point-of-sale and the channel too: let us consider all the channels ("IN", "DN", "IF" and "DF") and all the points of sale (the origin "LHR", the destination "SYD" and the rest-of-the-world "ROW") existing. To access this information, we could look into the default booking request.

The input file is now:

```
// Fares: fare ID; OriginCity; DestinationCity; TripType; DateRangeStart;
      DateRangeEnd; DepartureTimeRangeStart; DepartureTimeRangeEnd; POS; CabinCode;
      Channel; AdvancePurchase; SaturdayNight; ChangeFees; NonRefundable; MinimumStay; Price;
      nb Segments
// Segment: AirlineCode; Class;
1; LHR; SYD; ??; 2011-01-01; 2011-12-31; 00:00; 23:59; LHR; ?; IN; 0; ?; ?; ?;
  0; ???; BA; ?;
2; LHR; SYD; ??; 2011-01-01; 2011-12-31; 00:00; 23:59; LHR; ?; IF; 0; ?; ?; ?;
  0; ???; BA; ?;
3; LHR; SYD; ??; 2011-01-01; 2011-12-31; 00:00; 23:59; LHR; ?; DN; 0; ?; ?; ?;
  0; ???; BA; ?;
4; LHR; SYD; ??; 2011-01-01; 2011-12-31; 00:00; 23:59; LHR; ?; DF; 0; ?; ?; ?;
  0; ???; BA; ?;
5; LHR; SYD; ??; 2011-01-01; 2011-12-31; 00:00; 23:59; SYD; ?; IN; 0; ?; ?; ?;
  0; ???; BA; ?;
6; LHR; SYD; ??; 2011-01-01; 2011-12-31; 00:00; 23:59; SYD; ?; IF; 0; ?; ?; ?;
  0; ???; BA; ?;
7; LHR; SYD; ??; 2011-01-01; 2011-12-31; 00:00; 23:59; SYD; ?; DN; 0; ?; ?; ?;
  0; ???; BA; ?;
8; LHR; SYD; ??; 2011-01-01; 2011-12-31; 00:00; 23:59; SYD; ?; DF; 0; ?; ?; ?;
  0; ???; BA; ?;
9; LHR; SYD; ??; 2011-01-01; 2011-12-31; 00:00; 23:59; ROW; ?; IN; 0; ?; ?; ?;
  0; ???; BA; ?;
10; LHR; SYD; ??; 2011-01-01; 2011-12-31; 00:00; 23:59; ROW; ?; IF; 0; ?; ?; ?;
  0; ???; BA; ?;
11; LHR; SYD; ??; 2011-01-01; 2011-12-31; 00:00; 23:59; ROW; ?; DN; 0; ?; ?; ?;
  0; ???; BA; ?;
12; LHR; SYD; ??; 2011-01-01; 2011-12-31; 00:00; 23:59; ROW; ?; DF; 0; ?; ?; ?;
  0; ???; BA; ?;
```



Let us say we have just the Economy cabin "Y" and British Airways prices ticket for class "Y".

No information about the trip type, so we duplicate all the network rules for both type: one-way "OW" and round-trip "RT" (to access this information, we could look to the default booking request).

The network options are all set to a default value "T" (meaning true) and the network values are chosen to be all distinct.

We obtain:

```
// Fares: fare ID; OriginCity; DestinationCity; TripType; DateRangeStart;
//         DateRangeEnd; DepartureTimeRangeStart; DepartureTimeRangeEnd; POS; CabinCode;
//         Channel; AdvancePurchase; SaturdayNight; ChangeFees; NonRefundable; MinimumStay; Price;
//         nb Segments
// Segment: AirlineCode; Class;
1; LHR; SYD; OW; 2011-01-01; 2011-12-31; 00:00; 23:59; LHR; Y; IN; 0; T; T; T;
   0; 50; BA; Y;
2; LHR; SYD; OW; 2011-01-01; 2011-12-31; 00:00; 23:59; LHR; Y; IF; 0; T; T; T;
   0; 150; BA; Y;
3; LHR; SYD; OW; 2011-01-01; 2011-12-31; 00:00; 23:59; LHR; Y; DN; 0; T; T; T;
   0; 250; BA; Y;
4; LHR; SYD; OW; 2011-01-01; 2011-12-31; 00:00; 23:59; LHR; Y; DF; 0; T; T; T;
   0; 350; BA; Y;
5; LHR; SYD; OW; 2011-01-01; 2011-12-31; 00:00; 23:59; SYD; Y; IN; 0; T; T; T;
   0; 450; BA; Y;
6; LHR; SYD; OW; 2011-01-01; 2011-12-31; 00:00; 23:59; SYD; Y; IF; 0; T; T; T;
   0; 550; BA; Y;
7; LHR; SYD; OW; 2011-01-01; 2011-12-31; 00:00; 23:59; SYD; Y; DN; 0; T; T; T;
   0; 650; BA; Y;
8; LHR; SYD; OW; 2011-01-01; 2011-12-31; 00:00; 23:59; SYD; Y; DF; 0; T; T; T;
   0; 750; BA; Y;
9; LHR; SYD; OW; 2011-01-01; 2011-12-31; 00:00; 23:59; ROW; Y; IN; 0; T; T; T;
   0; 850; BA; Y;
10; LHR; SYD; OW; 2011-01-01; 2011-12-31; 00:00; 23:59; ROW; Y; IF; 0; T; T; T;
   0; 950; BA; Y;
11; LHR; SYD; OW; 2011-01-01; 2011-12-31; 00:00; 23:59; ROW; Y; DN; 0; T; T; T;
   0; 1050; BA; Y;
12; LHR; SYD; OW; 2011-01-01; 2011-12-31; 00:00; 23:59; ROW; Y; DF; 0; T; T; T;
   0; 1150; BA; Y;
13; LHR; SYD; RT; 2011-01-01; 2011-12-31; 00:00; 23:59; LHR; Y; IN; 0; T; T; T;
   0; 90; BA; Y;
14; LHR; SYD; RT; 2011-01-01; 2011-12-31; 00:00; 23:59; LHR; Y; IF; 0; T; T; T;
   0; 190; BA; Y;
15; LHR; SYD; RT; 2011-01-01; 2011-12-31; 00:00; 23:59; LHR; Y; DN; 0; T; T; T;
   0; 290; BA; Y;
16; LHR; SYD; RT; 2011-01-01; 2011-12-31; 00:00; 23:59; LHR; Y; DF; 0; T; T; T;
   0; 390; BA; Y;
17; LHR; SYD; RT; 2011-01-01; 2011-12-31; 00:00; 23:59; SYD; Y; IN; 0; T; T; T;
   0; 490; BA; Y;
18; LHR; SYD; RT; 2011-01-01; 2011-12-31; 00:00; 23:59; SYD; Y; IF; 0; T; T; T;
   0; 590; BA; Y;
19; LHR; SYD; RT; 2011-01-01; 2011-12-31; 00:00; 23:59; SYD; Y; DN; 0; T; T; T;
   0; 690; BA; Y;
20; LHR; SYD; RT; 2011-01-01; 2011-12-31; 00:00; 23:59; SYD; Y; DF; 0; T; T; T;
   0; 790; BA; Y;
21; LHR; SYD; RT; 2011-01-01; 2011-12-31; 00:00; 23:59; ROW; Y; IN; 0; T; T; T;
   0; 890; BA; Y;
22; LHR; SYD; RT; 2011-01-01; 2011-12-31; 00:00; 23:59; ROW; Y; IF; 0; T; T; T;
   0; 990; BA; Y;
23; LHR; SYD; RT; 2011-01-01; 2011-12-31; 00:00; 23:59; ROW; Y; DN; 0; T; T; T;
   0; 1090; BA; Y;
24; LHR; SYD; RT; 2011-01-01; 2011-12-31; 00:00; 23:59; ROW; Y; DF; 0; T; T; T;
   0; 1190; BA; Y;
```

#### 16.4.2 Building the BOM tree with an input file

The steps are the same as before [Summary of the different steps](#) except the bom tree must be built using the network input file :

#### 16.4.3 Result of the Batch Program

When the `AirSched.cpp` program is run with the `-f` option linking with the file built just above:

```
~/AirSched -f ~/<YourFileName>.csv
```

the last lines of the log output should look like:

```
[D]~/AirSchedgit/AirSched/batches/AirSched.cpp:223: Travel solutions:
    [0] [0] BA, 9, 2011-06-10, LHR, SYD, 21:45 --- Y, 145, 1 1 1 ---
```

We have just one network option added to the travel solution. We can deduce from the price value 145 that the network builder used the network rule number 15 to price the travel solution. We have an inbound or outbound trip of a round trip: the total price 290 has been divided by 2.

## 17 Command-Line Test to Demonstrate How To Test the AirSched Project

```
*/
// //////////////////////////////////////
// Import section
// //////////////////////////////////////
// STL
#include <sstream>
#include <fstream>
#include <string>
// Boost Unit Test Framework (UTF)
#define BOOST_TEST_DYN_LINK
#define BOOST_TEST_MAIN
#define BOOST_TEST_MODULE InventoryTestSuite
#include <boost/test/unit_test.hpp>
// StdAir
#include <stdair/basic/BasLogParams.hpp>
#include <stdair/basic/BasDBParams.hpp>
#include <stdair/basic/BasFileMgr.hpp>
#include <stdair/bom/TravelSolutionStruct.hpp>
#include <stdair/bom/BookingRequestStruct.hpp>
#include <stdair/service/Logger.hpp>
// AirSched
#include <airsched/AIRSCHEM_Service.hpp>
#include <airsched/config/airsched-paths.hpp>

namespace boost_utf = boost::unit_test;

// (Boost) Unit Test XML Report
std::ofstream utfReportStream ("AirlineScheduleTestSuite_utfresults.xml");

struct UnitTestConfig {
    UnitTestConfig() {
        boost_utf::unit_test_log.set_stream (utfReportStream);
        boost_utf::unit_test_log.set_format (boost_utf::XML);
        boost_utf::unit_test_log.set_threshold_level (boost_utf::log_test_units);
        //boost_utf::unit_test_log.set_threshold_level
        (boost_utf::log_successful_tests);
    }

    ~UnitTestConfig() {
    }
};

// ////////////////////////////////// Main: Unit Test Suite //////////////////////////////////

// Set the UTF configuration (re-direct the output to a specific file)
BOOST_GLOBAL_FIXTURE (UnitTestConfig);

// Start the test suite
BOOST_AUTO_TEST_SUITE (master_test_suite)

BOOST_AUTO_TEST_CASE (airsched_simple_inventory_sell) {

    // Input file name
    const stdair::Filename_T lScheduleInputFilename (STDAIR_SAMPLE_DIR
        "/schedule03.csv");

    // Output log File
    const stdair::Filename_T lLogFilename ("AirlineScheduleTestSuite.log");

    // Check that the file path given as input corresponds to an actual file
    bool doesExistAndIsReadable =
        stdair::BasFileMgr::doesExistAndIsReadable (lScheduleInputFilename);
    BOOST_CHECK_MESSAGE (doesExistAndIsReadable == true,
        "The '" << lScheduleInputFilename
        << "' input file can not be open and read");

    // Set the log parameters
```

```

std::ofstream logOutputFile;
// Open and clean the log outputfile
logOutputFile.open (lLogFilename.c_str());
logOutputFile.clear();

// Instantiate the AirSched service
const stdair::BasLogParams lLogParams (stdair::LOG::DEBUG, logOutputFile);
AIRSCHED::AIRSCHED_Service airschedService (
    lLogParams);

// Build the BOM tree from parsing input files
airschedService.parseAndLoad (lScheduleInputFilename);

// Create an empty booking request structure
// \todo: fill the booking request structure from the input parameters
const stdair::AirportCode_T lOrigin ("NCE");
const stdair::AirportCode_T lDestination ("BKK");
const stdair::AirportCode_T lPOS ("NCE");
const stdair::Date_T lPreferredDepartureDate(2007, boost::gregorian::Apr, 21)
;
const stdair::Date_T lRequestDate (2007, boost::gregorian::Mar, 21);
const stdair::Duration_T lRequestTime (boost::posix_time::hours(8));
const stdair::DateTime_T lRequestDateTime (lRequestDate, lRequestTime);
const stdair::CabinCode_T lPreferredCabin ("Bus");
const stdair::PartySize_T lPartySize (3);
const stdair::ChannelLabel_T lChannel ("DF");
const stdair::TripType_T lTripType ("RO");
const stdair::DayDuration_T lStayDuration (5);
const stdair::FrequentFlyer_T lFrequentFlyerType ("NONE");
const stdair::Duration_T lPreferredDepartureTime (boost::posix_time::hours(10)
);
const stdair::WTP_T lWTP (2000.0);
const stdair::PriceValue_T lValueOfTime (20.0);
const stdair::BookingRequestStruct lBookingRequest (lOrigin, lDestination,
                                                    lPOS,
                                                    lPreferredDepartureDate,
                                                    lRequestDateTime,
                                                    lPreferredCabin,
                                                    lPartySize, lChannel,
                                                    lTripType, lStayDuration,
                                                    lFrequentFlyerType,
                                                    lPreferredDepartureTime,
                                                    lWTP, lValueOfTime);

//
stdair::TravelSolutionList_T lTravelSolutionList;
airschedService.buildSegmentPathList (lTravelSolutionList, lBookingRequest);
const unsigned int lNbOfTravelSolutions = lTravelSolutionList.size();

// \todo: change the expected number of travel solutions to the actual number
const unsigned int lExpectedNbOfTravelSolutions = 4;

// DEBUG
STDAIR_LOG_DEBUG ("Number of travel solutions for the booking request ' "
                  << lBookingRequest.describe() << "': "
                  << lNbOfTravelSolutions << ". It is expected to be "
                  << lExpectedNbOfTravelSolutions << ".");

BOOST_CHECK_EQUAL (lNbOfTravelSolutions, lExpectedNbOfTravelSolutions);

BOOST_CHECK_MESSAGE(lNbOfTravelSolutions == lExpectedNbOfTravelSolutions,
                    "The number of travel solutions for the booking request '
                    "
                    << lBookingRequest.describe() << "' is equal to "
                    << lNbOfTravelSolutions << ", but it should be equal to "
                    << lExpectedNbOfTravelSolutions);

// Close the Log outputfile
logOutputFile.close();
}

// End the test suite
BOOST_AUTO_TEST_SUITE_END()

/*!

```

## 18 Namespace Index

### 18.1 Namespace List

Here is a list of all namespaces with brief descriptions:

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## 19 Class Index

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std::basic_fstream< wchar_t >	
std::basic_ifstream< char >	
std::basic_ifstream< wchar_t >	
std::basic_ios< char >	
std::basic_ios< wchar_t >	
std::basic_iostream< char >	
std::basic_iostream< wchar_t >	
std::basic_istream< char >	
std::basic_istream< wchar_t >	
std::basic_istreamstream< char >	
std::basic_istreamstream< wchar_t >	
std::basic_ofstream< char >	
std::basic_ofstream< wchar_t >	
std::basic_ostream< char >	
std::basic_ostream< wchar_t >	
std::basic_ostringstream< char >	
std::basic_ostringstream< wchar_t >	
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## 22 Namespace Documentation

### 22.1 airsched Namespace Reference

#### Classes

- struct [store\\_place\\_element](#)
- struct [store\\_date](#)
- struct [store\\_airline\\_sign](#)
- struct [store\\_airline\\_code](#)
- struct [store\\_airline\\_name](#)
- struct [store\\_passenger\\_number](#)
- struct [store\\_adult\\_passenger\\_type](#)
- struct [store\\_child\\_passenger\\_type](#)
- struct [store\\_pet\\_passenger\\_type](#)

- struct [SearchStringParser](#)
- struct [Place\\_T](#)
- struct [Date\\_T](#)
- struct [Airline\\_T](#)
- struct [Passenger\\_T](#)
- struct [SearchString\\_T](#)

#### Typedefs

- typedef std::vector< [Place\\_T](#) > [PlaceList\\_T](#)
- typedef std::vector< [Date\\_T](#) > [DateList\\_T](#)
- typedef std::vector< [Airline\\_T](#) > [AirlineList\\_T](#)
- typedef std::vector< [Passenger\\_T](#) > [PassengerList\\_T](#)

#### Functions

- [SearchString\\_T parseBookingRequest](#) (const std::string &iSearchString)

#### Variables

- boost::spirit::classic::int\_parser  
< unsigned int, 10, 1, 1 > [int1\\_p](#)
- boost::spirit::classic::uint\_parser  
< unsigned int, 10, 1, 1 > [uint1\\_p](#)
- boost::spirit::classic::uint\_parser  
< unsigned int, 10, 1, 2 > [uint1\\_2\\_p](#)
- boost::spirit::classic::uint\_parser  
< int, 10, 2, 2 > [uint2\\_p](#)
- boost::spirit::classic::uint\_parser  
< int, 10, 2, 4 > [uint2\\_4\\_p](#)
- boost::spirit::classic::uint\_parser  
< int, 10, 4, 4 > [uint4\\_p](#)
- boost::spirit::classic::uint\_parser  
< int, 10, 1, 4 > [uint1\\_4\\_p](#)

#### 22.1.1 Typedef Documentation

##### 22.1.1.1 typedef std::vector<Place\_T> airsched::PlaceList\_T

List of Place strucutres.

Definition at line 24 of file [BookingRequestParser.hpp](#).

##### 22.1.1.2 typedef std::vector<Date\_T> airsched::DateList\_T

List of Date strucutres.

Definition at line 49 of file [BookingRequestParser.hpp](#).

##### 22.1.1.3 typedef std::vector<Airline\_T> airsched::AirlineList\_T

List of Airline strucutres.

Definition at line 68 of file [BookingRequestParser.hpp](#).

#### 22.1.1.4 typedef std::vector<Passenger\_T> airsched::PassengerList\_T

List of Passenger strucutres.

Definition at line 91 of file [BookingRequestParser.hpp](#).

### 22.1.2 Function Documentation

#### 22.1.2.1 SearchString\_T airsched::parseBookingRequest ( const std::string & iSearchString )

Parse the booking request.

Sample guadeloupe rio de janeiro 07/22/2009 +aa -ua 2 adults 1 dog

Grammar: search\_string ::= places [dates] (preferred\_airlines) (passengers) dates ::= board\_date [off\_date] places ::= [board\_place] off\_place board\_place ::= place\_elements off\_place ::= place\_elements place\_elements ::= country | city | airport country ::= country\_code | country\_name city ::= city\_code | city\_name airport ::= airport\_code | airport\_name preferred\_airlines ::= [+|-] airline\_code | airline\_name passengers ::= adult\_number adult\_description [child\_number child\_description] [pet\_number pet\_description] adult\_description ::= 'adult' | 'adults' | 'pax' | 'passengers' child\_description ::= 'child' | 'children' | 'kid' | 'kids' pet\_description ::= 'dog' | 'dogs' | 'cat' | 'cats'

Definition at line 373 of file [BookingRequestParser.cpp](#).

### 22.1.3 Variable Documentation

#### 22.1.3.1 boost::spirit::classic::int\_parser<unsigned int, 10, 1, 1> airsched::int1\_p

1-digit-integer parser

Definition at line 203 of file [BookingRequestParser.cpp](#).

#### 22.1.3.2 boost::spirit::classic::uint\_parser<unsigned int, 10, 1, 1> airsched::uint1\_p

1-digit-integer parser

Definition at line 205 of file [BookingRequestParser.cpp](#).

Referenced by [airsched::SearchStringParser::definition< ScannerT >::definition\(\)](#).

#### 22.1.3.3 boost::spirit::classic::uint\_parser<unsigned int, 10, 1, 2> airsched::uint1\_2\_p

Up-to-2-digit-integer parser

Definition at line 207 of file [BookingRequestParser.cpp](#).

Referenced by [airsched::SearchStringParser::definition< ScannerT >::definition\(\)](#).

#### 22.1.3.4 boost::spirit::classic::uint\_parser<int, 10, 2, 2> airsched::uint2\_p

2-digit-integer parser

Definition at line 209 of file [BookingRequestParser.cpp](#).

Referenced by [airsched::SearchStringParser::definition< ScannerT >::definition\(\)](#).

#### 22.1.3.5 boost::spirit::classic::uint\_parser<int, 10, 2, 4> airsched::uint2\_4\_p

Up-to-4-digit-integer parser

Definition at line 211 of file [BookingRequestParser.cpp](#).

#### 22.1.3.6 boost::spirit::classic::uint\_parser<int, 10, 4, 4> airsched::uint4\_p

4-digit-integer parser

Definition at line 213 of file [BookingRequestParser.cpp](#).

Referenced by [airsched::SearchStringParser::definition< ScannerT >::definition\(\)](#).

### 22.1.3.7 boost::spirit::classic::uint\_parser<int, 10, 1, 4> airsched::uint1\_4\_p

Up-to-4-digit-integer parser

Definition at line 215 of file [BookingRequestParser.cpp](#).

## 22.2 AIRSCHED Namespace Reference

### Namespaces

- namespace [ScheduleParserHelper](#)
- namespace [OnDParserHelper](#)

### Classes

- class [AIRSCHED\\_Service](#)  
*Interface for the AirSched Services.*
- class [SegmentDateNotFoundException](#)
- class [OnDInputFileNotFoundException](#)
- class [ScheduleInputFileNotFoundException](#)
- struct [FlagSaver](#)
- class [BomDisplay](#)  
*Utility class to display AirSched objects with a pretty format.*
- struct [FareFamilyStruct](#)
- struct [FlightPeriodStruct](#)
- struct [LegCabinStruct](#)
- struct [LegStruct](#)
- struct [OnDPeriodStruct](#)
- class [OriginDestinationSet](#)  
*Class representing a simple sub-network.*
- struct [OriginDestinationSetKey](#)  
*Structure representing the key of a sub-network.*
- class [ReachableUniverse](#)  
*Class representing the root of the schedule-related BOM tree.*
- struct [ReachableUniverseKey](#)  
*Structure representing the key of the schedule-related BOM tree root.*
- struct [SegmentCabinStruct](#)
- class [SegmentPathPeriod](#)  
*Class representing a segment/path.*
- struct [SegmentPathPeriodKey](#)  
*Structure representing the key of a segment/path.*
- class [SegmentPeriodHelper](#)
- struct [SegmentStruct](#)
- class [InventoryGenerator](#)
- class [OnDParser](#)  
*Class wrapping the parser entry point.*
- class [OnDPeriodFileParser](#)
- class [OnDPeriodGenerator](#)  
*Class handling the generation / instantiation of the O&D-Period BOM.*
- class [ScheduleParser](#)



- class [FlightPeriodFileParser](#)
- class [SegmentPathGenerator](#)  
*Class handling the generation / instantiation of the network BOM.*
- class [SegmentPathProvider](#)  
*Class building the travel solutions from airline schedules.*
- class [Simulator](#)
- class [TravelSolutionParser](#)  
*Class filling the TravelSolutionHolder structure (representing a list of classes/travelSolutions) from a given input file.*
- class [FacAIRSCHEDServiceContext](#)  
*Factory for the service context.*
- class [FacServiceAbstract](#)
- class [AIRSCHED\\_ServiceContext](#)  
*Class holding the context of the AirSched services.*
- class [ServiceAbstract](#)

### Typedefs

- typedef boost::shared\_ptr  
    < [AIRSCHED\\_Service](#) > [AIRSCHED\\_ServicePtr\\_T](#)
- typedef char [char\\_t](#)
- typedef  
    boost::spirit::classic::file\_iterator  
    < [char\\_t](#) > [iterator\\_t](#)
- typedef  
    boost::spirit::classic::scanner  
    < [iterator\\_t](#) > [scanner\\_t](#)
- typedef  
    boost::spirit::classic::rule  
    < [scanner\\_t](#) > [rule\\_t](#)
- typedef  
    boost::spirit::classic::int\_parser  
    < unsigned int, 10, 1, 1 > [int1\\_p\\_t](#)
- typedef  
    boost::spirit::classic::uint\_parser  
    < unsigned int, 10, 2, 2 > [uint2\\_p\\_t](#)
- typedef  
    boost::spirit::classic::uint\_parser  
    < unsigned int, 10, 4, 4 > [uint4\\_p\\_t](#)
- typedef  
    boost::spirit::classic::uint\_parser  
    < unsigned int, 10, 1, 4 > [uint1\\_4\\_p\\_t](#)
- typedef  
    boost::spirit::classic::chset  
    < [char\\_t](#) > [chset\\_t](#)
- typedef  
    boost::spirit::classic::impl::loop\_traits  
    < [chset\\_t](#), unsigned int,  
    unsigned int >::type [repeat\\_p\\_t](#)
- typedef  
    boost::spirit::classic::bounded  
    < [uint2\\_p\\_t](#), unsigned int > [bounded2\\_p\\_t](#)
- typedef  
    boost::spirit::classic::bounded  
    < [uint4\\_p\\_t](#), unsigned int > [bounded4\\_p\\_t](#)

- typedef  
boost::spirit::classic::bounded  
< uint1\_4\_p\_t, unsigned int > bounded1\_4\_p\_t
- typedef std::set  
< stdair::AirportCode\_T > AirportList\_T
- typedef std::vector  
< stdair::AirportCode\_T > AirportOrderedList\_T
- typedef std::vector  
< FareFamilyStruct > FareFamilyStructList\_T
- typedef std::vector  
< LegCabinStruct > LegCabinStructList\_T
- typedef std::vector< LegStruct > LegStructList\_T
- typedef std::list  
< OriginDestinationSet \* > OriginDestinationSetList\_T
- typedef std::map< const  
stdair::MapKey\_T,  
OriginDestinationSet \* > OriginDestinationSetMap\_T
- typedef std::list  
< ReachableUniverse \* > ReachableUniverseList\_T
- typedef std::map< const  
stdair::MapKey\_T,  
ReachableUniverse \* > ReachableUniverseMap\_T
- typedef std::vector  
< SegmentCabinStruct > SegmentCabinStructList\_T
- typedef std::list  
< SegmentPathPeriod \* > SegmentPathPeriodList\_T
- typedef std::multimap< const  
stdair::MapKey\_T,  
SegmentPathPeriod \* > SegmentPathPeriodMultimap\_T
- typedef std::vector< const  
SegmentPathPeriod \* > SegmentPathPeriodLightList\_T
- typedef std::vector  
< SegmentPathPeriodLightList\_T > SegmentPathPeriodListList\_T
- typedef std::vector  
< stdair::DateOffset\_T > DateOffsetList\_T
- typedef std::vector  
< SegmentStruct > SegmentStructList\_T

## Functions

- template void OriginDestinationSet::serialize< ba::text\_oarchive > (ba::text\_oarchive &, unsigned int)
- template void OriginDestinationSet::serialize< ba::text\_iarchive > (ba::text\_iarchive &, unsigned int)
- template void OriginDestinationSetKey::serialize< ba::text\_oarchive > (ba::text\_oarchive &, unsigned int)
- template void OriginDestinationSetKey::serialize< ba::text\_iarchive > (ba::text\_iarchive &, unsigned int)
- template void ReachableUniverse::serialize< ba::text\_oarchive > (ba::text\_oarchive &, unsigned int)
- template void ReachableUniverse::serialize< ba::text\_iarchive > (ba::text\_iarchive &, unsigned int)
- template void ReachableUniverseKey::serialize< ba::text\_oarchive > (ba::text\_oarchive &, unsigned int)
- template void ReachableUniverseKey::serialize< ba::text\_iarchive > (ba::text\_iarchive &, unsigned int)
- template void SegmentPathPeriod::serialize< ba::text\_oarchive > (ba::text\_oarchive &, unsigned int)
- template void SegmentPathPeriod::serialize< ba::text\_iarchive > (ba::text\_iarchive &, unsigned int)
- template void SegmentPathPeriodKey::serialize< ba::text\_oarchive > (ba::text\_oarchive &, unsigned int)
- template void SegmentPathPeriodKey::serialize< ba::text\_iarchive > (ba::text\_iarchive &, unsigned int)

## Variables

- const int DEFAULT\_NUMBER\_OF\_DRAWNS\_FOR\_MC\_SIMULATION = 100000

### 22.2.1 Typedef Documentation

22.2.1.1 `typedef boost::shared_ptr<AIRSCHED_Service> AIRSCHED::AIRSCHED_ServicePtr_T`

(Smart) Pointer on the AirSched service handler.

Definition at line 62 of file [AIRSCHED\\_Types.hpp](#).

22.2.1.2 `typedef char AIRSCHED::char_t`

Definition at line 31 of file [BasParserTypes.hpp](#).

22.2.1.3 `typedef boost::spirit::classic::file_iterator<char_t> AIRSCHED::iterator_t`

Definition at line 35 of file [BasParserTypes.hpp](#).

22.2.1.4 `typedef boost::spirit::classic::scanner<iterator_t> AIRSCHED::scanner_t`

Definition at line 36 of file [BasParserTypes.hpp](#).

22.2.1.5 `typedef boost::spirit::classic::rule<scanner_t> AIRSCHED::rule_t`

Definition at line 37 of file [BasParserTypes.hpp](#).

22.2.1.6 `typedef boost::spirit::classic::int_parser<unsigned int, 10, 1, 1> AIRSCHED::int1_p_t`

1-digit-integer parser

Definition at line 45 of file [BasParserTypes.hpp](#).

22.2.1.7 `typedef boost::spirit::classic::uint_parser<unsigned int, 10, 2, 2> AIRSCHED::uint2_p_t`

2-digit-integer parser

Definition at line 48 of file [BasParserTypes.hpp](#).

22.2.1.8 `typedef boost::spirit::classic::uint_parser<unsigned int, 10, 4, 4> AIRSCHED::uint4_p_t`

4-digit-integer parser

Definition at line 51 of file [BasParserTypes.hpp](#).

22.2.1.9 `typedef boost::spirit::classic::uint_parser<unsigned int, 10, 1, 4> AIRSCHED::uint1_4_p_t`

Up-to-4-digit-integer parser

Definition at line 54 of file [BasParserTypes.hpp](#).

22.2.1.10 `typedef boost::spirit::classic::chset<char_t> AIRSCHED::chset_t`

character set

Definition at line 57 of file [BasParserTypes.hpp](#).

22.2.1.11 `typedef boost::spirit::classic::impl::loop_traits<chset_t, unsigned int, unsigned int>::type  
AIRSCHED::repeat_p_t`

(Repeating) sequence of a given number of characters: `repeat_p(min, max)`

Definition at line 63 of file [BasParserTypes.hpp](#).

22.2.1.12 `typedef boost::spirit::classic::bounded<uint2_p_t, unsigned int> AIRSCHED::bounded2_p_t`

Bounded-number-of-integers parser

Definition at line 66 of file [BasParserTypes.hpp](#).

22.2.1.13 `typedef boost::spirit::classic::bounded<uint4_p_t, unsigned int> AIRSCHED::bounded4_p_t`

Definition at line 67 of file [BasParserTypes.hpp](#).

22.2.1.14 `typedef boost::spirit::classic::bounded<uint1_4_p_t, unsigned int> AIRSCHED::bounded1_4_p_t`

Definition at line 68 of file [BasParserTypes.hpp](#).

22.2.1.15 `typedef std::set<stdair::AirportCode_T> AIRSCHED::AirportList_T`

Define lists of Airport Codes.

Definition at line 16 of file [AirportList.hpp](#).

22.2.1.16 `typedef std::vector<stdair::AirportCode_T> AIRSCHED::AirportOrderedList_T`

Definition at line 17 of file [AirportList.hpp](#).

22.2.1.17 `typedef std::vector<FareFamilyStruct> AIRSCHED::FareFamilyStructList_T`

List of FareFamily-Detail structures.

Definition at line 31 of file [FareFamilyStruct.hpp](#).

22.2.1.18 `typedef std::vector<LegCabinStruct> AIRSCHED::LegCabinStructList_T`

List of LegCabin-Detail structures.

Definition at line 36 of file [LegCabinStruct.hpp](#).

22.2.1.19 `typedef std::vector<LegStruct> AIRSCHED::LegStructList_T`

List of Leg structures.

Definition at line 50 of file [LegStruct.hpp](#).

22.2.1.20 `typedef std::list<OriginDestinationSet*> AIRSCHED::OriginDestinationSetList_T`

Define the [OriginDestinationSet](#) list.

Definition at line 18 of file [OriginDestinationSetTypes.hpp](#).

22.2.1.21 `typedef std::map<const stdair::MapKey_T, OriginDestinationSet*> AIRSCHED::OriginDestinationSet-Map_T`

Define the [OriginDestinationSet](#) map.

Definition at line 25 of file [OriginDestinationSetTypes.hpp](#).

22.2.1.22 `typedef std::list<ReachableUniverse*> AIRSCHED::ReachableUniverseList_T`

Define the reachable-universe list.

Definition at line 18 of file [ReachableUniverseTypes.hpp](#).

22.2.1.23 `typedef std::map<const stdair::MapKey_T, ReachableUniverse*> AIRSCHED::ReachableUniverseMap_T`

Define the reachable-universe map.

Definition at line 25 of file [ReachableUniverseTypes.hpp](#).

22.2.1.24 `typedef std::vector<SegmentCabinStruct> AIRSCHED::SegmentCabinStructList_T`

List of SegmentCabin-Detail structures.

Definition at line 41 of file [SegmentCabinStruct.hpp](#).

22.2.1.25 `typedef std::list<SegmentPathPeriod*> AIRSCHED::SegmentPathPeriodList_T`

Define the segment path list.

Definition at line 20 of file [SegmentPathPeriodTypes.hpp](#).

22.2.1.26 `typedef std::multimap<const stdair::MapKey_T, SegmentPathPeriod*> AIRSCHED::SegmentPathPeriodMultimap_T`

Define the segment path map.

Definition at line 27 of file [SegmentPathPeriodTypes.hpp](#).

22.2.1.27 `typedef std::vector<const SegmentPathPeriod*> AIRSCHED::SegmentPathPeriodLightList_T`

Define the (temporary) containers of segment path period.

Definition at line 30 of file [SegmentPathPeriodTypes.hpp](#).

22.2.1.28 `typedef std::vector<SegmentPathPeriodLightList_T> AIRSCHED::SegmentPathPeriodListList_T`

Definition at line 31 of file [SegmentPathPeriodTypes.hpp](#).

22.2.1.29 `typedef std::vector<stdair::DateOffset_T> AIRSCHED::DateOffsetList_T`

Define the vector of boarding date offsets of the member segments of a segment path compare to the boarding date of the first segment.

Definition at line 35 of file [SegmentPathPeriodTypes.hpp](#).

22.2.1.30 `typedef std::vector<SegmentStruct> AIRSCHED::SegmentStructList_T`

List of Segment strucutres.

Definition at line 44 of file [SegmentStruct.hpp](#).

## 22.2.2 Function Documentation

22.2.2.1 `template void AIRSCHED::OriginDestinationSet::serialize< ba::text_oarchive > ( ba::text_oarchive & , unsigned int )`

22.2.2.2 `template void AIRSCHED::OriginDestinationSet::serialize< ba::text_iarchive > ( ba::text_iarchive & , unsigned int )`

22.2.2.3 `template void AIRSCHED::OriginDestinationSetKey::serialize< ba::text_oarchive > ( ba::text_oarchive & , unsigned int )`

22.2.2.4 `template void AIRSCHED::OriginDestinationSetKey::serialize< ba::text_iarchive > ( ba::text_iarchive & , unsigned int )`

22.2.2.5 `template void AIRSCHED::ReachableUniverse::serialize< ba::text_oarchive > ( ba::text_oarchive & , unsigned int )`

22.2.2.6 `template void AIRSCHED::ReachableUniverse::serialize< ba::text_iarchive > ( ba::text_iarchive & , unsigned int )`

22.2.2.7 `template void AIRSCHED::ReachableUniverseKey::serialize< ba::text_oarchive > ( ba::text_oarchive & , unsigned int )`

- 22.2.2.8 `template void AIRSCHED::ReachableUniverseKey::serialize< ba::text_iarchive > ( ba::text_iarchive & , unsigned int )`
- 22.2.2.9 `template void AIRSCHED::SegmentPathPeriod::serialize< ba::text_oarchive > ( ba::text_oarchive & , unsigned int )`
- 22.2.2.10 `template void AIRSCHED::SegmentPathPeriod::serialize< ba::text_iarchive > ( ba::text_iarchive & , unsigned int )`
- 22.2.2.11 `template void AIRSCHED::SegmentPathPeriodKey::serialize< ba::text_oarchive > ( ba::text_oarchive & , unsigned int )`
- 22.2.2.12 `template void AIRSCHED::SegmentPathPeriodKey::serialize< ba::text_iarchive > ( ba::text_iarchive & , unsigned int )`

### 22.2.3 Variable Documentation

- 22.2.3.1 `const int AIRSCHED::DEFAULT_NUMBER_OF_DRAWS_FOR_MC_SIMULATION = 100000`

Default value for the number of draws within the Monte-Carlo Integration algorithm.

Definition at line 8 of file [BasConst.cpp](#).

## 22.3 AIRSCHED::OnDParserHelper Namespace Reference

### Classes

- struct [ParserSemanticAction](#)
- struct [storeOrigin](#)
- struct [storeDestination](#)
- struct [storeDateRangeStart](#)
- struct [storeDateRangeEnd](#)
- struct [storeStartRangeTime](#)
- struct [storeEndRangeTime](#)
- struct [storeAirlineCode](#)
- struct [storeClassCode](#)
- struct [doEndOnD](#)
- struct [OnDParser](#)

### Functions

- [chset\\_t alpha\\_cap\\_set\\_p](#) ("A-Z")
- [repeat\\_p\\_t airport\\_p](#) ([chset\\_t](#)("0-9A-Z").derived(), 3, 3)
- [repeat\\_p\\_t airline\\_code\\_p](#) ([alpha\\_cap\\_set\\_p](#).derived(), 2, 3)
- [bounded4\\_p\\_t year\\_p](#) ([uint4\\_p](#).derived(), 2000u, 2099u)
- [bounded2\\_p\\_t month\\_p](#) ([uint2\\_p](#).derived(), 1u, 12u)
- [bounded2\\_p\\_t day\\_p](#) ([uint2\\_p](#).derived(), 1u, 31u)
- [bounded2\\_p\\_t hours\\_p](#) ([uint2\\_p](#).derived(), 0u, 23u)
- [bounded2\\_p\\_t minutes\\_p](#) ([uint2\\_p](#).derived(), 0u, 59u)
- [bounded2\\_p\\_t seconds\\_p](#) ([uint2\\_p](#).derived(), 0u, 59u)
- [chset\\_t class\\_code\\_p](#) ("A-Z")

### Variables

- [uint2\\_p\\_t uint2\\_p](#)
- [uint4\\_p\\_t uint4\\_p](#)
- [uint1\\_4\\_p\\_t uint1\\_4\\_p](#)

## 22.3.1 Function Documentation

22.3.1.1 `chset_t` AIRSCHED::OnDParserHelper::alpha\_cap\_set\_p ( "A-Z" )

Sequence of (capital) alphabetic characters: `chset_p("A-Z")`

22.3.1.2 `repeat_p_t` AIRSCHED::OnDParserHelper::airport\_p ( `chset_t("0-9A-Z").derived()` , 3 , 3 )

Airport Parser: `repeat_p(3)[chset_p("0-9A-Z")]`

Referenced by [AIRSCHED::OnDParserHelper::OnDParser::definition< ScannerT >::definition\(\)](#).

22.3.1.3 `repeat_p_t` AIRSCHED::OnDParserHelper::airline\_code\_p ( `alpha_cap_set_p.derived()` , 2 , 3 )

Airline Code Parser: `repeat_p(2,3)[chset_p("0-9A-Z")]`

Referenced by [AIRSCHED::OnDParserHelper::OnDParser::definition< ScannerT >::definition\(\)](#).

22.3.1.4 `bounded4_p_t` AIRSCHED::OnDParserHelper::year\_p ( `uint4_p.derived()` , 2000u , 2099u )

Year Parser: `limit_d(2000u, 2099u)[uint4_p]`

Referenced by [AIRSCHED::OnDParserHelper::OnDParser::definition< ScannerT >::definition\(\)](#).

22.3.1.5 `bounded2_p_t` AIRSCHED::OnDParserHelper::month\_p ( `uint2_p.derived()` , 1u , 12u )

Month Parser: `limit_d(1u, 12u)[uint2_p]`

Referenced by [AIRSCHED::OnDParserHelper::OnDParser::definition< ScannerT >::definition\(\)](#).

22.3.1.6 `bounded2_p_t` AIRSCHED::OnDParserHelper::day\_p ( `uint2_p.derived()` , 1u , 31u )

Day Parser: `limit_d(1u, 31u)[uint2_p]`

Referenced by [AIRSCHED::OnDParserHelper::OnDParser::definition< ScannerT >::definition\(\)](#).

22.3.1.7 `bounded2_p_t` AIRSCHED::OnDParserHelper::hours\_p ( `uint2_p.derived()` , 0u , 23u )

Hour Parser: `limit_d(0u, 23u)[uint2_p]`

Referenced by [AIRSCHED::OnDParserHelper::OnDParser::definition< ScannerT >::definition\(\)](#).

22.3.1.8 `bounded2_p_t` AIRSCHED::OnDParserHelper::minutes\_p ( `uint2_p.derived()` , 0u , 59u )

Minute Parser: `limit_d(0u, 59u)[uint2_p]`

Referenced by [AIRSCHED::OnDParserHelper::OnDParser::definition< ScannerT >::definition\(\)](#).

22.3.1.9 `bounded2_p_t` AIRSCHED::OnDParserHelper::seconds\_p ( `uint2_p.derived()` , 0u , 59u )

Second Parser: `limit_d(0u, 59u)[uint2_p]`

Referenced by [AIRSCHED::OnDParserHelper::OnDParser::definition< ScannerT >::definition\(\)](#).

22.3.1.10 `chset_t` AIRSCHED::OnDParserHelper::class\_code\_p ( "A-Z" )

Class Code Parser: `chset_p("A-Z")`

Referenced by [AIRSCHED::OnDParserHelper::OnDParser::definition< ScannerT >::definition\(\)](#).

## 22.3.2 Variable Documentation

22.3.2.1 `uint2_p_t` AIRSCHED::OnDParserHelper::uint2\_p

2-digit-integer parser

Definition at line 215 of file [OnDParserHelper.cpp](#).

#### 22.3.2.2 uint4\_p\_t AIRSCHED::OnDParserHelper::uint4\_p

4-digit-integer parser

Definition at line 218 of file [OnDParserHelper.cpp](#).

#### 22.3.2.3 uint1\_4\_p\_t AIRSCHED::OnDParserHelper::uint1\_4\_p

Up-to-4-digit-integer parser

Definition at line 221 of file [OnDParserHelper.cpp](#).

## 22.4 AIRSCHED::ScheduleParserHelper Namespace Reference

### Classes

- struct [ParserSemanticAction](#)
- struct [storeAirlineCode](#)
- struct [storeFlightNumber](#)
- struct [storeDateRangeStart](#)
- struct [storeDateRangeEnd](#)
- struct [storeDow](#)
- struct [storeLegBoardingPoint](#)
- struct [storeLegOffPoint](#)
- struct [storeBoardingTime](#)
- struct [storeOffTime](#)
- struct [storeElapsedTime](#)
- struct [storeLegCabinCode](#)
- struct [storeCapacity](#)
- struct [storeSegmentSpecificity](#)
- struct [storeSegmentBoardingPoint](#)
- struct [storeSegmentOffPoint](#)
- struct [storeSegmentCabinCode](#)
- struct [storeClasses](#)
- struct [storeFamilyCode](#)
- struct [storeFClasses](#)
- struct [doEndFlight](#)
- struct [FlightPeriodParser](#)

### Functions

- [repeat\\_p\\_t airline\\_code\\_p](#) ([chset\\_t](#)("0-9A-Z").derived(), 2, 3)
- [bounded1\\_4\\_p\\_t flight\\_number\\_p](#) ([uint1\\_4\\_p](#).derived(), 0u, 9999u)
- [bounded4\\_p\\_t year\\_p](#) ([uint4\\_p](#).derived(), 2000u, 2099u)
- [bounded2\\_p\\_t month\\_p](#) ([uint2\\_p](#).derived(), 1u, 12u)
- [bounded2\\_p\\_t day\\_p](#) ([uint2\\_p](#).derived(), 1u, 31u)
- [repeat\\_p\\_t dow\\_p](#) ([chset\\_t](#)("0-1").derived().derived(), 7, 7)
- [repeat\\_p\\_t airport\\_p](#) ([chset\\_t](#)("0-9A-Z").derived(), 3, 3)
- [bounded2\\_p\\_t hours\\_p](#) ([uint2\\_p](#).derived(), 0u, 23u)
- [bounded2\\_p\\_t minutes\\_p](#) ([uint2\\_p](#).derived(), 0u, 59u)
- [bounded2\\_p\\_t seconds\\_p](#) ([uint2\\_p](#).derived(), 0u, 59u)
- [chset\\_t cabin\\_code\\_p](#) ("A-Z")
- [repeat\\_p\\_t class\\_code\\_list\\_p](#) ([chset\\_t](#)("A-Z").derived(), 1, 26)



## Variables

- [int1\\_p\\_t int1\\_p](#)
- [uint2\\_p\\_t uint2\\_p](#)
- [uint4\\_p\\_t uint4\\_p](#)
- [uint1\\_4\\_p\\_t uint1\\_4\\_p](#)
- [int1\\_p\\_t family\\_code\\_p](#)

## 22.4.1 Function Documentation

22.4.1.1 `repeat_p_t` AIRSCHED::ScheduleParserHelper::airline\_code\_p ( `chset_t("0-9A-Z").derived()`, 2, 3 )

Airline Code Parser: `repeat_p(2,3)[chset_p("0-9A-Z")]`

Referenced by [AIRSCHED::ScheduleParserHelper::FlightPeriodParser::definition< ScannerT >::definition\(\)](#).

22.4.1.2 `bounded1_4_p_t` AIRSCHED::ScheduleParserHelper::flight\_number\_p ( `uint1_4_p.derived()`, 0u, 9999u )

Flight Number Parser: `limit_d(0u, 9999u)[uint1_4_p]`

Referenced by [AIRSCHED::ScheduleParserHelper::FlightPeriodParser::definition< ScannerT >::definition\(\)](#).

22.4.1.3 `bounded4_p_t` AIRSCHED::ScheduleParserHelper::year\_p ( `uint4_p.derived()`, 2000u, 2099u )

Year Parser: `limit_d(2000u, 2099u)[uint4_p]`

Referenced by [AIRSCHED::ScheduleParserHelper::FlightPeriodParser::definition< ScannerT >::definition\(\)](#).

22.4.1.4 `bounded2_p_t` AIRSCHED::ScheduleParserHelper::month\_p ( `uint2_p.derived()`, 1u, 12u )

Month Parser: `limit_d(1u, 12u)[uint2_p]`

Referenced by [AIRSCHED::ScheduleParserHelper::FlightPeriodParser::definition< ScannerT >::definition\(\)](#).

22.4.1.5 `bounded2_p_t` AIRSCHED::ScheduleParserHelper::day\_p ( `uint2_p.derived()`, 1u, 31u )

Day Parser: `limit_d(1u, 31u)[uint2_p]`

Referenced by [AIRSCHED::ScheduleParserHelper::FlightPeriodParser::definition< ScannerT >::definition\(\)](#).

22.4.1.6 `repeat_p_t` AIRSCHED::ScheduleParserHelper::dow\_p ( `chset_t("0-1").derived().derived()`, 7, 7 )

DOW (Day-Of-the-Week) Parser: `repeat_p(7)[chset_p("0-1")]`

Referenced by [AIRSCHED::ScheduleParserHelper::FlightPeriodParser::definition< ScannerT >::definition\(\)](#).

22.4.1.7 `repeat_p_t` AIRSCHED::ScheduleParserHelper::airport\_p ( `chset_t("0-9A-Z").derived()`, 3, 3 )

Airport Parser: `repeat_p(3)[chset_p("0-9A-Z")]`

Referenced by [AIRSCHED::ScheduleParserHelper::FlightPeriodParser::definition< ScannerT >::definition\(\)](#).

22.4.1.8 `bounded2_p_t` AIRSCHED::ScheduleParserHelper::hours\_p ( `uint2_p.derived()`, 0u, 23u )

Hour Parser: `limit_d(0u, 23u)[uint2_p]`

Referenced by [AIRSCHED::ScheduleParserHelper::FlightPeriodParser::definition< ScannerT >::definition\(\)](#).

22.4.1.9 `bounded2_p_t` AIRSCHED::ScheduleParserHelper::minutes\_p ( `uint2_p.derived()`, 0u, 59u )

Minute Parser: `limit_d(0u, 59u)[uint2_p]`

Referenced by [AIRSCHED::ScheduleParserHelper::FlightPeriodParser::definition< ScannerT >::definition\(\)](#).

22.4.1.10 **bounded2\_p\_t** AIRSCHED::ScheduleParserHelper::seconds\_p ( uint2\_p. *derived()*, 0u , 59u )

Second Parser: limit\_d(0u, 59u)[uint2\_p]

Referenced by [AIRSCHED::ScheduleParserHelper::FlightPeriodParser::definition< ScannerT >::definition\(\)](#).

22.4.1.11 **chset\_t** AIRSCHED::ScheduleParserHelper::cabin\_code\_p ( "A-Z" )

Cabin Code Parser: chset\_p("A-Z")

Referenced by [AIRSCHED::ScheduleParserHelper::FlightPeriodParser::definition< ScannerT >::definition\(\)](#).

22.4.1.12 **repeat\_p\_t** AIRSCHED::ScheduleParserHelper::class\_code\_list\_p ( chset\_t("A-Z").*derived()*, 1 , 26 )

Class Code List Parser: repeat\_p(1,26)[chset\_p("A-Z")]

Referenced by [AIRSCHED::ScheduleParserHelper::FlightPeriodParser::definition< ScannerT >::definition\(\)](#).

## 22.4.2 Variable Documentation

22.4.2.1 **int1\_p\_t** AIRSCHED::ScheduleParserHelper::int1\_p

1-digit-integer parser

Definition at line 408 of file [ScheduleParserHelper.cpp](#).

Referenced by [AIRSCHED::ScheduleParserHelper::FlightPeriodParser::definition< ScannerT >::definition\(\)](#).

22.4.2.2 **uint2\_p\_t** AIRSCHED::ScheduleParserHelper::uint2\_p

2-digit-integer parser

Definition at line 411 of file [ScheduleParserHelper.cpp](#).

22.4.2.3 **uint4\_p\_t** AIRSCHED::ScheduleParserHelper::uint4\_p

4-digit-integer parser

Definition at line 414 of file [ScheduleParserHelper.cpp](#).

22.4.2.4 **uint1\_4\_p\_t** AIRSCHED::ScheduleParserHelper::uint1\_4\_p

Up-to-4-digit-integer parser

Definition at line 417 of file [ScheduleParserHelper.cpp](#).

22.4.2.5 **int1\_p\_t** AIRSCHED::ScheduleParserHelper::family\_code\_p

Family code parser

Definition at line 453 of file [ScheduleParserHelper.cpp](#).

Referenced by [AIRSCHED::ScheduleParserHelper::FlightPeriodParser::definition< ScannerT >::definition\(\)](#).

## 22.5 boost Namespace Reference

Forward declarations.

### Namespaces

- namespace [serialization](#)

### 22.5.1 Detailed Description

Forward declarations.

## 22.6 boost::serialization Namespace Reference

### 22.7 stdair Namespace Reference

Forward declarations.

### 22.7.1 Detailed Description

Forward declarations.

## 23 Class Documentation

### 23.1 airsched::Airline\_T Struct Reference

```
#include <airsched/batches/BookingRequestParser.hpp>
```

#### Public Member Functions

- [Airline\\_T](#) ()
- void [display](#) () const

#### Public Attributes

- bool [\\_isPreferred](#)
- std::string [\\_name](#)
- std::string [\\_code](#)

#### 23.1.1 Detailed Description

Airline.

Definition at line 52 of file [BookingRequestParser.hpp](#).

#### 23.1.2 Constructor & Destructor Documentation

##### 23.1.2.1 airsched::Airline\_T::Airline\_T ( ) [inline]

Constructor.

Definition at line 58 of file [BookingRequestParser.hpp](#).

#### 23.1.3 Member Function Documentation

##### 23.1.3.1 void airsched::Airline\_T::display ( ) const [inline]

Definition at line 60 of file [BookingRequestParser.hpp](#).

References [\\_code](#), [\\_isPreferred](#), and [\\_name](#).

Referenced by [airsched::SearchString\\_T::display\(\)](#).

### 23.1.4 Member Data Documentation

#### 23.1.4.1 bool airsched::Airline\_T::\_isPreferred

Definition at line 54 of file [BookingRequestParser.hpp](#).

Referenced by [display\(\)](#), and [airsched::store\\_airline\\_sign::operator\(\)](#).

#### 23.1.4.2 std::string airsched::Airline\_T::\_name

Definition at line 55 of file [BookingRequestParser.hpp](#).

Referenced by [display\(\)](#), and [airsched::store\\_airline\\_name::operator\(\)](#).

#### 23.1.4.3 std::string airsched::Airline\_T::\_code

Definition at line 56 of file [BookingRequestParser.hpp](#).

Referenced by [display\(\)](#), and [airsched::store\\_airline\\_code::operator\(\)](#).

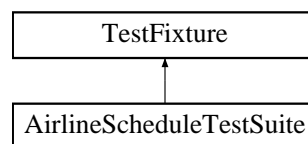
The documentation for this struct was generated from the following file:

- [airsched/batches/BookingRequestParser.hpp](#)

## 23.2 AirlineScheduleTestSuite Class Reference

```
#include <test/airsched/AirlineScheduleTestSuite.hpp>
```

Inheritance diagram for AirlineScheduleTestSuite:



### Public Member Functions

- void [externalMemoryManagement](#) ()
- void [scheduleParsing](#) ()
- [AirlineScheduleTestSuite](#) ()

### Protected Attributes

- std::stringstream [\\_describeKey](#)

### 23.2.1 Detailed Description

Definition at line 6 of file [AirlineScheduleTestSuite.hpp](#).

### 23.2.2 Constructor & Destructor Documentation

#### 23.2.2.1 AirlineScheduleTestSuite::AirlineScheduleTestSuite ( )

Constructor.

### 23.2.3 Member Function Documentation

#### 23.2.3.1 void AirlineScheduleTestSuite::externalMemoryManagement ( )

Test the Optimisation functionality.

The code is aimed at testing the initialization of airline inventory-related objects which are mainly implemented in the stdair library. That means the memory allocation of these objects will be managed by the calling project and not by the called project.

#### 23.2.3.2 void AirlineScheduleTestSuite::scheduleParsing ( )

### 23.2.4 Member Data Documentation

#### 23.2.4.1 std::stringstream AirlineScheduleTestSuite::\_describeKey [protected]

Definition at line 26 of file [AirlineScheduleTestSuite.hpp](#).

The documentation for this class was generated from the following file:

- test/airsched/[AirlineScheduleTestSuite.hpp](#)

## 23.3 AIRSCHED::AIRSCHED\_Service Class Reference

Interface for the AirSched Services.

```
#include <airsched/AIRSCHED_Service.hpp>
```

### Public Member Functions

- [AIRSCHED\\_Service](#) (const stdair::BasLogParams &, const stdair::BasDBParams &)
- [AIRSCHED\\_Service](#) (const stdair::BasLogParams &)
- [AIRSCHED\\_Service](#) (stdair::STDAIR\_ServicePtr\_T ioSTDAIR\_ServicePtr)
- void [parseAndLoad](#) (const stdair::Filename\_T &iScheduleInputFilename)
- void [parseAndLoad](#) (const stdair::Filename\_T &iScheduleFilename, const stdair::Filename\_T &iODInputFilename)
- [~AIRSCHED\\_Service](#) ()
- void [buildSampleBom](#) ()
- void [buildSegmentPathList](#) (stdair::TravelSolutionList\_T &, const stdair::BookingRequestStruct &)
- void [simulate](#) ()
- std::string [jsonExport](#) (const stdair::AirlineCode\_T &, const stdair::FlightNumber\_T &, const stdair::Date\_T &iDepartureDate) const
- std::string [csvDisplay](#) () const
- std::string [csvDisplay](#) (const stdair::AirlineCode\_T &, const stdair::FlightNumber\_T &, const stdair::Date\_T &iDepartureDate) const

#### 23.3.1 Detailed Description

Interface for the AirSched Services.

Definition at line 32 of file [AIRSCHED\\_Service.hpp](#).

#### 23.3.2 Constructor & Destructor Documentation

##### 23.3.2.1 AIRSCHED::AIRSCHED\_Service::AIRSCHED\_Service ( const stdair::BasLogParams & *iLogParams*, const stdair::BasDBParams & *iDBParams* )

Constructor.

The `initAirschedService()` method is called; see the corresponding documentation for more details.

A reference on an output stream is given, so that log outputs can be directed onto that stream.

Moreover, database connection parameters are given, so that a session can be created on the corresponding database.

#### Parameters

<i>const</i>	<code>stdair::BasLogParams&amp;</code> Parameters for the output log stream.
<i>const</i>	<code>stdair::BasDBParams&amp;</code> Parameters for the database access.

Definition at line 62 of file [AIRSCHED\\_Service.cpp](#).

#### 23.3.2.2 AIRSCHED::AIRSCHED\_Service::AIRSCHED\_Service ( *const* `stdair::BasLogParams & iLogParams` )

Constructor.

The `initAirschedService()` method is called; see the corresponding documentation for more details.

A reference on an output stream is given, so that log outputs can be directed onto that stream.

#### Parameters

<i>const</i>	<code>stdair::BasLogParams&amp;</code> Parameters for the output log stream.
--------------	--

Definition at line 42 of file [AIRSCHED\\_Service.cpp](#).

#### 23.3.2.3 AIRSCHED::AIRSCHED\_Service::AIRSCHED\_Service ( `stdair::STDAIR_ServicePtr_T ioSTDAIR_ServicePtr` )

Constructor.

The `initAirschedService()` method is called; see the corresponding documentation for more details.

Moreover, as no reference on any output stream is given, it is assumed that the `StdAir` log service has already been initialised with the proper log output stream by some other methods in the calling chain (for instance, when the [AIRSCHED\\_Service](#) is itself being initialised by another library service such as `SIMCRS_Service`).

#### Parameters

<code>stdair::STDAIR_ServicePtr_T</code>	Reference on the <code>STDAIR</code> service.
--	---

Definition at line 84 of file [AIRSCHED\\_Service.cpp](#).

#### 23.3.2.4 AIRSCHED::AIRSCHED\_Service::~~AIRSCHED\_Service ( )

Destructor.

Definition at line 100 of file [AIRSCHED\\_Service.cpp](#).

### 23.3.3 Member Function Documentation

#### 23.3.3.1 void AIRSCHED::AIRSCHED\_Service::parseAndLoad ( *const* `stdair::Filename_T & iScheduleInputFilename` )

Parse the schedule input file and load it into memory.

The CSV file, describing the airline schedule for the simulator, is parsed and instantiated in memory accordingly.

#### Parameters

<i>const</i>	<code>stdair::Filename_T&amp;</code> Filename of the input schedule file.
--------------	---

Definition at line 178 of file [AIRSCHED\\_Service.cpp](#).

References [AIRSCHED::ScheduleParser::generateInventories\(\)](#).

Referenced by [main\(\)](#), and [parseAndLoad\(\)](#).

**23.3.3.2** void AIRSCHED::AIRSCHED\_Service::parseAndLoad ( const stdair::Filename\_T & *iScheduleFilename*, const stdair::Filename\_T & *iODInputFilename* )

Parse the schedule and O&D input files, and load them into memory.

The CSV files, describing the airline schedule and the O&Ds for the simulator, are parsed and instantiated in memory accordingly.

#### Parameters

<i>const</i>	stdair::Filename_T& Filename of the input schedule file.
<i>const</i>	stdair::Filename_T& Filename of the input O&D file.

Definition at line 199 of file [AIRSCHED\\_Service.cpp](#).

References [AIRSCHED::OnDParser::generateOnDPeriods\(\)](#), and [parseAndLoad\(\)](#).

**23.3.3.3** void AIRSCHED::AIRSCHED\_Service::buildSampleBom ( )

Build a sample BOM tree, and attach it to the BomRoot instance.

The BOM tree is based on two actual inventories (one for BA, another for AF). Each inventory contains one flight. One of those flights has two legs (and therefore three segments).

Definition at line 223 of file [AIRSCHED\\_Service.cpp](#).

References [AIRSCHED::SegmentPathGenerator::createSegmentPathNetwork\(\)](#).

Referenced by [main\(\)](#).

**23.3.3.4** void AIRSCHED::AIRSCHED\_Service::buildSegmentPathList ( stdair::TravelSolutionList\_T & *ioTravelSolutionList*, const stdair::BookingRequestStruct & *iBookingRequest* )

Calculate and return a list of travel solutions corresponding to a given product demand.

Definition at line 369 of file [AIRSCHED\\_Service.cpp](#).

Referenced by [main\(\)](#).

**23.3.3.5** void AIRSCHED::AIRSCHED\_Service::simulate ( )

Perform a small simulation, which uses the Customer Choice Model (CCM).

Currently, that method does nothing.

Definition at line 341 of file [AIRSCHED\\_Service.cpp](#).

**23.3.3.6** std::string AIRSCHED::AIRSCHED\_Service::jsonExport ( const stdair::AirlineCode\_T & *iAirlineCode*, const stdair::FlightNumber\_T & *iFlightNumber*, const stdair::Date\_T & *iDepartureDate* ) const

Recursively dump, in the returned string and in JSON format, the flight-period corresponding to the parameters given as input.

#### Parameters

<i>const</i>	stdair::AirlineCode_T& Airline code of the flight to dump.
<i>const</i>	stdair::FlightNumber_T& Flight number of the flight to dump.
<i>const</i>	stdair::Date_T& Departure date of a flight within the flight period to dump.

## Returns

std::string Output string in which the BOM tree is JSON-ified.

Definition at line 274 of file [AIRSCHED\\_Service.cpp](#).

## 23.3.3.7 std::string AIRSCHED::AIRSCHED\_Service::csvDisplay ( ) const

Recursively display (dump in the returned string) the objects of the BOM tree.

## Returns

std::string Output string in which the BOM tree is logged/dumped.

Definition at line 297 of file [AIRSCHED\\_Service.cpp](#).

## 23.3.3.8 std::string AIRSCHED::AIRSCHED\_Service::csvDisplay ( const stdair::AirlineCode\_T &amp; iAirlineCode, const stdair::FlightNumber\_T &amp; iFlightNumber, const stdair::Date\_T &amp; iDepartureDate ) const

Recursively display (dump in the returned string) the flight-period corresponding to the parameters given as input.

## Parameters

const	stdair::AirlineCode_T& Airline code of the flight period to display.
const	stdair::FlightNumber_T& Flight number of the flight to display.
const	stdair::Date_T& Departure date of a flight within the flight-period to display.

## Returns

std::string Output string in which the BOM tree is logged/dumped.

Definition at line 318 of file [AIRSCHED\\_Service.cpp](#).

The documentation for this class was generated from the following files:

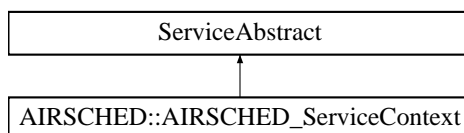
- [airsched/AIRSCHED\\_Service.hpp](#)
- [airsched/service/AIRSCHED\\_Service.cpp](#)

## 23.4 AIRSCHED::AIRSCHED\_ServiceContext Class Reference

Class holding the context of the AirSched services.

```
#include <airsched/service/AIRSCHED_ServiceContext.hpp>
```

Inheritance diagram for AIRSCHED::AIRSCHED\_ServiceContext:



## Friends

- class [AIRSCHED\\_Service](#)
- class [FacAIRSCHEDServiceContext](#)



### 23.4.1 Detailed Description

Class holding the context of the AirSched services.

Definition at line 22 of file [AIRSCHED\\_ServiceContext.hpp](#).

### 23.4.2 Friends And Related Function Documentation

#### 23.4.2.1 friend class AIRSCHED\_Service [friend]

The [AIRSCHED\\_Service](#) class should be the sole class to get access to ServiceContext content: general users do not want to bother with a context interface.

Definition at line 28 of file [AIRSCHED\\_ServiceContext.hpp](#).

#### 23.4.2.2 friend class FacAIRSCHEDServiceContext [friend]

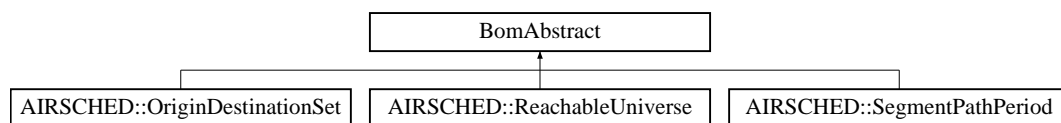
Definition at line 29 of file [AIRSCHED\\_ServiceContext.hpp](#).

The documentation for this class was generated from the following files:

- [airsched/service/AIRSCHED\\_ServiceContext.hpp](#)
- [airsched/service/AIRSCHED\\_ServiceContext.cpp](#)

## 23.5 BomAbstract Class Reference

Inheritance diagram for BomAbstract:



The documentation for this class was generated from the following file:

- [airsched/bom/OriginDestinationSet.hpp](#)

## 23.6 AIRSCHED::BomDisplay Class Reference

Utility class to display AirSched objects with a pretty format.

```
#include <airsched/bom/BomDisplay.hpp>
```

### Static Public Member Functions

- static std::string [csvDisplay](#) (const stdair::BomRoot &)
- static void [csvDisplay](#) (std::ostream &, const [ReachableUniverse](#) &)

### 23.6.1 Detailed Description

Utility class to display AirSched objects with a pretty format.

Definition at line 26 of file [BomDisplay.hpp](#).

## 23.6.2 Member Function Documentation

23.6.2.1 `std::string AIRSCHED::BomDisplay::csvDisplay ( const stdair::BomRoot & iBomRoot ) [static]`

Recursively display (dump in the underlying output log stream) the objects of the BOM tree.

## Parameters

<code>std::ostream&amp;</code>	Output stream in which the BOM tree should be logged/dumped.
<code>const</code>	<code>stdair::EventQueue&amp;</code> Root of the BOM tree to be displayed.

Definition at line 43 of file [BomDisplay.cpp](#).

23.6.2.2 `void AIRSCHED::BomDisplay::csvDisplay ( std::ostream & oStream, const ReachableUniverse & iReachableUniverse ) [static]`

Recursively display (dump in the underlying output log stream) the objects of the BOM tree.

## Parameters

<code>std::ostream&amp;</code>	Output stream in which the BOM tree should be logged/dumped.
<code>const</code>	<a href="#">ReachableUniverse&amp;</a> Root of the BOM tree to be displayed.

Definition at line 81 of file [BomDisplay.cpp](#).

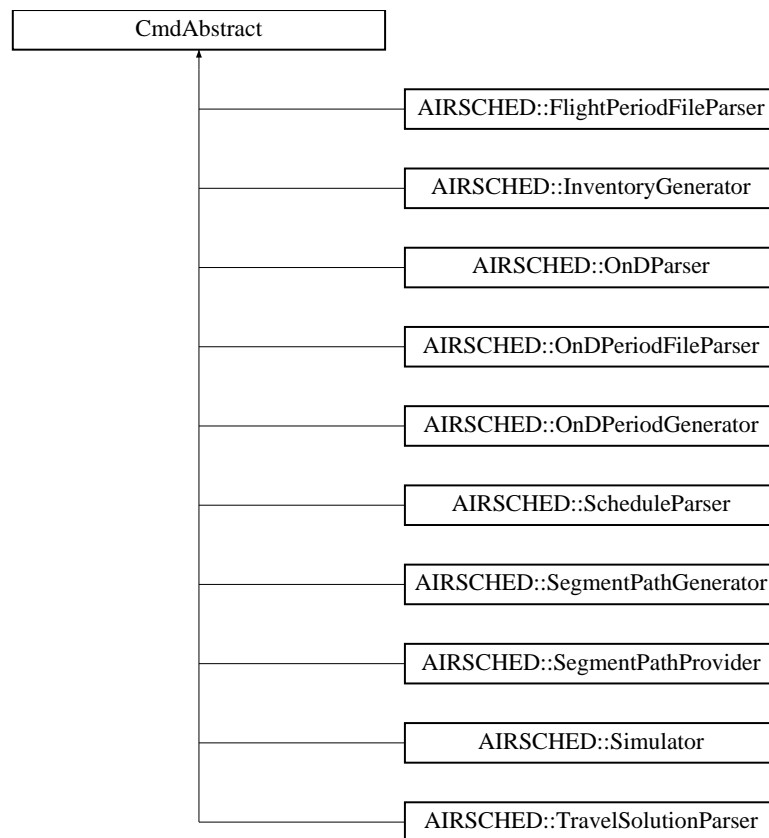
References [AIRSCHED::ReachableUniverse::toString\(\)](#).

The documentation for this class was generated from the following files:

- [airsched/bom/BomDisplay.hpp](#)
- [airsched/bom/BomDisplay.cpp](#)

## 23.7 CmdAbstract Class Reference

Inheritance diagram for CmdAbstract:



The documentation for this class was generated from the following file:

- [airsched/command/OnDPeriodGenerator.hpp](#)

## 23.8 airsched::Date\_T Struct Reference

```
#include <airsched/batches/BookingRequestParser.hpp>
```

### Public Member Functions

- [Date\\_T](#) ()
- void [display](#) () const
- boost::gregorian::date [getDate](#) () const

### Public Attributes

- boost::gregorian::date [\\_date](#)
- unsigned int [\\_reldays](#)
- unsigned int [\\_day](#)
- unsigned int [\\_month](#)
- unsigned int [\\_year](#)

### 23.8.1 Detailed Description

Date.

Definition at line 27 of file [BookingRequestParser.hpp](#).

### 23.8.2 Constructor & Destructor Documentation

#### 23.8.2.1 airsched::Date\_T::Date\_T ( ) [inline]

Constructor.

Definition at line 35 of file [BookingRequestParser.hpp](#).

### 23.8.3 Member Function Documentation

#### 23.8.3.1 void airsched::Date\_T::display ( ) const [inline]

Definition at line 37 of file [BookingRequestParser.hpp](#).

References [\\_date](#), [\\_day](#), [\\_month](#), [\\_reldays](#), and [\\_year](#).

Referenced by [airsched::SearchString\\_T::display\(\)](#).

#### 23.8.3.2 boost::gregorian::date airsched::Date\_T::getDate ( ) const [inline]

Set the date from the staging details.

Definition at line 43 of file [BookingRequestParser.hpp](#).

References [\\_day](#), [\\_month](#), and [\\_year](#).

Referenced by [airsched::store\\_date::operator\(\)\(\)](#).

### 23.8.4 Member Data Documentation

#### 23.8.4.1 boost::gregorian::date airsched::Date\_T::\_date

Definition at line 29 of file [BookingRequestParser.hpp](#).

Referenced by [display\(\)](#), and [airsched::store\\_date::operator\(\)\(\)](#).

#### 23.8.4.2 unsigned int airsched::Date\_T::\_reldays

Definition at line 30 of file [BookingRequestParser.hpp](#).

Referenced by [display\(\)](#).

#### 23.8.4.3 unsigned int airsched::Date\_T::\_day

Definition at line 31 of file [BookingRequestParser.hpp](#).

Referenced by [display\(\)](#), and [getDate\(\)](#).

#### 23.8.4.4 unsigned int airsched::Date\_T::\_month

Definition at line 32 of file [BookingRequestParser.hpp](#).

Referenced by [display\(\)](#), and [getDate\(\)](#).

#### 23.8.4.5 unsigned int airsched::Date\_T::\_year

Definition at line 33 of file [BookingRequestParser.hpp](#).

Referenced by [display\(\)](#), and [getDate\(\)](#).

The documentation for this struct was generated from the following file:

- [airsched/batches/BookingRequestParser.hpp](#)

23.9 `airsched::SearchStringParser::definition< ScannerT >` Struct Template Reference

## Public Member Functions

- [definition](#) ([SearchStringParser](#) const &self)
- `boost::spirit::classic::rule`  
`< ScannerT > const & start () const`

## Public Attributes

- `boost::spirit::classic::rule`  
`< ScannerT > search\_string`
- `boost::spirit::classic::rule`  
`< ScannerT > places`
- `boost::spirit::classic::rule`  
`< ScannerT > place\_element`
- `boost::spirit::classic::rule`  
`< ScannerT > dates`
- `boost::spirit::classic::rule`  
`< ScannerT > date`
- `boost::spirit::classic::rule`  
`< ScannerT > month`
- `boost::spirit::classic::rule`  
`< ScannerT > day`
- `boost::spirit::classic::rule`  
`< ScannerT > year`
- `boost::spirit::classic::rule`  
`< ScannerT > preferred\_airlines`
- `boost::spirit::classic::rule`  
`< ScannerT > airline\_code`
- `boost::spirit::classic::rule`  
`< ScannerT > airline\_name`
- `boost::spirit::classic::rule`  
`< ScannerT > passengers`
- `boost::spirit::classic::rule`  
`< ScannerT > passenger\_number`
- `boost::spirit::classic::rule`  
`< ScannerT > passenger\_type`
- `boost::spirit::classic::rule`  
`< ScannerT > passenger\_adult\_type`
- `boost::spirit::classic::rule`  
`< ScannerT > passenger\_child\_type`
- `boost::spirit::classic::rule`  
`< ScannerT > passenger\_pet\_type`

## 23.9.1 Detailed Description

`template<typename ScannerT> struct airsched::SearchStringParser::definition< ScannerT >`

Definition at line 259 of file [BookingRequestParser.cpp](#).

### 23.9.2 Constructor & Destructor Documentation

23.9.2.1 `template<typename ScannerT > airsched::SearchStringParser::definition< ScannerT >::definition ( SearchStringParser const & self ) [inline]`

Definition at line 260 of file [BookingRequestParser.cpp](#).

References [airsched::uint1\\_2\\_p](#), [airsched::uint1\\_p](#), [airsched::uint2\\_p](#), and [airsched::uint4\\_p](#).

### 23.9.3 Member Function Documentation

23.9.3.1 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> const& airsched::SearchStringParser::definition< ScannerT >::start ( ) const [inline]`

Definition at line 366 of file [BookingRequestParser.cpp](#).

### 23.9.4 Member Data Documentation

23.9.4.1 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> airsched::SearchStringParser::definition< ScannerT >::search_string`

Definition at line 360 of file [BookingRequestParser.cpp](#).

23.9.4.2 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> airsched::SearchStringParser::definition< ScannerT >::places`

Definition at line 360 of file [BookingRequestParser.cpp](#).

23.9.4.3 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> airsched::SearchStringParser::definition< ScannerT >::place_element`

Definition at line 360 of file [BookingRequestParser.cpp](#).

23.9.4.4 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> airsched::SearchStringParser::definition< ScannerT >::dates`

Definition at line 360 of file [BookingRequestParser.cpp](#).

23.9.4.5 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> airsched::SearchStringParser::definition< ScannerT >::date`

Definition at line 360 of file [BookingRequestParser.cpp](#).

23.9.4.6 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> airsched::SearchStringParser::definition< ScannerT >::month`

Definition at line 360 of file [BookingRequestParser.cpp](#).

23.9.4.7 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> airsched::SearchStringParser::definition< ScannerT >::day`

Definition at line 360 of file [BookingRequestParser.cpp](#).

23.9.4.8 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> airsched::SearchStringParser::definition< ScannerT >::year`

Definition at line 360 of file [BookingRequestParser.cpp](#).

23.9.4.9 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> airsched::SearchStringParser::definition< ScannerT >::preferred_airlines`

Definition at line 360 of file [BookingRequestParser.cpp](#).

23.9.4.10 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> airsched::SearchStringParser::definition< ScannerT >::airline_code`

Definition at line 360 of file [BookingRequestParser.cpp](#).

23.9.4.11 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> airsched::SearchStringParser::definition< ScannerT >::airline_name`

Definition at line 360 of file [BookingRequestParser.cpp](#).

23.9.4.12 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> airsched::SearchStringParser::definition< ScannerT >::passengers`

Definition at line 360 of file [BookingRequestParser.cpp](#).

23.9.4.13 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> airsched::SearchStringParser::definition< ScannerT >::passenger_number`

Definition at line 360 of file [BookingRequestParser.cpp](#).

23.9.4.14 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> airsched::SearchStringParser::definition< ScannerT >::passenger_type`

Definition at line 360 of file [BookingRequestParser.cpp](#).

23.9.4.15 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> airsched::SearchStringParser::definition< ScannerT >::passenger_adult_type`

Definition at line 360 of file [BookingRequestParser.cpp](#).

23.9.4.16 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> airsched::SearchStringParser::definition< ScannerT >::passenger_child_type`

Definition at line 360 of file [BookingRequestParser.cpp](#).

23.9.4.17 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> airsched::SearchStringParser::definition< ScannerT >::passenger_pet_type`

Definition at line 360 of file [BookingRequestParser.cpp](#).

The documentation for this struct was generated from the following file:

- [airsched/batches/BookingRequestParser.cpp](#)

## 23.10 AIRSCHED::OnDParserHelper::OnDParser::definition< ScannerT > Struct Template Reference

```
#include <airsched/command/OnDParserHelper.hpp>
```

### Public Member Functions

- [definition](#) ([OnDParser](#) const &self)
- `boost::spirit::classic::rule< ScannerT > const & start () const`

## Public Attributes

- boost::spirit::classic::rule< ScannerT > [ond\\_list](#)
- boost::spirit::classic::rule< ScannerT > [ond](#)
- boost::spirit::classic::rule< ScannerT > [segment](#)
- boost::spirit::classic::rule< ScannerT > [ond\\_key](#)
- boost::spirit::classic::rule< ScannerT > [ond\\_end](#)
- boost::spirit::classic::rule< ScannerT > [date](#)
- boost::spirit::classic::rule< ScannerT > [time](#)

## 23.10.1 Detailed Description

template<typename ScannerT>struct AIRSCHED::OnDParserHelper::OnDParser::definition< ScannerT >

Definition at line 133 of file [OnDParserHelper.hpp](#).

## 23.10.2 Constructor &amp; Destructor Documentation

23.10.2.1 template<typename ScannerT > AIRSCHED::OnDParserHelper::OnDParser::definition< ScannerT >::definition ( OnDParser const & self )

Definition at line 267 of file [OnDParserHelper.cpp](#).

References [AIRSCHED::OnDParserHelper::airline\\_code\\_p\(\)](#), [AIRSCHED::OnDParserHelper::airport\\_p\(\)](#), [AIRSCHED::OnDParserHelper::class\\_code\\_p\(\)](#), [AIRSCHED::OnDParserHelper::day\\_p\(\)](#), [AIRSCHED::OnDParserHelper::hours\\_p\(\)](#), [AIRSCHED::OnDParserHelper::minutes\\_p\(\)](#), [AIRSCHED::OnDParserHelper::month\\_p\(\)](#), [AIRSCHED::OnDParserHelper::seconds\\_p\(\)](#), and [AIRSCHED::OnDParserHelper::year\\_p\(\)](#).

## 23.10.3 Member Function Documentation

23.10.3.1 template<typename ScannerT > boost::spirit::classic::rule< ScannerT > const & AIRSCHED::OnDParserHelper::OnDParser::definition< ScannerT >::start ( ) const

Entry point of the parser.

Definition at line 330 of file [OnDParserHelper.cpp](#).

## 23.10.4 Member Data Documentation

23.10.4.1 template<typename ScannerT > boost::spirit::classic::rule<ScannerT> AIRSCHED::OnDParserHelper::OnDParser::definition< ScannerT >::ond\_list

Definition at line 137 of file [OnDParserHelper.hpp](#).

23.10.4.2 template<typename ScannerT > boost::spirit::classic::rule<ScannerT> AIRSCHED::OnDParserHelper::OnDParser::definition< ScannerT >::ond

Definition at line 137 of file [OnDParserHelper.hpp](#).



23.10.4.3 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> AIRSCHED::OnDParserHelper::OnDParser::definition< ScannerT >::segment`

Definition at line 137 of file [OnDParserHelper.hpp](#).

23.10.4.4 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> AIRSCHED::OnDParserHelper::OnDParser::definition< ScannerT >::ond_key`

Definition at line 137 of file [OnDParserHelper.hpp](#).

23.10.4.5 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> AIRSCHED::OnDParserHelper::OnDParser::definition< ScannerT >::ond_end`

Definition at line 137 of file [OnDParserHelper.hpp](#).

23.10.4.6 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> AIRSCHED::OnDParserHelper::OnDParser::definition< ScannerT >::date`

Definition at line 137 of file [OnDParserHelper.hpp](#).

23.10.4.7 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> AIRSCHED::OnDParserHelper::OnDParser::definition< ScannerT >::time`

Definition at line 137 of file [OnDParserHelper.hpp](#).

The documentation for this struct was generated from the following files:

- [airsched/command/OnDParserHelper.hpp](#)
- [airsched/command/OnDParserHelper.cpp](#)

## 23.11 AIRSCHED::ScheduleParserHelper::FlightPeriodParser::definition< ScannerT > Struct Template Reference

```
#include <airsched/command/ScheduleParserHelper.hpp>
```

### Public Member Functions

- [definition](#) ([FlightPeriodParser](#) const &self)
- `boost::spirit::classic::rule< ScannerT > const & start () const`

### Public Attributes

- `boost::spirit::classic::rule< ScannerT > flight\_period\_list`
- `boost::spirit::classic::rule< ScannerT > flight\_period`
- `boost::spirit::classic::rule< ScannerT > not\_to\_be\_parsed`
- `boost::spirit::classic::rule< ScannerT > flight\_period\_end`
- `boost::spirit::classic::rule< ScannerT > flight\_key`
- `boost::spirit::classic::rule< ScannerT > airline\_code`
- `boost::spirit::classic::rule< ScannerT > flight\_number`

- boost::spirit::classic::rule< ScannerT > [date](#)
- boost::spirit::classic::rule< ScannerT > [dow](#)
- boost::spirit::classic::rule< ScannerT > [time](#)
- boost::spirit::classic::rule< ScannerT > [date\\_offset](#)
- boost::spirit::classic::rule< ScannerT > [leg](#)
- boost::spirit::classic::rule< ScannerT > [leg\\_key](#)
- boost::spirit::classic::rule< ScannerT > [leg\\_details](#)
- boost::spirit::classic::rule< ScannerT > [leg\\_cabin\\_details](#)
- boost::spirit::classic::rule< ScannerT > [segment\\_section](#)
- boost::spirit::classic::rule< ScannerT > [segment\\_key](#)
- boost::spirit::classic::rule< ScannerT > [full\\_segment\\_cabin\\_details](#)
- boost::spirit::classic::rule< ScannerT > [segment\\_cabin\\_details](#)
- boost::spirit::classic::rule< ScannerT > [full\\_family\\_cabin\\_details](#)
- boost::spirit::classic::rule< ScannerT > [family\\_cabin\\_details](#)
- boost::spirit::classic::rule< ScannerT > [generic\\_segment](#)
- boost::spirit::classic::rule< ScannerT > [specific\\_segment\\_list](#)

### 23.11.1 Detailed Description

template<typename ScannerT>struct AIRSCHED::ScheduleParserHelper::FlightPeriodParser::definition< ScannerT >

Definition at line 255 of file [ScheduleParserHelper.hpp](#).

### 23.11.2 Constructor & Destructor Documentation

23.11.2.1 template<typename ScannerT > AIRSCHED::ScheduleParserHelper::FlightPeriodParser::definition< ScannerT >::definition ( FlightPeriodParser const & self )

Definition at line 474 of file [ScheduleParserHelper.cpp](#).

References [AIRSCHED::ScheduleParserHelper::airline\\_code\\_p\(\)](#), [AIRSCHED::ScheduleParserHelper::airport\\_p\(\)](#), [AIRSCHED::ScheduleParserHelper::cabin\\_code\\_p\(\)](#), [AIRSCHED::ScheduleParserHelper::class\\_code\\_list\\_p\(\)](#), [AIRSCHED::ScheduleParserHelper::day\\_p\(\)](#), [AIRSCHED::ScheduleParserHelper::dow\\_p\(\)](#), [AIRSCHED::ScheduleParserHelper::family\\_code\\_p\(\)](#), [AIRSCHED::ScheduleParserHelper::flight\\_number\\_p\(\)](#), [AIRSCHED::ScheduleParserHelper::hours\\_p\(\)](#), [AIRSCHED::ScheduleParserHelper::int1\\_p\(\)](#), [AIRSCHED::ScheduleParserHelper::minutes\\_p\(\)](#), [AIRSCHED::ScheduleParserHelper::month\\_p\(\)](#), [AIRSCHED::ScheduleParserHelper::seconds\\_p\(\)](#), and [AIRSCHED::ScheduleParserHelper::year\\_p\(\)](#).

### 23.11.3 Member Function Documentation

23.11.3.1 `template<typename ScannerT > bsc::rule< ScannerT > const & AIRSCHED::ScheduleParserHelper::FlightPeriodParser::definition< ScannerT >::start ( ) const`

Entry point of the parser.

Definition at line 621 of file [ScheduleParserHelper.cpp](#).

### 23.11.4 Member Data Documentation

23.11.4.1 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> AIRSCHED::ScheduleParserHelper::FlightPeriodParser::definition< ScannerT >::flight_period_list`

Definition at line 259 of file [ScheduleParserHelper.hpp](#).

23.11.4.2 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> AIRSCHED::ScheduleParserHelper::FlightPeriodParser::definition< ScannerT >::flight_period`

Definition at line 259 of file [ScheduleParserHelper.hpp](#).

23.11.4.3 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> AIRSCHED::ScheduleParserHelper::FlightPeriodParser::definition< ScannerT >::not_to_be_parsed`

Definition at line 259 of file [ScheduleParserHelper.hpp](#).

23.11.4.4 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> AIRSCHED::ScheduleParserHelper::FlightPeriodParser::definition< ScannerT >::flight_period_end`

Definition at line 259 of file [ScheduleParserHelper.hpp](#).

23.11.4.5 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> AIRSCHED::ScheduleParserHelper::FlightPeriodParser::definition< ScannerT >::flight_key`

Definition at line 259 of file [ScheduleParserHelper.hpp](#).

23.11.4.6 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> AIRSCHED::ScheduleParserHelper::FlightPeriodParser::definition< ScannerT >::airline_code`

Definition at line 259 of file [ScheduleParserHelper.hpp](#).

23.11.4.7 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> AIRSCHED::ScheduleParserHelper::FlightPeriodParser::definition< ScannerT >::flight_number`

Definition at line 259 of file [ScheduleParserHelper.hpp](#).

23.11.4.8 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> AIRSCHED::ScheduleParserHelper::FlightPeriodParser::definition< ScannerT >::date`

Definition at line 259 of file [ScheduleParserHelper.hpp](#).

23.11.4.9 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> AIRSCHED::ScheduleParserHelper::FlightPeriodParser::definition< ScannerT >::dow`

Definition at line 259 of file [ScheduleParserHelper.hpp](#).

23.11.4.10 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> AIRSCHED::ScheduleParserHelper::FlightPeriodParser::definition< ScannerT >::time`

Definition at line 259 of file [ScheduleParserHelper.hpp](#).

23.11.4.11 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> AIRSCHED::ScheduleParserHelper::FlightPeriodParser::definition< ScannerT >::date_offset`

Definition at line 259 of file [ScheduleParserHelper.hpp](#).

23.11.4.12 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> AIRSCHED::ScheduleParserHelper::FlightPeriodParser::definition< ScannerT >::leg`

Definition at line 259 of file [ScheduleParserHelper.hpp](#).

23.11.4.13 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> AIRSCHED::ScheduleParserHelper::FlightPeriodParser::definition< ScannerT >::leg_key`

Definition at line 259 of file [ScheduleParserHelper.hpp](#).

23.11.4.14 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> AIRSCHED::ScheduleParserHelper::FlightPeriodParser::definition< ScannerT >::leg_details`

Definition at line 259 of file [ScheduleParserHelper.hpp](#).

23.11.4.15 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> AIRSCHED::ScheduleParserHelper::FlightPeriodParser::definition< ScannerT >::leg_cabin_details`

Definition at line 259 of file [ScheduleParserHelper.hpp](#).

23.11.4.16 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> AIRSCHED::ScheduleParserHelper::FlightPeriodParser::definition< ScannerT >::segment_section`

Definition at line 259 of file [ScheduleParserHelper.hpp](#).

23.11.4.17 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> AIRSCHED::ScheduleParserHelper::FlightPeriodParser::definition< ScannerT >::segment_key`

Definition at line 259 of file [ScheduleParserHelper.hpp](#).

23.11.4.18 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> AIRSCHED::ScheduleParserHelper::FlightPeriodParser::definition< ScannerT >::full_segment_cabin_details`

Definition at line 259 of file [ScheduleParserHelper.hpp](#).

23.11.4.19 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> AIRSCHED::ScheduleParserHelper::FlightPeriodParser::definition< ScannerT >::segment_cabin_details`

Definition at line 259 of file [ScheduleParserHelper.hpp](#).

23.11.4.20 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> AIRSCHED::ScheduleParserHelper::FlightPeriodParser::definition< ScannerT >::full_family_cabin_details`

Definition at line 259 of file [ScheduleParserHelper.hpp](#).

23.11.4.21 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> AIRSCHED::ScheduleParserHelper::FlightPeriodParser::definition< ScannerT >::family_cabin_details`

Definition at line 259 of file [ScheduleParserHelper.hpp](#).

23.11.4.22 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> AIRSCHED::ScheduleParserHelper::FlightPeriodParser::definition< ScannerT >::generic_segment`

Definition at line 259 of file [ScheduleParserHelper.hpp](#).

23.11.4.23 `template<typename ScannerT > boost::spirit::classic::rule<ScannerT> AIRSCHED::ScheduleParserHelper::FlightPeriodParser::definition< ScannerT >::specific_segment_list`

Definition at line 259 of file [ScheduleParserHelper.hpp](#).

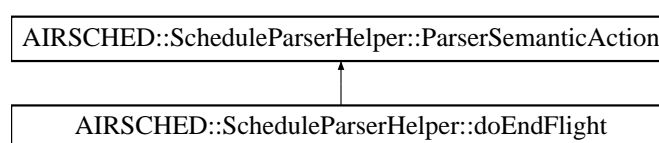
The documentation for this struct was generated from the following files:

- [airsched/command/ScheduleParserHelper.hpp](#)
- [airsched/command/ScheduleParserHelper.cpp](#)

## 23.12 AIRSCHED::ScheduleParserHelper::doEndFlight Struct Reference

```
#include <airsched/command/ScheduleParserHelper.hpp>
```

Inheritance diagram for AIRSCHED::ScheduleParserHelper::doEndFlight:



### Public Member Functions

- [doEndFlight](#) (stdair::BomRoot &, [FlightPeriodStruct](#) &)
- void [operator\(\)](#) (iterator\_t iStr, iterator\_t iStrEnd) const

### Public Attributes

- stdair::BomRoot & [\\_bomRoot](#)
- [FlightPeriodStruct](#) & [\\_flightPeriod](#)

### 23.12.1 Detailed Description

Mark the end of the flight-period parsing.

Definition at line 192 of file [ScheduleParserHelper.hpp](#).

### 23.12.2 Constructor & Destructor Documentation

23.12.2.1 `AIRSCHED::ScheduleParserHelper::doEndFlight::doEndFlight ( stdair::BomRoot & ioBomRoot, FlightPeriodStruct & ioFlightPeriod )`

Actor Constructor.

Definition at line 375 of file [ScheduleParserHelper.cpp](#).

### 23.12.3 Member Function Documentation

23.12.3.1 `void AIRSCHED::ScheduleParserHelper::doEndFlight::operator() ( iterator_t iStr, iterator_t iStrEnd ) const`

Actor Function (functor).

Definition at line 383 of file [ScheduleParserHelper.cpp](#).

References [\\_bomRoot](#), [AIRSCHED::LegStruct::\\_cabinList](#), [AIRSCHED::ScheduleParserHelper::ParserSemanticAction::\\_flightPeriod](#), [AIRSCHED::FlightPeriodStruct::\\_itLeg](#), [AIRSCHED::FlightPeriodStruct::\\_legAlreadyDefined](#), [AIRSCHED::FlightPeriodStruct::\\_legList](#), and [AIRSCHED::FlightPeriodStruct::describe\(\)](#).

#### 23.12.4 Member Data Documentation

##### 23.12.4.1 stdair::BomRoot& AIRSCHED::ScheduleParserHelper::doEndFlight::\_bomRoot

Actor Specific Context.

Definition at line 198 of file [ScheduleParserHelper.hpp](#).

Referenced by [operator\(\)](#).

##### 23.12.4.2 FlightPeriodStruct& AIRSCHED::ScheduleParserHelper::ParserSemanticAction::\_flightPeriod [inherited]

Actor Context.

Definition at line 33 of file [ScheduleParserHelper.hpp](#).

Referenced by [AIRSCHED::ScheduleParserHelper::storeAirlineCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFlightNumber::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDateRangeStart::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDateRangeEnd::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDow::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegBoardingPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegOffPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeBoardingTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeOffTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeElapsedTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegCabinCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeCapacity::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentSpecificity::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentBoardingPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentOffPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentCabinCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeClasses::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFamilyCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFClasses::operator\(\)](#), and [operator\(\)](#).

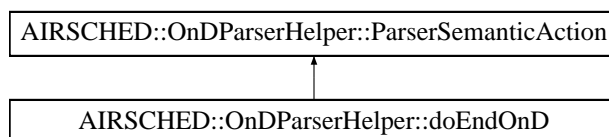
The documentation for this struct was generated from the following files:

- [airsched/command/ScheduleParserHelper.hpp](#)
- [airsched/command/ScheduleParserHelper.cpp](#)

## 23.13 AIRSCHED::OnDParserHelper::doEndOnD Struct Reference

```
#include <airsched/command/OnDParserHelper.hpp>
```

Inheritance diagram for AIRSCHED::OnDParserHelper::doEndOnD:



#### Public Member Functions

- [doEndOnD](#) (stdair::BomRoot &, [OnDPeriodStruct](#) &)
- void [operator\(\)](#) ([iterator\\_t](#) iStr, [iterator\\_t](#) iStrEnd) const

#### Public Attributes

- stdair::BomRoot & [\\_bomRoot](#)

- [OnDPeriodStruct](#) & [\\_onDPeriod](#)

### 23.13.1 Detailed Description

Mark the end of the O&D parsing.

Definition at line 106 of file [OnDParserHelper.hpp](#).

### 23.13.2 Constructor & Destructor Documentation

#### 23.13.2.1 AIRSCHED::OnDParserHelper::doEndOnD::doEndOnD ( [stdair::BomRoot](#) & [ioBomRoot](#), [OnDPeriodStruct](#) & [ioOnDPeriod](#) )

Actor Constructor.

Definition at line 193 of file [OnDParserHelper.cpp](#).

### 23.13.3 Member Function Documentation

#### 23.13.3.1 void AIRSCHED::OnDParserHelper::doEndOnD::operator() ( [iterator\\_t iStr](#), [iterator\\_t iStrEnd](#) ) const

Actor Function (functor).

Definition at line 199 of file [OnDParserHelper.cpp](#).

References [\\_bomRoot](#), and [AIRSCHED::OnDParserHelper::ParserSemanticAction::\\_onDPeriod](#).

### 23.13.4 Member Data Documentation

#### 23.13.4.1 [stdair::BomRoot](#)& AIRSCHED::OnDParserHelper::doEndOnD::\_bomRoot

Actor Specific Context.

Definition at line 112 of file [OnDParserHelper.hpp](#).

Referenced by [operator\(\)\(\)](#).

#### 23.13.4.2 [OnDPeriodStruct](#)& AIRSCHED::OnDParserHelper::ParserSemanticAction::\_onDPeriod [inherited]

Actor Context.

Definition at line 38 of file [OnDParserHelper.hpp](#).

Referenced by [AIRSCHED::OnDParserHelper::storeOrigin::operator\(\)\(\)](#), [AIRSCHED::OnDParserHelper::storeDestination::operator\(\)\(\)](#), [AIRSCHED::OnDParserHelper::storeDateRangeStart::operator\(\)\(\)](#), [AIRSCHED::OnDParserHelper::storeDateRangeEnd::operator\(\)\(\)](#), [AIRSCHED::OnDParserHelper::storeStartRangeTime::operator\(\)\(\)](#), [AIRSCHED::OnDParserHelper::storeEndRangeTime::operator\(\)\(\)](#), [AIRSCHED::OnDParserHelper::storeAirlineCode::operator\(\)\(\)](#), [AIRSCHED::OnDParserHelper::storeClassCode::operator\(\)\(\)](#), and [operator\(\)\(\)](#).

The documentation for this struct was generated from the following files:

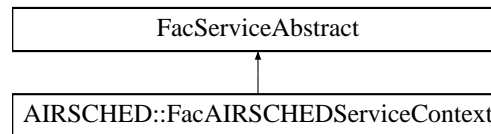
- [airsched/command/OnDParserHelper.hpp](#)
- [airsched/command/OnDParserHelper.cpp](#)

## 23.14 AIRSCHED::FacAIRSCHEDServiceContext Class Reference

Factory for the service context.

```
#include <airsched/factory/FacAIRSCHEDServiceContext.hpp>
```

Inheritance diagram for AIRSCHED::FacAIRSCHEDServiceContext:



#### Public Member Functions

- [~FacAIRSCHEDServiceContext\(\)](#)
- [AIRSCHED\\_ServiceContext & create\(\)](#)

#### Static Public Member Functions

- static [FacAIRSCHEDServiceContext & instance\(\)](#)

#### Protected Member Functions

- [FacAIRSCHEDServiceContext\(\)](#)

#### 23.14.1 Detailed Description

Factory for the service context.

Definition at line 19 of file [FacAIRSCHEDServiceContext.hpp](#).

#### 23.14.2 Constructor & Destructor Documentation

##### 23.14.2.1 AIRSCHED::FacAIRSCHEDServiceContext::~~FacAIRSCHEDServiceContext()

Destructor.

The Destruction put the `_instance` to NULL in order to be clean for the next [FacAIRSCHEDServiceContext::instance\(\)](#).

Definition at line 17 of file [FacAIRSCHEDServiceContext.cpp](#).

##### 23.14.2.2 AIRSCHED::FacAIRSCHEDServiceContext::FacAIRSCHEDServiceContext() [inline], [protected]

Default Constructor.

This constructor is protected in order to ensure the singleton pattern.

Definition at line 54 of file [FacAIRSCHEDServiceContext.hpp](#).

Referenced by [instance\(\)](#).

#### 23.14.3 Member Function Documentation

##### 23.14.3.1 FacAIRSCHEDServiceContext & AIRSCHED::FacAIRSCHEDServiceContext::instance() [static]

Provide the unique instance.

The singleton is instantiated when first used.



**Returns**

FacServiceContext&

Definition at line 22 of file [FacAIRSCHEDServiceContext.cpp](#).

References [FacAIRSCHEDServiceContext\(\)](#).

**23.14.3.2 AIRSCHED\_ServiceContext & AIRSCHED::FacAIRSCHEDServiceContext::create ( )**

Create a new ServiceContext object.

This new object is added to the list of instantiated objects.

**Returns**

ServiceContext& The newly created object.

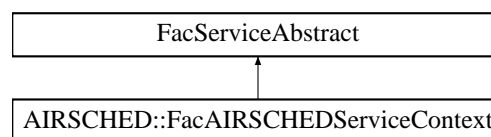
Definition at line 34 of file [FacAIRSCHEDServiceContext.cpp](#).

The documentation for this class was generated from the following files:

- [airsched/factory/FacAIRSCHEDServiceContext.hpp](#)
- [airsched/factory/FacAIRSCHEDServiceContext.cpp](#)

**23.15 FacServiceAbstract Class Reference**

Inheritance diagram for FacServiceAbstract:



The documentation for this class was generated from the following file:

- [airsched/factory/FacAIRSCHEDServiceContext.hpp](#)

**23.16 AIRSCHED::FacServiceAbstract Class Reference**

```
#include <airsched/factory/FacServiceAbstract.hpp>
```

**Public Types**

- typedef std::vector  
< [ServiceAbstract](#) \* > [ServicePool\\_T](#)

**Public Member Functions**

- virtual [~FacServiceAbstract](#) ()
- void [clean](#) ()

**Protected Member Functions**

- [FacServiceAbstract](#) ()

## Protected Attributes

- [ServicePool\\_T \\_pool](#)

## 23.16.1 Detailed Description

Base class for the (Service) Factory layer.

Definition at line 16 of file [FacServiceAbstract.hpp](#).

## 23.16.2 Member Typedef Documentation

23.16.2.1 `typedef std::vector<ServiceAbstract*> AIRSCHED::FacServiceAbstract::ServicePool_T`

Define the list (pool) of Service objects.

Definition at line 20 of file [FacServiceAbstract.hpp](#).

## 23.16.3 Constructor &amp; Destructor Documentation

23.16.3.1 `AIRSCHED::FacServiceAbstract::~~FacServiceAbstract ( ) [virtual]`

Destructor.

Definition at line 13 of file [FacServiceAbstract.cpp](#).

References [clean\(\)](#).

23.16.3.2 `AIRSCHED::FacServiceAbstract::FacServiceAbstract ( ) [inline],[protected]`

Default Constructor.

This constructor is protected to ensure the class is abstract.

Definition at line 31 of file [FacServiceAbstract.hpp](#).

## 23.16.4 Member Function Documentation

23.16.4.1 `void AIRSCHED::FacServiceAbstract::clean ( )`

Destroyed all the object instantiated by this factory.

Definition at line 18 of file [FacServiceAbstract.cpp](#).

References [\\_pool](#).

Referenced by [~FacServiceAbstract\(\)](#).

## 23.16.5 Member Data Documentation

23.16.5.1 `ServicePool_T AIRSCHED::FacServiceAbstract::_pool [protected]`

List of instantiated Business Objects

Definition at line 34 of file [FacServiceAbstract.hpp](#).

Referenced by [clean\(\)](#).

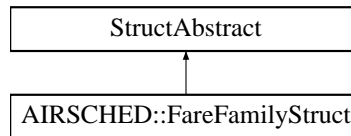
The documentation for this class was generated from the following files:

- [airsched/factory/FacServiceAbstract.hpp](#)
- [airsched/factory/FacServiceAbstract.cpp](#)

## 23.17 AIRSCHED::FareFamilyStruct Struct Reference

```
#include <airsched/bom/FareFamilyStruct.hpp>
```

Inheritance diagram for AIRSCHED::FareFamilyStruct:



### Public Member Functions

- [FareFamilyStruct](#) (const stdair::FamilyCode\_T &, const stdair::ClassList\_String\_T &)
- const std::string [describe](#) () const

### Public Attributes

- stdair::FamilyCode\_T [\\_familyCode](#)
- stdair::ClassList\_String\_T [\\_classes](#)

#### 23.17.1 Detailed Description

Utility Structure for the parsing of fare family details.

Definition at line 17 of file [FareFamilyStruct.hpp](#).

#### 23.17.2 Constructor & Destructor Documentation

23.17.2.1 AIRSCHED::FareFamilyStruct::FareFamilyStruct ( const stdair::FamilyCode\_T & *iFamilyCode*, const stdair::ClassList\_String\_T & *iClasses* )

Constructors.

Definition at line 14 of file [FareFamilyStruct.cpp](#).

#### 23.17.3 Member Function Documentation

23.17.3.1 const std::string AIRSCHED::FareFamilyStruct::describe ( ) const

Give a description of the structure (for display purposes).

Definition at line 21 of file [FareFamilyStruct.cpp](#).

References [\\_classes](#), and [\\_familyCode](#).

#### 23.17.4 Member Data Documentation

23.17.4.1 stdair::FamilyCode\_T AIRSCHED::FareFamilyStruct::\_familyCode

Definition at line 19 of file [FareFamilyStruct.hpp](#).

Referenced by [describe\(\)](#).

## 23.17.4.2 stdair::ClassList\_String\_T AIRSCHED::FareFamilyStruct::\_classes

Definition at line 20 of file [FareFamilyStruct.hpp](#).

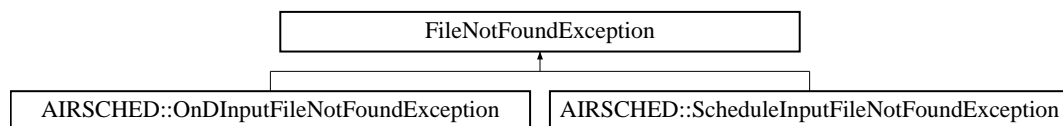
Referenced by [describe\(\)](#).

The documentation for this struct was generated from the following files:

- [airsched/bom/FareFamilyStruct.hpp](#)
- [airsched/bom/FareFamilyStruct.cpp](#)

## 23.18 FileNotFoundException Class Reference

Inheritance diagram for FileNotFoundException:



The documentation for this class was generated from the following file:

- [airsched/AIRSCHED\\_Types.hpp](#)

## 23.19 AIRSCHED::FlagSaver Struct Reference

## Public Member Functions

- [FlagSaver](#) (std::ostream &oStream)
- [~FlagSaver](#) ()

## 23.19.1 Detailed Description

Helper singleton structure to store the current formatting flags of any given output stream. The flags are re-set at the structure destruction.

Definition at line 22 of file [BomDisplay.cpp](#).

## 23.19.2 Constructor &amp; Destructor Documentation

## 23.19.2.1 AIRSCHED::FlagSaver::FlagSaver ( std::ostream &amp; oStream ) [inline]

Constructor.

Definition at line 25 of file [BomDisplay.cpp](#).

## 23.19.2.2 AIRSCHED::FlagSaver::~~FlagSaver ( ) [inline]

Destructor.

Definition at line 30 of file [BomDisplay.cpp](#).

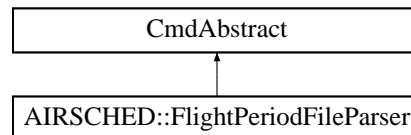
The documentation for this struct was generated from the following file:

- [airsched/bom/BomDisplay.cpp](#)

## 23.20 AIRSCHED::FlightPeriodFileParser Class Reference

```
#include <airsched/command/ScheduleParserHelper.hpp>
```

Inheritance diagram for AIRSCHED::FlightPeriodFileParser:



### Public Member Functions

- [FlightPeriodFileParser](#) (stdair::BomRoot &ioBomRoot, const stdair::Filename\_T &iFilename)
- bool [generateInventories](#) ()

#### 23.20.1 Detailed Description

Short Description

Detailed Description. Class wrapping the initialisation and entry point of the parser.

The seemingly redundancy is used to force the instantiation of the actual parser, which is a templatised Boost Spirit grammar. Hence, the actual parser is instantiated within that class object code.

Definition at line 291 of file [ScheduleParserHelper.hpp](#).

#### 23.20.2 Constructor & Destructor Documentation

23.20.2.1 **AIRSCHED::FlightPeriodFileParser::FlightPeriodFileParser** ( stdair::BomRoot & *ioBomRoot*, const stdair::Filename\_T & *iFilename* )

Constructor.

Definition at line 636 of file [ScheduleParserHelper.cpp](#).

#### 23.20.3 Member Function Documentation

23.20.3.1 bool AIRSCHED::FlightPeriodFileParser::generateInventories ( )

Parse the input file and generate the Inventories.

Definition at line 673 of file [ScheduleParserHelper.cpp](#).

Referenced by [AIRSCHED::ScheduleParser::generateInventories\(\)](#).

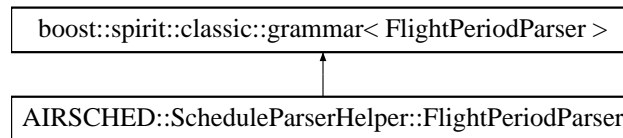
The documentation for this class was generated from the following files:

- [airsched/command/ScheduleParserHelper.hpp](#)
- [airsched/command/ScheduleParserHelper.cpp](#)

## 23.21 AIRSCHED::ScheduleParserHelper::FlightPeriodParser Struct Reference

```
#include <airsched/command/ScheduleParserHelper.hpp>
```

Inheritance diagram for AIRSCHED::ScheduleParserHelper::FlightPeriodParser:



## Classes

- struct [definition](#)

## Public Member Functions

- [FlightPeriodParser](#) (stdair::BomRoot &, [FlightPeriodStruct](#) &)

## Public Attributes

- stdair::BomRoot & [\\_bomRoot](#)
- [FlightPeriodStruct](#) & [\\_flightPeriod](#)

### 23.21.1 Detailed Description

AirlineCode; FlightNumber; DateRangeStart; DateRangeEnd; DOW; (list) BoardingPoint; OffPoint; BoardingTime; DateOffset; OffTime; ElapsedTime; (list) CabinCode; Capacity; SegmentSpecificity (0 or 1); (list) (optional BoardingPoint; OffPoint); CabinCode; Classes BA; 9; 2007-04-20; 2007-04-30; 0000011; LHR; BKK; 22:00; +1; 15:15; 11:15; C; 12; M; 300; BKK; SYD; 18:10; +1; 06:05; 08:55; C; 20; M; 250; 0; C; CDI; 1; CD; 2; IU; M; YHBKLMNOPQRSTUVWXYZ; 3; YHBKLMNOPQRSTUVWXYZ BA; 9; 2007-04-20; 2007-04-30; 1111100; LHR; SIN; 22:00; +1; 15:15; 11:15; C; 15; M; 310; SIN; SYD; 18:10; +1; 06:05; 08:55; C; 25; M; 260; 1; LHR; SIN; C; CDI; 1; CDI; M; YHBKLMNOPQRSTUVWXYZ; 2; YHBKLMNOPQRSTUVWXYZ SIN; SYD; C; CDI; 1; CDI; M; YHBKLMNOPQRSTUVWXYZ; 2; YHBKLMNOPQRSTUVWXYZ LHR; SYD; C; CDI; 1; CDI; M; YHBKLMNOPQRSTUVWXYZ; 2; YHBKLMNOPQRSTUVWXYZ

Grammar: DOW ::= int FlightKey ::= AirlineCode ';' FlightNumber ';' DateRangeStart ';' DateRangeEnd ';' DOW  
 LegKey ::= BoardingPoint ';' OffPoint LegDetails ::= BoardingTime [ '/' BoardingDateOffset ] ';' OffTime [ '/' BoardingDateOffset ] ';' Elapsed LegCabinDetails ::= CabinCode ';' Capacity Leg ::= LegKey ';' LegDetails ( ';' CabinDetails )+  
 SegmentKey ::= BoardingPoint ';' OffPoint SegmentCabinDetails ::= CabinCode ';' Classes ( ';' FamilyCabinDetails ) \*  
 FamilyCabinDetails ::= FamilyCode ';' Classes FullSegmentCabinDetails ::= ( ';' SegmentCabinDetails )+ GenericSegment ::= '0' ( ';' SegmentCabinDetails )+ SpecificSegments ::= '1' ( ';' SegmentKey ';' FullSegmentCabinDetails )+  
 SegmentSection ::= GenericSegment | SpecificSegments FlightPeriod ::= FlightKey ( ';' Leg )+ ';' SegmentSection ';' EndOfFlight EndOfFlight ::= ';' Grammar for the Flight-Period parser.

Definition at line 249 of file [ScheduleParserHelper.hpp](#).

### 23.21.2 Constructor & Destructor Documentation

23.21.2.1 AIRSCHED::ScheduleParserHelper::FlightPeriodParser::FlightPeriodParser ( stdair::BomRoot & *ioBomRoot*, [FlightPeriodStruct](#) & *ioFlightPeriod* )

Definition at line 465 of file [ScheduleParserHelper.cpp](#).

### 23.21.3 Member Data Documentation

23.21.3.1 stdair::BomRoot& AIRSCHED::ScheduleParserHelper::FlightPeriodParser::\_bomRoot

Definition at line 272 of file [ScheduleParserHelper.hpp](#).

## 23.21.3.2 FlightPeriodStruct&amp; AIRSCHED::ScheduleParserHelper::FlightPeriodParser::\_flightPeriod

Definition at line 273 of file [ScheduleParserHelper.hpp](#).

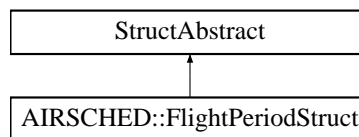
The documentation for this struct was generated from the following files:

- [airsched/command/ScheduleParserHelper.hpp](#)
- [airsched/command/ScheduleParserHelper.cpp](#)

## 23.22 AIRSCHED::FlightPeriodStruct Struct Reference

```
#include <airsched/bom/FlightPeriodStruct.hpp>
```

Inheritance diagram for AIRSCHED::FlightPeriodStruct:



## Public Member Functions

- `stdair::Date_T` [getDate](#) () const
- `stdair::Duration_T` [getTime](#) () const
- `const std::string` [describe](#) () const
- `void` [addAirport](#) (const `stdair::AirportCode_T` &)
- `void` [buildSegments](#) ()
- `void` [addSegmentCabin](#) (const [SegmentStruct](#) &, const [SegmentCabinStruct](#) &)
- `void` [addSegmentCabin](#) (const [SegmentCabinStruct](#) &)
- `void` [addFareFamily](#) (const [SegmentStruct](#) &, const [SegmentCabinStruct](#) &, const [FareFamilyStruct](#) &)
- `void` [addFareFamily](#) (const [SegmentCabinStruct](#) &, const [FareFamilyStruct](#) &)
- [FlightPeriodStruct](#) ()

## Public Attributes

- `stdair::AirlineCode_T` [\\_airlineCode](#)
- `stdair::FlightNumber_T` [\\_flightNumber](#)
- `stdair::DatePeriod_T` [\\_dateRange](#)
- `stdair::DoWStruct` [\\_dow](#)
- [LegStructList\\_T](#) [\\_legList](#)
- [SegmentStructList\\_T](#) [\\_segmentList](#)
- `bool` [\\_legAlreadyDefined](#)
- [LegStruct](#) [\\_itLeg](#)
- [LegCabinStruct](#) [\\_itLegCabin](#)
- `stdair::Date_T` [\\_dateRangeStart](#)
- `stdair::Date_T` [\\_dateRangeEnd](#)
- `unsigned int` [\\_itYear](#)
- `unsigned int` [\\_itMonth](#)
- `unsigned int` [\\_itDay](#)
- `int` [\\_dateOffset](#)
- `long` [\\_itHours](#)
- `long` [\\_itMinutes](#)
- `long` [\\_itSeconds](#)

- [AirportList\\_T \\_airportList](#)
- [AirportOrderedList\\_T \\_airportOrderedList](#)
- [bool \\_areSegmentDefinitionsSpecific](#)
- [SegmentStruct \\_itSegment](#)
- [SegmentCabinStruct \\_itSegmentCabin](#)

### 23.22.1 Detailed Description

Utility Structure for the parsing of Flight-Period structures.

Definition at line 26 of file [FlightPeriodStruct.hpp](#).

### 23.22.2 Constructor & Destructor Documentation

#### 23.22.2.1 AIRSCHED::FlightPeriodStruct::FlightPeriodStruct ( )

Constructor.

Definition at line 17 of file [FlightPeriodStruct.cpp](#).

### 23.22.3 Member Function Documentation

#### 23.22.3.1 stdair::Date\_T AIRSCHED::FlightPeriodStruct::getDate ( ) const

Set the date from the staging details.

Definition at line 24 of file [FlightPeriodStruct.cpp](#).

References [\\_itDay](#), [\\_itMonth](#), and [\\_itYear](#).

Referenced by [AIRSCHED::ScheduleParserHelper::storeDateRangeStart::operator\(\)\(\)](#), and [AIRSCHED::ScheduleParserHelper::storeDateRangeEnd::operator\(\)\(\)](#).

#### 23.22.3.2 stdair::Duration\_T AIRSCHED::FlightPeriodStruct::getTime ( ) const

Set the time from the staging details.

Definition at line 29 of file [FlightPeriodStruct.cpp](#).

References [\\_itHours](#), [\\_itMinutes](#), and [\\_itSeconds](#).

Referenced by [AIRSCHED::ScheduleParserHelper::storeBoardingTime::operator\(\)\(\)](#), [AIRSCHED::ScheduleParserHelper::storeOffTime::operator\(\)\(\)](#), and [AIRSCHED::ScheduleParserHelper::storeElapsedTime::operator\(\)\(\)](#).

#### 23.22.3.3 const std::string AIRSCHED::FlightPeriodStruct::describe ( ) const

Give a description of the structure (for display purposes).

Definition at line 36 of file [FlightPeriodStruct.cpp](#).

References [\\_airlineCode](#), [\\_dateRange](#), [\\_dow](#), [\\_flightNumber](#), [\\_legList](#), [\\_segmentList](#), [AIRSCHED::SegmentStruct::describe\(\)](#), and [AIRSCHED::LegStruct::describe\(\)](#).

Referenced by [AIRSCHED::ScheduleParserHelper::doEndFlight::operator\(\)\(\)](#).

#### 23.22.3.4 void AIRSCHED::FlightPeriodStruct::addAirport ( const stdair::AirportCode\_T & iAirport )

Add the given airport to the internal lists (if not already existing).

Definition at line 62 of file [FlightPeriodStruct.cpp](#).

References [\\_airportList](#), and [\\_airportOrderedList](#).



Referenced by [AIRSCHED::ScheduleParserHelper::storeLegBoardingPoint::operator\(\)\(\)](#), and [AIRSCHED::ScheduleParserHelper::storeLegOffPoint::operator\(\)\(\)](#).

#### 23.22.3.5 void AIRSCHED::FlightPeriodStruct::buildSegments ( )

Build the list of [SegmentStruct](#) objects.

Definition at line 78 of file [FlightPeriodStruct.cpp](#).

References [\\_airportList](#), [\\_airportOrderedList](#), [AIRSCHED::SegmentStruct::\\_boardingPoint](#), [AIRSCHED::SegmentStruct::\\_offPoint](#), and [\\_segmentList](#).

Referenced by [AIRSCHED::ScheduleParserHelper::storeSegmentSpecificity::operator\(\)\(\)](#).

#### 23.22.3.6 void AIRSCHED::FlightPeriodStruct::addSegmentCabin ( const SegmentStruct & iSegment, const SegmentCabinStruct & iCabin )

Add, to the Segment structure whose key corresponds to the given (board point, off point) pair, the specific segment cabin details (mainly, the list of the class codes).

Note that the Segment structure is retrieved from the internal list, already filled by a previous step (the [buildSegments\(\)](#) method).

Definition at line 111 of file [FlightPeriodStruct.cpp](#).

References [AIRSCHED::SegmentStruct::\\_boardingPoint](#), [AIRSCHED::SegmentStruct::\\_cabinList](#), [AIRSCHED::SegmentStruct::\\_offPoint](#), and [\\_segmentList](#).

Referenced by [AIRSCHED::ScheduleParserHelper::storeClasses::operator\(\)\(\)](#).

#### 23.22.3.7 void AIRSCHED::FlightPeriodStruct::addSegmentCabin ( const SegmentCabinStruct & iCabin )

Add, to all the Segment structures, the general segment cabin details (mainly, the list of the class codes).

Note that the Segment structures are stored within the internal list, already filled by a previous step (the [buildSegments\(\)](#) method).

Definition at line 149 of file [FlightPeriodStruct.cpp](#).

References [AIRSCHED::SegmentStruct::\\_cabinList](#), and [\\_segmentList](#).

#### 23.22.3.8 void AIRSCHED::FlightPeriodStruct::addFareFamily ( const SegmentStruct & iSegment, const SegmentCabinStruct & iCabin, const FareFamilyStruct & iFareFamily )

Add, to the SegmentCabin structure whose key corresponds to the given cabin code, the specific segment fare family details (mainly, the list of the class codes).

Note that the SegmentCabin structure is retrieved from the internal list, already filled by a previous step (the [buildSegmentCabins\(\)](#) method).

Definition at line 162 of file [FlightPeriodStruct.cpp](#).

References [AIRSCHED::SegmentStruct::\\_boardingPoint](#), [AIRSCHED::SegmentCabinStruct::\\_cabinCode](#), [AIRSCHED::SegmentCabinStruct::\\_cabinList](#), [AIRSCHED::SegmentCabinStruct::\\_fareFamilies](#), [AIRSCHED::SegmentStruct::\\_offPoint](#), and [\\_segmentList](#).

Referenced by [AIRSCHED::ScheduleParserHelper::storeFClasses::operator\(\)\(\)](#).

#### 23.22.3.9 void AIRSCHED::FlightPeriodStruct::addFareFamily ( const SegmentCabinStruct & iCabin, const FareFamilyStruct & iFareFamily )

Add, to all the Segment structures, the general fare family sets (list of fare families).

Note that the SegmentCabin structures are stored within the internal list, already filled by a previous step (the [buildSegmentCabins\(\)](#) method).

Definition at line 229 of file [FlightPeriodStruct.cpp](#).

References [AIRSCHED::SegmentCabinStruct::\\_cabinCode](#), [AIRSCHED::SegmentCabinStruct::\\_cabinList](#), [AIRSCHED::](#)

[::SegmentCabinStruct::\\_fareFamilies](#), and [\\_segmentList](#).

#### 23.22.4 Member Data Documentation

##### 23.22.4.1 stdair::AirlineCode\_T AIRSCHED::FlightPeriodStruct::\_airlineCode

Definition at line 84 of file [FlightPeriodStruct.hpp](#).

Referenced by [describe\(\)](#), and [AIRSCHED::ScheduleParserHelper::storeAirlineCode::operator\(\)](#).

##### 23.22.4.2 stdair::FlightNumber\_T AIRSCHED::FlightPeriodStruct::\_flightNumber

Definition at line 85 of file [FlightPeriodStruct.hpp](#).

Referenced by [describe\(\)](#), and [AIRSCHED::ScheduleParserHelper::storeFlightNumber::operator\(\)](#).

##### 23.22.4.3 stdair::DatePeriod\_T AIRSCHED::FlightPeriodStruct::\_dateRange

Definition at line 86 of file [FlightPeriodStruct.hpp](#).

Referenced by [describe\(\)](#), and [AIRSCHED::ScheduleParserHelper::storeDateRangeEnd::operator\(\)](#).

##### 23.22.4.4 stdair::DoWStruct AIRSCHED::FlightPeriodStruct::\_dow

Definition at line 87 of file [FlightPeriodStruct.hpp](#).

Referenced by [describe\(\)](#), and [AIRSCHED::ScheduleParserHelper::storeDow::operator\(\)](#).

##### 23.22.4.5 LegStructList\_T AIRSCHED::FlightPeriodStruct::\_legList

Definition at line 88 of file [FlightPeriodStruct.hpp](#).

Referenced by [describe\(\)](#), [AIRSCHED::ScheduleParserHelper::storeAirlineCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegBoardingPoint::operator\(\)](#), and [AIRSCHED::ScheduleParserHelper::doEndFlight::operator\(\)](#).

##### 23.22.4.6 SegmentStructList\_T AIRSCHED::FlightPeriodStruct::\_segmentList

Definition at line 89 of file [FlightPeriodStruct.hpp](#).

Referenced by [addFareFamily\(\)](#), [addSegmentCabin\(\)](#), [buildSegments\(\)](#), and [describe\(\)](#).

##### 23.22.4.7 bool AIRSCHED::FlightPeriodStruct::\_legAlreadyDefined

Staging Leg (resp. Cabin) structure, gathering the result of the iteration on one leg (resp. cabin).

Definition at line 93 of file [FlightPeriodStruct.hpp](#).

Referenced by [AIRSCHED::ScheduleParserHelper::storeLegBoardingPoint::operator\(\)](#), and [AIRSCHED::ScheduleParserHelper::doEndFlight::operator\(\)](#).

##### 23.22.4.8 LegStruct AIRSCHED::FlightPeriodStruct::\_itLeg

Definition at line 94 of file [FlightPeriodStruct.hpp](#).

Referenced by [AIRSCHED::ScheduleParserHelper::storeLegBoardingPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegOffPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeBoardingTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeOffTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeElapsedTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeCapacity::operator\(\)](#), and [AIRSCHED::ScheduleParserHelper::doEndFlight::operator\(\)](#).

##### 23.22.4.9 LegCabinStruct AIRSCHED::FlightPeriodStruct::\_itLegCabin

Definition at line 95 of file [FlightPeriodStruct.hpp](#).

Referenced by [AIRSCHED::ScheduleParserHelper::storeLegCabinCode::operator\(\)\(\)](#), and [AIRSCHED::ScheduleParserHelper::storeCapacity::operator\(\)\(\)](#).

#### 23.22.4.10 stdair::Date\_T AIRSCHED::FlightPeriodStruct::\_dateRangeStart

Staging Date.

Definition at line 98 of file [FlightPeriodStruct.hpp](#).

Referenced by [AIRSCHED::ScheduleParserHelper::storeDateRangeStart::operator\(\)\(\)](#), and [AIRSCHED::ScheduleParserHelper::storeDateRangeEnd::operator\(\)\(\)](#).

#### 23.22.4.11 stdair::Date\_T AIRSCHED::FlightPeriodStruct::\_dateRangeEnd

Definition at line 99 of file [FlightPeriodStruct.hpp](#).

Referenced by [AIRSCHED::ScheduleParserHelper::storeDateRangeEnd::operator\(\)\(\)](#).

#### 23.22.4.12 unsigned int AIRSCHED::FlightPeriodStruct::\_itYear

Definition at line 100 of file [FlightPeriodStruct.hpp](#).

Referenced by [getDate\(\)](#).

#### 23.22.4.13 unsigned int AIRSCHED::FlightPeriodStruct::\_itMonth

Definition at line 101 of file [FlightPeriodStruct.hpp](#).

Referenced by [getDate\(\)](#).

#### 23.22.4.14 unsigned int AIRSCHED::FlightPeriodStruct::\_itDay

Definition at line 102 of file [FlightPeriodStruct.hpp](#).

Referenced by [getDate\(\)](#).

#### 23.22.4.15 int AIRSCHED::FlightPeriodStruct::\_dateOffset

Definition at line 103 of file [FlightPeriodStruct.hpp](#).

Referenced by [AIRSCHED::ScheduleParserHelper::storeBoardingTime::operator\(\)\(\)](#), [AIRSCHED::ScheduleParserHelper::storeOffTime::operator\(\)\(\)](#), and [AIRSCHED::ScheduleParserHelper::storeElapsedTime::operator\(\)\(\)](#).

#### 23.22.4.16 long AIRSCHED::FlightPeriodStruct::\_itHours

Staging Time.

Definition at line 106 of file [FlightPeriodStruct.hpp](#).

Referenced by [getTime\(\)](#).

#### 23.22.4.17 long AIRSCHED::FlightPeriodStruct::\_itMinutes

Definition at line 107 of file [FlightPeriodStruct.hpp](#).

Referenced by [getTime\(\)](#).

#### 23.22.4.18 long AIRSCHED::FlightPeriodStruct::\_itSeconds

Definition at line 108 of file [FlightPeriodStruct.hpp](#).

Referenced by [getTime\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDateRangeStart::operator\(\)\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDateRangeEnd::operator\(\)\(\)](#), [AIRSCHED::ScheduleParserHelper::storeBoardingTime::operator\(\)\(\)](#), [AIRSCHED::ScheduleParserHelper::storeOffTime::operator\(\)\(\)](#), and [AIRSCHED::ScheduleParserHelper::storeElapsedTime::operator\(\)\(\)](#).

**23.22.4.19 AirportList\_T AIRSCHED::FlightPeriodStruct::\_airportList**

Staging Airport List (helper to derive the list of Segment structures).

Definition at line 112 of file [FlightPeriodStruct.hpp](#).

Referenced by [addAirport\(\)](#), [buildSegments\(\)](#), and [AIRSCHED::ScheduleParserHelper::storeSegmentSpecificity::operator\(\)](#).

**23.22.4.20 AirportOrderedList\_T AIRSCHED::FlightPeriodStruct::\_airportOrderedList**

Definition at line 113 of file [FlightPeriodStruct.hpp](#).

Referenced by [addAirport\(\)](#), [buildSegments\(\)](#), and [AIRSCHED::ScheduleParserHelper::storeSegmentSpecificity::operator\(\)](#).

**23.22.4.21 bool AIRSCHED::FlightPeriodStruct::\_areSegmentDefinitionsSpecific**

Staging Segment-related attributes.

Definition at line 116 of file [FlightPeriodStruct.hpp](#).

Referenced by [AIRSCHED::ScheduleParserHelper::storeSegmentSpecificity::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeClasses::operator\(\)](#), and [AIRSCHED::ScheduleParserHelper::storeFClasses::operator\(\)](#).

**23.22.4.22 SegmentStruct AIRSCHED::FlightPeriodStruct::\_itSegment**

Definition at line 117 of file [FlightPeriodStruct.hpp](#).

Referenced by [AIRSCHED::ScheduleParserHelper::storeSegmentBoardingPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentOffPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeClasses::operator\(\)](#), and [AIRSCHED::ScheduleParserHelper::storeFClasses::operator\(\)](#).

**23.22.4.23 SegmentCabinStruct AIRSCHED::FlightPeriodStruct::\_itSegmentCabin**

Definition at line 118 of file [FlightPeriodStruct.hpp](#).

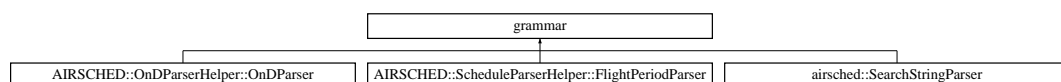
Referenced by [AIRSCHED::ScheduleParserHelper::storeSegmentCabinCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeClasses::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFamilyCode::operator\(\)](#), and [AIRSCHED::ScheduleParserHelper::storeFClasses::operator\(\)](#).

The documentation for this struct was generated from the following files:

- [airsched/bom/FlightPeriodStruct.hpp](#)
- [airsched/bom/FlightPeriodStruct.cpp](#)

**23.23 grammar Class Reference**

Inheritance diagram for grammar:



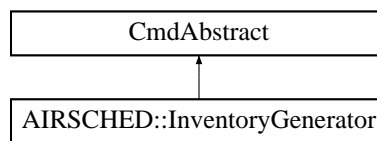
The documentation for this class was generated from the following file:

- [airsched/command/OnDParserHelper.hpp](#)

**23.24 AIRSCHED::InventoryGenerator Class Reference**

```
#include <airsched/command/InventoryGenerator.hpp>
```

Inheritance diagram for AIRSCHED::InventoryGenerator:



#### Friends

- class [FlightPeriodFileParser](#)
- class [FFFlightPeriodFileParser](#)
- struct [ScheduleParserHelper::doEndFlight](#)
- class [ScheduleParser](#)

#### 23.24.1 Detailed Description

Class handling the generation / instantiation of the Inventory BOM.

Definition at line 31 of file [InventoryGenerator.hpp](#).

#### 23.24.2 Friends And Related Function Documentation

##### 23.24.2.1 friend class **FlightPeriodFileParser** [friend]

Definition at line 35 of file [InventoryGenerator.hpp](#).

##### 23.24.2.2 friend class **FFFlightPeriodFileParser** [friend]

Definition at line 36 of file [InventoryGenerator.hpp](#).

##### 23.24.2.3 friend struct **ScheduleParserHelper::doEndFlight** [friend]

Definition at line 37 of file [InventoryGenerator.hpp](#).

##### 23.24.2.4 friend class **ScheduleParser** [friend]

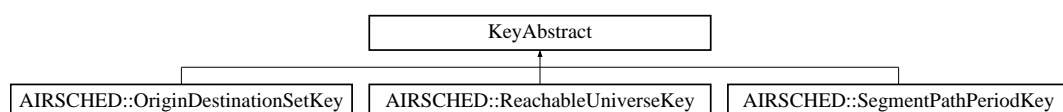
Definition at line 38 of file [InventoryGenerator.hpp](#).

The documentation for this class was generated from the following files:

- [airsched/command/InventoryGenerator.hpp](#)
- [airsched/command/InventoryGenerator.cpp](#)

## 23.25 KeyAbstract Class Reference

Inheritance diagram for KeyAbstract:



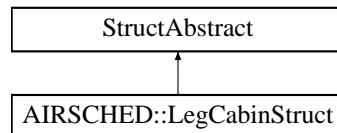
The documentation for this class was generated from the following file:

- [airsched/bom/ReachableUniverseKey.hpp](#)

## 23.26 AIRSCHED::LegCabinStruct Struct Reference

```
#include <airsched/bom/LegCabinStruct.hpp>
```

Inheritance diagram for AIRSCHED::LegCabinStruct:



### Public Member Functions

- void [fill](#) (stdair::LegCabin &) const
- const std::string [describe](#) () const

### Public Attributes

- stdair::CabinCode\_T [\\_cabinCode](#)
- stdair::CabinCapacity\_T [\\_capacity](#)

#### 23.26.1 Detailed Description

Utility Structure for the parsing of LegCabin details.

Definition at line 22 of file [LegCabinStruct.hpp](#).

#### 23.26.2 Member Function Documentation

##### 23.26.2.1 void AIRSCHED::LegCabinStruct::fill ( stdair::LegCabin & *ioLegCabin* ) const

Fill the LegCabin objects with the attributes of the [LegCabinStruct](#).

Definition at line 22 of file [LegCabinStruct.cpp](#).

References [\\_capacity](#).

##### 23.26.2.2 const std::string AIRSCHED::LegCabinStruct::describe ( ) const

Give a description of the structure (for display purposes).

Definition at line 15 of file [LegCabinStruct.cpp](#).

References [\\_cabinCode](#), and [\\_capacity](#).

Referenced by [AIRSCHED::LegStruct::describe\(\)](#).

#### 23.26.3 Member Data Documentation

##### 23.26.3.1 stdair::CabinCode\_T AIRSCHED::LegCabinStruct::\_cabinCode

Definition at line 24 of file [LegCabinStruct.hpp](#).

Referenced by [describe\(\)](#), and [AIRSCHED::ScheduleParserHelper::storeLegCabinCode::operator\(\)\(\)](#).

## 23.26.3.2 stdair::CabinCapacity\_T AIRSCHED::LegCabinStruct::\_capacity

Definition at line 25 of file [LegCabinStruct.hpp](#).

Referenced by [describe\(\)](#), [fill\(\)](#), and [AIRSCHED::ScheduleParserHelper::storeCapacity::operator\(\)](#).

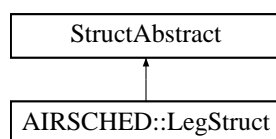
The documentation for this struct was generated from the following files:

- [airsched/bom/LegCabinStruct.hpp](#)
- [airsched/bom/LegCabinStruct.cpp](#)

## 23.27 AIRSCHED::LegStruct Struct Reference

```
#include <airsched/bom/LegStruct.hpp>
```

Inheritance diagram for AIRSCHED::LegStruct:



## Public Member Functions

- void [fill](#) (const stdair::Date\_T &iRefDate, stdair::LegDate &) const
- const std::string [describe](#) () const
- [LegStruct](#) ()

## Public Attributes

- stdair::AirportCode\_T [\\_boardingPoint](#)
- stdair::DateOffset\_T [\\_boardingDateOffset](#)
- stdair::Duration\_T [\\_boardingTime](#)
- stdair::AirportCode\_T [\\_offPoint](#)
- stdair::DateOffset\_T [\\_offDateOffset](#)
- stdair::Duration\_T [\\_offTime](#)
- stdair::Duration\_T [\\_elapsed](#)
- [LegCabinStructList\\_T](#) [\\_cabinList](#)

## 23.27.1 Detailed Description

Utility Structure for the parsing of Leg structures.

Definition at line 24 of file [LegStruct.hpp](#).

## 23.27.2 Constructor &amp; Destructor Documentation

## 23.27.2.1 AIRSCHED::LegStruct::LegStruct ( )

Default Constructor.

Definition at line 16 of file [LegStruct.cpp](#).

## 23.27.3 Member Function Documentation

## 23.27.3.1 void AIRSCHED::LegStruct::fill ( const stdair::Date\_T &amp; iRefDate, stdair::LegDate &amp; ioLegDate ) const

Fill the LegDate objects with the attributes of the [LegStruct](#).

The given reference date corresponds to the date of the FlightDate. Indeed, each Leg gets date off-sets, when compared to that (reference) flight-date, both for the boarding date and for the off date.

Definition at line 48 of file [LegStruct.cpp](#).

References [\\_boardingDateOffset](#), [\\_boardingTime](#), [\\_elapsed](#), [\\_offDateOffset](#), [\\_offPoint](#), and [\\_offTime](#).

## 23.27.3.2 const std::string AIRSCHED::LegStruct::describe ( ) const

Give a description of the structure (for display purposes).

Definition at line 22 of file [LegStruct.cpp](#).

References [\\_boardingDateOffset](#), [\\_boardingPoint](#), [\\_boardingTime](#), [\\_cabinList](#), [\\_elapsed](#), [\\_offDateOffset](#), [\\_offPoint](#), [\\_offTime](#), and [AIRSCHED::LegCabinStruct::describe\(\)](#).

Referenced by [AIRSCHED::FlightPeriodStruct::describe\(\)](#).

## 23.27.4 Member Data Documentation

## 23.27.4.1 stdair::AirportCode\_T AIRSCHED::LegStruct::\_boardingPoint

Definition at line 26 of file [LegStruct.hpp](#).

Referenced by [describe\(\)](#), [AIRSCHED::SegmentPeriodHelper::fill\(\)](#), and [AIRSCHED::ScheduleParserHelper::storeLegBoardingPoint::operator\(\)\(\)](#).

## 23.27.4.2 stdair::DateOffset\_T AIRSCHED::LegStruct::\_boardingDateOffset

Definition at line 27 of file [LegStruct.hpp](#).

Referenced by [describe\(\)](#), [fill\(\)](#), and [AIRSCHED::ScheduleParserHelper::storeOffTime::operator\(\)\(\)](#).

## 23.27.4.3 stdair::Duration\_T AIRSCHED::LegStruct::\_boardingTime

Definition at line 28 of file [LegStruct.hpp](#).

Referenced by [describe\(\)](#), [fill\(\)](#), and [AIRSCHED::ScheduleParserHelper::storeBoardingTime::operator\(\)\(\)](#).

## 23.27.4.4 stdair::AirportCode\_T AIRSCHED::LegStruct::\_offPoint

Definition at line 29 of file [LegStruct.hpp](#).

Referenced by [describe\(\)](#), [AIRSCHED::SegmentPeriodHelper::fill\(\)](#), [fill\(\)](#), and [AIRSCHED::ScheduleParserHelper::storeLegOffPoint::operator\(\)\(\)](#).

## 23.27.4.5 stdair::DateOffset\_T AIRSCHED::LegStruct::\_offDateOffset

Definition at line 30 of file [LegStruct.hpp](#).

Referenced by [describe\(\)](#), [AIRSCHED::SegmentPeriodHelper::fill\(\)](#), [fill\(\)](#), and [AIRSCHED::ScheduleParserHelper::storeElapsedTime::operator\(\)\(\)](#).

## 23.27.4.6 stdair::Duration\_T AIRSCHED::LegStruct::\_offTime

Definition at line 31 of file [LegStruct.hpp](#).

Referenced by [describe\(\)](#), [AIRSCHED::SegmentPeriodHelper::fill\(\)](#), [fill\(\)](#), and [AIRSCHED::ScheduleParserHelper::storeOffTime::operator\(\)\(\)](#).



## 23.27.4.7 stdair::Duration\_T AIRSCHED::LegStruct::\_elapsed

Definition at line 32 of file [LegStruct.hpp](#).

Referenced by [describe\(\)](#), [fill\(\)](#), and [AIRSCHED::ScheduleParserHelper::storeElapsedTime::operator\(\)](#).

## 23.27.4.8 LegCabinStructList\_T AIRSCHED::LegStruct::\_cabinList

Definition at line 33 of file [LegStruct.hpp](#).

Referenced by [describe\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegBoardingPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeCapacity::operator\(\)](#), and [AIRSCHED::ScheduleParserHelper::doEndFlight::operator\(\)](#).

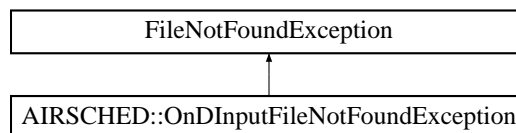
The documentation for this struct was generated from the following files:

- [airsched/bom/LegStruct.hpp](#)
- [airsched/bom/LegStruct.cpp](#)

## 23.28 AIRSCHED::OnDInputFileNotFoundException Class Reference

```
#include <airsched/AIRSCHED_Types.hpp>
```

Inheritance diagram for AIRSCHED::OnDInputFileNotFoundException:



## Public Member Functions

- [OnDInputFileNotFoundException](#) (const std::string &iWhat)

## 23.28.1 Detailed Description

The O&D input file cannot be retrieved.

Definition at line 35 of file [AIRSCHED\\_Types.hpp](#).

## 23.28.2 Constructor &amp; Destructor Documentation

23.28.2.1 AIRSCHED::OnDInputFileNotFoundException::OnDInputFileNotFoundException ( const std::string & iWhat )  
[inline]

Constructor.

Definition at line 40 of file [AIRSCHED\\_Types.hpp](#).

The documentation for this class was generated from the following file:

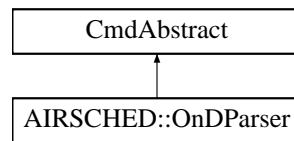
- [airsched/AIRSCHED\\_Types.hpp](#)

## 23.29 AIRSCHED::OnDParser Class Reference

Class wrapping the parser entry point.

```
#include <airsched/command/OnDParser.hpp>
```

Inheritance diagram for AIRSCHED::OnDParser:



#### Static Public Member Functions

- static void [generateOnDPeriods](#) (const stdair::Filename\_T &, stdair::BomRoot &)

#### 23.29.1 Detailed Description

Class wrapping the parser entry point.

Definition at line 23 of file [OnDParser.hpp](#).

#### 23.29.2 Member Function Documentation

**23.29.2.1** void AIRSCHED::OnDParser::generateOnDPeriods ( const stdair::Filename\_T & *iFilename*, stdair::BomRoot & *ioBomRoot* ) [static]

Parse the CSV file describing the O&D.

#### Parameters

<i>const</i>	std::string& The file-name of the CSV-formatted fare input file and the container.
--------------	--

Definition at line 16 of file [OnDParser.cpp](#).

References [AIRSCHED::OnDPeriodFileParser::generateOnDPeriods\(\)](#).

Referenced by [AIRSCHED::AIRSCHED\\_Service::parseAndLoad\(\)](#).

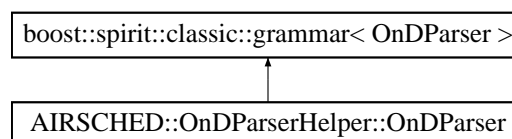
The documentation for this class was generated from the following files:

- [airsched/command/OnDParser.hpp](#)
- [airsched/command/OnDParser.cpp](#)

## 23.30 AIRSCHED::OnDParserHelper::OnDParser Struct Reference

```
#include <airsched/command/OnDParserHelper.hpp>
```

Inheritance diagram for AIRSCHED::OnDParserHelper::OnDParser:



#### Classes

- struct [definition](#)

## Public Member Functions

- [OnDParser](#) (stdair::BomRoot &, [OnDPeriodStruct](#) &)

## Public Attributes

- stdair::BomRoot & [\\_bomRoot](#)
- [OnDPeriodStruct](#) & [\\_onDPeriod](#)

## 23.30.1 Detailed Description

Fares: AirlineCode; OriginCity; DestinationCity; DepartureDate-Range(FirstDate; LastDate); Airline; Class; BA; N-CE; LHR; 2007-01-01; 2007-12-31; BA; Y; BA; Y BA; NCE; LHR; 2007-01-01; 2007-12-31; BA; V; BA; H Grammar for the FareRule parser.

Definition at line 127 of file [OnDParserHelper.hpp](#).

## 23.30.2 Constructor &amp; Destructor Documentation

23.30.2.1 AIRSCHED::OnDParserHelper::OnDParser::OnDParser ( stdair::BomRoot & *ioBomRoot*, [OnDPeriodStruct](#) & *ioOnDPeriod* )

Definition at line 261 of file [OnDParserHelper.cpp](#).

## 23.30.3 Member Data Documentation

## 23.30.3.1 stdair::BomRoot&amp; AIRSCHED::OnDParserHelper::OnDParser::\_bomRoot

Definition at line 145 of file [OnDParserHelper.hpp](#).

23.30.3.2 [OnDPeriodStruct](#)& AIRSCHED::OnDParserHelper::OnDParser::\_onDPeriod

Definition at line 146 of file [OnDParserHelper.hpp](#).

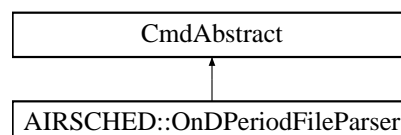
The documentation for this struct was generated from the following files:

- [airsched/command/OnDParserHelper.hpp](#)
- [airsched/command/OnDParserHelper.cpp](#)

## 23.31 AIRSCHED::OnDPeriodFileParser Class Reference

```
#include <airsched/command/OnDParserHelper.hpp>
```

Inheritance diagram for AIRSCHED::OnDPeriodFileParser:



## Public Member Functions

- [OnDPeriodFileParser](#) (const stdair::Filename\_T &iFilename, stdair::BomRoot &ioBomRoot)
- bool [generateOnDPeriods](#) ()

## 23.31.1 Detailed Description

Class wrapping the initialisation and entry point of the parser.

The seemingly redundancy is used to force the instantiation of the actual parser, which is a templatised Boost Spirit grammar. Hence, the actual parser is instantiated within that class object code.

Definition at line 161 of file [OnDParserHelper.hpp](#).

## 23.31.2 Constructor &amp; Destructor Documentation

## 23.31.2.1 AIRSCHED::OnDPeriodFileParser::OnDPeriodFileParser ( const stdair::Filename.T &amp; iFilename, stdair::BomRoot &amp; ioBomRoot )

Constructor.

Definition at line 342 of file [OnDParserHelper.cpp](#).

## 23.31.3 Member Function Documentation

## 23.31.3.1 bool AIRSCHED::OnDPeriodFileParser::generateOnDPeriods ( )

Parse the input file and generate the O&D-Periods.

Definition at line 378 of file [OnDParserHelper.cpp](#).

Referenced by [AIRSCHED::OnDParser::generateOnDPeriods\(\)](#).

The documentation for this class was generated from the following files:

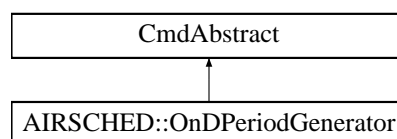
- [airsched/command/OnDParserHelper.hpp](#)
- [airsched/command/OnDParserHelper.cpp](#)

## 23.32 AIRSCHED::OnDPeriodGenerator Class Reference

Class handling the generation / instantiation of the O&D-Period BOM.

```
#include <airsched/command/OnDPeriodGenerator.hpp>
```

Inheritance diagram for AIRSCHED::OnDPeriodGenerator:



## Friends

- class [OnDPeriodFileParser](#)
- struct [OnDParserHelper::doEndOnD](#)
- class [OnDParser](#)

## 23.32.1 Detailed Description

Class handling the generation / instantiation of the O&D-Period BOM.

Definition at line 29 of file [OnDPeriodGenerator.hpp](#).

## 23.32.2 Friends And Related Function Documentation

## 23.32.2.1 friend class OnDPeriodFileParser [friend]

Only the following class may use methods of [OnDPeriodGenerator](#). Indeed, as those methods build the BOM, it is not good to expose them publicly.

Definition at line 35 of file [OnDPeriodGenerator.hpp](#).

## 23.32.2.2 friend struct OnDParserHelper::doEndOnD [friend]

Definition at line 36 of file [OnDPeriodGenerator.hpp](#).

## 23.32.2.3 friend class OnDParser [friend]

Definition at line 37 of file [OnDPeriodGenerator.hpp](#).

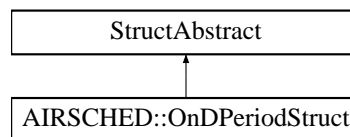
The documentation for this class was generated from the following files:

- [airsched/command/OnDPeriodGenerator.hpp](#)
- [airsched/command/OnDPeriodGenerator.cpp](#)

## 23.33 AIRSCHED::OnDPeriodStruct Struct Reference

```
#include <airsched/bom/OnDPeriodStruct.hpp>
```

Inheritance diagram for AIRSCHED::OnDPeriodStruct:



## Public Member Functions

- const stdair::AirlineCode\_T & [getFirstAirlineCode](#) () const
- stdair::Date\_T [getDate](#) () const
- stdair::Duration\_T [getTime](#) () const
- const std::string [describe](#) () const
- const std::string [describeTSKey](#) () const
- [OnDPeriodStruct](#) ()

## Public Attributes

- stdair::AirportCode\_T [\\_origin](#)
- stdair::AirportCode\_T [\\_destination](#)
- stdair::DatePeriod\_T [\\_datePeriod](#)
- stdair::Duration\_T [\\_timeRangeStart](#)
- stdair::Duration\_T [\\_timeRangeEnd](#)
- stdair::NbOfAirlines\_T [\\_nbOfAirlines](#)
- stdair::AirlineCode\_T [\\_airlineCode](#)
- stdair::ClassCode\_T [\\_classCode](#)
- stdair::AirlineCodeList\_T [\\_airlineCodeList](#)
- stdair::ClassCodeList\_T [\\_classCodeList](#)
- stdair::Date\_T [\\_dateRangeStart](#)

- [stdair::Date\\_T \\_dateRangeEnd](#)
- [unsigned int \\_itYear](#)
- [unsigned int \\_itMonth](#)
- [unsigned int \\_itDay](#)
- [long \\_itHours](#)
- [long \\_itMinutes](#)
- [long \\_itSeconds](#)

#### 23.33.1 Detailed Description

Utility Structure for the parsing of FareRule structures.

Definition at line 15 of file [OnDPeriodStruct.hpp](#).

#### 23.33.2 Constructor & Destructor Documentation

##### 23.33.2.1 AIRSCHED::OnDPeriodStruct::OnDPeriodStruct ( )

Default constructor.

Definition at line 17 of file [OnDPeriodStruct.cpp](#).

#### 23.33.3 Member Function Documentation

##### 23.33.3.1 const stdair::AirlineCode\_T & AIRSCHED::OnDPeriodStruct::getFirstAirlineCode ( ) const

Get the first airline code.

Definition at line 64 of file [OnDPeriodStruct.cpp](#).

References [\\_airlineCodeList](#).

##### 23.33.3.2 stdair::Date\_T AIRSCHED::OnDPeriodStruct::getDate ( ) const

Get the date from the staging details.

Definition at line 28 of file [OnDPeriodStruct.cpp](#).

References [\\_itDay](#), [\\_itMonth](#), and [\\_itYear](#).

Referenced by [AIRSCHED::OnDParserHelper::storeDateRangeStart::operator\(\)\(\)](#), and [AIRSCHED::OnDParserHelper::storeDateRangeEnd::operator\(\)\(\)](#).

##### 23.33.3.3 stdair::Duration\_T AIRSCHED::OnDPeriodStruct::getTime ( ) const

Get the time from the staging details.

Definition at line 33 of file [OnDPeriodStruct.cpp](#).

References [\\_itHours](#), [\\_itMinutes](#), and [\\_itSeconds](#).

Referenced by [AIRSCHED::OnDParserHelper::storeStartRangeTime::operator\(\)\(\)](#), and [AIRSCHED::OnDParserHelper::storeEndRangeTime::operator\(\)\(\)](#).

##### 23.33.3.4 const std::string AIRSCHED::OnDPeriodStruct::describe ( ) const

Give a description of the structure (for display purposes).

Definition at line 40 of file [OnDPeriodStruct.cpp](#).

References [\\_airlineCode](#), [\\_classCode](#), [\\_datePeriod](#), [\\_destination](#), [\\_origin](#), [\\_timeRangeEnd](#), and [\\_timeRangeStart](#).

#### 23.33.3.5 const std::string AIRSCHED::OnDPeriodStruct::describeTSKey ( ) const

Give a short description of the key required in the travel solution object to differentiate fare rule structures.

Definition at line 55 of file [OnDPeriodStruct.cpp](#).

References [\\_airlineCode](#), [\\_classCode](#), [\\_destination](#), and [\\_origin](#).

#### 23.33.4 Member Data Documentation

##### 23.33.4.1 stdair::AirportCode\_T AIRSCHED::OnDPeriodStruct::\_origin

Definition at line 41 of file [OnDPeriodStruct.hpp](#).

Referenced by [describe\(\)](#), [describeTSKey\(\)](#), and [AIRSCHED::OnDParserHelper::storeOrigin::operator\(\)](#).

##### 23.33.4.2 stdair::AirportCode\_T AIRSCHED::OnDPeriodStruct::\_destination

Definition at line 42 of file [OnDPeriodStruct.hpp](#).

Referenced by [describe\(\)](#), [describeTSKey\(\)](#), and [AIRSCHED::OnDParserHelper::storeDestination::operator\(\)](#).

##### 23.33.4.3 stdair::DatePeriod\_T AIRSCHED::OnDPeriodStruct::\_datePeriod

Definition at line 43 of file [OnDPeriodStruct.hpp](#).

Referenced by [describe\(\)](#), and [AIRSCHED::OnDParserHelper::storeDateRangeEnd::operator\(\)](#).

##### 23.33.4.4 stdair::Duration\_T AIRSCHED::OnDPeriodStruct::\_timeRangeStart

Definition at line 44 of file [OnDPeriodStruct.hpp](#).

Referenced by [describe\(\)](#), and [AIRSCHED::OnDParserHelper::storeStartRangeTime::operator\(\)](#).

##### 23.33.4.5 stdair::Duration\_T AIRSCHED::OnDPeriodStruct::\_timeRangeEnd

Definition at line 45 of file [OnDPeriodStruct.hpp](#).

Referenced by [describe\(\)](#), and [AIRSCHED::OnDParserHelper::storeEndRangeTime::operator\(\)](#).

##### 23.33.4.6 stdair::NbOfAirlines\_T AIRSCHED::OnDPeriodStruct::\_nbOfAirlines

Definition at line 46 of file [OnDPeriodStruct.hpp](#).

Referenced by [AIRSCHED::OnDParserHelper::storeOrigin::operator\(\)](#), and [AIRSCHED::OnDParserHelper::storeAirlineCode::operator\(\)](#).

##### 23.33.4.7 stdair::AirlineCode\_T AIRSCHED::OnDPeriodStruct::\_airlineCode

Definition at line 47 of file [OnDPeriodStruct.hpp](#).

Referenced by [describe\(\)](#), [describeTSKey\(\)](#), [AIRSCHED::OnDParserHelper::storeOrigin::operator\(\)](#), and [AIRSCHED::OnDParserHelper::storeAirlineCode::operator\(\)](#).

##### 23.33.4.8 stdair::ClassCode\_T AIRSCHED::OnDPeriodStruct::\_classCode

Definition at line 48 of file [OnDPeriodStruct.hpp](#).

Referenced by [describe\(\)](#), [describeTSKey\(\)](#), [AIRSCHED::OnDParserHelper::storeOrigin::operator\(\)](#), and [AIRSCHED::OnDParserHelper::storeClassCode::operator\(\)](#).

##### 23.33.4.9 stdair::AirlineCodeList\_T AIRSCHED::OnDPeriodStruct::\_airlineCodeList

Definition at line 49 of file [OnDPeriodStruct.hpp](#).

Referenced by [getFirstAirlineCode\(\)](#), [AIRSCHED::OnDParserHelper::storeOrigin::operator\(\)](#), and [AIRSCHED::-](#)

[OnDParserHelper::storeAirlineCode::operator\(\)\(\)](#).

23.33.4.10 `stdair::ClassCodeList.T` `AIRSCHED::OnDPeriodStruct::_classCodeList`

Definition at line 50 of file [OnDPeriodStruct.hpp](#).

Referenced by [AIRSCHED::OnDParserHelper::storeOrigin::operator\(\)\(\)](#), and [AIRSCHED::OnDParserHelper::storeClassCode::operator\(\)\(\)](#).

23.33.4.11 `stdair::Date.T` `AIRSCHED::OnDPeriodStruct::_dateRangeStart`

Staging Date.

Definition at line 53 of file [OnDPeriodStruct.hpp](#).

Referenced by [AIRSCHED::OnDParserHelper::storeDateRangeStart::operator\(\)\(\)](#), and [AIRSCHED::OnDParserHelper::storeDateRangeEnd::operator\(\)\(\)](#).

23.33.4.12 `stdair::Date.T` `AIRSCHED::OnDPeriodStruct::_dateRangeEnd`

Definition at line 54 of file [OnDPeriodStruct.hpp](#).

Referenced by [AIRSCHED::OnDParserHelper::storeDateRangeEnd::operator\(\)\(\)](#).

23.33.4.13 `unsigned int` `AIRSCHED::OnDPeriodStruct::_itYear`

Definition at line 55 of file [OnDPeriodStruct.hpp](#).

Referenced by [getDate\(\)](#).

23.33.4.14 `unsigned int` `AIRSCHED::OnDPeriodStruct::_itMonth`

Definition at line 56 of file [OnDPeriodStruct.hpp](#).

Referenced by [getDate\(\)](#).

23.33.4.15 `unsigned int` `AIRSCHED::OnDPeriodStruct::_itDay`

Definition at line 57 of file [OnDPeriodStruct.hpp](#).

Referenced by [getDate\(\)](#).

23.33.4.16 `long` `AIRSCHED::OnDPeriodStruct::_itHours`

Staging Time.

Definition at line 60 of file [OnDPeriodStruct.hpp](#).

Referenced by [getTime\(\)](#).

23.33.4.17 `long` `AIRSCHED::OnDPeriodStruct::_itMinutes`

Definition at line 61 of file [OnDPeriodStruct.hpp](#).

Referenced by [getTime\(\)](#).

23.33.4.18 `long` `AIRSCHED::OnDPeriodStruct::_itSeconds`

Definition at line 62 of file [OnDPeriodStruct.hpp](#).

Referenced by [getTime\(\)](#), [AIRSCHED::OnDParserHelper::storeDateRangeStart::operator\(\)\(\)](#), [AIRSCHED::OnDParserHelper::storeDateRangeEnd::operator\(\)\(\)](#), [AIRSCHED::OnDParserHelper::storeStartRangeTime::operator\(\)\(\)](#), and [AIRSCHED::OnDParserHelper::storeEndRangeTime::operator\(\)\(\)](#).

The documentation for this struct was generated from the following files:

- [airsched/bom/OnDPeriodStruct.hpp](#)



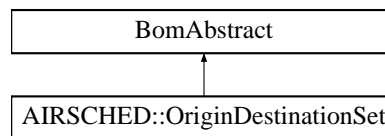
- [airsched/bom/OnDPeriodStruct.cpp](#)

## 23.34 AIRSCHED::OriginDestinationSet Class Reference

Class representing a simple sub-network.

```
#include <airsched/bom/OriginDestinationSet.hpp>
```

Inheritance diagram for AIRSCHED::OriginDestinationSet:



### Public Types

- typedef [OriginDestinationSetKey](#) [Key\\_T](#)

### Public Member Functions

- const [Key\\_T](#) & [getKey](#) () const
- const stdair::AirportCode\_T & [getDestination](#) () const
- stdair::BomAbstract \*const [getParent](#) () const
- const stdair::HolderMap\_T & [getHolderMap](#) () const
- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- std::string [toString](#) () const
- const std::string [describeKey](#) () const
- template<class Archive >  
void [serialize](#) (Archive &ar, const unsigned int iFileVersion)

### Protected Member Functions

- [OriginDestinationSet](#) (const [Key\\_T](#) &)
- [~OriginDestinationSet](#) ()

### Protected Attributes

- [Key\\_T \\_key](#)
- stdair::BomAbstract \* [\\_parent](#)
- stdair::HolderMap\_T [\\_holderMap](#)

### Friends

- class [stdair::FacBom](#)
- class [stdair::FacBomManager](#)
- class [boost::serialization::access](#)

### 23.34.1 Detailed Description

Class representing a simple sub-network.

That simple sub-network is made of a set of segments ([SegmentPathPeriod](#) objects), from the origin airport specified within [ReachableUniverse](#) (parent object) to the destination specified in the [OriginDestinationSetKey](#) object.

Each segment (composing that [OriginDestinationSet](#) object) corresponds to an actual travel solution from the origin to the destination, that is, a path that a traveller can take with actual scheduled flights.

Definition at line 44 of file [OriginDestinationSet.hpp](#).

### 23.34.2 Member Typedef Documentation

#### 23.34.2.1 typedef OriginDestinationSetKey AIRSCHED::OriginDestinationSet::Key\_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 57 of file [OriginDestinationSet.hpp](#).

### 23.34.3 Constructor & Destructor Documentation

#### 23.34.3.1 AIRSCHED::OriginDestinationSet::OriginDestinationSet ( const Key\_T & iKey ) [protected]

Main constructor.

Definition at line 31 of file [OriginDestinationSet.cpp](#).

#### 23.34.3.2 AIRSCHED::OriginDestinationSet::~~OriginDestinationSet ( ) [protected]

Destructor.

Definition at line 36 of file [OriginDestinationSet.cpp](#).

### 23.34.4 Member Function Documentation

#### 23.34.4.1 const Key\_T& AIRSCHED::OriginDestinationSet::getKey ( ) const [inline]

Get the primary key (destination airport).

Definition at line 65 of file [OriginDestinationSet.hpp](#).

References [\\_key](#).

#### 23.34.4.2 const stdair::AirportCode\_T& AIRSCHED::OriginDestinationSet::getDestination ( ) const [inline]

Get the destination airport (i.e., the primary key).

Definition at line 72 of file [OriginDestinationSet.hpp](#).

References [\\_key](#), and [AIRSCHED::OriginDestinationSetKey::getOffPoint\(\)](#).

#### 23.34.4.3 stdair::BomAbstract\* const AIRSCHED::OriginDestinationSet::getParent ( ) const [inline]

Get the parent (i.e., [ReachableUniverse](#)) object.

Definition at line 79 of file [OriginDestinationSet.hpp](#).

References [\\_parent](#).

#### 23.34.4.4 const stdair::HolderMap\_T& AIRSCHED::OriginDestinationSet::getHolderMap ( ) const [inline]

Get the map of children holders ([SegmentPathPeriod](#) objects).

Definition at line 86 of file [OriginDestinationSet.hpp](#).

References [\\_holderMap](#).

23.34.4.5 void AIRSCHED::OriginDestinationSet::toStream ( std::ostream & *ioOut* ) const [inline]

Dump a Business Object into an output stream.

Parameters

<i>ostream&amp;</i>	the output stream.
---------------------	--------------------

Definition at line 98 of file [OriginDestinationSet.hpp](#).

References [toString\(\)](#).

23.34.4.6 void AIRSCHED::OriginDestinationSet::fromStream ( std::istream & *ioIn* ) [inline]

Read a Business Object from an input stream.

Parameters

<i>istream&amp;</i>	the input stream.
---------------------	-------------------

Definition at line 107 of file [OriginDestinationSet.hpp](#).

23.34.4.7 std::string AIRSCHED::OriginDestinationSet::toString ( ) const

Get the serialised version of the Business Object.

Definition at line 40 of file [OriginDestinationSet.cpp](#).

References [\\_key](#), and [AIRSCHED::OriginDestinationSetKey::toString\(\)](#).

Referenced by [toStream\(\)](#).

23.34.4.8 const std::string AIRSCHED::OriginDestinationSet::describeKey ( ) const [inline]

Get a string describing the key.

Definition at line 118 of file [OriginDestinationSet.hpp](#).

References [\\_key](#), and [AIRSCHED::OriginDestinationSetKey::toString\(\)](#).

23.34.4.9 template<class Archive > void AIRSCHED::OriginDestinationSet::serialize ( Archive & *ar*, const unsigned int *iFileVersion* )

Serialisation.

Definition at line 62 of file [OriginDestinationSet.cpp](#).

References [\\_key](#).

## 23.34.5 Friends And Related Function Documentation

23.34.5.1 friend class stdair::FacBom [friend]

Friend classes.

Definition at line 48 of file [OriginDestinationSet.hpp](#).

23.34.5.2 friend class stdair::FacBomManager [friend]

Definition at line 49 of file [OriginDestinationSet.hpp](#).

## 23.34.5.3 friend class boost::serialization::access [friend]

Definition at line 50 of file [OriginDestinationSet.hpp](#).

## 23.34.6 Member Data Documentation

## 23.34.6.1 Key\_T AIRSCHED::OriginDestinationSet::key [protected]

Primary key (destination airport code).

Definition at line 168 of file [OriginDestinationSet.hpp](#).

Referenced by [describeKey\(\)](#), [getDestination\(\)](#), [getKey\(\)](#), [serialize\(\)](#), and [toString\(\)](#).

## 23.34.6.2 stdair::BomAbstract\* AIRSCHED::OriginDestinationSet::parent [protected]

Pointer on the parent ([ReachableUniverse](#)) object.

Definition at line 173 of file [OriginDestinationSet.hpp](#).

Referenced by [getParent\(\)](#).

## 23.34.6.3 stdair::HolderMap\_T AIRSCHED::OriginDestinationSet::holderMap [protected]

Map holding the children ([SegmentPathPeriod](#) objects).

Definition at line 178 of file [OriginDestinationSet.hpp](#).

Referenced by [getHolderMap\(\)](#).

The documentation for this class was generated from the following files:

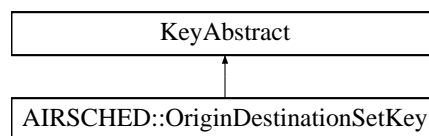
- [airsched/bom/OriginDestinationSet.hpp](#)
- [airsched/bom/OriginDestinationSet.cpp](#)

## 23.35 AIRSCHED::OriginDestinationSetKey Struct Reference

Structure representing the key of a sub-network.

```
#include <airsched/bom/OriginDestinationSetKey.hpp>
```

Inheritance diagram for AIRSCHED::OriginDestinationSetKey:



## Public Member Functions

- [OriginDestinationSetKey](#) (const stdair::AirportCode\_T &iDestination)
- [OriginDestinationSetKey](#) (const [OriginDestinationSetKey](#) &)
- [~OriginDestinationSetKey](#) ()
- const stdair::AirportCode\_T & [getOffPoint](#) () const
- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- const std::string [toString](#) () const
- template<class Archive >  
void [serialize](#) (Archive &ar, const unsigned int iFileVersion)

## Friends

- class [boost::serialization::access](#)

## 23.35.1 Detailed Description

Structure representing the key of a sub-network.

As the origin airport code is already part of the [ReachableUniverse](#) (parent) class, that key is only made of the destination airport code.

Definition at line 30 of file [OriginDestinationSetKey.hpp](#).

## 23.35.2 Constructor &amp; Destructor Documentation

## 23.35.2.1 AIRSCHED::OriginDestinationSetKey::OriginDestinationSetKey ( const stdair::AirportCode\_T &amp; iDestination )

Constructor.

Definition at line 26 of file [OriginDestinationSetKey.cpp](#).

## 23.35.2.2 AIRSCHED::OriginDestinationSetKey::OriginDestinationSetKey ( const OriginDestinationSetKey &amp; iKey )

Copy constructor.

Definition at line 32 of file [OriginDestinationSetKey.cpp](#).

## 23.35.2.3 AIRSCHED::OriginDestinationSetKey::~OriginDestinationSetKey ( )

Destructor.

Definition at line 37 of file [OriginDestinationSetKey.cpp](#).

## 23.35.3 Member Function Documentation

## 23.35.3.1 const stdair::AirportCode\_T&amp; AIRSCHED::OriginDestinationSetKey::getOffPoint ( ) const [inline]

Get the destination airport.

Definition at line 62 of file [OriginDestinationSetKey.hpp](#).

Referenced by [AIRSCHED::OriginDestinationSet::getDestination\(\)](#).

## 23.35.3.2 void AIRSCHED::OriginDestinationSetKey::toStream ( std::ostream &amp; ioOut ) const

Dump a Business Object Key into an output stream.

## Parameters

<i>ostream&amp;</i>	the output stream.
---------------------	--------------------

Definition at line 41 of file [OriginDestinationSetKey.cpp](#).

References [toString\(\)](#).

## 23.35.3.3 void AIRSCHED::OriginDestinationSetKey::fromStream ( std::istream &amp; ioIn )

Read a Business Object Key from an input stream.

## Parameters

<i>istream&amp;</i>	the input stream.
---------------------	-------------------

Definition at line 46 of file [OriginDestinationSetKey.cpp](#).

23.35.3.4 `const std::string AIRSCHED::OriginDestinationSetKey::toString ( ) const`

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-date.

Definition at line 50 of file [OriginDestinationSetKey.cpp](#).

Referenced by [AIRSCHED::OriginDestinationSet::describeKey\(\)](#), [toStream\(\)](#), and [AIRSCHED::OriginDestinationSet::toString\(\)](#).

23.35.3.5 `template<class Archive > void AIRSCHED::OriginDestinationSetKey::serialize ( Archive & ar, const unsigned int iFileVersion )`

Serialisation.

Definition at line 72 of file [OriginDestinationSetKey.cpp](#).

## 23.35.4 Friends And Related Function Documentation

23.35.4.1 `friend class boost::serialization::access [friend]`

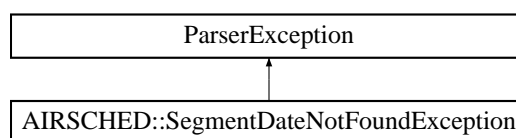
Definition at line 31 of file [OriginDestinationSetKey.hpp](#).

The documentation for this struct was generated from the following files:

- [airsched/bom/OriginDestinationSetKey.hpp](#)
- [airsched/bom/OriginDestinationSetKey.cpp](#)

## 23.36 ParserException Class Reference

Inheritance diagram for ParserException:



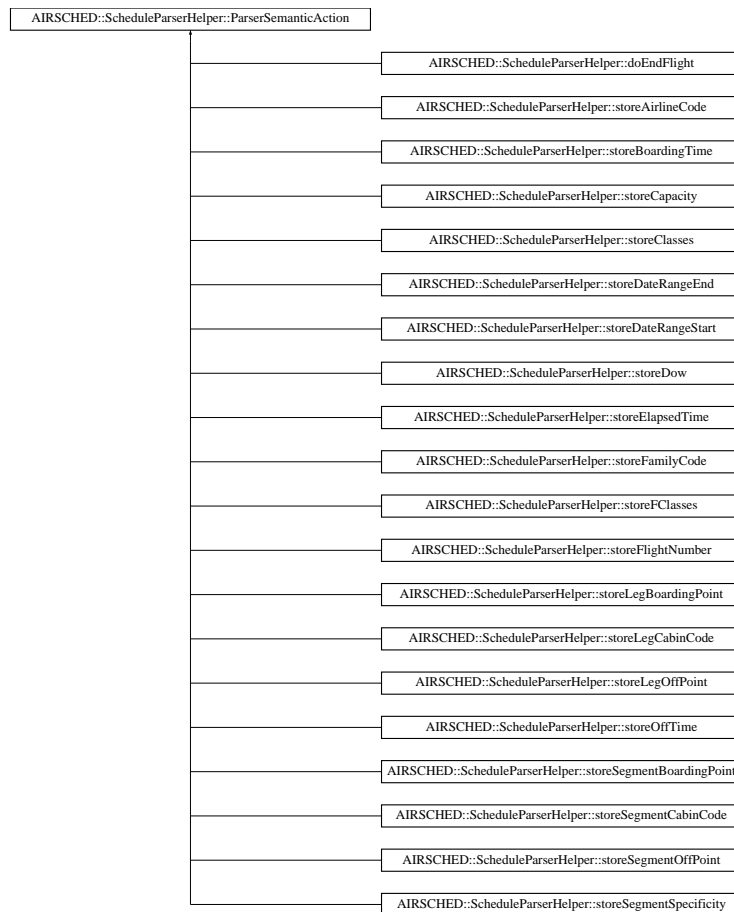
The documentation for this class was generated from the following file:

- [airsched/AIRSCHED\\_Types.hpp](#)

## 23.37 AIRSCHED::ScheduleParserHelper::ParserSemanticAction Struct Reference

```
#include <airsched/command/ScheduleParserHelper.hpp>
```

Inheritance diagram for AIRSCHED::ScheduleParserHelper::ParserSemanticAction:



### Public Member Functions

- [ParserSemanticAction](#) ([FlightPeriodStruct](#) &)

### Public Attributes

- [FlightPeriodStruct](#) & [\\_flightPeriod](#)

#### 23.37.1 Detailed Description

Generic Semantic Action (Actor / Functor) for the Schedule Parser.

Definition at line 29 of file [ScheduleParserHelper.hpp](#).

#### 23.37.2 Constructor & Destructor Documentation

##### 23.37.2.1 AIRSCHED::ScheduleParserHelper::ParserSemanticAction::ParserSemanticAction ( [FlightPeriodStruct](#) & [ioFlightPeriod](#) )

Actor Constructor.

Definition at line 26 of file [ScheduleParserHelper.cpp](#).

#### 23.37.3 Member Data Documentation

## 23.37.3.1 FlightPeriodStruct&amp; AIRSCHED::ScheduleParserHelper::ParserSemanticAction::\_flightPeriod

Actor Context.

Definition at line 33 of file [ScheduleParserHelper.hpp](#).

Referenced by [AIRSCHED::ScheduleParserHelper::storeAirlineCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFlightNumber::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDateRangeStart::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDateRangeEnd::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDow::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegBoardingPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegOffPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeBoardingTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeOffTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeElapsedTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegCabinCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeCapacity::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentSpecificity::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentBoardingPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentOffPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentCabinCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeClasses::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFamilyCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFClasses::operator\(\)](#), and [AIRSCHED::ScheduleParserHelper::doEndFlight::operator\(\)](#).

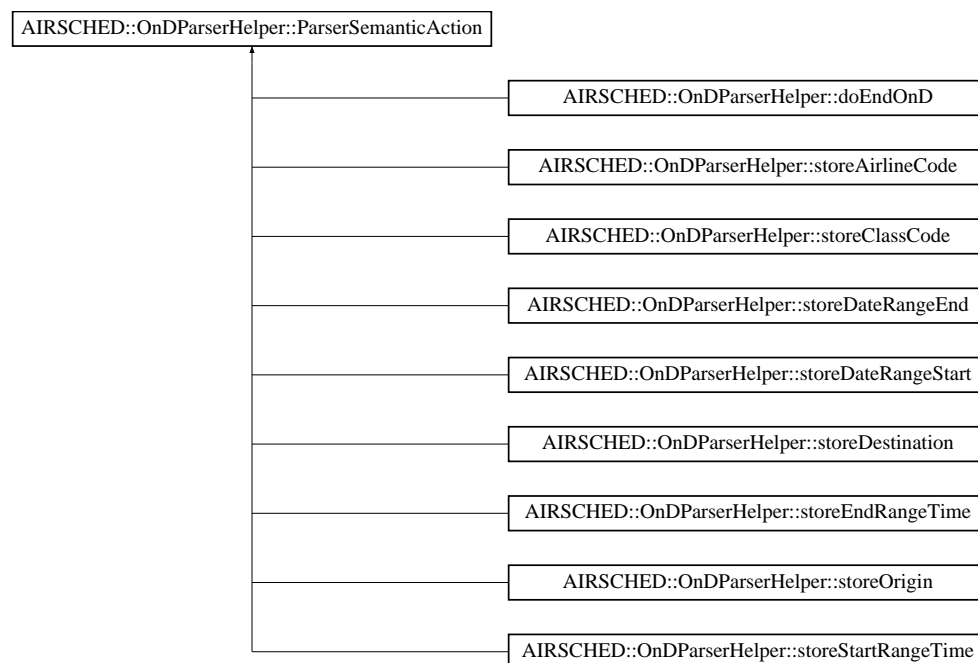
The documentation for this struct was generated from the following files:

- [airsched/command/ScheduleParserHelper.hpp](#)
- [airsched/command/ScheduleParserHelper.cpp](#)

## 23.38 AIRSCHED::OnDParserHelper::ParserSemanticAction Struct Reference

```
#include <airsched/command/OnDParserHelper.hpp>
```

Inheritance diagram for AIRSCHED::OnDParserHelper::ParserSemanticAction:



## Public Member Functions

- [ParserSemanticAction](#) ([OnDPeriodStruct](#) &)



## Public Attributes

- [OnDPeriodStruct](#) & [\\_onDPeriod](#)

## 23.38.1 Detailed Description

Generic Semantic Action (Actor / Functor) for the Schedule Parser.

Definition at line 34 of file [OnDParserHelper.hpp](#).

## 23.38.2 Constructor &amp; Destructor Documentation

23.38.2.1 AIRSCHED::OnDParserHelper::ParserSemanticAction::ParserSemanticAction ( [OnDPeriodStruct](#) & *ioOnDPeriod* )

Actor Constructor.

Definition at line 25 of file [OnDParserHelper.cpp](#).

## 23.38.3 Member Data Documentation

23.38.3.1 [OnDPeriodStruct](#)& AIRSCHED::OnDParserHelper::ParserSemanticAction::\_onDPeriod

Actor Context.

Definition at line 38 of file [OnDParserHelper.hpp](#).

Referenced by [AIRSCHED::OnDParserHelper::storeOrigin::operator\(\)](#)(), [AIRSCHED::OnDParserHelper::storeDestination::operator\(\)](#)(), [AIRSCHED::OnDParserHelper::storeDateRangeStart::operator\(\)](#)(), [AIRSCHED::OnDParserHelper::storeDateRangeEnd::operator\(\)](#)(), [AIRSCHED::OnDParserHelper::storeStartRangeTime::operator\(\)](#)(), [AIRSCHED::OnDParserHelper::storeEndRangeTime::operator\(\)](#)(), [AIRSCHED::OnDParserHelper::storeAirlineCode::operator\(\)](#)(), [AIRSCHED::OnDParserHelper::storeClassCode::operator\(\)](#)(), and [AIRSCHED::OnDParserHelper::doEndOnD::operator\(\)](#)().

The documentation for this struct was generated from the following files:

- [airsched/command/OnDParserHelper.hpp](#)
- [airsched/command/OnDParserHelper.cpp](#)

## 23.39 airsched::Passenger\_T Struct Reference

```
#include <airsched/batches/BookingRequestParser.hpp>
```

## Public Types

- enum [PassengerType\\_T](#) { [ADULT](#) = 0, [CHILD](#), [PET](#), [LAST\\_VALUE](#) }

## Public Member Functions

- [Passenger\\_T](#) ()
- void [display](#) () const

## Public Attributes

- [PassengerType\\_T](#) \_type
- unsigned short [\\_number](#)

## Static Public Attributes

- static const std::string [\\_labels](#) [[LAST\\_VALUE](#)]

## 23.39.1 Detailed Description

Passenger.

Definition at line 71 of file [BookingRequestParser.hpp](#).

## 23.39.2 Member Enumeration Documentation

## 23.39.2.1 enum airsched::Passenger\_T::PassengerType\_T

Enumerator:

***ADULT***  
***CHILD***  
***PET***  
***LAST\_VALUE***

Definition at line 73 of file [BookingRequestParser.hpp](#).

## 23.39.3 Constructor &amp; Destructor Documentation

23.39.3.1 airsched::Passenger\_T::Passenger\_T ( ) [[inline](#)]

Constructor.

Definition at line 78 of file [BookingRequestParser.hpp](#).

## 23.39.4 Member Function Documentation

23.39.4.1 void airsched::Passenger\_T::display ( ) const [[inline](#)]

Definition at line 80 of file [BookingRequestParser.hpp](#).

References [\\_labels](#), [\\_number](#), and [\\_type](#).

Referenced by [airsched::SearchString\\_T::display\(\)](#).

## 23.39.5 Member Data Documentation

23.39.5.1 const std::string airsched::Passenger\_T::\_labels [[static](#)]

**Initial value:**

```
{ "Adult", "Child", "Pet" }
```

Passenger type labels.

Definition at line 74 of file [BookingRequestParser.hpp](#).

Referenced by [display\(\)](#).

### 23.39.5.2 PassengerType\_T airsched::Passenger\_T::\_type

Definition at line 75 of file [BookingRequestParser.hpp](#).

Referenced by [display\(\)](#), [airsched::store\\_adult\\_passenger\\_type::operator\(\)\(\)](#), [airsched::store\\_child\\_passenger\\_type::operator\(\)\(\)](#), and [airsched::store\\_pet\\_passenger\\_type::operator\(\)\(\)](#).

### 23.39.5.3 unsigned short airsched::Passenger\_T::\_number

Definition at line 76 of file [BookingRequestParser.hpp](#).

Referenced by [display\(\)](#), and [airsched::store\\_passenger\\_number::operator\(\)\(\)](#).

The documentation for this struct was generated from the following file:

- [airsched/batches/BookingRequestParser.hpp](#)

## 23.40 airsched::Place\_T Struct Reference

```
#include <airsched/batches/BookingRequestParser.hpp>
```

### Public Member Functions

- [Place\\_T \(\)](#)
- void [display \(\)](#) const

### Public Attributes

- std::string [\\_name](#)
- std::string [\\_code](#)

### 23.40.1 Detailed Description

Place.

Definition at line 11 of file [BookingRequestParser.hpp](#).

### 23.40.2 Constructor & Destructor Documentation

#### 23.40.2.1 airsched::Place\_T::Place\_T ( ) [inline]

Constructor.

Definition at line 16 of file [BookingRequestParser.hpp](#).

### 23.40.3 Member Function Documentation

#### 23.40.3.1 void airsched::Place\_T::display ( ) const [inline]

Definition at line 18 of file [BookingRequestParser.hpp](#).

References [\\_code](#), and [\\_name](#).

Referenced by [airsched::SearchString\\_T::display\(\)](#).

## 23.40.4 Member Data Documentation

## 23.40.4.1 std::string airsched::Place\_T::\_name

Definition at line 13 of file [BookingRequestParser.hpp](#).

Referenced by [display\(\)](#), and [airsched::store\\_place\\_element::operator\(\)](#).

## 23.40.4.2 std::string airsched::Place\_T::\_code

Definition at line 14 of file [BookingRequestParser.hpp](#).

Referenced by [display\(\)](#).

The documentation for this struct was generated from the following file:

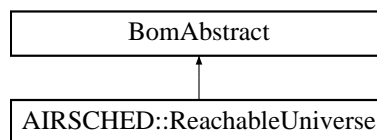
- airsched/batches/[BookingRequestParser.hpp](#)

## 23.41 AIRSCHED::ReachableUniverse Class Reference

Class representing the root of the schedule-related BOM tree.

```
#include <airsched/bom/ReachableUniverse.hpp>
```

Inheritance diagram for AIRSCHED::ReachableUniverse:



## Public Types

- typedef [ReachableUniverseKey](#) Key\_T

## Public Member Functions

- const [Key\\_T](#) & [getKey](#) () const
- const stdair::AirportCode\_T & [getOrigin](#) () const
- stdair::BomAbstract \*const [getParent](#) () const
- const stdair::HolderMap\_T & [getHolderMap](#) () const
- const [SegmentPathPeriodListList\\_T](#) & [getSegmentPathPeriodListList](#) () const
- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- std::string [toString](#) () const
- const std::string [describeKey](#) () const
- template<class Archive >  
void [serialize](#) (Archive &ar, const unsigned int iFileVersion)

## Protected Member Functions

- [ReachableUniverse](#) (const [Key\\_T](#) &)
- [~ReachableUniverse](#) ()

## Protected Attributes

- [Key\\_T \\_key](#)
- `stdair::BomAbstract * _parent`
- `stdair::HolderMap_T _holderMap`
- [SegmentPathPeriodListList\\_T \\_segmentPathPeriodListList](#)

## Friends

- class [stdair::FacBom](#)
- class [stdair::FacBomManager](#)
- class [SegmentPathGenerator](#)
- class [boost::serialization::access](#)

## 23.41.1 Detailed Description

Class representing the root of the schedule-related BOM tree.

It is the pending, in the schedule universe, of the `stdair::Inventory` class. It corresponds to all the destinations, which can be reached from a given geographical point. That latter is an airport for now, and its key (airport code) is specified by the [ReachableUniverseKey](#) object.

Definition at line 41 of file [ReachableUniverse.hpp](#).

## 23.41.2 Member Typedef Documentation

23.41.2.1 `typedef ReachableUniverseKey AIRSCHED::ReachableUniverse::Key_T`

Definition allowing to retrieve the associated BOM key type.

Definition at line 55 of file [ReachableUniverse.hpp](#).

## 23.41.3 Constructor &amp; Destructor Documentation

23.41.3.1 `AIRSCHED::ReachableUniverse::ReachableUniverse ( const Key_T & iKey ) [protected]`

Main constructor.

Definition at line 32 of file [ReachableUniverse.cpp](#).

23.41.3.2 `AIRSCHED::ReachableUniverse::~~ReachableUniverse ( ) [protected]`

Destructor.

Definition at line 37 of file [ReachableUniverse.cpp](#).

## 23.41.4 Member Function Documentation

23.41.4.1 `const Key_T & AIRSCHED::ReachableUniverse::getKey ( ) const [inline]`

Get the universe key (airport code representing the departure point of the "reachable universe").

Definition at line 63 of file [ReachableUniverse.hpp](#).

References [\\_key](#).

23.41.4.2 `const stdair::AirportCode.T& AIRSCHED::ReachableUniverse::getOrigin ( ) const [inline]`

Get the (origin) airport (i.e., the primary key).

Definition at line 70 of file [ReachableUniverse.hpp](#).

References [\\_key](#), and [AIRSCHED::ReachableUniverseKey::getBoardingPoint\(\)](#).

23.41.4.3 `stdair::BomAbstract* const AIRSCHED::ReachableUniverse::getParent ( ) const [inline]`

Get the parent (i.e., the BomRoot) object.

Definition at line 77 of file [ReachableUniverse.hpp](#).

References [\\_parent](#).

23.41.4.4 `const stdair::HolderMap.T& AIRSCHED::ReachableUniverse::getHolderMap ( ) const [inline]`

Get the map of children holders ([OriginDestinationSet](#) objects).

Definition at line 84 of file [ReachableUniverse.hpp](#).

References [\\_holderMap](#).

23.41.4.5 `const SegmentPathPeriodListList_T& AIRSCHED::ReachableUniverse::getSegmentPathPeriodListList ( ) const [inline]`

Get the vector of [SegmentPathPeriodLightList](#) objects.

Definition at line 91 of file [ReachableUniverse.hpp](#).

References [\\_segmentPathPeriodListList](#).

23.41.4.6 `void AIRSCHED::ReachableUniverse::toStream ( std::ostream & ioOut ) const [inline]`

Dump a Business Object into an output stream.

#### Parameters

<i>ostream&amp;</i>	the output stream.
---------------------	--------------------

Definition at line 103 of file [ReachableUniverse.hpp](#).

References [toString\(\)](#).

23.41.4.7 `void AIRSCHED::ReachableUniverse::fromStream ( std::istream & ioIn ) [inline]`

Read a Business Object from an input stream.

#### Parameters

<i>istream&amp;</i>	the input stream.
---------------------	-------------------

Definition at line 112 of file [ReachableUniverse.hpp](#).

23.41.4.8 `std::string AIRSCHED::ReachableUniverse::toString ( ) const`

Get the serialised version of the Business Object.

Definition at line 41 of file [ReachableUniverse.cpp](#).

References [\\_key](#), and [AIRSCHED::ReachableUniverseKey::toString\(\)](#).

Referenced by [AIRSCHED::BomDisplay::csvDisplay\(\)](#), and [toStream\(\)](#).

23.41.4.9 `const std::string AIRSCHED::ReachableUniverse::describeKey ( ) const` `[inline]`

Get a string describing the key.

Definition at line 123 of file [ReachableUniverse.hpp](#).

References [\\_key](#), and [AIRSCHED::ReachableUniverseKey::toString\(\)](#).

23.41.4.10 `template<class Archive > void AIRSCHED::ReachableUniverse::serialize ( Archive & ar, const unsigned int iFileVersion )`

Serialisation.

Definition at line 63 of file [ReachableUniverse.cpp](#).

References [\\_key](#).

### 23.41.5 Friends And Related Function Documentation

23.41.5.1 `friend class stdair::FacBom` `[friend]`

Friend classes.

Definition at line 45 of file [ReachableUniverse.hpp](#).

23.41.5.2 `friend class stdair::FacBomManager` `[friend]`

Definition at line 46 of file [ReachableUniverse.hpp](#).

23.41.5.3 `friend class SegmentPathGenerator` `[friend]`

Definition at line 47 of file [ReachableUniverse.hpp](#).

23.41.5.4 `friend class boost::serialization::access` `[friend]`

Definition at line 48 of file [ReachableUniverse.hpp](#).

### 23.41.6 Member Data Documentation

23.41.6.1 `Key_T AIRSCHED::ReachableUniverse::_key` `[protected]`

Primary key (origin airport code).

Definition at line 174 of file [ReachableUniverse.hpp](#).

Referenced by [describeKey\(\)](#), [getKey\(\)](#), [getOrigin\(\)](#), [serialize\(\)](#), and [toString\(\)](#).

23.41.6.2 `stdair::BomAbstract* AIRSCHED::ReachableUniverse::_parent` `[protected]`

Pointer on the parent (BomRoot) object.

Definition at line 179 of file [ReachableUniverse.hpp](#).

Referenced by [getParent\(\)](#).

23.41.6.3 `stdair::HolderMap_T AIRSCHED::ReachableUniverse::_holderMap` `[protected]`

Map holding the children ([OriginDestinationSet](#) objects).

Definition at line 184 of file [ReachableUniverse.hpp](#).

Referenced by [getHolderMap\(\)](#).

#### 23.41.6.4 SegmentPathPeriodListList\_T AIRSCHED::ReachableUniverse::segmentPathPeriodListList [protected]

The list (actually, a vector) of lists of SegmentPathPeriods, used solely for the construction of the main list of SegmentPathPeriods within the ReachableUniverseStructure.

Definition at line 191 of file [ReachableUniverse.hpp](#).

Referenced by [getSegmentPathPeriodListList\(\)](#).

The documentation for this class was generated from the following files:

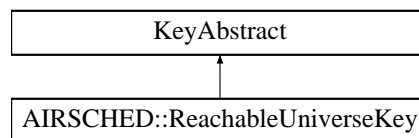
- [airsched/bom/ReachableUniverse.hpp](#)
- [airsched/bom/ReachableUniverse.cpp](#)

## 23.42 AIRSCHED::ReachableUniverseKey Struct Reference

Structure representing the key of the schedule-related BOM tree root.

```
#include <airsched/bom/ReachableUniverseKey.hpp>
```

Inheritance diagram for AIRSCHED::ReachableUniverseKey:



### Public Member Functions

- [ReachableUniverseKey](#) (const stdair::AirportCode\_T &iOrigin)
- [ReachableUniverseKey](#) (const [ReachableUniverseKey](#) &)
- [~ReachableUniverseKey](#) ()
- const stdair::AirportCode\_T & [getBoardingPoint](#) () const
- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- const std::string [toString](#) () const
- template<class Archive >  
void [serialize](#) (Archive &ar, const unsigned int iFileVersion)

### Friends

- class [boost::serialization::access](#)

#### 23.42.1 Detailed Description

Structure representing the key of the schedule-related BOM tree root.

The [ReachableUniverse](#) is the pending, in the schedule universe, of the stdair::Inventory class. It corresponds to all the destinations which can be reached from a given geographical point. That latter is an airport for now, and the present structure specifies its key (i.e., airport code).

Definition at line 33 of file [ReachableUniverseKey.hpp](#).



### 23.42.2 Constructor & Destructor Documentation

#### 23.42.2.1 AIRSCHED::ReachableUniverseKey::ReachableUniverseKey ( const stdair::AirportCode\_T & iOrigin )

Constructor.

Definition at line 32 of file [ReachableUniverseKey.cpp](#).

#### 23.42.2.2 AIRSCHED::ReachableUniverseKey::ReachableUniverseKey ( const ReachableUniverseKey & iKey )

Copy constructor.

Definition at line 26 of file [ReachableUniverseKey.cpp](#).

#### 23.42.2.3 AIRSCHED::ReachableUniverseKey::~~ReachableUniverseKey ( )

Destructor.

Definition at line 37 of file [ReachableUniverseKey.cpp](#).

### 23.42.3 Member Function Documentation

#### 23.42.3.1 const stdair::AirportCode\_T& AIRSCHED::ReachableUniverseKey::getBoardingPoint ( ) const [inline]

Get the origin airport (from which the remaining universe may be reached).

Definition at line 66 of file [ReachableUniverseKey.hpp](#).

Referenced by [AIRSCHED::ReachableUniverse::getOrigin\(\)](#).

#### 23.42.3.2 void AIRSCHED::ReachableUniverseKey::toStream ( std::ostream & ioOut ) const

Dump a Business Object Key into an output stream.

##### Parameters

<i>ostream&amp;</i>	the output stream.
---------------------	--------------------

Definition at line 41 of file [ReachableUniverseKey.cpp](#).

References [toString\(\)](#).

#### 23.42.3.3 void AIRSCHED::ReachableUniverseKey::fromStream ( std::istream & ioIn )

Read a Business Object Key from an input stream.

##### Parameters

<i>istream&amp;</i>	the input stream.
---------------------	-------------------

Definition at line 46 of file [ReachableUniverseKey.cpp](#).

#### 23.42.3.4 const std::string AIRSCHED::ReachableUniverseKey::toString ( ) const

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-date.

Definition at line 50 of file [ReachableUniverseKey.cpp](#).

Referenced by [AIRSCHED::ReachableUniverse::describeKey\(\)](#), [toStream\(\)](#), and [AIRSCHED::ReachableUniverse::toString\(\)](#).

23.42.3.5 `template<class Archive > void AIRSCHED::ReachableUniverseKey::serialize ( Archive & ar, const unsigned int iFileVersion )`

Serialisation.

Definition at line 72 of file [ReachableUniverseKey.cpp](#).

#### 23.42.4 Friends And Related Function Documentation

23.42.4.1 `friend class boost::serialization::access [friend]`

Definition at line 34 of file [ReachableUniverseKey.hpp](#).

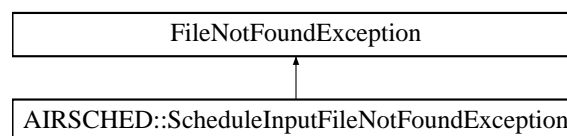
The documentation for this struct was generated from the following files:

- [airsched/bom/ReachableUniverseKey.hpp](#)
- [airsched/bom/ReachableUniverseKey.cpp](#)

### 23.43 AIRSCHED::ScheduleInputFileNotFoundException Class Reference

```
#include <airsched/AIRSCHED_Types.hpp>
```

Inheritance diagram for AIRSCHED::ScheduleInputFileNotFoundException:



#### Public Member Functions

- [ScheduleInputFileNotFoundException](#) (const std::string &iWhat)

#### 23.43.1 Detailed Description

The schedule input file cannot be retrieved.

Definition at line 47 of file [AIRSCHED\\_Types.hpp](#).

#### 23.43.2 Constructor & Destructor Documentation

23.43.2.1 `AIRSCHED::ScheduleInputFileNotFoundException::ScheduleInputFileNotFoundException ( const std::string &iWhat ) [inline]`

Constructor.

Definition at line 53 of file [AIRSCHED\\_Types.hpp](#).

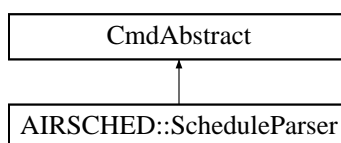
The documentation for this class was generated from the following file:

- [airsched/AIRSCHED\\_Types.hpp](#)

### 23.44 AIRSCHED::ScheduleParser Class Reference

```
#include <airsched/command/ScheduleParser.hpp>
```

Inheritance diagram for AIRSCHED::ScheduleParser:



#### Static Public Member Functions

- static void [generateInventories](#) (const stdair::Filename\_T &, stdair::BomRoot &)

#### 23.44.1 Detailed Description

Class wrapping the parser entry point.

Definition at line 21 of file [ScheduleParser.hpp](#).

#### 23.44.2 Member Function Documentation

**23.44.2.1** void AIRSCHED::ScheduleParser::generateInventories ( const stdair::Filename\_T & *iFilename*, stdair::BomRoot & *ioBomRoot* ) [static]

Parse the CSV file describing the airline schedules for the simulator, and generates the inventories accordingly.

##### Parameters

<i>const</i>	stdair::Filename_T& The file-name of the CSV-formatted schedule input file.
<i>stdair::Bom-Root&amp;</i>	Root of the BOM tree.

Definition at line 18 of file [ScheduleParser.cpp](#).

References [AIRSCHED::SegmentPathGenerator::createSegmentPathNetwork\(\)](#), and [AIRSCHED::FlightPeriodFileParser::generateInventories\(\)](#).

Referenced by [AIRSCHED::AIRSCHED\\_Service::parseAndLoad\(\)](#).

The documentation for this class was generated from the following files:

- [airsched/command/ScheduleParser.hpp](#)
- [airsched/command/ScheduleParser.cpp](#)

## 23.45 airsched::SearchString\_T Struct Reference

```
#include <airsched/batches/BookingRequestParser.hpp>
```

#### Public Member Functions

- [SearchString\\_T](#) ()
- void [display](#) () const

#### Public Attributes

- [PlaceList\\_T](#) \_placeList

- [DateList\\_T\\_dateList](#)
- [AirlineList\\_T\\_airlineList](#)
- [PassengerList\\_T\\_passengerList](#)
- [Place\\_T\\_tmpPlace](#)
- [Date\\_T\\_tmpDate](#)
- [Airline\\_T\\_tmpAirline](#)
- [Passenger\\_T\\_tmpPassenger](#)

#### 23.45.1 Detailed Description

Search string.

Definition at line 94 of file [BookingRequestParser.hpp](#).

#### 23.45.2 Constructor & Destructor Documentation

##### 23.45.2.1 `airsched::SearchString_T::SearchString_T( )` `[inline]`

Constructor.

Definition at line 102 of file [BookingRequestParser.hpp](#).

#### 23.45.3 Member Function Documentation

##### 23.45.3.1 `void airsched::SearchString_T::display( ) const` `[inline]`

Definition at line 105 of file [BookingRequestParser.hpp](#).

References [\\_airlineList](#), [\\_dateList](#), [\\_passengerList](#), [\\_placeList](#), [\\_tmpPlace](#), [airsched::Place\\_T::display\(\)](#), [airsched::Date\\_T::display\(\)](#), [airsched::Airline\\_T::display\(\)](#), and [airsched::Passenger\\_T::display\(\)](#).

#### 23.45.4 Member Data Documentation

##### 23.45.4.1 `PlaceList_T` `airsched::SearchString_T::_placeList`

Definition at line 96 of file [BookingRequestParser.hpp](#).

Referenced by [display\(\)](#).

##### 23.45.4.2 `DateList_T` `airsched::SearchString_T::_dateList`

Definition at line 97 of file [BookingRequestParser.hpp](#).

Referenced by [display\(\)](#), and [airsched::store\\_date::operator\(\)\(\)](#).

##### 23.45.4.3 `AirlineList_T` `airsched::SearchString_T::_airlineList`

Definition at line 98 of file [BookingRequestParser.hpp](#).

Referenced by [display\(\)](#), [airsched::store\\_airline\\_code::operator\(\)\(\)](#), and [airsched::store\\_airline\\_name::operator\(\)\(\)](#).

##### 23.45.4.4 `PassengerList_T` `airsched::SearchString_T::_passengerList`

Definition at line 99 of file [BookingRequestParser.hpp](#).

Referenced by [display\(\)](#), [airsched::store\\_adult\\_passenger\\_type::operator\(\)\(\)](#), [airsched::store\\_child\\_passenger\\_type::operator\(\)\(\)](#), and [airsched::store\\_pet\\_passenger\\_type::operator\(\)\(\)](#).

**23.45.4.5 Place\_T** airsched::SearchString\_T::tmpPlace

Definition at line 137 of file [BookingRequestParser.hpp](#).

Referenced by [display\(\)](#), and [airsched::store\\_place\\_element::operator\(\)](#).

**23.45.4.6 Date\_T** airsched::SearchString\_T::tmpDate

Definition at line 138 of file [BookingRequestParser.hpp](#).

Referenced by [airsched::store\\_date::operator\(\)](#).

**23.45.4.7 Airline\_T** airsched::SearchString\_T::tmpAirline

Definition at line 139 of file [BookingRequestParser.hpp](#).

Referenced by [airsched::store\\_airline\\_sign::operator\(\)](#), [airsched::store\\_airline\\_code::operator\(\)](#), and [airsched::store\\_airline\\_name::operator\(\)](#).

**23.45.4.8 Passenger\_T** airsched::SearchString\_T::tmpPassenger

Definition at line 140 of file [BookingRequestParser.hpp](#).

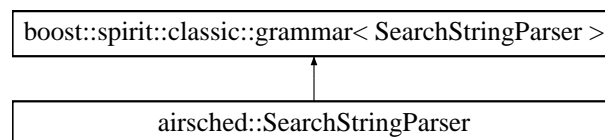
Referenced by [airsched::store\\_passenger\\_number::operator\(\)](#), [airsched::store\\_adult\\_passenger\\_type::operator\(\)](#), [airsched::store\\_child\\_passenger\\_type::operator\(\)](#), and [airsched::store\\_pet\\_passenger\\_type::operator\(\)](#).

The documentation for this struct was generated from the following file:

- [airsched/batches/BookingRequestParser.hpp](#)

**23.46 airsched::SearchStringParser Struct Reference**

Inheritance diagram for airsched::SearchStringParser:

**Classes**

- struct [definition](#)

**Public Member Functions**

- [SearchStringParser](#) ([SearchString\\_T](#) &ioSearchString)

**Public Attributes**

- [SearchString\\_T](#) & [\\_searchString](#)

**23.46.1 Detailed Description**

Grammar for the search string parser.

Definition at line 251 of file [BookingRequestParser.cpp](#).

## 23.46.2 Constructor &amp; Destructor Documentation

23.46.2.1 `airsched::SearchStringParser::SearchStringParser ( SearchString_T & ioSearchString ) [inline]`

Definition at line 254 of file [BookingRequestParser.cpp](#).

## 23.46.3 Member Data Documentation

23.46.3.1 `SearchString_T& aircshed::SearchStringParser::_searchString`

Definition at line 369 of file [BookingRequestParser.cpp](#).

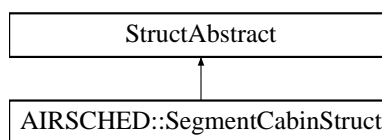
The documentation for this struct was generated from the following file:

- [airsched/batches/BookingRequestParser.cpp](#)

## 23.47 AIRSCHED::SegmentCabinStruct Struct Reference

```
#include <airsched/bom/SegmentCabinStruct.hpp>
```

Inheritance diagram for AIRSCHED::SegmentCabinStruct:



## Public Member Functions

- void [fill](#) (stdair::SegmentCabin &) const
- const std::string [describe](#) () const

## Public Attributes

- stdair::CabinCode\_T [\\_cabinCode](#)
- stdair::ClassList\_String\_T [\\_classes](#)
- stdair::FamilyCode\_T [\\_itFamilyCode](#)
- [FareFamilyStructList\\_T \\_fareFamilies](#)

## 23.47.1 Detailed Description

Utility Structure for the parsing of SegmentCabin details.

Definition at line 24 of file [SegmentCabinStruct.hpp](#).

## 23.47.2 Member Function Documentation

23.47.2.1 `void AIRSCHED::SegmentCabinStruct::fill ( stdair::SegmentCabin & ioSegmentCabin ) const`

Fill the SegmentCabin objects with the attributes of the [SegmentCabinStruct](#).

Definition at line 22 of file [SegmentCabinStruct.cpp](#).

23.47.2.2 `const std::string AIRSCHED::SegmentCabinStruct::describe ( ) const`

Give a description of the structure (for display purposes).

Definition at line 15 of file [SegmentCabinStruct.cpp](#).

References [\\_cabinCode](#), and [\\_classes](#).

Referenced by [AIRSCHED::SegmentStruct::describe\(\)](#).

### 23.47.3 Member Data Documentation

23.47.3.1 `stdair::CabinCode_T AIRSCHED::SegmentCabinStruct::_cabinCode`

Definition at line 26 of file [SegmentCabinStruct.hpp](#).

Referenced by [AIRSCHED::FlightPeriodStruct::addFareFamily\(\)](#), [describe\(\)](#), [AIRSCHED::SegmentPeriodHelper::fill\(\)](#), and [AIRSCHED::ScheduleParserHelper::storeSegmentCabinCode::operator\(\)\(\)](#).

23.47.3.2 `stdair::ClassList_String_T AIRSCHED::SegmentCabinStruct::_classes`

Definition at line 27 of file [SegmentCabinStruct.hpp](#).

Referenced by [describe\(\)](#), [AIRSCHED::SegmentPeriodHelper::fill\(\)](#), and [AIRSCHED::ScheduleParserHelper::storeClasses::operator\(\)\(\)](#).

23.47.3.3 `stdair::FamilyCode_T AIRSCHED::SegmentCabinStruct::_itFamilyCode`

Definition at line 28 of file [SegmentCabinStruct.hpp](#).

Referenced by [AIRSCHED::ScheduleParserHelper::storeFamilyCode::operator\(\)\(\)](#), and [AIRSCHED::ScheduleParserHelper::storeFCClasses::operator\(\)\(\)](#).

23.47.3.4 `FareFamilyStructList_T AIRSCHED::SegmentCabinStruct::_fareFamilies`

Definition at line 29 of file [SegmentCabinStruct.hpp](#).

Referenced by [AIRSCHED::FlightPeriodStruct::addFareFamily\(\)](#).

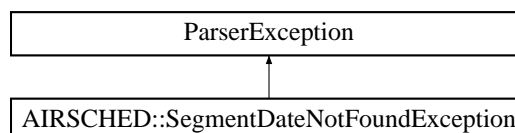
The documentation for this struct was generated from the following files:

- [airsched/bom/SegmentCabinStruct.hpp](#)
- [airsched/bom/SegmentCabinStruct.cpp](#)

## 23.48 AIRSCHED::SegmentDateNotFoundException Class Reference

```
#include <airsched/AIRSCHED_Types.hpp>
```

Inheritance diagram for AIRSCHED::SegmentDateNotFoundException:



### Public Member Functions

- [SegmentDateNotFoundException](#) (const std::string &iWhat)

### 23.48.1 Detailed Description

Specific exception when some BOM objects can not be found within the schedule.

Definition at line 23 of file [AIRSCHED\\_Types.hpp](#).

### 23.48.2 Constructor & Destructor Documentation

23.48.2.1 `AIRSCHED::SegmentDateNotFoundException::SegmentDateNotFoundException ( const std::string & iWhat )`  
`[inline]`

Constructor.

Definition at line 28 of file [AIRSCHED\\_Types.hpp](#).

The documentation for this class was generated from the following file:

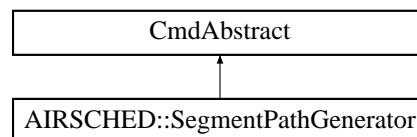
- [airsched/AIRSCHED\\_Types.hpp](#)

## 23.49 AIRSCHED::SegmentPathGenerator Class Reference

Class handling the generation / instantiation of the network BOM.

```
#include <airsched/command/SegmentPathGenerator.hpp>
```

Inheritance diagram for AIRSCHED::SegmentPathGenerator:



### Static Public Member Functions

- static void [createSegmentPathNetwork](#) (const stdair::BomRoot &)

### 23.49.1 Detailed Description

Class handling the generation / instantiation of the network BOM.

Definition at line 34 of file [SegmentPathGenerator.hpp](#).

### 23.49.2 Member Function Documentation

23.49.2.1 `void AIRSCHED::SegmentPathGenerator::createSegmentPathNetwork ( const stdair::BomRoot & iBomRoot )`  
`[static]`

Generate the segment path network.

Definition at line 26 of file [SegmentPathGenerator.cpp](#).

Referenced by [AIRSCHED::AIRSCHED\\_Service::buildSampleBom\(\)](#), and [AIRSCHED::ScheduleParser::generateInventories\(\)](#).

The documentation for this class was generated from the following files:

- [airsched/command/SegmentPathGenerator.hpp](#)
- [airsched/command/SegmentPathGenerator.cpp](#)

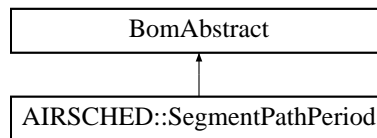


## 23.50 AIRSCHED::SegmentPathPeriod Class Reference

Class representing a segment/path.

```
#include <airsched/bom/SegmentPathPeriod.hpp>
```

Inheritance diagram for AIRSCHED::SegmentPathPeriod:



### Public Types

- typedef [SegmentPathPeriodKey](#) Key\_T

### Public Member Functions

- const [Key\\_T](#) & [getKey](#) () const
- stdair::BomAbstract \*const [getParent](#) () const
- const stdair::PeriodStruct & [getDeparturePeriod](#) () const
- const [DateOffsetList\\_T](#) & [getBoardingDateOffsetList](#) () const
- const stdair::NbOfSegments\_T [getNbOfSegments](#) () const
- const stdair::NbOfAirlines\_T & [getNbOfAirlines](#) () const
- const stdair::Duration\_T & [getElapsedTime](#) () const
- const stdair::Duration\_T & [getBoardingTime](#) () const
- const stdair::HolderMap\_T & [getHolderMap](#) () const
- stdair::SegmentPeriod \* [getLastSegmentPeriod](#) () const
- stdair::SegmentPeriod \* [getFirstSegmentPeriod](#) () const
- const stdair::AirportCode\_T & [getDestination](#) () const
- [Key\\_T](#) [connectWithAnotherSegment](#) (const [SegmentPathPeriod](#) &) const
- bool [checkCircle](#) (const stdair::AirportCode\_T &) const
- bool [isAirlineFlown](#) (const stdair::AirlineCode\_T &) const
- bool [isDepartureDateValid](#) (const stdair::Date\_T &) const
- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- std::string [toString](#) () const
- const std::string [describeKey](#) () const
- template<class Archive >  
void [serialize](#) (Archive &ar, const unsigned int iFileVersion)

### Protected Member Functions

- [SegmentPathPeriod](#) (const [Key\\_T](#) &)
- [~SegmentPathPeriod](#) ()

### Protected Attributes

- [Key\\_T \\_key](#)
- stdair::BomAbstract \* [\\_parent](#)
- stdair::HolderMap\_T [\\_holderMap](#)

## Friends

- class [stdair::FacBom](#)
- class [stdair::FacBomManager](#)
- class [boost::serialization::access](#)

## 23.50.1 Detailed Description

Class representing a segment/path.

It corresponds to an actual travel solution from the origin to the destination, that is, a path that a traveller can take with actual scheduled flights.

Definition at line 39 of file [SegmentPathPeriod.hpp](#).

## 23.50.2 Member Typedef Documentation

## 23.50.2.1 typedef SegmentPathPeriodKey AIRSCHED::SegmentPathPeriod::Key\_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 52 of file [SegmentPathPeriod.hpp](#).

## 23.50.3 Constructor &amp; Destructor Documentation

## 23.50.3.1 AIRSCHED::SegmentPathPeriod::SegmentPathPeriod ( const Key\_T &amp; iKey ) [protected]

Main constructor.

Definition at line 43 of file [SegmentPathPeriod.cpp](#).

## 23.50.3.2 AIRSCHED::SegmentPathPeriod::~~SegmentPathPeriod ( ) [protected]

Destructor.

Definition at line 48 of file [SegmentPathPeriod.cpp](#).

## 23.50.4 Member Function Documentation

## 23.50.4.1 const Key\_T&amp; AIRSCHED::SegmentPathPeriod::getKey ( ) const [inline]

Get the primary key (destination airport).

Definition at line 60 of file [SegmentPathPeriod.hpp](#).

References [\\_key](#).

## 23.50.4.2 stdair::BomAbstract\* const AIRSCHED::SegmentPathPeriod::getParent ( ) const [inline]

Get the parent (i.e., [OriginDestinationSet](#)) object.

Definition at line 67 of file [SegmentPathPeriod.hpp](#).

References [\\_parent](#).

## 23.50.4.3 const stdair::PeriodStruct&amp; AIRSCHED::SegmentPathPeriod::getDeparturePeriod ( ) const [inline]

Get the departure period (part of the primary key).

Definition at line 72 of file [SegmentPathPeriod.hpp](#).

References [\\_key](#), and [AIRSCHED::SegmentPathPeriodKey::getPeriod\(\)](#).

Referenced by [connectWithAnotherSegment\(\)](#), and [isDepartureDateValid\(\)](#).

**23.50.4.4** `const DateOffsetList_T& AIRSCHED::SegmentPathPeriod::getBoardingDateOffsetList ( ) const [inline]`

Get the boarding date offset list (part of the primary key).

Definition at line 77 of file [SegmentPathPeriod.hpp](#).

References [\\_key](#), and [AIRSCHED::SegmentPathPeriodKey::getBoardingDateOffsetList\(\)](#).

Referenced by [connectWithAnotherSegment\(\)](#).

**23.50.4.5** `const stdair::NbOfSegments_T AIRSCHED::SegmentPathPeriod::getNbOfSegments ( ) const [inline]`

Get the number of segments (part of the primary key).

Definition at line 82 of file [SegmentPathPeriod.hpp](#).

References [\\_key](#), and [AIRSCHED::SegmentPathPeriodKey::getNbOfSegments\(\)](#).

Referenced by [connectWithAnotherSegment\(\)](#).

**23.50.4.6** `const stdair::NbOfAirlines_T& AIRSCHED::SegmentPathPeriod::getNbOfAirlines ( ) const [inline]`

Get the number of airlines (part of the primary key).

Definition at line 87 of file [SegmentPathPeriod.hpp](#).

References [\\_key](#), and [AIRSCHED::SegmentPathPeriodKey::getNbOfAirlines\(\)](#).

**23.50.4.7** `const stdair::Duration_T& AIRSCHED::SegmentPathPeriod::getElapsedTime ( ) const [inline]`

Get the elapsed time (part of the primary key).

Definition at line 92 of file [SegmentPathPeriod.hpp](#).

References [\\_key](#), and [AIRSCHED::SegmentPathPeriodKey::getElapsedTime\(\)](#).

Referenced by [connectWithAnotherSegment\(\)](#).

**23.50.4.8** `const stdair::Duration_T& AIRSCHED::SegmentPathPeriod::getBoardingTime ( ) const [inline]`

Get the boarding time (part of the primary key).

Definition at line 97 of file [SegmentPathPeriod.hpp](#).

References [\\_key](#), and [AIRSCHED::SegmentPathPeriodKey::getBoardingTime\(\)](#).

Referenced by [connectWithAnotherSegment\(\)](#).

**23.50.4.9** `const stdair::HolderMap_T& AIRSCHED::SegmentPathPeriod::getHolderMap ( ) const [inline]`

Get the map of children holders (SegmentPeriod objects).

Definition at line 104 of file [SegmentPathPeriod.hpp](#).

References [\\_holderMap](#).

**23.50.4.10** `stdair::SegmentPeriod * AIRSCHED::SegmentPathPeriod::getLastSegmentPeriod ( ) const`

Get the last SegmentPeriod object of the list.

Return a NULL pointer if the list is empty.

Definition at line 91 of file [SegmentPathPeriod.cpp](#).

Referenced by [connectWithAnotherSegment\(\)](#), and [getDestination\(\)](#).

**23.50.4.11** `stdair::SegmentPeriod * AIRSCHED::SegmentPathPeriod::getFirstSegmentPeriod ( ) const`

Get the first SegmentPeriod object of the list.

Return a NULL pointer if the list is empty.

Definition at line 109 of file [SegmentPathPeriod.cpp](#).

Referenced by [connectWithAnotherSegment\(\)](#).

**23.50.4.12** `const stdair::AirportCode_T & AIRSCHED::SegmentPathPeriod::getDestination ( ) const`

Get the destination of the segment path (i.e., the destination of the last segment).

Definition at line 127 of file [SegmentPathPeriod.cpp](#).

References [getLastSegmentPeriod\(\)](#).

**23.50.4.13** `SegmentPathPeriodKey AIRSCHED::SegmentPathPeriod::connectWithAnotherSegment ( const SegmentPathPeriod & iSingleSegmentPath ) const`

Check whether the (i-1)-length segment path period can be merged with the single segment path period in order to create an i-length segment path period. The function will return a valid or non-valid segment path period key.

The two segment path period above can be fused (and will produce a valid new segment path period key) if:

1. A passenger can connect from the last segment of the first segment path and the first segment of the next segment path. These two segments should not create another segment.
2. There is no circle within the new segment path.
3. The intersection of the two periods is non-empty.

Definition at line 163 of file [SegmentPathPeriod.cpp](#).

References [checkCircle\(\)](#), [getBoardingDateOffsetList\(\)](#), [getBoardingTime\(\)](#), [getDeparturePeriod\(\)](#), [getElapsedTime\(\)](#), [getFirstSegmentPeriod\(\)](#), [getLastSegmentPeriod\(\)](#), [getNbOfSegments\(\)](#), [AIRSCHED::SegmentPathPeriodKey::setBoardingDateOffsetList\(\)](#), [AIRSCHED::SegmentPathPeriodKey::setBoardingTime\(\)](#), [AIRSCHED::SegmentPathPeriodKey::setElapsedTime\(\)](#), and [AIRSCHED::SegmentPathPeriodKey::setPeriod\(\)](#).

**23.50.4.14** `bool AIRSCHED::SegmentPathPeriod::checkCircle ( const stdair::AirportCode_T & ) const`

Check whether the given destination airport is also the departure point of one of the other segment members. If yes, a circle exists.

Definition at line 289 of file [SegmentPathPeriod.cpp](#).

Referenced by [connectWithAnotherSegment\(\)](#).

**23.50.4.15** `bool AIRSCHED::SegmentPathPeriod::isAirlineFlown ( const stdair::AirlineCode_T & iAirlineCode ) const`

State whether or not the given airline is flown by (at least) one of the segments of the internal list.

Definition at line 135 of file [SegmentPathPeriod.cpp](#).

**23.50.4.16** `bool AIRSCHED::SegmentPathPeriod::isDepartureDateValid ( const stdair::Date_T & iDepartureDate ) const`

Check whether the given departure date is included in the departure period of the segment path.

Definition at line 308 of file [SegmentPathPeriod.cpp](#).

References [getDeparturePeriod\(\)](#).

**23.50.4.17** `void AIRSCHED::SegmentPathPeriod::toStream ( std::ostream & ioOut ) const [inline]`

Dump a Business Object into an output stream.

## Parameters

<i>ostream</i> &	the output stream.
------------------	--------------------

Definition at line 176 of file [SegmentPathPeriod.hpp](#).

References [toString\(\)](#).

23.50.4.18 void AIRSCHED::SegmentPathPeriod::fromStream ( std::istream & *ioIn* ) [inline]

Read a Business Object from an input stream.

## Parameters

<i>istream</i> &	the input stream.
------------------	-------------------

Definition at line 185 of file [SegmentPathPeriod.hpp](#).

23.50.4.19 std::string AIRSCHED::SegmentPathPeriod::toString ( ) const

Get the serialised version of the Business Object.

Definition at line 52 of file [SegmentPathPeriod.cpp](#).

References [\\_key](#), and [AIRSCHED::SegmentPathPeriodKey::toString\(\)](#).

Referenced by [toStream\(\)](#).

23.50.4.20 const std::string AIRSCHED::SegmentPathPeriod::describeKey ( ) const [inline]

Get a string describing the key.

Definition at line 196 of file [SegmentPathPeriod.hpp](#).

References [\\_key](#), and [AIRSCHED::SegmentPathPeriodKey::toString\(\)](#).

23.50.4.21 template<class Archive > void AIRSCHED::SegmentPathPeriod::serialize ( Archive & *ar*, const unsigned int *iFileVersion* )

Serialisation.

Definition at line 74 of file [SegmentPathPeriod.cpp](#).

References [\\_key](#).

## 23.50.5 Friends And Related Function Documentation

23.50.5.1 friend class stdair::FacBom [friend]

Friend classes.

Definition at line 43 of file [SegmentPathPeriod.hpp](#).

23.50.5.2 friend class stdair::FacBomManager [friend]

Definition at line 44 of file [SegmentPathPeriod.hpp](#).

23.50.5.3 friend class boost::serialization::access [friend]

Definition at line 45 of file [SegmentPathPeriod.hpp](#).

## 23.50.6 Member Data Documentation

## 23.50.6.1 Key\_T AIRSCHED::SegmentPathPeriod::\_key [protected]

Primary key (segment/path characteristics: scheduled period, number of segments, number of airlines, elapsed time, boarding time).

Definition at line 249 of file [SegmentPathPeriod.hpp](#).

Referenced by [describeKey\(\)](#), [getBoardingDateOffsetList\(\)](#), [getBoardingTime\(\)](#), [getDeparturePeriod\(\)](#), [getElapsedTime\(\)](#), [getKey\(\)](#), [getNbOfAirlines\(\)](#), [getNbOfSegments\(\)](#), [serialize\(\)](#), and [toString\(\)](#).

## 23.50.6.2 stdair::BomAbstract\* AIRSCHED::SegmentPathPeriod::\_parent [protected]

Pointer on the parent ([OriginDestinationSet](#)) object.

Definition at line 254 of file [SegmentPathPeriod.hpp](#).

Referenced by [getParent\(\)](#).

## 23.50.6.3 stdair::HolderMap\_T AIRSCHED::SegmentPathPeriod::\_holderMap [protected]

Map holding the children (SegmentPeriod objects).

## Note

The SegmentPeriod objects themselves have for parent the FlightPeriod class (not the [SegmentPathPeriod](#) class).

Definition at line 262 of file [SegmentPathPeriod.hpp](#).

Referenced by [getHolderMap\(\)](#).

The documentation for this class was generated from the following files:

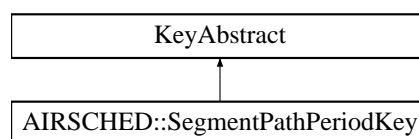
- [airsched/bom/SegmentPathPeriod.hpp](#)
- [airsched/bom/SegmentPathPeriod.cpp](#)

## 23.51 AIRSCHED::SegmentPathPeriodKey Struct Reference

Structure representing the key of a segment/path.

```
#include <airsched/bom/SegmentPathPeriodKey.hpp>
```

Inheritance diagram for AIRSCHED::SegmentPathPeriodKey:



## Public Member Functions

- [SegmentPathPeriodKey](#) (const stdair::PeriodStruct &, const stdair::Duration\_T &iBoardingTime, const stdair::Duration\_T &iElapsed, const [DateOffsetList\\_T](#) &, const stdair::NbOfAirlines\_T &)
- [SegmentPathPeriodKey](#) ()
- [SegmentPathPeriodKey](#) (const [SegmentPathPeriodKey](#) &)
- [~SegmentPathPeriodKey](#) ()
- const stdair::PeriodStruct & [getPeriod](#) () const
- const [DateOffsetList\\_T](#) & [getBoardingDateOffsetList](#) () const
- const stdair::NbOfSegments\_T [getNbOfSegments](#) () const

- const stdair::NbOfAirlines\_T & [getNbOfAirlines](#) () const
- const stdair::Duration\_T & [getElapsedTime](#) () const
- const stdair::Duration\_T & [getBoardingTime](#) () const
- void [setPeriod](#) (const stdair::PeriodStruct &iPeriod)
- void [setBoardingDateOffsetList](#) (const [DateOffsetList\\_T](#) &iList)
- void [setNbOfAirlines](#) (const stdair::NbOfAirlines\_T &iNbOfAirlines)
- void [setElapsedTime](#) (const stdair::Duration\_T &iElapsed)
- void [setBoardingTime](#) (const stdair::Duration\_T &iBoardingTime)
- const bool [isValid](#) () const
- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- const std::string [toString](#) () const
- template<class Archive >  
void [serialize](#) (Archive &ar, const unsigned int iFileVersion)

#### Friends

- class [boost::serialization::access](#)

#### 23.51.1 Detailed Description

Structure representing the key of a segment/path.

That key specifies a travel solution from a geographical point (origin airport) to another (destination airport).

Definition at line 33 of file [SegmentPathPeriodKey.hpp](#).

#### 23.51.2 Constructor & Destructor Documentation

**23.51.2.1 AIRSCHED::SegmentPathPeriodKey::SegmentPathPeriodKey ( const stdair::PeriodStruct & *iPeriod*, const stdair::Duration\_T & *iBoardingTime*, const stdair::Duration\_T & *iElapsed*, const [DateOffsetList\\_T](#) & *iBoardingDateOffsetList*, const stdair::NbOfAirlines\_T & *iNbOfAirlines* )**

Constructor.

Definition at line 40 of file [SegmentPathPeriodKey.cpp](#).

**23.51.2.2 AIRSCHED::SegmentPathPeriodKey::SegmentPathPeriodKey ( )**

Default constructor.

Definition at line 22 of file [SegmentPathPeriodKey.cpp](#).

**23.51.2.3 AIRSCHED::SegmentPathPeriodKey::SegmentPathPeriodKey ( const [SegmentPathPeriodKey](#) & *iSPPK* )**

Copy constructor.

Definition at line 30 of file [SegmentPathPeriodKey.cpp](#).

**23.51.2.4 AIRSCHED::SegmentPathPeriodKey::~~SegmentPathPeriodKey ( )**

Destructor.

Definition at line 53 of file [SegmentPathPeriodKey.cpp](#).

#### 23.51.3 Member Function Documentation

23.51.3.1 `const stdair::PeriodStruct& AIRSCHED::SegmentPathPeriodKey::getPeriod ( ) const [inline]`

Get the active days-of-week.

Definition at line 68 of file [SegmentPathPeriodKey.hpp](#).

Referenced by [AIRSCHED::SegmentPathPeriod::getDeparturePeriod\(\)](#).

23.51.3.2 `const DateOffsetList_T& AIRSCHED::SegmentPathPeriodKey::getBoardingDateOffsetList ( ) const [inline]`

Get the list of boarding date off-sets.

Definition at line 75 of file [SegmentPathPeriodKey.hpp](#).

Referenced by [AIRSCHED::SegmentPathPeriod::getBoardingDateOffsetList\(\)](#).

23.51.3.3 `const stdair::NbOfSegments_T AIRSCHED::SegmentPathPeriodKey::getNbOfSegments ( ) const [inline]`

Get the number of segments.

Definition at line 82 of file [SegmentPathPeriodKey.hpp](#).

Referenced by [AIRSCHED::SegmentPathPeriod::getNbOfSegments\(\)](#).

23.51.3.4 `const stdair::NbOfAirlines_T& AIRSCHED::SegmentPathPeriodKey::getNbOfAirlines ( ) const [inline]`

Get the number of airlines.

Definition at line 89 of file [SegmentPathPeriodKey.hpp](#).

Referenced by [AIRSCHED::SegmentPathPeriod::getNbOfAirlines\(\)](#).

23.51.3.5 `const stdair::Duration_T& AIRSCHED::SegmentPathPeriodKey::getElapsedTime ( ) const [inline]`

Get the elapsed time.

Definition at line 96 of file [SegmentPathPeriodKey.hpp](#).

Referenced by [AIRSCHED::SegmentPathPeriod::getElapsedTime\(\)](#).

23.51.3.6 `const stdair::Duration_T& AIRSCHED::SegmentPathPeriodKey::getBoardingTime ( ) const [inline]`

Get the boarding time.

Definition at line 103 of file [SegmentPathPeriodKey.hpp](#).

Referenced by [AIRSCHED::SegmentPathPeriod::getBoardingTime\(\)](#).

23.51.3.7 `void AIRSCHED::SegmentPathPeriodKey::setPeriod ( const stdair::PeriodStruct & iPeriod ) [inline]`

Set the active days-of-week.

Definition at line 111 of file [SegmentPathPeriodKey.hpp](#).

Referenced by [AIRSCHED::SegmentPathPeriod::connectWithAnotherSegment\(\)](#).

23.51.3.8 `void AIRSCHED::SegmentPathPeriodKey::setBoardingDateOffsetList ( const DateOffsetList_T & iList ) [inline]`

Definition at line 115 of file [SegmentPathPeriodKey.hpp](#).

Referenced by [AIRSCHED::SegmentPathPeriod::connectWithAnotherSegment\(\)](#).

23.51.3.9 `void AIRSCHED::SegmentPathPeriodKey::setNbOfAirlines ( const stdair::NbOfAirlines_T & iNbOfAirlines ) [inline]`

Set the number of airlines.



Definition at line 120 of file [SegmentPathPeriodKey.hpp](#).

23.51.3.10 void AIRSCHED::SegmentPathPeriodKey::setElapsedTime ( const stdair::Duration.T & iElapsed ) [inline]

Set the elapsed time.

Definition at line 125 of file [SegmentPathPeriodKey.hpp](#).

Referenced by [AIRSCHED::SegmentPathPeriod::connectWithAnotherSegment\(\)](#).

23.51.3.11 void AIRSCHED::SegmentPathPeriodKey::setBoardingTime ( const stdair::Duration.T & iBoardingTime ) [inline]

Set the boarding time.

Definition at line 130 of file [SegmentPathPeriodKey.hpp](#).

Referenced by [AIRSCHED::SegmentPathPeriod::connectWithAnotherSegment\(\)](#).

23.51.3.12 const bool AIRSCHED::SegmentPathPeriodKey::isValid ( ) const [inline]

Check if the key is valid (i.e. the departure period is valid).

Definition at line 138 of file [SegmentPathPeriodKey.hpp](#).

23.51.3.13 void AIRSCHED::SegmentPathPeriodKey::toStream ( std::ostream & ioOut ) const

Dump a Business Object Key into an output stream.

#### Parameters

<i>ostream&amp;</i>	the output stream.
---------------------	--------------------

Definition at line 57 of file [SegmentPathPeriodKey.cpp](#).

References [toString\(\)](#).

23.51.3.14 void AIRSCHED::SegmentPathPeriodKey::fromStream ( std::istream & ioIn )

Read a Business Object Key from an input stream.

#### Parameters

<i>istream&amp;</i>	the input stream.
---------------------	-------------------

Definition at line 62 of file [SegmentPathPeriodKey.cpp](#).

23.51.3.15 const std::string AIRSCHED::SegmentPathPeriodKey::toString ( ) const

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-date.

Definition at line 66 of file [SegmentPathPeriodKey.cpp](#).

Referenced by [AIRSCHED::SegmentPathPeriod::describeKey\(\)](#), [toStream\(\)](#), and [AIRSCHED::SegmentPathPeriod::toString\(\)](#).

23.51.3.16 template<class Archive > void AIRSCHED::SegmentPathPeriodKey::serialize ( Archive & ar, const unsigned int iFileVersion )

Serialisation.

Definition at line 98 of file [SegmentPathPeriodKey.cpp](#).

### 23.51.4 Friends And Related Function Documentation

#### 23.51.4.1 friend class boost::serialization::access [friend]

Definition at line 34 of file [SegmentPathPeriodKey.hpp](#).

The documentation for this struct was generated from the following files:

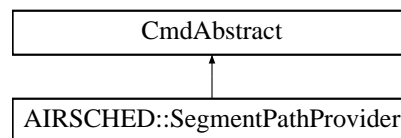
- [airsched/bom/SegmentPathPeriodKey.hpp](#)
- [airsched/bom/SegmentPathPeriodKey.cpp](#)

## 23.52 AIRSCHED::SegmentPathProvider Class Reference

Class building the travel solutions from airline schedules.

```
#include <airsched/command/SegmentPathProvider.hpp>
```

Inheritance diagram for AIRSCHED::SegmentPathProvider:



### Friends

- class [AIRSCHED\\_Service](#)

### 23.52.1 Detailed Description

Class building the travel solutions from airline schedules.

Definition at line 27 of file [SegmentPathProvider.hpp](#).

### 23.52.2 Friends And Related Function Documentation

#### 23.52.2.1 friend class AIRSCHED\_Service [friend]

Definition at line 28 of file [SegmentPathProvider.hpp](#).

The documentation for this class was generated from the following files:

- [airsched/command/SegmentPathProvider.hpp](#)
- [airsched/command/SegmentPathProvider.cpp](#)

## 23.53 AIRSCHED::SegmentPeriodHelper Class Reference

```
#include <airsched/bom/SegmentPeriodHelper.hpp>
```

### Static Public Member Functions

- static void [fill](#) (stdair::SegmentPeriod &, const [SegmentStruct](#) &)
- static void [fill](#) (stdair::SegmentPeriod &, const [LegStructList\\_T](#) &)

## 23.53.1 Detailed Description

Class representing the actual business functions for an airline segment-period.

Definition at line 19 of file [SegmentPeriodHelper.hpp](#).

## 23.53.2 Member Function Documentation

**23.53.2.1** `void AIRSCHED::SegmentPeriodHelper::fill ( stdair::SegmentPeriod & ioSegmentPeriod, const SegmentStruct & iSegmentStruct ) [static]`

Fill the attributes of the given segment-period with the cabins and classes.

Definition at line 14 of file [SegmentPeriodHelper.cpp](#).

References [AIRSCHED::SegmentCabinStruct::\\_cabinCode](#), [AIRSCHED::SegmentStruct::\\_cabinList](#), and [AIRSCHED::SegmentCabinStruct::\\_classes](#).

**23.53.2.2** `void AIRSCHED::SegmentPeriodHelper::fill ( stdair::SegmentPeriod & ioSegmentPeriod, const LegStructList_T & iLegList ) [static]`

Fill the attributes of the given segment-period with the list of used legs.

Definition at line 29 of file [SegmentPeriodHelper.cpp](#).

References [AIRSCHED::LegStruct::\\_boardingPoint](#), [AIRSCHED::LegStruct::\\_offDateOffset](#), [AIRSCHED::LegStruct::\\_offPoint](#), and [AIRSCHED::LegStruct::\\_offTime](#).

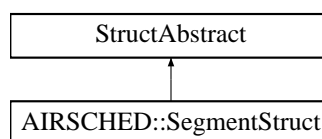
The documentation for this class was generated from the following files:

- [airsched/bom/SegmentPeriodHelper.hpp](#)
- [airsched/bom/SegmentPeriodHelper.cpp](#)

## 23.54 AIRSCHED::SegmentStruct Struct Reference

```
#include <airsched/bom/SegmentStruct.hpp>
```

Inheritance diagram for AIRSCHED::SegmentStruct:



## Public Member Functions

- void [fill](#) (stdair::SegmentDate &) const
- const std::string [describe](#) () const

## Public Attributes

- stdair::AirportCode\_T [\\_boardingPoint](#)
- stdair::Date\_T [\\_boardingDate](#)
- stdair::Duration\_T [\\_boardingTime](#)
- stdair::AirportCode\_T [\\_offPoint](#)
- stdair::Date\_T [\\_offDate](#)
- stdair::Duration\_T [\\_offTime](#)

- [stdair::Duration\\_T \\_elapsed](#)
- [SegmentCabinStructList\\_T \\_cabinList](#)

#### 23.54.1 Detailed Description

Utility Structure for the parsing of Segment structures.

Definition at line 24 of file [SegmentStruct.hpp](#).

#### 23.54.2 Member Function Documentation

##### 23.54.2.1 void AIRSCHED::SegmentStruct::fill ( stdair::SegmentDate & *ioSegmentDate* ) const

Fill the SegmentDate objects with the attributes of the [SegmentStruct](#).

Definition at line 35 of file [SegmentStruct.cpp](#).

##### 23.54.2.2 const std::string AIRSCHED::SegmentStruct::describe ( ) const

Give a description of the structure (for display purposes).

Definition at line 15 of file [SegmentStruct.cpp](#).

References [\\_boardingPoint](#), [\\_boardingTime](#), [\\_cabinList](#), [\\_elapsed](#), [\\_offPoint](#), [\\_offTime](#), and [AIRSCHED::SegmentCabinStruct::describe\(\)](#).

Referenced by [AIRSCHED::FlightPeriodStruct::describe\(\)](#).

#### 23.54.3 Member Data Documentation

##### 23.54.3.1 stdair::AirportCode\_T AIRSCHED::SegmentStruct::\_boardingPoint

Definition at line 26 of file [SegmentStruct.hpp](#).

Referenced by [AIRSCHED::FlightPeriodStruct::addFareFamily\(\)](#), [AIRSCHED::FlightPeriodStruct::addSegmentCabin\(\)](#), [AIRSCHED::FlightPeriodStruct::buildSegments\(\)](#), [describe\(\)](#), and [AIRSCHED::ScheduleParserHelper::storeSegmentBoardingPoint::operator\(\)](#).

##### 23.54.3.2 stdair::Date\_T AIRSCHED::SegmentStruct::\_boardingDate

Definition at line 27 of file [SegmentStruct.hpp](#).

##### 23.54.3.3 stdair::Duration\_T AIRSCHED::SegmentStruct::\_boardingTime

Definition at line 28 of file [SegmentStruct.hpp](#).

Referenced by [describe\(\)](#).

##### 23.54.3.4 stdair::AirportCode\_T AIRSCHED::SegmentStruct::\_offPoint

Definition at line 29 of file [SegmentStruct.hpp](#).

Referenced by [AIRSCHED::FlightPeriodStruct::addFareFamily\(\)](#), [AIRSCHED::FlightPeriodStruct::addSegmentCabin\(\)](#), [AIRSCHED::FlightPeriodStruct::buildSegments\(\)](#), [describe\(\)](#), and [AIRSCHED::ScheduleParserHelper::storeSegmentOffPoint::operator\(\)](#).

##### 23.54.3.5 stdair::Date\_T AIRSCHED::SegmentStruct::\_offDate

Definition at line 30 of file [SegmentStruct.hpp](#).

## 23.54.3.6 stdair::Duration\_T AIRSCHED::SegmentStruct::\_offTime

Definition at line 31 of file [SegmentStruct.hpp](#).

Referenced by [describe\(\)](#).

## 23.54.3.7 stdair::Duration\_T AIRSCHED::SegmentStruct::\_elapsed

Definition at line 32 of file [SegmentStruct.hpp](#).

Referenced by [describe\(\)](#).

## 23.54.3.8 SegmentCabinStructList\_T AIRSCHED::SegmentStruct::\_cabinList

Definition at line 33 of file [SegmentStruct.hpp](#).

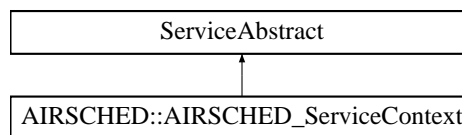
Referenced by [AIRSCHED::FlightPeriodStruct::addFareFamily\(\)](#), [AIRSCHED::FlightPeriodStruct::addSegmentCabin\(\)](#), [describe\(\)](#), and [AIRSCHED::SegmentPeriodHelper::fill\(\)](#).

The documentation for this struct was generated from the following files:

- [airsched/bom/SegmentStruct.hpp](#)
- [airsched/bom/SegmentStruct.cpp](#)

## 23.55 ServiceAbstract Class Reference

Inheritance diagram for ServiceAbstract:



The documentation for this class was generated from the following file:

- [airsched/service/AIRSCHED\\_ServiceContext.hpp](#)

## 23.56 AIRSCHED::ServiceAbstract Class Reference

```
#include <airsched/service/ServiceAbstract.hpp>
```

## Public Member Functions

- virtual [~ServiceAbstract](#) ()
- virtual void [toStream](#) (std::ostream &ioOut) const
- virtual void [fromStream](#) (std::istream &ioIn)

## Protected Member Functions

- [ServiceAbstract](#) ()

## 23.56.1 Detailed Description

Base class for the Service layer.

Definition at line 14 of file [ServiceAbstract.hpp](#).

## 23.56.2 Constructor &amp; Destructor Documentation

23.56.2.1 `virtual AIRSCHED::ServiceAbstract::~~ServiceAbstract ( ) [inline],[virtual]`

Destructor.

Definition at line 18 of file [ServiceAbstract.hpp](#).

23.56.2.2 `AIRSCHED::ServiceAbstract::ServiceAbstract ( ) [inline],[protected]`

Protected Default Constructor to ensure this class is abstract.

Definition at line 30 of file [ServiceAbstract.hpp](#).

## 23.56.3 Member Function Documentation

23.56.3.1 `virtual void AIRSCHED::ServiceAbstract::toStream ( std::ostream & ioOut ) const [inline],[virtual]`

Dump a Business Object into an output stream.

## Parameters

<code>ostream&amp;</code>	the output stream.
---------------------------	--------------------

Definition at line 22 of file [ServiceAbstract.hpp](#).

23.56.3.2 `virtual void AIRSCHED::ServiceAbstract::fromStream ( std::istream & ioIn ) [inline],[virtual]`

Read a Business Object from an input stream.

## Parameters

<code>istream&amp;</code>	the input stream.
---------------------------	-------------------

Definition at line 26 of file [ServiceAbstract.hpp](#).

Referenced by [operator>>\(\)](#).

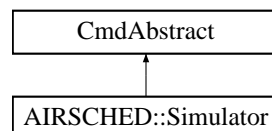
The documentation for this class was generated from the following file:

- [airsched/service/ServiceAbstract.hpp](#)

## 23.57 AIRSCHED::Simulator Class Reference

```
#include <airsched/command/Simulator.hpp>
```

Inheritance diagram for AIRSCHED::Simulator:



## Static Public Member Functions

- static void [simulate](#) (stdair::BomRoot &)

## 23.57.1 Detailed Description

Class implementing a small simulation, which uses the Airline Schedule.

Definition at line 18 of file [Simulator.hpp](#).

## 23.57.2 Member Function Documentation

## 23.57.2.1 void AIRSCHED::Simulator::simulate ( stdair::BomRoot &amp; ioBomRoot ) [static]

Perform a small simulation, which uses the Airline Schedule.

## Parameters

<i>stdair::Bom-Root&amp;</i>	Root of the BOM tree.
------------------------------	-----------------------

Definition at line 19 of file [Simulator.cpp](#).

The documentation for this class was generated from the following files:

- [airsched/command/Simulator.hpp](#)
- [airsched/command/Simulator.cpp](#)

## 23.58 airsched::store\_adult\_passenger\_type Struct Reference

## Public Member Functions

- [store\\_adult\\_passenger\\_type](#) ([SearchString\\_T](#) &ioSearchString)
- void [operator\(\)](#) ([iterator\\_t](#) iStr, [iterator\\_t](#) iStrEnd) const

## Public Attributes

- [SearchString\\_T](#) & [\\_searchString](#)

## 23.58.1 Detailed Description

Store the parsed passenger type.

Definition at line 145 of file [BookingRequestParser.cpp](#).

## 23.58.2 Constructor &amp; Destructor Documentation

23.58.2.1 airsched::store\_adult\_passenger\_type::store\_adult\_passenger\_type ( [SearchString\\_T](#) & ioSearchString ) [inline]

Constructor.

Definition at line 147 of file [BookingRequestParser.cpp](#).

## 23.58.3 Member Function Documentation

23.58.3.1 void airsched::store\_adult\_passenger\_type::operator() ( [iterator\\_t](#) iStr, [iterator\\_t](#) iStrEnd ) const [inline]

Parse adult passenger type.

Definition at line 151 of file [BookingRequestParser.cpp](#).

References [airsched::SearchString\\_T::\\_passengerList](#), [\\_searchString](#), [airsched::SearchString\\_T::\\_tmpPassenger](#), [airsched::Passenger\\_T::\\_type](#), and [airsched::Passenger\\_T::ADULT](#).

#### 23.58.4 Member Data Documentation

##### 23.58.4.1 SearchString\_T& airsched::store\_adult\_passenger\_type::\_searchString

Definition at line 160 of file [BookingRequestParser.cpp](#).

Referenced by [operator>\(\)](#).

The documentation for this struct was generated from the following file:

- [airsched/batches/BookingRequestParser.cpp](#)

## 23.59 airsched::store\_airline\_code Struct Reference

### Public Member Functions

- [store\\_airline\\_code](#) ([SearchString\\_T](#) &ioSearchString)
- void [operator\(\)](#) ([iterator\\_t](#) iStr, [iterator\\_t](#) iStrEnd) const

### Public Attributes

- [SearchString\\_T](#) & [\\_searchString](#)

#### 23.59.1 Detailed Description

Store the parsed airline code.

Definition at line 92 of file [BookingRequestParser.cpp](#).

#### 23.59.2 Constructor & Destructor Documentation

##### 23.59.2.1 airsched::store\_airline\_code::store\_airline\_code ( [SearchString\\_T](#) & *ioSearchString* ) [inline]

Constructor.

Definition at line 94 of file [BookingRequestParser.cpp](#).

#### 23.59.3 Member Function Documentation

##### 23.59.3.1 void airsched::store\_airline\_code::operator() ( [iterator\\_t](#) *iStr*, [iterator\\_t](#) *iStrEnd* ) const [inline]

Parse the airline code.

Definition at line 98 of file [BookingRequestParser.cpp](#).

References [airsched::SearchString\\_T::\\_airlineList](#), [airsched::Airline\\_T::\\_code](#), [\\_searchString](#), and [airsched::SearchString\\_T::\\_tmpAirline](#).

#### 23.59.4 Member Data Documentation

##### 23.59.4.1 SearchString\_T& airsched::store\_airline\_code::\_searchString

Definition at line 107 of file [BookingRequestParser.cpp](#).



Referenced by [operator\(\)\(\)](#).

The documentation for this struct was generated from the following file:

- [airsched/batches/BookingRequestParser.cpp](#)

## 23.60 airsched::store\_airline\_name Struct Reference

### Public Member Functions

- [store\\_airline\\_name](#) ([SearchString\\_T](#) &ioSearchString)
- void [operator\(\)](#) ([iterator\\_t](#) iStr, [iterator\\_t](#) iStrEnd) const

### Public Attributes

- [SearchString\\_T](#) &\_searchString

#### 23.60.1 Detailed Description

Store the parsed airline name.

Definition at line 111 of file [BookingRequestParser.cpp](#).

#### 23.60.2 Constructor & Destructor Documentation

23.60.2.1 `airsched::store_airline_name::store_airline_name ( SearchString\_T &ioSearchString )` `[inline]`

Constructor.

Definition at line 113 of file [BookingRequestParser.cpp](#).

#### 23.60.3 Member Function Documentation

23.60.3.1 `void airsched::store_airline_name::operator() ( iterator\_t iStr, iterator\_t iStrEnd ) const` `[inline]`

Parse the airline name.

Definition at line 117 of file [BookingRequestParser.cpp](#).

References [airsched::SearchString\\_T::\\_airlineList](#), [airsched::Airline\\_T::\\_name](#), [\\_searchString](#), and [airsched::SearchString\\_T::\\_tmpAirline](#).

#### 23.60.4 Member Data Documentation

23.60.4.1 `SearchString\_T &airsched::store_airline_name::_searchString`

Definition at line 126 of file [BookingRequestParser.cpp](#).

Referenced by [operator\(\)\(\)](#).

The documentation for this struct was generated from the following file:

- [airsched/batches/BookingRequestParser.cpp](#)

## 23.61 airsched::store\_airline\_sign Struct Reference

### Public Member Functions

- [store\\_airline\\_sign](#) ([SearchString\\_T](#) &ioSearchString)
- void [operator\(\)](#) (bool iAirlineSign) const

### Public Attributes

- [SearchString\\_T](#) & [\\_searchString](#)

#### 23.61.1 Detailed Description

Store the airline sign (+/-).

Definition at line 77 of file [BookingRequestParser.cpp](#).

#### 23.61.2 Constructor & Destructor Documentation

23.61.2.1 `airsched::store_airline_sign::store_airline_sign ( SearchString\_T & ioSearchString )` `[inline]`

Constructor.

Definition at line 79 of file [BookingRequestParser.cpp](#).

#### 23.61.3 Member Function Documentation

23.61.3.1 `void airsched::store_airline_sign::operator() ( bool iAirlineSign ) const` `[inline]`

Parse the airline sign.

Definition at line 83 of file [BookingRequestParser.cpp](#).

References [airsched::Airline\\_T::\\_isPreferred](#), [\\_searchString](#), and [airsched::SearchString\\_T::\\_tmpAirline](#).

#### 23.61.4 Member Data Documentation

23.61.4.1 `SearchString\_T &airsched::store_airline_sign::_searchString`

Definition at line 88 of file [BookingRequestParser.cpp](#).

Referenced by [operator\(\)\(\)](#).

The documentation for this struct was generated from the following file:

- [airsched/batches/BookingRequestParser.cpp](#)

## 23.62 airsched::store\_child\_passenger\_type Struct Reference

### Public Member Functions

- [store\\_child\\_passenger\\_type](#) ([SearchString\\_T](#) &ioSearchString)
- void [operator\(\)](#) ([iterator\\_t](#) iStr, [iterator\\_t](#) iStrEnd) const

### Public Attributes

- [SearchString\\_T](#) & [\\_searchString](#)

### 23.62.1 Detailed Description

Store the parsed passenger type.

Definition at line 164 of file [BookingRequestParser.cpp](#).

### 23.62.2 Constructor & Destructor Documentation

23.62.2.1 `airsched::store_child_passenger_type::store_child_passenger_type ( SearchString_T & ioSearchString )`  
[inline]

Constructor.

Definition at line 166 of file [BookingRequestParser.cpp](#).

### 23.62.3 Member Function Documentation

23.62.3.1 `void airsched::store_child_passenger_type::operator() ( iterator_t iStr, iterator_t iStrEnd ) const` [inline]

Parse child passenger type.

Definition at line 170 of file [BookingRequestParser.cpp](#).

References [airsched::SearchString\\_T::\\_passengerList](#), [\\_searchString](#), [airsched::SearchString\\_T::\\_tmpPassenger](#), [airsched::Passenger\\_T::\\_type](#), and [airsched::Passenger\\_T::CHILD](#).

### 23.62.4 Member Data Documentation

23.62.4.1 `SearchString_T& airsched::store_child_passenger_type::_searchString`

Definition at line 179 of file [BookingRequestParser.cpp](#).

Referenced by [operator\(\)\(\)](#).

The documentation for this struct was generated from the following file:

- [airsched/batches/BookingRequestParser.cpp](#)

## 23.63 airsched::store\_date Struct Reference

### Public Member Functions

- `store_date (SearchString_T &ioSearchString)`
- `void operator() (iterator_t iStr, iterator_t iStrEnd) const`

### Public Attributes

- `SearchString_T & _searchString`

### 23.63.1 Detailed Description

Store a parsed date.

Definition at line 58 of file [BookingRequestParser.cpp](#).

### 23.63.2 Constructor & Destructor Documentation

23.63.2.1 airsched::store\_date::store\_date ( [SearchString\\_T](#) & *ioSearchString* ) [\[inline\]](#)

Constructor.

Definition at line 60 of file [BookingRequestParser.cpp](#).

### 23.63.3 Member Function Documentation

23.63.3.1 void airsched::store\_date::operator() ( [iterator\\_t](#) *iStr*, [iterator\\_t](#) *iStrEnd* ) const [\[inline\]](#)

Parse the date.

Definition at line 64 of file [BookingRequestParser.cpp](#).

References [airsched::Date\\_T::\\_date](#), [airsched::SearchString\\_T::\\_dateList](#), [\\_searchString](#), [airsched::SearchString\\_T::\\_tmpDate](#), and [airsched::Date\\_T::getDate\(\)](#).

### 23.63.4 Member Data Documentation

23.63.4.1 [SearchString\\_T](#)& airsched::store\_date::\_searchString

Definition at line 73 of file [BookingRequestParser.cpp](#).

Referenced by [operator\(\)\(\)](#).

The documentation for this struct was generated from the following file:

- [airsched/batches/BookingRequestParser.cpp](#)

## 23.64 airsched::store\_passenger\_number Struct Reference

### Public Member Functions

- [store\\_passenger\\_number](#) ([SearchString\\_T](#) &*ioSearchString*)
- void [operator\(\)](#) (unsigned int *iNumber*) const

### Public Attributes

- [SearchString\\_T](#) & [\\_searchString](#)

### 23.64.1 Detailed Description

Store the parsed number of passengers.

Definition at line 130 of file [BookingRequestParser.cpp](#).

### 23.64.2 Constructor & Destructor Documentation

23.64.2.1 airsched::store\_passenger\_number::store\_passenger\_number ( [SearchString\\_T](#) & *ioSearchString* ) [\[inline\]](#)

Constructor.

Definition at line 132 of file [BookingRequestParser.cpp](#).

### 23.64.3 Member Function Documentation

23.64.3.1 void airsched::store\_passenger\_number::operator() ( unsigned int *iNumber* ) const [inline]

Parse number of passengers.

Definition at line 136 of file [BookingRequestParser.cpp](#).

References [airsched::Passenger\\_T::\\_number](#), [\\_searchString](#), and [airsched::SearchString\\_T::\\_tmpPassenger](#).

### 23.64.4 Member Data Documentation

23.64.4.1 SearchString\_T& airsched::store\_passenger\_number::\_searchString

Definition at line 141 of file [BookingRequestParser.cpp](#).

Referenced by [operator\(\)\(\)](#).

The documentation for this struct was generated from the following file:

- [airsched/batches/BookingRequestParser.cpp](#)

## 23.65 airsched::store\_pet\_passenger\_type Struct Reference

### Public Member Functions

- [store\\_pet\\_passenger\\_type](#) ([SearchString\\_T](#) &ioSearchString)
- void [operator\(\)](#) ([iterator\\_t](#) iStr, [iterator\\_t](#) iStrEnd) const

### Public Attributes

- [SearchString\\_T](#) & [\\_searchString](#)

### 23.65.1 Detailed Description

Store the parsed passenger type.

Definition at line 183 of file [BookingRequestParser.cpp](#).

### 23.65.2 Constructor & Destructor Documentation

23.65.2.1 airsched::store\_pet\_passenger\_type::store\_pet\_passenger\_type ( [SearchString\\_T](#) & *ioSearchString* ) [inline]

Constructor.

Definition at line 185 of file [BookingRequestParser.cpp](#).

### 23.65.3 Member Function Documentation

23.65.3.1 void airsched::store\_pet\_passenger\_type::operator() ( [iterator\\_t](#) *iStr*, [iterator\\_t](#) *iStrEnd* ) const [inline]

Parse pet passenger type.

Definition at line 189 of file [BookingRequestParser.cpp](#).

References [airsched::SearchString\\_T::\\_passengerList](#), [\\_searchString](#), [airsched::SearchString\\_T::\\_tmpPassenger](#), [airsched::Passenger\\_T::\\_type](#), and [airsched::Passenger\\_T::PET](#).

#### 23.65.4 Member Data Documentation

##### 23.65.4.1 SearchString\_T& airsched::store\_pet\_passenger\_type::\_searchString

Definition at line 198 of file [BookingRequestParser.cpp](#).

Referenced by [operator\(\)\(\)](#).

The documentation for this struct was generated from the following file:

- [airsched/batches/BookingRequestParser.cpp](#)

## 23.66 airsched::store\_place\_element Struct Reference

### Public Member Functions

- [store\\_place\\_element](#) ([SearchString\\_T](#) &ioSearchString)
- void [operator\(\)](#) ([iterator\\_t](#) iStr, [iterator\\_t](#) iStrEnd) const

### Public Attributes

- [SearchString\\_T](#) & [\\_searchString](#)

#### 23.66.1 Detailed Description

Store the parsed place element.

Definition at line 37 of file [BookingRequestParser.cpp](#).

#### 23.66.2 Constructor & Destructor Documentation

##### 23.66.2.1 airsched::store\_place\_element::store\_place\_element ( [SearchString\\_T](#) & *ioSearchString* ) [\[inline\]](#)

Constructor.

Definition at line 39 of file [BookingRequestParser.cpp](#).

#### 23.66.3 Member Function Documentation

##### 23.66.3.1 void airsched::store\_place\_element::operator() ( [iterator\\_t](#) *iStr*, [iterator\\_t](#) *iStrEnd* ) const [\[inline\]](#)

Parse the place.

Definition at line 43 of file [BookingRequestParser.cpp](#).

References [airsched::Place\\_T::\\_name](#), [\\_searchString](#), and [airsched::SearchString\\_T::\\_tmpPlace](#).

#### 23.66.4 Member Data Documentation

##### 23.66.4.1 SearchString\_T& airsched::store\_place\_element::\_searchString

Definition at line 54 of file [BookingRequestParser.cpp](#).

Referenced by [operator\(\)\(\)](#).

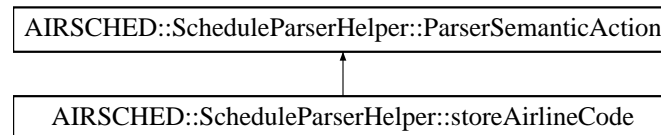
The documentation for this struct was generated from the following file:

- [airsched/batches/BookingRequestParser.cpp](#)

## 23.67 AIRSCHED::ScheduleParserHelper::storeAirlineCode Struct Reference

```
#include <airsched/command/ScheduleParserHelper.hpp>
```

Inheritance diagram for AIRSCHED::ScheduleParserHelper::storeAirlineCode:



### Public Member Functions

- [storeAirlineCode](#) ([FlightPeriodStruct](#) &)
- void [operator\(\)](#) ([iterator\\_t](#) iStr, [iterator\\_t](#) iStrEnd) const

### Public Attributes

- [FlightPeriodStruct](#) & [\\_flightPeriod](#)

#### 23.67.1 Detailed Description

Store the parsed airline code.

Definition at line 37 of file [ScheduleParserHelper.hpp](#).

#### 23.67.2 Constructor & Destructor Documentation

23.67.2.1 AIRSCHED::ScheduleParserHelper::storeAirlineCode::storeAirlineCode ( [FlightPeriodStruct](#) & *ioFlightPeriod* )

Actor Constructor.

Definition at line 32 of file [ScheduleParserHelper.cpp](#).

#### 23.67.3 Member Function Documentation

23.67.3.1 void AIRSCHED::ScheduleParserHelper::storeAirlineCode::operator() ( [iterator\\_t](#) iStr, [iterator\\_t](#) iStrEnd ) const

Actor Function (functor).

Definition at line 37 of file [ScheduleParserHelper.cpp](#).

References [AIRSCHED::FlightPeriodStruct::\\_airlineCode](#), [AIRSCHED::ScheduleParserHelper::ParserSemanticAction::\\_flightPeriod](#), and [AIRSCHED::FlightPeriodStruct::\\_legList](#).

#### 23.67.4 Member Data Documentation

23.67.4.1 [FlightPeriodStruct](#)& AIRSCHED::ScheduleParserHelper::ParserSemanticAction::\_flightPeriod [inherited]

Actor Context.

Definition at line 33 of file [ScheduleParserHelper.hpp](#).

Referenced by [operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFlightNumber::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDateRangeStart::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDateRangeEnd::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDow::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeAirlineCode::operator\(\)](#), and [AIRSCHED::ScheduleParserHelper::storeAirlineCode::storeAirlineCode](#).

[::storeLegBoardingPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegOffPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeBoardingTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeOffTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeElapsedTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegCabinCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeCapacity::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentSpecificity::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentBoardingPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentOffPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentCabinCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeClasses::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFamilyCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFClasses::operator\(\)](#), and [AIRSCHED::ScheduleParserHelper::doEndFlight::operator\(\)](#).

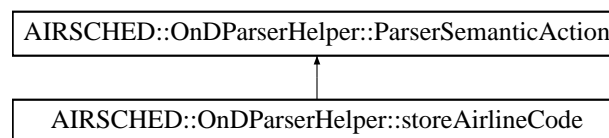
The documentation for this struct was generated from the following files:

- [airsched/command/ScheduleParserHelper.hpp](#)
- [airsched/command/ScheduleParserHelper.cpp](#)

## 23.68 AIRSCHED::OnDParserHelper::storeAirlineCode Struct Reference

```
#include <airsched/command/OnDParserHelper.hpp>
```

Inheritance diagram for AIRSCHED::OnDParserHelper::storeAirlineCode:



### Public Member Functions

- [storeAirlineCode](#) ([OnDPeriodStruct](#) &)
- void [operator\(\)](#) ([iterator\\_t](#) iStr, [iterator\\_t](#) iStrEnd) const

### Public Attributes

- [OnDPeriodStruct](#) & [\\_onDPeriod](#)

#### 23.68.1 Detailed Description

Store the parsed airline code.

Definition at line 90 of file [OnDParserHelper.hpp](#).

#### 23.68.2 Constructor & Destructor Documentation

##### 23.68.2.1 AIRSCHED::OnDParserHelper::storeAirlineCode::storeAirlineCode ( [OnDPeriodStruct](#) & *ioOnDPeriod* )

Actor Constructor.

Definition at line 139 of file [OnDParserHelper.cpp](#).

#### 23.68.3 Member Function Documentation

##### 23.68.3.1 void AIRSCHED::OnDParserHelper::storeAirlineCode::operator() ( [iterator\\_t](#) iStr, [iterator\\_t](#) iStrEnd ) const

Actor Function (functor).



Definition at line 144 of file [OnDParserHelper.cpp](#).

References [AIRSCHED::OnDPeriodStruct::\\_airlineCode](#), [AIRSCHED::OnDPeriodStruct::\\_airlineCodeList](#), [AIRSCHED::OnDPeriodStruct::\\_nbOfAirlines](#), and [AIRSCHED::OnDParserHelper::ParserSemanticAction::\\_onDPeriod](#).

## 23.68.4 Member Data Documentation

### 23.68.4.1 OnDPeriodStruct& AIRSCHED::OnDParserHelper::ParserSemanticAction::\_onDPeriod [inherited]

Actor Context.

Definition at line 38 of file [OnDParserHelper.hpp](#).

Referenced by [AIRSCHED::OnDParserHelper::storeOrigin::operator\(\)](#), [AIRSCHED::OnDParserHelper::storeDestination::operator\(\)](#), [AIRSCHED::OnDParserHelper::storeDateRangeStart::operator\(\)](#), [AIRSCHED::OnDParserHelper::storeDateRangeEnd::operator\(\)](#), [AIRSCHED::OnDParserHelper::storeStartRangeTime::operator\(\)](#), [AIRSCHED::OnDParserHelper::storeEndRangeTime::operator\(\)](#), [operator\(\)](#), [AIRSCHED::OnDParserHelper::storeClassCode::operator\(\)](#), and [AIRSCHED::OnDParserHelper::doEndOnD::operator\(\)](#).

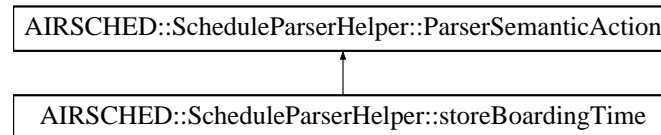
The documentation for this struct was generated from the following files:

- [airsched/command/OnDParserHelper.hpp](#)
- [airsched/command/OnDParserHelper.cpp](#)

## 23.69 AIRSCHED::ScheduleParserHelper::storeBoardingTime Struct Reference

```
#include <airsched/command/ScheduleParserHelper.hpp>
```

Inheritance diagram for AIRSCHED::ScheduleParserHelper::storeBoardingTime:



### Public Member Functions

- [storeBoardingTime](#) ([FlightPeriodStruct](#) &)
- void [operator\(\)](#) ([iterator\\_t](#) iStr, [iterator\\_t](#) iStrEnd) const

### Public Attributes

- [FlightPeriodStruct](#) & [\\_flightPeriod](#)

### 23.69.1 Detailed Description

Store the boarding time.

Definition at line 93 of file [ScheduleParserHelper.hpp](#).

### 23.69.2 Constructor & Destructor Documentation

#### 23.69.2.1 AIRSCHED::ScheduleParserHelper::storeBoardingTime::storeBoardingTime ( [FlightPeriodStruct](#) & *ioFlightPeriod* )

Actor Constructor.

Definition at line 155 of file [ScheduleParserHelper.cpp](#).

### 23.69.3 Member Function Documentation

23.69.3.1 void AIRSCHED::ScheduleParserHelper::storeBoardingTime::operator() ( iterator\_t iStr, iterator\_t iStrEnd ) const

Actor Function (functor).

Definition at line 160 of file [ScheduleParserHelper.cpp](#).

References [AIRSCHED::LegStruct::\\_boardingTime](#), [AIRSCHED::FlightPeriodStruct::\\_dateOffset](#), [AIRSCHED::ScheduleParserHelper::ParserSemanticAction::\\_flightPeriod](#), [AIRSCHED::FlightPeriodStruct::\\_itLeg](#), [AIRSCHED::FlightPeriodStruct::\\_itSeconds](#), and [AIRSCHED::FlightPeriodStruct::getTime\(\)](#).

### 23.69.4 Member Data Documentation

23.69.4.1 FlightPeriodStruct& AIRSCHED::ScheduleParserHelper::ParserSemanticAction::\_flightPeriod [inherited]

Actor Context.

Definition at line 33 of file [ScheduleParserHelper.hpp](#).

Referenced by [AIRSCHED::ScheduleParserHelper::storeAirlineCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFlightNumber::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDateRangeStart::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDateRangeEnd::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDow::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegBoardingPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegOffPoint::operator\(\)](#), [operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeOffTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeElapsedTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegCabinCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeCapacity::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentSpecificity::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentBoardingPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentOffPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentCabinCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeClasses::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFamilyCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFClasses::operator\(\)](#), and [AIRSCHED::ScheduleParserHelper::doEndFlight::operator\(\)](#).

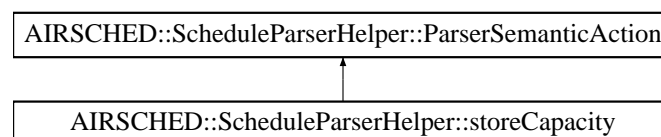
The documentation for this struct was generated from the following files:

- [airsched/command/ScheduleParserHelper.hpp](#)
- [airsched/command/ScheduleParserHelper.cpp](#)

## 23.70 AIRSCHED::ScheduleParserHelper::storeCapacity Struct Reference

```
#include <airsched/command/ScheduleParserHelper.hpp>
```

Inheritance diagram for AIRSCHED::ScheduleParserHelper::storeCapacity:



### Public Member Functions

- [storeCapacity](#) ([FlightPeriodStruct](#) &)
- void [operator\(\)](#) (double iReal) const

## Public Attributes

- [FlightPeriodStruct](#) & [\\_flightPeriod](#)

## 23.70.1 Detailed Description

Store the parsed capacity.

Definition at line 125 of file [ScheduleParserHelper.hpp](#).

## 23.70.2 Constructor &amp; Destructor Documentation

23.70.2.1 AIRSCHED::ScheduleParserHelper::storeCapacity::storeCapacity ( [FlightPeriodStruct](#) & *ioFlightPeriod* )

Actor Constructor.

Definition at line 227 of file [ScheduleParserHelper.cpp](#).

## 23.70.3 Member Function Documentation

23.70.3.1 void AIRSCHED::ScheduleParserHelper::storeCapacity::operator() ( double *iReal* ) const

Actor Function (functor).

Definition at line 232 of file [ScheduleParserHelper.cpp](#).

References [AIRSCHED::LegStruct::\\_cabinList](#), [AIRSCHED::LegCabinStruct::\\_capacity](#), [AIRSCHED::ScheduleParserHelper::ParserSemanticAction::\\_flightPeriod](#), [AIRSCHED::FlightPeriodStruct::\\_itLeg](#), and [AIRSCHED::FlightPeriodStruct::\\_itLegCabin](#).

## 23.70.4 Member Data Documentation

23.70.4.1 [FlightPeriodStruct](#)& AIRSCHED::ScheduleParserHelper::ParserSemanticAction::\_flightPeriod [inherited]

Actor Context.

Definition at line 33 of file [ScheduleParserHelper.hpp](#).

Referenced by [AIRSCHED::ScheduleParserHelper::storeAirlineCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFlightNumber::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDateRangeStart::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDateRangeEnd::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDow::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegBoardingPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegOffPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeBoardingTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeOffTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeElapsedTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegCabinCode::operator\(\)](#), [operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentSpecificity::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentBoardingPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentOffPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentCabinCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeClasses::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFamilyCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFClasses::operator\(\)](#), and [AIRSCHED::ScheduleParserHelper::doEndFlight::operator\(\)](#).

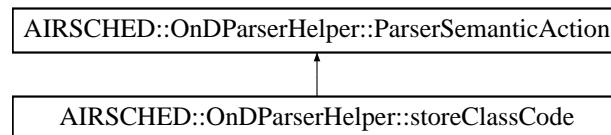
The documentation for this struct was generated from the following files:

- [airsched/command/ScheduleParserHelper.hpp](#)
- [airsched/command/ScheduleParserHelper.cpp](#)

## 23.71 AIRSCHED::OnDParserHelper::storeClassCode Struct Reference

```
#include <airsched/command/OnDParserHelper.hpp>
```

Inheritance diagram for AIRSCHED::OnDParserHelper::storeClassCode:



### Public Member Functions

- [storeClassCode](#) ([OnDPeriodStruct](#) &)
- void [operator\(\)](#) (char iChar) const

### Public Attributes

- [OnDPeriodStruct](#) & [\\_onDPeriod](#)

#### 23.71.1 Detailed Description

Store the parsed class code.

Definition at line 98 of file [OnDParserHelper.hpp](#).

#### 23.71.2 Constructor & Destructor Documentation

23.71.2.1 AIRSCHED::OnDParserHelper::storeClassCode::storeClassCode ( [OnDPeriodStruct](#) & *ioOnDPeriod* )

Actor Constructor.

Definition at line 172 of file [OnDParserHelper.cpp](#).

#### 23.71.3 Member Function Documentation

23.71.3.1 void AIRSCHED::OnDParserHelper::storeClassCode::operator() ( char *iChar* ) const

Actor Function (functor).

Definition at line 177 of file [OnDParserHelper.cpp](#).

References [AIRSCHED::OnDPeriodStruct::\\_classCode](#), [AIRSCHED::OnDPeriodStruct::\\_classCodeList](#), and [AIRSCHED::OnDParserHelper::ParserSemanticAction::\\_onDPeriod](#).

#### 23.71.4 Member Data Documentation

23.71.4.1 [OnDPeriodStruct&](#) AIRSCHED::OnDParserHelper::ParserSemanticAction::\_onDPeriod [inherited]

Actor Context.

Definition at line 38 of file [OnDParserHelper.hpp](#).

Referenced by [AIRSCHED::OnDParserHelper::storeOrigin::operator\(\)](#)(), [AIRSCHED::OnDParserHelper::storeDestination::operator\(\)](#)(), [AIRSCHED::OnDParserHelper::storeDateRangeStart::operator\(\)](#)(), [AIRSCHED::OnDParserHelper::storeDateRangeEnd::operator\(\)](#)(), [AIRSCHED::OnDParserHelper::storeStartRangeTime-](#)

[::operator\(\)](#), [AIRSCHED::OnDParserHelper::storeEndRangeTime::operator\(\)](#), [AIRSCHED::OnDParserHelper::storeAirlineCode::operator\(\)](#), [operator\(\)](#), and [AIRSCHED::OnDParserHelper::doEndOnD::operator\(\)](#).

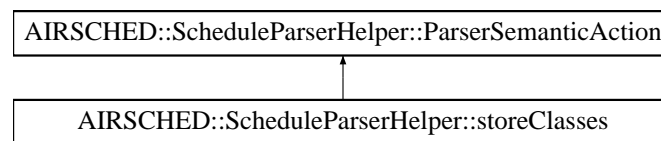
The documentation for this struct was generated from the following files:

- [airsched/command/OnDParserHelper.hpp](#)
- [airsched/command/OnDParserHelper.cpp](#)

## 23.72 AIRSCHED::ScheduleParserHelper::storeClasses Struct Reference

```
#include <airsched/command/ScheduleParserHelper.hpp>
```

Inheritance diagram for AIRSCHED::ScheduleParserHelper::storeClasses:



### Public Member Functions

- [storeClasses](#) ([FlightPeriodStruct](#) &)
- [void operator\(\)](#) ([iterator\\_t](#) iStr, [iterator\\_t](#) iStrEnd) const

### Public Attributes

- [FlightPeriodStruct](#) & [\\_flightPeriod](#)

### 23.72.1 Detailed Description

Store the parsed list of class codes.

Definition at line 168 of file [ScheduleParserHelper.hpp](#).

### 23.72.2 Constructor & Destructor Documentation

#### 23.72.2.1 AIRSCHED::ScheduleParserHelper::storeClasses::storeClasses ( [FlightPeriodStruct](#) & *ioFlightPeriod* )

Actor Constructor.

Definition at line 309 of file [ScheduleParserHelper.cpp](#).

### 23.72.3 Member Function Documentation

#### 23.72.3.1 void AIRSCHED::ScheduleParserHelper::storeClasses::operator() ( [iterator\\_t](#) iStr, [iterator\\_t](#) iStrEnd ) const

Actor Function (functor).

Definition at line 314 of file [ScheduleParserHelper.cpp](#).

References [AIRSCHED::FlightPeriodStruct::\\_areSegmentDefinitionsSpecific](#), [AIRSCHED::SegmentCabinStruct::\\_classes](#), [AIRSCHED::ScheduleParserHelper::ParserSemanticAction::\\_flightPeriod](#), [AIRSCHED::FlightPeriodStruct::\\_itSegment](#), [AIRSCHED::FlightPeriodStruct::\\_itSegmentCabin](#), and [AIRSCHED::FlightPeriodStruct::addSegmentCabin\(\)](#).

## 23.72.4 Member Data Documentation

## 23.72.4.1 FlightPeriodStruct&amp; AIRSCHED::ScheduleParserHelper::ParserSemanticAction::\_flightPeriod [inherited]

Actor Context.

Definition at line 33 of file [ScheduleParserHelper.hpp](#).

Referenced by [AIRSCHED::ScheduleParserHelper::storeAirlineCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFlightNumber::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDateRangeStart::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDateRangeEnd::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDow::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegBoardingPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegOffPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeBoardingTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeOffTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeElapsedTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegCabinCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeCapacity::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentSpecificity::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentBoardingPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentOffPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentCabinCode::operator\(\)](#), [operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFamilyCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFClasses::operator\(\)](#), and [AIRSCHED::ScheduleParserHelper::doEndFlight::operator\(\)](#).

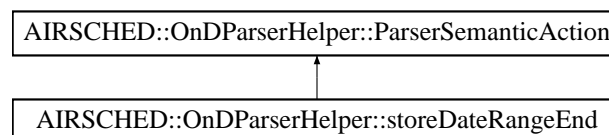
The documentation for this struct was generated from the following files:

- [airsched/command/ScheduleParserHelper.hpp](#)
- [airsched/command/ScheduleParserHelper.cpp](#)

## 23.73 AIRSCHED::OnDParserHelper::storeDateRangeEnd Struct Reference

```
#include <airsched/command/OnDParserHelper.hpp>
```

Inheritance diagram for AIRSCHED::OnDParserHelper::storeDateRangeEnd:



## Public Member Functions

- [storeDateRangeEnd](#) ([OnDPeriodStruct](#) &)
- void [operator\(\)](#) ([iterator\\_t](#) iStr, [iterator\\_t](#) iStrEnd) const

## Public Attributes

- [OnDPeriodStruct](#) & [\\_onDPeriod](#)

## 23.73.1 Detailed Description

Store the end of the date range.

Definition at line 66 of file [OnDParserHelper.hpp](#).

## 23.73.2 Constructor &amp; Destructor Documentation

## 23.73.2.1 AIRSCHED::OnDParserHelper::storeDateRangeEnd::storeDateRangeEnd ( OnDPeriodStruct &amp; ioOnDPeriod )

Actor Constructor.

Definition at line 83 of file [OnDParserHelper.cpp](#).

## 23.73.3 Member Function Documentation

## 23.73.3.1 void AIRSCHED::OnDParserHelper::storeDateRangeEnd::operator() ( iterator\_t iStr, iterator\_t iStrEnd ) const

Actor Function (functor).

Definition at line 88 of file [OnDParserHelper.cpp](#).

References [AIRSCHED::OnDPeriodStruct::\\_datePeriod](#), [AIRSCHED::OnDPeriodStruct::\\_dateRangeEnd](#), [AIRSCHED::OnDPeriodStruct::\\_dateRangeStart](#), [AIRSCHED::OnDPeriodStruct::\\_itSeconds](#), [AIRSCHED::OnDParserHelper::ParserSemanticAction::\\_onDPeriod](#), and [AIRSCHED::OnDPeriodStruct::getDate\(\)](#).

## 23.73.4 Member Data Documentation

## 23.73.4.1 OnDPeriodStruct&amp; AIRSCHED::OnDParserHelper::ParserSemanticAction::\_onDPeriod [inherited]

Actor Context.

Definition at line 38 of file [OnDParserHelper.hpp](#).

Referenced by [AIRSCHED::OnDParserHelper::storeOrigin::operator\(\)](#), [AIRSCHED::OnDParserHelper::storeDestination::operator\(\)](#), [AIRSCHED::OnDParserHelper::storeDateRangeStart::operator\(\)](#), [operator\(\)](#), [AIRSCHED::OnDParserHelper::storeStartRangeTime::operator\(\)](#), [AIRSCHED::OnDParserHelper::storeEndRangeTime::operator\(\)](#), [AIRSCHED::OnDParserHelper::storeAirlineCode::operator\(\)](#), [AIRSCHED::OnDParserHelper::storeClassCode::operator\(\)](#), and [AIRSCHED::OnDParserHelper::doEndOnD::operator\(\)](#).

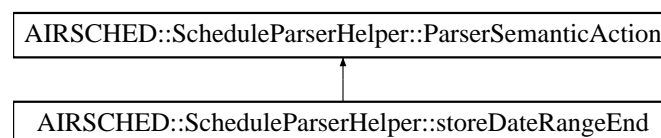
The documentation for this struct was generated from the following files:

- [airsched/command/OnDParserHelper.hpp](#)
- [airsched/command/OnDParserHelper.cpp](#)

## 23.74 AIRSCHED::ScheduleParserHelper::storeDateRangeEnd Struct Reference

```
#include <airsched/command/ScheduleParserHelper.hpp>
```

Inheritance diagram for AIRSCHED::ScheduleParserHelper::storeDateRangeEnd:



## Public Member Functions

- [storeDateRangeEnd](#) (FlightPeriodStruct &)
- void [operator\(\)](#) (iterator\_t iStr, iterator\_t iStrEnd) const

## Public Attributes

- [FlightPeriodStruct](#) & [\\_flightPeriod](#)

## 23.74.1 Detailed Description

Store the end of the date range.

Definition at line 61 of file [ScheduleParserHelper.hpp](#).

## 23.74.2 Constructor &amp; Destructor Documentation

23.74.2.1 AIRSCHED::ScheduleParserHelper::storeDateRangeEnd::storeDateRangeEnd ( [FlightPeriodStruct](#) & [ioFlightPeriod](#) )

Actor Constructor.

Definition at line 75 of file [ScheduleParserHelper.cpp](#).

## 23.74.3 Member Function Documentation

23.74.3.1 void AIRSCHED::ScheduleParserHelper::storeDateRangeEnd::operator() ( [iterator\\_t iStr](#), [iterator\\_t iStrEnd](#) ) const

Actor Function (functor).

Definition at line 80 of file [ScheduleParserHelper.cpp](#).

References [AIRSCHED::FlightPeriodStruct::\\_dateRange](#), [AIRSCHED::FlightPeriodStruct::\\_dateRangeEnd](#), [AIRSCHED::FlightPeriodStruct::\\_dateRangeStart](#), [AIRSCHED::ScheduleParserHelper::ParserSemanticAction::\\_flightPeriod](#), [AIRSCHED::FlightPeriodStruct::\\_itSeconds](#), and [AIRSCHED::FlightPeriodStruct::getDate\(\)](#).

## 23.74.4 Member Data Documentation

23.74.4.1 [FlightPeriodStruct](#)& AIRSCHED::ScheduleParserHelper::ParserSemanticAction::\_flightPeriod [inherited]

Actor Context.

Definition at line 33 of file [ScheduleParserHelper.hpp](#).

Referenced by [AIRSCHED::ScheduleParserHelper::storeAirlineCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFlightNumber::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDateRangeStart::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDow::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegBoardingPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegOffPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeBoardingTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeOffTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeElapsedTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegCabinCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeCapacity::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentSpecificity::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentBoardingPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentOffPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentCabinCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeClasses::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFamilyCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFClasses::operator\(\)](#), and [AIRSCHED::ScheduleParserHelper::doEndFlight::operator\(\)](#).

The documentation for this struct was generated from the following files:

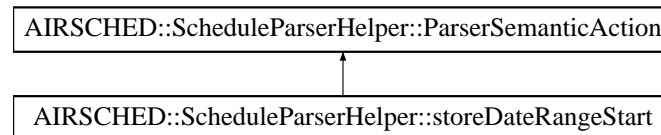
- [airsched/command/ScheduleParserHelper.hpp](#)
- [airsched/command/ScheduleParserHelper.cpp](#)



## 23.75 AIRSCHED::ScheduleParserHelper::storeDateRangeStart Struct Reference

```
#include <airsched/command/ScheduleParserHelper.hpp>
```

Inheritance diagram for AIRSCHED::ScheduleParserHelper::storeDateRangeStart:



## Public Member Functions

- [storeDateRangeStart](#) ([FlightPeriodStruct](#) &)
- void [operator\(\)](#) ([iterator\\_t](#) iStr, [iterator\\_t](#) iStrEnd) const

## Public Attributes

- [FlightPeriodStruct](#) & [\\_flightPeriod](#)

## 23.75.1 Detailed Description

Store the start of the date range.

Definition at line 53 of file [ScheduleParserHelper.hpp](#).

## 23.75.2 Constructor &amp; Destructor Documentation

23.75.2.1 AIRSCHED::ScheduleParserHelper::storeDateRangeStart::storeDateRangeStart ( [FlightPeriodStruct](#) & [ioFlightPeriod](#) )

Actor Constructor.

Definition at line 60 of file [ScheduleParserHelper.cpp](#).

## 23.75.3 Member Function Documentation

23.75.3.1 void AIRSCHED::ScheduleParserHelper::storeDateRangeStart::operator() ( [iterator\\_t](#) iStr, [iterator\\_t](#) iStrEnd ) const

Actor Function (functor).

Definition at line 65 of file [ScheduleParserHelper.cpp](#).

References [AIRSCHED::FlightPeriodStruct::\\_dateRangeStart](#), [AIRSCHED::ScheduleParserHelper::ParserSemanticAction::\\_flightPeriod](#), [AIRSCHED::FlightPeriodStruct::\\_itSeconds](#), and [AIRSCHED::FlightPeriodStruct::getDate\(\)](#).

## 23.75.4 Member Data Documentation

23.75.4.1 [FlightPeriodStruct](#)& AIRSCHED::ScheduleParserHelper::ParserSemanticAction::\_flightPeriod [inherited]

Actor Context.

Definition at line 33 of file [ScheduleParserHelper.hpp](#).

Referenced by [AIRSCHED::ScheduleParserHelper::storeAirlineCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFlightNumber::operator\(\)](#), [operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDateRangeEnd::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDow::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegBoardingPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegOffPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeBoardingTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeOffTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeElapsedTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegCabinCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeCapacity::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentSpecificity::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentBoardingPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentOffPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentCabinCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeClasses::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFamilyCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFClasses::operator\(\)](#), and [AIRSCHED::ScheduleParserHelper::doEndFlight::operator\(\)](#).

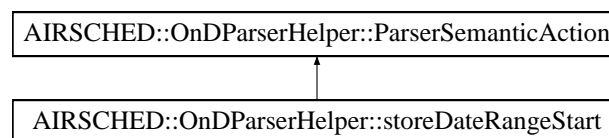
The documentation for this struct was generated from the following files:

- [airsched/command/ScheduleParserHelper.hpp](#)
- [airsched/command/ScheduleParserHelper.cpp](#)

## 23.76 AIRSCHED::OnDParserHelper::storeDateRangeStart Struct Reference

```
#include <airsched/command/OnDParserHelper.hpp>
```

Inheritance diagram for AIRSCHED::OnDParserHelper::storeDateRangeStart:



### Public Member Functions

- [storeDateRangeStart](#) ([OnDPeriodStruct](#) &)
- [void operator\(\)](#) ([iterator\\_t](#) iStr, [iterator\\_t](#) iStrEnd) const

### Public Attributes

- [OnDPeriodStruct](#) & [\\_onDPeriod](#)

#### 23.76.1 Detailed Description

Store the start of the date range.

Definition at line 58 of file [OnDParserHelper.hpp](#).

#### 23.76.2 Constructor & Destructor Documentation

##### 23.76.2.1 AIRSCHED::OnDParserHelper::storeDateRangeStart::storeDateRangeStart ( [OnDPeriodStruct](#) & *ioOnDPeriod* )

Actor Constructor.

Definition at line 66 of file [OnDParserHelper.cpp](#).

## 23.76.3 Member Function Documentation

23.76.3.1 void AIRSCHED::OnDParserHelper::storeDateRangeStart::operator() ( iterator\_t iStr, iterator\_t iStrEnd ) const

Actor Function (functor).

Definition at line 71 of file [OnDParserHelper.cpp](#).

References [AIRSCHED::OnDPeriodStruct::\\_dateRangeStart](#), [AIRSCHED::OnDPeriodStruct::\\_itSeconds](#), [AIRSCHED::OnDParserHelper::ParserSemanticAction::\\_onDPeriod](#), and [AIRSCHED::OnDPeriodStruct::getDate\(\)](#).

## 23.76.4 Member Data Documentation

23.76.4.1 OnDPeriodStruct& AIRSCHED::OnDParserHelper::ParserSemanticAction::\_onDPeriod [inherited]

Actor Context.

Definition at line 38 of file [OnDParserHelper.hpp](#).

Referenced by [AIRSCHED::OnDParserHelper::storeOrigin::operator\(\)](#), [AIRSCHED::OnDParserHelper::storeDestination::operator\(\)](#), [operator\(\)](#), [AIRSCHED::OnDParserHelper::storeDateRangeEnd::operator\(\)](#), [AIRSCHED::OnDParserHelper::storeStartRangeTime::operator\(\)](#), [AIRSCHED::OnDParserHelper::storeEndRangeTime::operator\(\)](#), [AIRSCHED::OnDParserHelper::storeAirlineCode::operator\(\)](#), [AIRSCHED::OnDParserHelper::storeClassCode::operator\(\)](#), and [AIRSCHED::OnDParserHelper::doEndOnD::operator\(\)](#).

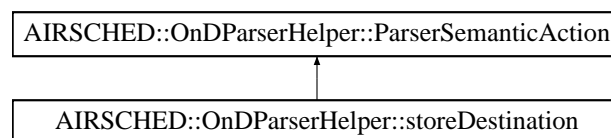
The documentation for this struct was generated from the following files:

- [airsched/command/OnDParserHelper.hpp](#)
- [airsched/command/OnDParserHelper.cpp](#)

## 23.77 AIRSCHED::OnDParserHelper::storeDestination Struct Reference

```
#include <airsched/command/OnDParserHelper.hpp>
```

Inheritance diagram for AIRSCHED::OnDParserHelper::storeDestination:



## Public Member Functions

- [storeDestination](#) (OnDPeriodStruct &)
- void [operator\(\)](#) (iterator\_t iStr, iterator\_t iStrEnd) const

## Public Attributes

- [OnDPeriodStruct](#) & [\\_onDPeriod](#)

## 23.77.1 Detailed Description

Store the parsed destination.

Definition at line 50 of file [OnDParserHelper.hpp](#).

## 23.77.2 Constructor &amp; Destructor Documentation

## 23.77.2.1 AIRSCHED::OnDParserHelper::storeDestination::storeDestination ( OnDPeriodStruct &amp; ioOnDPeriod )

Actor Constructor.

Definition at line 50 of file [OnDParserHelper.cpp](#).

## 23.77.3 Member Function Documentation

## 23.77.3.1 void AIRSCHED::OnDParserHelper::storeDestination::operator() ( iterator\_t iStr, iterator\_t iStrEnd ) const

Actor Function (functor).

Definition at line 55 of file [OnDParserHelper.cpp](#).

References [AIRSCHED::OnDPeriodStruct::\\_destination](#), and [AIRSCHED::OnDParserHelper::ParserSemanticAction::\\_onDPeriod](#).

## 23.77.4 Member Data Documentation

## 23.77.4.1 OnDPeriodStruct&amp; AIRSCHED::OnDParserHelper::ParserSemanticAction::\_onDPeriod [inherited]

Actor Context.

Definition at line 38 of file [OnDParserHelper.hpp](#).

Referenced by [AIRSCHED::OnDParserHelper::storeOrigin::operator\(\)](#), [operator\(\)](#), [AIRSCHED::OnDParserHelper::storeDateRangeStart::operator\(\)](#), [AIRSCHED::OnDParserHelper::storeDateRangeEnd::operator\(\)](#), [AIRSCHED::OnDParserHelper::storeStartRangeTime::operator\(\)](#), [AIRSCHED::OnDParserHelper::storeEndRangeTime::operator\(\)](#), [AIRSCHED::OnDParserHelper::storeAirlineCode::operator\(\)](#), [AIRSCHED::OnDParserHelper::storeClassCode::operator\(\)](#), and [AIRSCHED::OnDParserHelper::doEndOnD::operator\(\)](#).

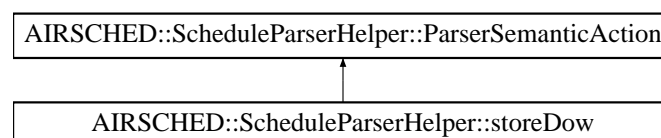
The documentation for this struct was generated from the following files:

- [airsched/command/OnDParserHelper.hpp](#)
- [airsched/command/OnDParserHelper.cpp](#)

## 23.78 AIRSCHED::ScheduleParserHelper::storeDow Struct Reference

```
#include <airsched/command/ScheduleParserHelper.hpp>
```

Inheritance diagram for AIRSCHED::ScheduleParserHelper::storeDow:



## Public Member Functions

- [storeDow](#) ([FlightPeriodStruct](#) &)
- void [operator\(\)](#) ([iterator\\_t](#) iStr, [iterator\\_t](#) iStrEnd) const

## Public Attributes

- [FlightPeriodStruct](#) & [\\_flightPeriod](#)

## 23.78.1 Detailed Description

Store the DOW (day of the Week).

Definition at line 69 of file [ScheduleParserHelper.hpp](#).

## 23.78.2 Constructor &amp; Destructor Documentation

## 23.78.2.1 AIRSCHED::ScheduleParserHelper::storeDow::storeDow ( FlightPeriodStruct &amp; ioFlightPeriod )

Actor Constructor.

Definition at line 98 of file [ScheduleParserHelper.cpp](#).

## 23.78.3 Member Function Documentation

## 23.78.3.1 void AIRSCHED::ScheduleParserHelper::storeDow::operator() ( iterator\_t iStr, iterator\_t iStrEnd ) const

Actor Function (functor).

Definition at line 103 of file [ScheduleParserHelper.cpp](#).

References [AIRSCHED::FlightPeriodStruct::\\_dow](#), and [AIRSCHED::ScheduleParserHelper::ParserSemanticAction::\\_flightPeriod](#).

## 23.78.4 Member Data Documentation

## 23.78.4.1 FlightPeriodStruct&amp; AIRSCHED::ScheduleParserHelper::ParserSemanticAction::\_flightPeriod [inherited]

Actor Context.

Definition at line 33 of file [ScheduleParserHelper.hpp](#).

Referenced by [AIRSCHED::ScheduleParserHelper::storeAirlineCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFlightNumber::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDateRangeStart::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDateRangeEnd::operator\(\)](#), [operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegBoardingPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegOffPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeBoardingTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeOffTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeElapsedTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegCabinCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeCapacity::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentSpecificity::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentBoardingPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentOffPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentCabinCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeClasses::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFamilyCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFClasses::operator\(\)](#), and [AIRSCHED::ScheduleParserHelper::doEndFlight::operator\(\)](#).

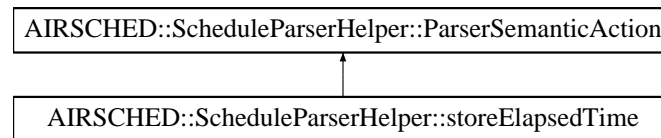
The documentation for this struct was generated from the following files:

- [airsched/command/ScheduleParserHelper.hpp](#)
- [airsched/command/ScheduleParserHelper.cpp](#)

## 23.79 AIRSCHED::ScheduleParserHelper::storeElapsedTime Struct Reference

```
#include <airsched/command/ScheduleParserHelper.hpp>
```

Inheritance diagram for AIRSCHED::ScheduleParserHelper::storeElapsedTime:



### Public Member Functions

- [storeElapsedTime](#) ([FlightPeriodStruct](#) &)
- void [operator\(\)](#) ([iterator\\_t](#) iStr, [iterator\\_t](#) iStrEnd) const

### Public Attributes

- [FlightPeriodStruct](#) & [\\_flightPeriod](#)

#### 23.79.1 Detailed Description

Store the elapsed time.

Definition at line 109 of file [ScheduleParserHelper.hpp](#).

#### 23.79.2 Constructor & Destructor Documentation

##### 23.79.2.1 AIRSCHED::ScheduleParserHelper::storeElapsedTime::storeElapsedTime ( [FlightPeriodStruct](#) & *ioFlightPeriod* )

Actor Constructor.

Definition at line 194 of file [ScheduleParserHelper.cpp](#).

#### 23.79.3 Member Function Documentation

##### 23.79.3.1 void AIRSCHED::ScheduleParserHelper::storeElapsedTime::operator() ( [iterator\\_t](#) iStr, [iterator\\_t](#) iStrEnd ) const

Actor Function (functor).

Definition at line 199 of file [ScheduleParserHelper.cpp](#).

References [AIRSCHED::FlightPeriodStruct::\\_dateOffset](#), [AIRSCHED::LegStruct::\\_elapsed](#), [AIRSCHED::ScheduleParserHelper::ParserSemanticAction::\\_flightPeriod](#), [AIRSCHED::FlightPeriodStruct::\\_itLeg](#), [AIRSCHED::FlightPeriodStruct::\\_itSeconds](#), [AIRSCHED::LegStruct::\\_offDateOffset](#), and [AIRSCHED::FlightPeriodStruct::getTime\(\)](#).

#### 23.79.4 Member Data Documentation

##### 23.79.4.1 [FlightPeriodStruct](#)& AIRSCHED::ScheduleParserHelper::ParserSemanticAction::\_flightPeriod [inherited]

Actor Context.

Definition at line 33 of file [ScheduleParserHelper.hpp](#).

Referenced by [AIRSCHED::ScheduleParserHelper::storeAirlineCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFlightNumber::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDateRangeStart::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDateRangeEnd::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDow::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegBoardingPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegOffPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeBoardingTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeOffTime::operator\(\)](#), [operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegCabinCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeCapacity::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentSpecificity::operator\(\)](#), [AIRSCHED::Schedule](#)

[ParserHelper::storeSegmentBoardingPoint::operator\(\)\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentOffPoint::operator\(\)\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentCabinCode::operator\(\)\(\)](#), [AIRSCHED::ScheduleParserHelper::storeClasses::operator\(\)\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFamilyCode::operator\(\)\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFClasses::operator\(\)\(\)](#), and [AIRSCHED::ScheduleParserHelper::doEndFlight::operator\(\)\(\)](#).

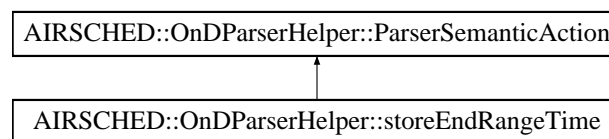
The documentation for this struct was generated from the following files:

- [airsched/command/ScheduleParserHelper.hpp](#)
- [airsched/command/ScheduleParserHelper.cpp](#)

## 23.80 AIRSCHED::OnDParserHelper::storeEndRangeTime Struct Reference

```
#include <airsched/command/OnDParserHelper.hpp>
```

Inheritance diagram for AIRSCHED::OnDParserHelper::storeEndRangeTime:



### Public Member Functions

- [storeEndRangeTime](#) ([OnDPeriodStruct](#) &)
- [void operator\(\)](#) ([iterator\\_t](#) iStr, [iterator\\_t](#) iStrEnd) const

### Public Attributes

- [OnDPeriodStruct](#) & [\\_onDPeriod](#)

#### 23.80.1 Detailed Description

Store the end range time.

Definition at line 82 of file [OnDParserHelper.hpp](#).

#### 23.80.2 Constructor & Destructor Documentation

##### 23.80.2.1 AIRSCHED::OnDParserHelper::storeEndRangeTime::storeEndRangeTime ( [OnDPeriodStruct](#) & *ioOnDPeriod* )

Actor Constructor.

Definition at line 124 of file [OnDParserHelper.cpp](#).

#### 23.80.3 Member Function Documentation

##### 23.80.3.1 void AIRSCHED::OnDParserHelper::storeEndRangeTime::operator() ( [iterator\\_t](#) *iStr*, [iterator\\_t](#) *iStrEnd* ) const

Actor Function (functor).

Definition at line 129 of file [OnDParserHelper.cpp](#).

References [AIRSCHED::OnDPeriodStruct::\\_itSeconds](#), [AIRSCHED::OnDParserHelper::ParserSemanticAction::\\_onDPeriod](#), [AIRSCHED::OnDPeriodStruct::\\_timeRangeEnd](#), and [AIRSCHED::OnDPeriodStruct::getTime\(\)](#).

## 23.80.4 Member Data Documentation

## 23.80.4.1 OnDPeriodStruct&amp; AIRSCHED::OnDParserHelper::ParserSemanticAction::onDPeriod [inherited]

Actor Context.

Definition at line 38 of file [OnDParserHelper.hpp](#).

Referenced by [AIRSCHED::OnDParserHelper::storeOrigin::operator\(\)](#), [AIRSCHED::OnDParserHelper::storeDestination::operator\(\)](#), [AIRSCHED::OnDParserHelper::storeDateRangeStart::operator\(\)](#), [AIRSCHED::OnDParserHelper::storeDateRangeEnd::operator\(\)](#), [AIRSCHED::OnDParserHelper::storeStartRangeTime::operator\(\)](#), [operator\(\)](#), [AIRSCHED::OnDParserHelper::storeAirlineCode::operator\(\)](#), [AIRSCHED::OnDParserHelper::storeClassCode::operator\(\)](#), and [AIRSCHED::OnDParserHelper::doEndOnD::operator\(\)](#).

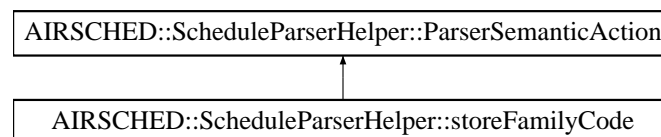
The documentation for this struct was generated from the following files:

- [airsched/command/OnDParserHelper.hpp](#)
- [airsched/command/OnDParserHelper.cpp](#)

## 23.81 AIRSCHED::ScheduleParserHelper::storeFamilyCode Struct Reference

```
#include <airsched/command/ScheduleParserHelper.hpp>
```

Inheritance diagram for AIRSCHED::ScheduleParserHelper::storeFamilyCode:



## Public Member Functions

- [storeFamilyCode](#) ([FlightPeriodStruct](#) &)
- void [operator\(\)](#) (int iCode) const

## Public Attributes

- [FlightPeriodStruct](#) & [\\_flightPeriod](#)

## 23.81.1 Detailed Description

Store the parsed family code.

Definition at line 176 of file [ScheduleParserHelper.hpp](#).

## 23.81.2 Constructor &amp; Destructor Documentation

23.81.2.1 AIRSCHED::ScheduleParserHelper::storeFamilyCode::storeFamilyCode ( [FlightPeriodStruct](#) & *ioFlightPeriod* )

Actor Constructor.

Definition at line 334 of file [ScheduleParserHelper.cpp](#).



## 23.81.3 Member Function Documentation

23.81.3.1 void AIRSCHED::ScheduleParserHelper::storeFamilyCode::operator() ( int *iCode* ) const

Actor Function (functor).

Definition at line 339 of file [ScheduleParserHelper.cpp](#).

References [AIRSCHED::ScheduleParserHelper::ParserSemanticAction::\\_flightPeriod](#), [AIRSCHED::SegmentCabinStruct::\\_itFamilyCode](#), and [AIRSCHED::FlightPeriodStruct::\\_itSegmentCabin](#).

## 23.81.4 Member Data Documentation

## 23.81.4.1 FlightPeriodStruct&amp; AIRSCHED::ScheduleParserHelper::ParserSemanticAction::\_flightPeriod [inherited]

Actor Context.

Definition at line 33 of file [ScheduleParserHelper.hpp](#).

Referenced by [AIRSCHED::ScheduleParserHelper::storeAirlineCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFlightNumber::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDateRangeStart::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDateRangeEnd::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDow::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegBoardingPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegOffPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeBoardingTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeOffTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeElapsedTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegCabinCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeCapacity::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentSpecificity::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentBoardingPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentOffPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentCabinCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeClasses::operator\(\)](#), [operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFClasses::operator\(\)](#), and [AIRSCHED::ScheduleParserHelper::doEndFlight::operator\(\)](#).

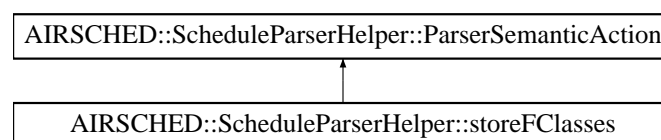
The documentation for this struct was generated from the following files:

- [airsched/command/ScheduleParserHelper.hpp](#)
- [airsched/command/ScheduleParserHelper.cpp](#)

## 23.82 AIRSCHED::ScheduleParserHelper::storeFClasses Struct Reference

```
#include <airsched/command/ScheduleParserHelper.hpp>
```

Inheritance diagram for AIRSCHED::ScheduleParserHelper::storeFClasses:



## Public Member Functions

- [storeFClasses](#) (FlightPeriodStruct &)
- void [operator\(\)](#) (iterator\_t iStr, iterator\_t iStrEnd) const

## Public Attributes

- [FlightPeriodStruct](#) & [\\_flightPeriod](#)

## 23.82.1 Detailed Description

Store the parsed list of class codes (for families).

Definition at line 184 of file [ScheduleParserHelper.hpp](#).

## 23.82.2 Constructor &amp; Destructor Documentation

23.82.2.1 AIRSCHED::ScheduleParserHelper::storeFClasses::storeFClasses ( *FlightPeriodStruct* & *ioFlightPeriod* )

Actor Constructor.

Definition at line 347 of file [ScheduleParserHelper.cpp](#).

## 23.82.3 Member Function Documentation

23.82.3.1 void AIRSCHED::ScheduleParserHelper::storeFClasses::operator() ( *iterator\_t iStr*, *iterator\_t iStrEnd* ) const

Actor Function (functor).

Definition at line 352 of file [ScheduleParserHelper.cpp](#).

References [AIRSCHED::FlightPeriodStruct::\\_areSegmentDefinitionsSpecific](#), [AIRSCHED::ScheduleParserHelper::ParserSemanticAction::\\_flightPeriod](#), [AIRSCHED::SegmentCabinStruct::\\_itFamilyCode](#), [AIRSCHED::FlightPeriodStruct::\\_itSegment](#), [AIRSCHED::FlightPeriodStruct::\\_itSegmentCabin](#), and [AIRSCHED::FlightPeriodStruct::addFareFamily\(\)](#).

## 23.82.4 Member Data Documentation

23.82.4.1 *FlightPeriodStruct*& AIRSCHED::ScheduleParserHelper::ParserSemanticAction::\_flightPeriod [inherited]

Actor Context.

Definition at line 33 of file [ScheduleParserHelper.hpp](#).

Referenced by [AIRSCHED::ScheduleParserHelper::storeAirlineCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFlightNumber::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDateRangeStart::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDateRangeEnd::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDow::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegBoardingPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegOffPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeBoardingTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeOffTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeElapsedTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegCabinCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeCapacity::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentSpecificity::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentBoardingPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentOffPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentCabinCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeClasses::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFamilyCode::operator\(\)](#), [operator\(\)](#), and [AIRSCHED::ScheduleParserHelper::doEndFlight::operator\(\)](#).

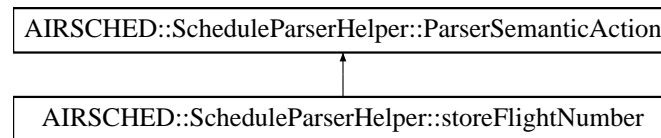
The documentation for this struct was generated from the following files:

- [airsched/command/ScheduleParserHelper.hpp](#)
- [airsched/command/ScheduleParserHelper.cpp](#)

## 23.83 AIRSCHED::ScheduleParserHelper::storeFlightNumber Struct Reference

```
#include <airsched/command/ScheduleParserHelper.hpp>
```

Inheritance diagram for AIRSCHED::ScheduleParserHelper::storeFlightNumber:



#### Public Member Functions

- [storeFlightNumber](#) ([FlightPeriodStruct](#) &)
- void [operator\(\)](#) (unsigned int *iNumber*) const

#### Public Attributes

- [FlightPeriodStruct](#) & [\\_flightPeriod](#)

#### 23.83.1 Detailed Description

Store the parsed flight number.

Definition at line 45 of file [ScheduleParserHelper.hpp](#).

#### 23.83.2 Constructor & Destructor Documentation

##### 23.83.2.1 AIRSCHED::ScheduleParserHelper::storeFlightNumber::storeFlightNumber ( [FlightPeriodStruct](#) & *ioFlightPeriod* )

Actor Constructor.

Definition at line 49 of file [ScheduleParserHelper.cpp](#).

#### 23.83.3 Member Function Documentation

##### 23.83.3.1 void AIRSCHED::ScheduleParserHelper::storeFlightNumber::operator() ( unsigned int *iNumber* ) const

Actor Function (functor).

Definition at line 54 of file [ScheduleParserHelper.cpp](#).

References [AIRSCHED::FlightPeriodStruct::\\_flightNumber](#), and [AIRSCHED::ScheduleParserHelper::ParserSemanticAction::\\_flightPeriod](#).

#### 23.83.4 Member Data Documentation

##### 23.83.4.1 [FlightPeriodStruct](#)& AIRSCHED::ScheduleParserHelper::ParserSemanticAction::\_flightPeriod [inherited]

Actor Context.

Definition at line 33 of file [ScheduleParserHelper.hpp](#).

Referenced by [AIRSCHED::ScheduleParserHelper::storeAirlineCode::operator\(\)](#), [operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDateRangeStart::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDateRangeEnd::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDow::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegBoardingPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegOffPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeBoardingTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeOffTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeElapsedTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegCabinCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeCapacity::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentSpecificity::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentBoardingPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentOffPoint::operator\(\)](#), [A-](#)

[AIRSCHED::ScheduleParserHelper::storeSegmentCabinCode::operator\(\)\(\)](#), [AIRSCHED::ScheduleParserHelper::storeClasses::operator\(\)\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFamilyCode::operator\(\)\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFClasses::operator\(\)\(\)](#), and [AIRSCHED::ScheduleParserHelper::doEndFlight::operator\(\)\(\)](#).

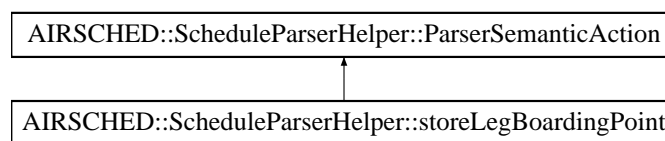
The documentation for this struct was generated from the following files:

- [airsched/command/ScheduleParserHelper.hpp](#)
- [airsched/command/ScheduleParserHelper.cpp](#)

## 23.84 AIRSCHED::ScheduleParserHelper::storeLegBoardingPoint Struct Reference

```
#include <airsched/command/ScheduleParserHelper.hpp>
```

Inheritance diagram for AIRSCHED::ScheduleParserHelper::storeLegBoardingPoint:



### Public Member Functions

- [storeLegBoardingPoint](#) ([FlightPeriodStruct](#) &)
- [void operator\(\)](#) ([iterator\\_t](#) iStr, [iterator\\_t](#) iStrEnd) const

### Public Attributes

- [FlightPeriodStruct](#) & [\\_flightPeriod](#)

#### 23.84.1 Detailed Description

Store the parsed leg boarding point.

Definition at line 77 of file [ScheduleParserHelper.hpp](#).

#### 23.84.2 Constructor & Destructor Documentation

##### 23.84.2.1 AIRSCHED::ScheduleParserHelper::storeLegBoardingPoint::storeLegBoardingPoint ( [FlightPeriodStruct](#) & *ioFlightPeriod* )

Actor Constructor.

Definition at line 110 of file [ScheduleParserHelper.cpp](#).

#### 23.84.3 Member Function Documentation

##### 23.84.3.1 void AIRSCHED::ScheduleParserHelper::storeLegBoardingPoint::operator() ( [iterator\\_t](#) iStr, [iterator\\_t](#) iStrEnd ) const

Actor Function (functor).

Definition at line 115 of file [ScheduleParserHelper.cpp](#).

References [AIRSCHED::LegStruct::\\_boardingPoint](#), [AIRSCHED::LegStruct::\\_cabinList](#), [AIRSCHED::ScheduleParserHelper::ParserSemanticAction::\\_flightPeriod](#), [AIRSCHED::FlightPeriodStruct::\\_itLeg](#), [AIRSCHED::FlightPeriodStruct::\\_legAlreadyDefined](#), [AIRSCHED::FlightPeriodStruct::\\_legList](#), and [AIRSCHED::FlightPeriodStruct::addAirport\(\)](#).

#### 23.84.4 Member Data Documentation

##### 23.84.4.1 FlightPeriodStruct& AIRSCHED::ScheduleParserHelper::ParserSemanticAction::flightPeriod [inherited]

Actor Context.

Definition at line 33 of file [ScheduleParserHelper.hpp](#).

Referenced by [AIRSCHED::ScheduleParserHelper::storeAirlineCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFlightNumber::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDateRangeStart::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDateRangeEnd::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDow::operator\(\)](#), [operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegOffPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeBoardingTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeOffTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeElapsedTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegCabinCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeCapacity::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentSpecificity::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentBoardingPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentOffPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentCabinCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeClasses::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFamilyCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFClasses::operator\(\)](#), and [AIRSCHED::ScheduleParserHelper::doEndFlight::operator\(\)](#).

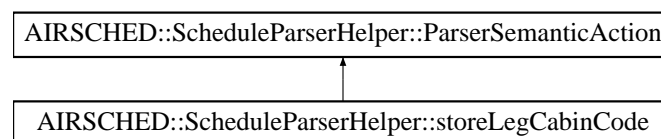
The documentation for this struct was generated from the following files:

- [airsched/command/ScheduleParserHelper.hpp](#)
- [airsched/command/ScheduleParserHelper.cpp](#)

## 23.85 AIRSCHED::ScheduleParserHelper::storeLegCabinCode Struct Reference

```
#include <airsched/command/ScheduleParserHelper.hpp>
```

Inheritance diagram for AIRSCHED::ScheduleParserHelper::storeLegCabinCode:



#### Public Member Functions

- [storeLegCabinCode](#) ([FlightPeriodStruct](#) &)
- void [operator\(\)](#) (char iChar) const

#### Public Attributes

- [FlightPeriodStruct](#) & [\\_flightPeriod](#)

#### 23.85.1 Detailed Description

Store the parsed leg cabin code.

Definition at line 117 of file [ScheduleParserHelper.hpp](#).

### 23.85.2 Constructor & Destructor Documentation

#### 23.85.2.1 AIRSCHED::ScheduleParserHelper::storeLegCabinCode::storeLegCabinCode ( FlightPeriodStruct & ioFlightPeriod )

Actor Constructor.

Definition at line 215 of file [ScheduleParserHelper.cpp](#).

### 23.85.3 Member Function Documentation

#### 23.85.3.1 void AIRSCHED::ScheduleParserHelper::storeLegCabinCode::operator() ( char iChar ) const

Actor Function (functor).

Definition at line 220 of file [ScheduleParserHelper.cpp](#).

References [AIRSCHED::LegCabinStruct::\\_cabinCode](#), [AIRSCHED::ScheduleParserHelper::ParserSemanticAction::\\_flightPeriod](#), and [AIRSCHED::FlightPeriodStruct::\\_itLegCabin](#).

### 23.85.4 Member Data Documentation

#### 23.85.4.1 FlightPeriodStruct& AIRSCHED::ScheduleParserHelper::ParserSemanticAction::\_flightPeriod [inherited]

Actor Context.

Definition at line 33 of file [ScheduleParserHelper.hpp](#).

Referenced by [AIRSCHED::ScheduleParserHelper::storeAirlineCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFlightNumber::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDateRangeStart::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDateRangeEnd::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDow::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegBoardingPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegOffPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeBoardingTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeOffTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeElapsedTime::operator\(\)](#), [operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeCapacity::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentSpecificity::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentBoardingPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentOffPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentCabinCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeClasses::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFamilyCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFClasses::operator\(\)](#), and [AIRSCHED::ScheduleParserHelper::doEndFlight::operator\(\)](#).

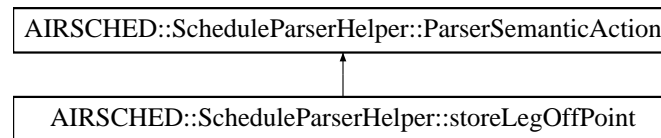
The documentation for this struct was generated from the following files:

- [airsched/command/ScheduleParserHelper.hpp](#)
- [airsched/command/ScheduleParserHelper.cpp](#)

## 23.86 AIRSCHED::ScheduleParserHelper::storeLegOffPoint Struct Reference

```
#include <airsched/command/ScheduleParserHelper.hpp>
```

Inheritance diagram for AIRSCHED::ScheduleParserHelper::storeLegOffPoint:



### Public Member Functions

- [storeLegOffPoint](#) ([FlightPeriodStruct](#) &)
- void [operator\(\)](#) ([iterator\\_t](#) iStr, [iterator\\_t](#) iStrEnd) const

### Public Attributes

- [FlightPeriodStruct](#) & [\\_flightPeriod](#)

#### 23.86.1 Detailed Description

Store the parsed leg off point.

Definition at line 85 of file [ScheduleParserHelper.hpp](#).

#### 23.86.2 Constructor & Destructor Documentation

##### 23.86.2.1 AIRSCHED::ScheduleParserHelper::storeLegOffPoint::storeLegOffPoint ( [FlightPeriodStruct](#) & *ioFlightPeriod* )

Actor Constructor.

Definition at line 139 of file [ScheduleParserHelper.cpp](#).

#### 23.86.3 Member Function Documentation

##### 23.86.3.1 void AIRSCHED::ScheduleParserHelper::storeLegOffPoint::operator() ( [iterator\\_t](#) iStr, [iterator\\_t](#) iStrEnd ) const

Actor Function (functor).

Definition at line 144 of file [ScheduleParserHelper.cpp](#).

References [AIRSCHED::ScheduleParserHelper::ParserSemanticAction::\\_flightPeriod](#), [AIRSCHED::FlightPeriodStruct::\\_itLeg](#), [AIRSCHED::LegStruct::\\_offPoint](#), and [AIRSCHED::FlightPeriodStruct::addAirport\(\)](#).

#### 23.86.4 Member Data Documentation

##### 23.86.4.1 [FlightPeriodStruct](#)& AIRSCHED::ScheduleParserHelper::ParserSemanticAction::\_flightPeriod [inherited]

Actor Context.

Definition at line 33 of file [ScheduleParserHelper.hpp](#).

Referenced by [AIRSCHED::ScheduleParserHelper::storeAirlineCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFlightNumber::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDateRangeStart::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDateRangeEnd::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDow::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegBoardingPoint::operator\(\)](#), [operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeBoardingTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeOffTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeElapsedTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegCabinCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeCapacity::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentSpecificity::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentBoardingPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentOffPoint::operator\(\)](#), A-

[AIRSCHED::ScheduleParserHelper::storeSegmentCabinCode::operator\(\)\(\)](#), [AIRSCHED::ScheduleParserHelper::storeClasses::operator\(\)\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFamilyCode::operator\(\)\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFClasses::operator\(\)\(\)](#), and [AIRSCHED::ScheduleParserHelper::doEndFlight::operator\(\)\(\)](#).

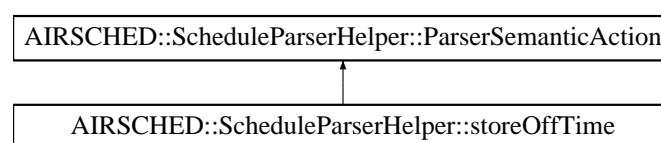
The documentation for this struct was generated from the following files:

- [airsched/command/ScheduleParserHelper.hpp](#)
- [airsched/command/ScheduleParserHelper.cpp](#)

## 23.87 AIRSCHED::ScheduleParserHelper::storeOffTime Struct Reference

```
#include <airsched/command/ScheduleParserHelper.hpp>
```

Inheritance diagram for AIRSCHED::ScheduleParserHelper::storeOffTime:



### Public Member Functions

- [storeOffTime](#) ([FlightPeriodStruct](#) &)
- void [operator\(\)](#) ([iterator\\_t](#) iStr, [iterator\\_t](#) iStrEnd) const

### Public Attributes

- [FlightPeriodStruct](#) & [\\_flightPeriod](#)

#### 23.87.1 Detailed Description

Store the off time.

Definition at line 101 of file [ScheduleParserHelper.hpp](#).

#### 23.87.2 Constructor & Destructor Documentation

##### 23.87.2.1 AIRSCHED::ScheduleParserHelper::storeOffTime::storeOffTime ( [FlightPeriodStruct](#) & *ioFlightPeriod* )

Actor Constructor.

Definition at line 173 of file [ScheduleParserHelper.cpp](#).

#### 23.87.3 Member Function Documentation

##### 23.87.3.1 void AIRSCHED::ScheduleParserHelper::storeOffTime::operator() ( [iterator\\_t](#) iStr, [iterator\\_t](#) iStrEnd ) const

Actor Function (functor).

Definition at line 178 of file [ScheduleParserHelper.cpp](#).

References [AIRSCHED::LegStruct::\\_boardingDateOffset](#), [AIRSCHED::FlightPeriodStruct::\\_dateOffset](#), [AIRSCHED::ScheduleParserHelper::ParserSemanticAction::\\_flightPeriod](#), [AIRSCHED::FlightPeriodStruct::\\_itLeg](#), [AIRSCHED::FlightPeriodStruct::\\_itSeconds](#), [AIRSCHED::LegStruct::\\_offTime](#), and [AIRSCHED::FlightPeriodStruct::getTime\(\)](#).



## 23.87.4 Member Data Documentation

## 23.87.4.1 FlightPeriodStruct&amp; AIRSCHED::ScheduleParserHelper::ParserSemanticAction::\_flightPeriod [inherited]

Actor Context.

Definition at line 33 of file [ScheduleParserHelper.hpp](#).

Referenced by [AIRSCHED::ScheduleParserHelper::storeAirlineCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFlightNumber::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDateRangeStart::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDateRangeEnd::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDow::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegBoardingPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegOffPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeBoardingTime::operator\(\)](#), [operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeElapsedTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegCabinCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeCapacity::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentSpecificity::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentBoardingPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentOffPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentCabinCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeClasses::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFamilyCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFClasses::operator\(\)](#), and [AIRSCHED::ScheduleParserHelper::doEndFlight::operator\(\)](#).

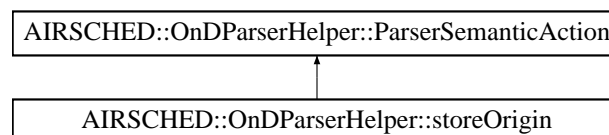
The documentation for this struct was generated from the following files:

- [airsched/command/ScheduleParserHelper.hpp](#)
- [airsched/command/ScheduleParserHelper.cpp](#)

## 23.88 AIRSCHED::OnDParserHelper::storeOrigin Struct Reference

```
#include <airsched/command/OnDParserHelper.hpp>
```

Inheritance diagram for AIRSCHED::OnDParserHelper::storeOrigin:



## Public Member Functions

- [storeOrigin](#) ([OnDPeriodStruct](#) &)
- void [operator\(\)](#) ([iterator\\_t](#) iStr, [iterator\\_t](#) iStrEnd) const

## Public Attributes

- [OnDPeriodStruct](#) & [\\_onDPeriod](#)

## 23.88.1 Detailed Description

Store the parsed origin.

Definition at line 42 of file [OnDParserHelper.hpp](#).

## 23.88.2 Constructor &amp; Destructor Documentation

## 23.88.2.1 AIRSCHED::OnDParserHelper::storeOrigin::storeOrigin ( OnDPeriodStruct &amp; ioOnDPeriod )

Actor Constructor.

Definition at line 30 of file [OnDParserHelper.cpp](#).

## 23.88.3 Member Function Documentation

## 23.88.3.1 void AIRSCHED::OnDParserHelper::storeOrigin::operator() ( iterator\_t iStr, iterator\_t iStrEnd ) const

Actor Function (functor).

Definition at line 35 of file [OnDParserHelper.cpp](#).

References [AIRSCHED::OnDPeriodStruct::\\_airlineCode](#), [AIRSCHED::OnDPeriodStruct::\\_airlineCodeList](#), [AIRSCHED::OnDPeriodStruct::\\_classCode](#), [AIRSCHED::OnDPeriodStruct::\\_classCodeList](#), [AIRSCHED::OnDPeriodStruct::\\_nbOfAirlines](#), [AIRSCHED::OnDParserHelper::ParserSemanticAction::\\_onDPeriod](#), and [AIRSCHED::OnDPeriodStruct::\\_origin](#).

## 23.88.4 Member Data Documentation

## 23.88.4.1 OnDPeriodStruct&amp; AIRSCHED::OnDParserHelper::ParserSemanticAction::\_onDPeriod [inherited]

Actor Context.

Definition at line 38 of file [OnDParserHelper.hpp](#).

Referenced by [operator\(\)](#), [AIRSCHED::OnDParserHelper::storeDestination::operator\(\)](#), [AIRSCHED::OnDParserHelper::storeDateRangeStart::operator\(\)](#), [AIRSCHED::OnDParserHelper::storeDateRangeEnd::operator\(\)](#), [AIRSCHED::OnDParserHelper::storeStartRangeTime::operator\(\)](#), [AIRSCHED::OnDParserHelper::storeEndRangeTime::operator\(\)](#), [AIRSCHED::OnDParserHelper::storeAirlineCode::operator\(\)](#), [AIRSCHED::OnDParserHelper::storeClassCode::operator\(\)](#), and [AIRSCHED::OnDParserHelper::doEndOnD::operator\(\)](#).

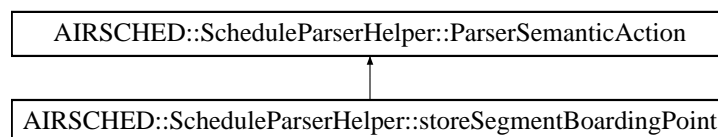
The documentation for this struct was generated from the following files:

- [airsched/command/OnDParserHelper.hpp](#)
- [airsched/command/OnDParserHelper.cpp](#)

## 23.89 AIRSCHED::ScheduleParserHelper::storeSegmentBoardingPoint Struct Reference

```
#include <airsched/command/ScheduleParserHelper.hpp>
```

Inheritance diagram for AIRSCHED::ScheduleParserHelper::storeSegmentBoardingPoint:



## Public Member Functions

- [storeSegmentBoardingPoint](#) ([FlightPeriodStruct](#) &)
- void [operator\(\)](#) ([iterator\\_t](#) iStr, [iterator\\_t](#) iStrEnd) const

## Public Attributes

- [FlightPeriodStruct](#) & [\\_flightPeriod](#)

## 23.89.1 Detailed Description

Store the parsed segment boarding point.

Definition at line 144 of file [ScheduleParserHelper.hpp](#).

## 23.89.2 Constructor &amp; Destructor Documentation

23.89.2.1 AIRSCHED::ScheduleParserHelper::storeSegmentBoardingPoint::storeSegmentBoardingPoint ( [FlightPeriodStruct](#) & *ioFlightPeriod* )

Actor Constructor.

Definition at line 272 of file [ScheduleParserHelper.cpp](#).

## 23.89.3 Member Function Documentation

23.89.3.1 void AIRSCHED::ScheduleParserHelper::storeSegmentBoardingPoint::operator() ( [iterator\\_t](#) *iStr*, [iterator\\_t](#) *iStrEnd* ) const

Actor Function (functor).

Definition at line 277 of file [ScheduleParserHelper.cpp](#).

References [AIRSCHED::SegmentStruct::\\_boardingPoint](#), [AIRSCHED::ScheduleParserHelper::ParserSemanticAction::\\_flightPeriod](#), and [AIRSCHED::FlightPeriodStruct::\\_itSegment](#).

## 23.89.4 Member Data Documentation

23.89.4.1 [FlightPeriodStruct](#)& AIRSCHED::ScheduleParserHelper::ParserSemanticAction::\_flightPeriod [inherited]

Actor Context.

Definition at line 33 of file [ScheduleParserHelper.hpp](#).

Referenced by [AIRSCHED::ScheduleParserHelper::storeAirlineCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFlightNumber::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDateRangeStart::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDateRangeEnd::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDow::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegBoardingPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegOffPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeBoardingTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeOffTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeElapsedTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegCabinCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeCapacity::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentSpecificity::operator\(\)](#), [operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentOffPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentCabinCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeClasses::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFamilyCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFClasses::operator\(\)](#), and [AIRSCHED::ScheduleParserHelper::doEndFlight::operator\(\)](#).

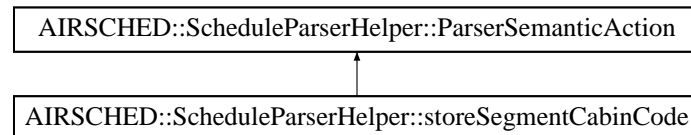
The documentation for this struct was generated from the following files:

- [airsched/command/ScheduleParserHelper.hpp](#)
- [airsched/command/ScheduleParserHelper.cpp](#)

## 23.90 AIRSCHED::ScheduleParserHelper::storeSegmentCabinCode Struct Reference

```
#include <airsched/command/ScheduleParserHelper.hpp>
```

Inheritance diagram for AIRSCHED::ScheduleParserHelper::storeSegmentCabinCode:



## Public Member Functions

- [storeSegmentCabinCode](#) ([FlightPeriodStruct](#) &)
- void [operator\(\)](#) (char iChar) const

## Public Attributes

- [FlightPeriodStruct](#) & [\\_flightPeriod](#)

## 23.90.1 Detailed Description

Store the parsed segment cabin code.

Definition at line 160 of file [ScheduleParserHelper.hpp](#).

## 23.90.2 Constructor &amp; Destructor Documentation

23.90.2.1 AIRSCHED::ScheduleParserHelper::storeSegmentCabinCode::storeSegmentCabinCode ( [FlightPeriodStruct](#) & [ioFlightPeriod](#) )

Actor Constructor.

Definition at line 298 of file [ScheduleParserHelper.cpp](#).

## 23.90.3 Member Function Documentation

23.90.3.1 void AIRSCHED::ScheduleParserHelper::storeSegmentCabinCode::operator() ( char *iChar* ) const

Actor Function (functor).

Definition at line 303 of file [ScheduleParserHelper.cpp](#).

References [AIRSCHED::SegmentCabinStruct::\\_cabinCode](#), [AIRSCHED::ScheduleParserHelper::ParserSemanticAction::\\_flightPeriod](#), and [AIRSCHED::FlightPeriodStruct::\\_itSegmentCabin](#).

## 23.90.4 Member Data Documentation

23.90.4.1 [FlightPeriodStruct](#)& AIRSCHED::ScheduleParserHelper::ParserSemanticAction::\_flightPeriod [inherited]

Actor Context.

Definition at line 33 of file [ScheduleParserHelper.hpp](#).

Referenced by [AIRSCHED::ScheduleParserHelper::storeAirlineCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFlightNumber::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDateRangeStart::operator\(\)](#),

AIRSCHED::ScheduleParserHelper::storeDateRangeEnd::operator(), AIRSCHED::ScheduleParserHelper::storeDow::operator(), AIRSCHED::ScheduleParserHelper::storeLegBoardingPoint::operator(), AIRSCHED::ScheduleParserHelper::storeLegOffPoint::operator(), AIRSCHED::ScheduleParserHelper::storeBoardingTime::operator(), AIRSCHED::ScheduleParserHelper::storeOffTime::operator(), AIRSCHED::ScheduleParserHelper::storeElapsedTime::operator(), AIRSCHED::ScheduleParserHelper::storeLegCabinCode::operator(), AIRSCHED::ScheduleParserHelper::storeCapacity::operator(), AIRSCHED::ScheduleParserHelper::storeSegmentSpecificity::operator(), AIRSCHED::ScheduleParserHelper::storeSegmentBoardingPoint::operator(), AIRSCHED::ScheduleParserHelper::storeSegmentOffPoint::operator(), operator(), AIRSCHED::ScheduleParserHelper::storeClasses::operator(), AIRSCHED::ScheduleParserHelper::storeFamilyCode::operator(), AIRSCHED::ScheduleParserHelper::storeFClasses::operator(), and AIRSCHED::ScheduleParserHelper::doEndFlight::operator().

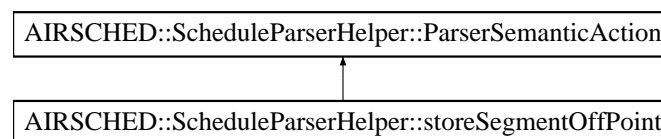
The documentation for this struct was generated from the following files:

- [airsched/command/ScheduleParserHelper.hpp](#)
- [airsched/command/ScheduleParserHelper.cpp](#)

## 23.91 AIRSCHED::ScheduleParserHelper::storeSegmentOffPoint Struct Reference

```
#include <airsched/command/ScheduleParserHelper.hpp>
```

Inheritance diagram for AIRSCHED::ScheduleParserHelper::storeSegmentOffPoint:



### Public Member Functions

- [storeSegmentOffPoint](#) ([FlightPeriodStruct](#) &)
- [void operator\(\)](#) ([iterator\\_t](#) iStr, [iterator\\_t](#) iStrEnd) const

### Public Attributes

- [FlightPeriodStruct](#) & [\\_flightPeriod](#)

#### 23.91.1 Detailed Description

Store the parsed segment off point.

Definition at line 152 of file [ScheduleParserHelper.hpp](#).

#### 23.91.2 Constructor & Destructor Documentation

##### 23.91.2.1 AIRSCHED::ScheduleParserHelper::storeSegmentOffPoint::storeSegmentOffPoint ( [FlightPeriodStruct](#) & *ioFlightPeriod* )

Actor Constructor.

Definition at line 285 of file [ScheduleParserHelper.cpp](#).

## 23.91.3 Member Function Documentation

23.91.3.1 void AIRSCHED::ScheduleParserHelper::storeSegmentOffPoint::operator() ( iterator\_t iStr, iterator\_t iStrEnd ) const

Actor Function (functor).

Definition at line 290 of file [ScheduleParserHelper.cpp](#).

References [AIRSCHED::ScheduleParserHelper::ParserSemanticAction::\\_flightPeriod](#), [AIRSCHED::FlightPeriodStruct::\\_itSegment](#), and [AIRSCHED::SegmentStruct::\\_offPoint](#).

## 23.91.4 Member Data Documentation

23.91.4.1 **FlightPeriodStruct&** AIRSCHED::ScheduleParserHelper::ParserSemanticAction::\_flightPeriod [inherited]

Actor Context.

Definition at line 33 of file [ScheduleParserHelper.hpp](#).

Referenced by [AIRSCHED::ScheduleParserHelper::storeAirlineCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFlightNumber::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDateRangeStart::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDateRangeEnd::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDow::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegBoardingPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegOffPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeBoardingTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeOffTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeElapsedTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegCabinCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeCapacity::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentBoardingPoint::operator\(\)](#), [operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentCabinCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeClasses::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFamilyCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFClasses::operator\(\)](#), and [AIRSCHED::ScheduleParserHelper::doEndFlight::operator\(\)](#).

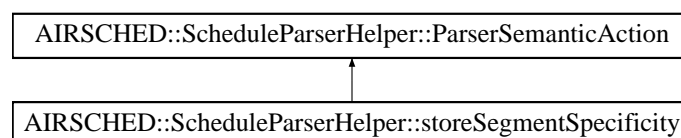
The documentation for this struct was generated from the following files:

- [airsched/command/ScheduleParserHelper.hpp](#)
- [airsched/command/ScheduleParserHelper.cpp](#)

## 23.92 AIRSCHED::ScheduleParserHelper::storeSegmentSpecificity Struct Reference

```
#include <airsched/command/ScheduleParserHelper.hpp>
```

Inheritance diagram for AIRSCHED::ScheduleParserHelper::storeSegmentSpecificity:



## Public Member Functions

- [storeSegmentSpecificity](#) ([FlightPeriodStruct](#) &)
- void [operator\(\)](#) (char iChar) const

## Public Attributes

- [FlightPeriodStruct](#) & [\\_flightPeriod](#)

## 23.92.1 Detailed Description

Store whether or not the segment definitions are specific. Specific means that there is a definition for each segment. General (not specific) means that a single definition defines all the segments.

Definition at line 136 of file [ScheduleParserHelper.hpp](#).

## 23.92.2 Constructor &amp; Destructor Documentation

23.92.2.1 AIRSCHED::ScheduleParserHelper::storeSegmentSpecificity::storeSegmentSpecificity ( [FlightPeriodStruct](#) & [ioFlightPeriod](#) )

Actor Constructor.

Definition at line 246 of file [ScheduleParserHelper.cpp](#).

## 23.92.3 Member Function Documentation

23.92.3.1 void AIRSCHED::ScheduleParserHelper::storeSegmentSpecificity::operator() ( [char iChar](#) ) const

Actor Function (functor).

Definition at line 251 of file [ScheduleParserHelper.cpp](#).

References [AIRSCHED::FlightPeriodStruct::\\_airportList](#), [AIRSCHED::FlightPeriodStruct::\\_airportOrderedList](#), [AIRSCHED::FlightPeriodStruct::\\_areSegmentDefinitionsSpecific](#), [AIRSCHED::ScheduleParserHelper::ParserSemanticAction::\\_flightPeriod](#), and [AIRSCHED::FlightPeriodStruct::buildSegments\(\)](#).

## 23.92.4 Member Data Documentation

23.92.4.1 [FlightPeriodStruct](#)& AIRSCHED::ScheduleParserHelper::ParserSemanticAction::\_flightPeriod [inherited]

Actor Context.

Definition at line 33 of file [ScheduleParserHelper.hpp](#).

Referenced by [AIRSCHED::ScheduleParserHelper::storeAirlineCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFlightNumber::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDateRangeStart::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDateRangeEnd::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeDow::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegBoardingPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegOffPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeBoardingTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeOffTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeElapsedTime::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeLegCabinCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeCapacity::operator\(\)](#), [operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentBoardingPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentOffPoint::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeSegmentCabinCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeClasses::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFamilyCode::operator\(\)](#), [AIRSCHED::ScheduleParserHelper::storeFClasses::operator\(\)](#), and [AIRSCHED::ScheduleParserHelper::doEndFlight::operator\(\)](#).

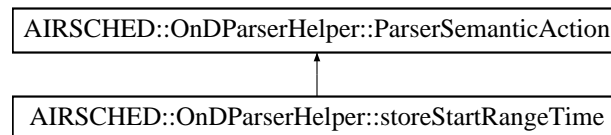
The documentation for this struct was generated from the following files:

- [airsched/command/ScheduleParserHelper.hpp](#)
- [airsched/command/ScheduleParserHelper.cpp](#)

## 23.93 AIRSCHED::OnDParserHelper::storeStartRangeTime Struct Reference

```
#include <airsched/command/OnDParserHelper.hpp>
```

Inheritance diagram for AIRSCHED::OnDParserHelper::storeStartRangeTime:



### Public Member Functions

- [storeStartRangeTime](#) ([OnDPeriodStruct](#) &)
- void [operator\(\)](#) ([iterator\\_t](#) iStr, [iterator\\_t](#) iStrEnd) const

### Public Attributes

- [OnDPeriodStruct](#) & [\\_onDPeriod](#)

#### 23.93.1 Detailed Description

Store the start range time.

Definition at line 74 of file [OnDParserHelper.hpp](#).

#### 23.93.2 Constructor & Destructor Documentation

23.93.2.1 AIRSCHED::OnDParserHelper::storeStartRangeTime::storeStartRangeTime ( [OnDPeriodStruct](#) & *ioOnDPeriod* )

Actor Constructor.

Definition at line 109 of file [OnDParserHelper.cpp](#).

#### 23.93.3 Member Function Documentation

23.93.3.1 void AIRSCHED::OnDParserHelper::storeStartRangeTime::operator() ( [iterator\\_t](#) iStr, [iterator\\_t](#) iStrEnd ) const

Actor Function (functor).

Definition at line 114 of file [OnDParserHelper.cpp](#).

References [AIRSCHED::OnDPeriodStruct::\\_itSeconds](#), [AIRSCHED::OnDParserHelper::ParserSemanticAction::\\_onDPeriod](#), [AIRSCHED::OnDPeriodStruct::\\_timeRangeStart](#), and [AIRSCHED::OnDPeriodStruct::getTime\(\)](#).

#### 23.93.4 Member Data Documentation

23.93.4.1 [OnDPeriodStruct&](#) AIRSCHED::OnDParserHelper::ParserSemanticAction::\_onDPeriod [inherited]

Actor Context.

Definition at line 38 of file [OnDParserHelper.hpp](#).

Referenced by [AIRSCHED::OnDParserHelper::storeOrigin::operator\(\)](#), [AIRSCHED::OnDParserHelper::storeDestination::operator\(\)](#), [AIRSCHED::OnDParserHelper::storeDateRangeStart::operator\(\)](#), [AIRSCHED::OnDParserHelper::storeDateRangeEnd::operator\(\)](#), [operator\(\)](#), [AIRSCHED::OnDParserHelper::storeEndRange-](#)



[Time::operator\(\)](#)(), [AIRSCHED::OnDParserHelper::storeAirlineCode::operator\(\)](#)(), [AIRSCHED::OnDParserHelper::storeClassCode::operator\(\)](#)(), and [AIRSCHED::OnDParserHelper::doEndOnD::operator\(\)](#)).

The documentation for this struct was generated from the following files:

- [airsched/command/OnDParserHelper.hpp](#)
- [airsched/command/OnDParserHelper.cpp](#)

## 23.94 StructAbstract Class Reference

Inheritance diagram for StructAbstract:

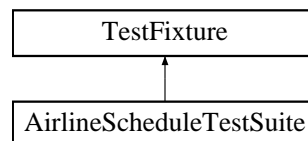


The documentation for this class was generated from the following file:

- [airsched/bom/SegmentStruct.hpp](#)

## 23.95 TestFixture Class Reference

Inheritance diagram for TestFixture:



The documentation for this class was generated from the following file:

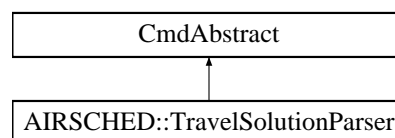
- [test/airsched/AirlineScheduleTestSuite.hpp](#)

## 23.96 AIRSCHED::TravelSolutionParser Class Reference

Class filling the TravelSolutionHolder structure (representing a list of classes/travelSolutions) from a given input file.

```
#include <airsched/command/TravelSolutionParser.hpp>
```

Inheritance diagram for AIRSCHED::TravelSolutionParser:



Static Public Member Functions

- static bool [parseInputFileAndBuildBom](#) (const stdair::Filename\_T &)

### 23.96.1 Detailed Description

Class filling the TravelSolutionHolder structure (representing a list of classes/travelSolutions) from a given input file.

Definition at line 19 of file [TravelSolutionParser.hpp](#).

### 23.96.2 Member Function Documentation

#### 23.96.2.1 bool AIRSCHED::TravelSolutionParser::parseInputFileAndBuildBom ( const stdair::Filename\_T & ) [static]

Parse the input values from a CSV-formatted travel solution file.

#### Parameters

<i>const</i>	std::string& iInputFileName Travel solution file to be parsed.
--------------	--

#### Returns

bool Whether or not the parsing was successful.

Definition at line 21 of file [TravelSolutionParser.cpp](#).

The documentation for this class was generated from the following files:

- [airsched/command/TravelSolutionParser.hpp](#)
- [airsched/command/TravelSolutionParser.cpp](#)

## 24 File Documentation

### 24.1 airsched/AIRSCHED\_Service.hpp File Reference

```
#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_service_types.hpp>
#include <stdair/bom/TravelSolutionTypes.hpp>
#include <airsched/AIRSCHED_Types.hpp>
```

#### Classes

- class [AIRSCHED::AIRSCHED\\_Service](#)  
*Interface for the AirSched Services.*

#### Namespaces

- namespace [stdair](#)  
*Forward declarations.*
- namespace [AIRSCHED](#)

### 24.2 AIRSCHED\_Service.hpp

```
00001 #ifndef __AIRSCHED_SVC_AIRSCHED_SERVICE_HPP
00002 #define __AIRSCHED_SVC_AIRSCHED_SERVICE_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
```

```

00007 // StdAir
00008 #include <stdair/stdair_basic_types.hpp>
00009 #include <stdair/stdair_service_types.hpp>
00010 #include <stdair/bom/TravelSolutionTypes.hpp>
00011 // AirSched
00012 #include <airsched/AIRSCHED_Types.hpp>
00013
00015 namespace stdair {
00016     class STDAIR_Service;
00017     struct BasLogParams;
00018     struct BasDBParams;
00019     struct BookingRequestStruct;
00020     struct TravelSolutionStruct;
00021 }
00022
00023 namespace AIRSCHED {
00024
00026     class AIRSCHED_ServiceContext;
00027
00028
00032     class AIRSCHED_Service {
00033     public:
00034         // ////////////////////////////////// Constructors and Destructors //////////////////////////////////
00050         AIRSCHED_Service (const stdair::BasLogParams&, const
stdair::BasDBParams&);
00051
00063         AIRSCHED_Service (const stdair::BasLogParams&);
00064
00080         AIRSCHED_Service (stdair::STDAIR_ServicePtr_T
ioSTDAIR_ServicePtr);
00081
00090         void parseAndLoad (const stdair::Filename_T&
iScheduleInputFilename);
00091
00101         void parseAndLoad (const stdair::Filename_T& iScheduleFilename,
00102                             const stdair::Filename_T& iODInputFilename);
00103
00107         ~AIRSCHED_Service ();
00108
00109
00110     public:
00111         // ////////////////////////////////// Business Methods //////////////////////////////////
00119         void buildSampleBom();
00120
00125         void buildSegmentPathList (stdair::TravelSolutionList_T
&,
00126                                     const stdair::BookingRequestStruct&);
00127
00133         void simulate();
00134
00135
00136     public:
00137         // ////////////////////////////////// Export support methods //////////////////////////////////
00149         std::string jsonExport (const stdair::AirlineCode_T&,
00150                                 const stdair::FlightNumber_T&,
00151                                 const stdair::Date_T& iDepartureDate) const;
00152
00153
00154     public:
00155         // ////////////////////////////////// Display support methods //////////////////////////////////
00163         std::string csvDisplay() const;
00164
00178         std::string csvDisplay (const stdair::AirlineCode_T&,
00179                                 const stdair::FlightNumber_T&,
00180                                 const stdair::Date_T& iDepartureDate) const;
00181
00182
00183     private:
00184         // ////////////////////////////////// Construction and Destruction helper methods //////////////////////////////////
00188         AIRSCHED_Service();
00189
00193         AIRSCHED_Service (const AIRSCHED_Service&);
00194
00204         stdair::STDAIR_ServicePtr_T initStdAirService (const stdair::BasLogParams&,
00205                                                         const stdair::BasDBParams&);
00206
00215         stdair::STDAIR_ServicePtr_T initStdAirService (const stdair::BasLogParams&);
00216
00225         void addStdAirService (stdair::STDAIR_ServicePtr_T,
00226                                 const bool iOwnStdairService);
00227
00232         void initServiceContext();
00233
00240         void initAirschedService();
00241
00245         void finalise();

```

```

00246
00247
00248     private:
00249         // ////////// Service Context //////////
00253         AIRSCHEDED_ServiceContext* _airschedServiceContext;
00254     };
00255 }
00256 #endif // __AIRSCHEDED_SVC_AIRSCHEDED_SERVICE_HPP

```

## 24.3 airsched/AIRSCHEDED.Types.hpp File Reference

```

#include <boost/shared_ptr.hpp>
#include <stdair/stdair_exceptions.hpp>

```

### Classes

- class [AIRSCHEDED::SegmentDateNotFoundExcep](#)
- class [AIRSCHEDED::OnDInputFileNotFoundExcep](#)
- class [AIRSCHEDED::ScheduleInputFileNotFoundExcep](#)

### Namespaces

- namespace [AIRSCHEDED](#)

### Typedefs

- typedef boost::shared\_ptr  
< AIRSCHEDED\_Service > [AIRSCHEDED::AIRSCHEDED\\_ServicePtr\\_T](#)

## 24.4 AIRSCHEDED.Types.hpp

```

00001 #ifndef __AIRSCHEDED_AIRSCHEDED_TYPES_HPP
00002 #define __AIRSCHEDED_AIRSCHEDED_TYPES_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // Boost
00008 #include <boost/shared_ptr.hpp>
00009 // StdAir
00010 #include <stdair/stdair_exceptions.hpp>
00011
00012 namespace AIRSCHEDED {
00013
00014     // Forward declarations
00015     class AIRSCHEDED_Service;
00016
00017
00018     // ////////// Exceptions //////////
00023     class SegmentDateNotFoundExcep : public
stdair::ParserException {
00024     public:
00028         SegmentDateNotFoundExcep (const std::string
& iWhat)
00029             : stdair::ParserException (iWhat) {}
00030     };
00031
00035     class OnDInputFileNotFoundExcep : public
stdair::FileNotFoundExcep {
00036     public:
00040         OnDInputFileNotFoundExcep (const
std::string& iWhat)
00041             : stdair::FileNotFoundExcep (iWhat) {}
00042     };
00043
00047     class ScheduleInputFileNotFoundExcep
: public stdair::FileNotFoundExcep {
00048     public:
00049

```

```

00053     ScheduleInputFileNotFoundException (const
std::string& iWhat)
00054     : stdair::FileNotFoundException (iWhat) {}
00055 };
00056
00057
00058 // ////////// Type definitions specific to AirSched //////////
00062 typedef boost::shared_ptr<AIRSCHED_Service> AIRSCHED_ServicePtr_T
;
00063
00064 }
00065 #endif // __AIRSCHED_AIRSCHED_TYPES_HPP

```

## 24.5 airsched/basic/BasConst.cpp File Reference

```

#include <airsched/basic/BasConst_General.hpp>
#include <airsched/basic/BasConst_AIRSCHED_Service.hpp>

```

### Namespaces

- namespace [AIRSCHED](#)

### Variables

- const int [AIRSCHED::DEFAULT\\_NUMBER\\_OF\\_DRAWS\\_FOR\\_MC\\_SIMULATION](#) = 100000

## 24.6 BasConst.cpp

```

00001 #include <airsched/basic/BasConst_General.hpp>
>
00002 #include <airsched/basic/BasConst_AIRSCHED_Service.hpp>
>
00003
00004 namespace AIRSCHED {
00005
00008     const int DEFAULT_NUMBER_OF_DRAWS_FOR_MC_SIMULATION
= 100000;
00009
00010 }

```

## 24.7 airsched/basic/BasConst\_AIRSCHED\_Service.hpp File Reference

### Namespaces

- namespace [AIRSCHED](#)

## 24.8 BasConst\_AIRSCHED\_Service.hpp

```

00001 #ifndef __AIRSCHED_BAS_BASCONST_AIRSCHED_SERVICE_HPP
00002 #define __AIRSCHED_BAS_BASCONST_AIRSCHED_SERVICE_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007
00008 namespace AIRSCHED {
00009
00010 }
00011 #endif // __AIRSCHED_BAS_BASCONST_AIRSCHED_SERVICE_HPP

```

## 24.9 airsched/basic/BasConst\_General.hpp File Reference

### Namespaces

- namespace [AIRSCHED](#)

## 24.10 BasConst\_General.hpp

```

00001 #ifndef __AIRSCHED_BAS_BASCONST_GENERAL_HPP
00002 #define __AIRSCHED_BAS_BASCONST_GENERAL_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007
00008 namespace AIRSCHED {
00009
00012     extern const int DEFAULT_NUMBER_OF_DRAWS_FOR_MC_SIMULATION
00013 ;
00014 }
00015 #endif // __AIRSCHED_BAS_BASCONST_GENERAL_HPP

```

## 24.11 airsched/basic/BasParserTypes.hpp File Reference

```

#include <string>
#include <boost/spirit/home/classic/core.hpp>
#include <boost/spirit/home/classic/attribute.hpp>
#include <boost/spirit/home/classic/utility/functor_parser.hpp>
#include <boost/spirit/home/classic/utility/loops.hpp>
#include <boost/spirit/home/classic/utility/chset.hpp>
#include <boost/spirit/home/classic/utility/confix.hpp>
#include <boost/spirit/home/classic/iterator/file_iterator.hpp>
#include <boost/spirit/home/classic/actor/push_back_actor.hpp>
#include <boost/spirit/home/classic/actor/assign_actor.hpp>

```

### Namespaces

- namespace [AIRSCHED](#)

### Typedefs

- typedef char [AIRSCHED::char\\_t](#)
- typedef  
boost::spirit::classic::file\_iterator  
< [char\\_t](#) > [AIRSCHED::iterator\\_t](#)
- typedef  
boost::spirit::classic::scanner  
< [iterator\\_t](#) > [AIRSCHED::scanner\\_t](#)
- typedef  
boost::spirit::classic::rule  
< [scanner\\_t](#) > [AIRSCHED::rule\\_t](#)
- typedef  
boost::spirit::classic::int\_parser  
< unsigned int, 10, 1, 1 > [AIRSCHED::int1\\_p\\_t](#)
- typedef  
boost::spirit::classic::uint\_parser  
< unsigned int, 10, 2, 2 > [AIRSCHED::uint2\\_p\\_t](#)

- typedef  
boost::spirit::classic::uint\_parser  
< unsigned int, 10, 4, 4 > AIRSCHED::uint4\_p\_t
- typedef  
boost::spirit::classic::uint\_parser  
< unsigned int, 10, 1, 4 > AIRSCHED::uint1\_4\_p\_t
- typedef  
boost::spirit::classic::chset  
< char\_t > AIRSCHED::chset\_t
- typedef  
boost::spirit::classic::impl::loop\_traits  
< chset\_t, unsigned int,  
unsigned int >::type AIRSCHED::repeat\_p\_t
- typedef  
boost::spirit::classic::bounded  
< uint2\_p\_t, unsigned int > AIRSCHED::bounded2\_p\_t
- typedef  
boost::spirit::classic::bounded  
< uint4\_p\_t, unsigned int > AIRSCHED::bounded4\_p\_t
- typedef  
boost::spirit::classic::bounded  
< uint1\_4\_p\_t, unsigned int > AIRSCHED::bounded1\_4\_p\_t

## 24.12 BasParserTypes.hpp

```

00001 #ifndef __AIRSCHED_BAS_BASCOMPARSERTYPES_HPP
00002 #define __AIRSCHED_BAS_BASCOMPARSERTYPES_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // Boost
00010 // #define BOOST_SPIRIT_DEBUG
00011 #include <boost/spirit/home/classic/core.hpp>
00012 #include <boost/spirit/home/classic/attribute.hpp>
00013 #include <boost/spirit/home/classic/utility/functor_parser.hpp>
00014 #include <boost/spirit/home/classic/utility/loops.hpp>
00015 #include <boost/spirit/home/classic/utility/chset.hpp>
00016 #include <boost/spirit/home/classic/utility/confix.hpp>
00017 #include <boost/spirit/home/classic/iterator/file_iterator.hpp>
00018 #include <boost/spirit/home/classic/actor/push_back_actor.hpp>
00019 #include <boost/spirit/home/classic/actor/assign_actor.hpp>
00020
00021 namespace AIRSCHED {
00022
00023 // //////////////////////////////////////
00024 //
00025 // Definition of Basic Types
00026 //
00027 // //////////////////////////////////////
00028 // For a file, the parsing unit is the character (char). For a string,
00029 // it is a "char const *".
00030 // typedef char const* iterator_t;
00031 typedef char char_t;
00032
00033 // The types of iterator, scanner and rule are then derived from
00034 // the parsing unit.
00035 typedef boost::spirit::classic::file_iterator<char_t> iterator_t;
00036 typedef boost::spirit::classic::scanner<iterator_t> scanner_t;
00037 typedef boost::spirit::classic::rule<scanner_t> rule_t;
00038
00039 // //////////////////////////////////////
00040 //
00041 // Parser related types
00042 //
00043 // //////////////////////////////////////
00044 typedef boost::spirit::classic::int_parser<unsigned int, 10, 1, 1> int1_p_t;
00045 ;
00046
00047 typedef boost::spirit::classic::uint_parser<unsigned int, 10, 2, 2> uint2_p_t;
00048 ;

```

```

00049
00051     typedef boost::spirit::classic::uint_parser<unsigned int, 10, 4, 4> uint4_p_t
;
00052
00054     typedef boost::spirit::classic::uint_parser<unsigned int, 10, 1, 4>
uint1_4_p_t;
00055
00057     typedef boost::spirit::classic::chset<char_t> chset_t;
00058
00061     typedef boost::spirit::classic::impl::loop_traits<chset_t,
00062                                     unsigned int,
00063                                     unsigned int>::type repeat_p_t
;
00064
00066     typedef boost::spirit::classic::bounded<uint2_p_t, unsigned int> bounded2_p_t
;
00067     typedef boost::spirit::classic::bounded<uint4_p_t, unsigned int> bounded4_p_t
;
00068     typedef boost::spirit::classic::bounded<uint1_4_p_t, unsigned int>
bounded1_4_p_t;
00069
00070 }
00071 #endif // __AIRSCHED_BAS_BASCOMPARSERTYPES_HPP

```

## 24.13 aircshed/batches/airshed.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <fstream>
#include <string>
#include <boost/date_time/posix_time/posix_time.hpp>
#include <boost/date_time/gregorian/gregorian.hpp>
#include <boost/program_options.hpp>
#include <boost/tokenizer.hpp>
#include <boost/lexical_cast.hpp>
#include <stdair/STDAIR_Service.hpp>
#include <stdair/bom/BomDisplay.hpp>
#include <stdair/bom/BookingRequestStruct.hpp>
#include <stdair/bom/TravelSolutionStruct.hpp>
#include <stdair/service/Logger.hpp>
#include <airshed/AIRSCHED_Service.hpp>
#include <airshed/batches/BookingRequestParser.hpp>
#include <airshed/config/airshed-paths.hpp>

```

### Typedefs

- typedef std::vector< std::string > [WordList\\_T](#)

### Functions

- const std::string [K\\_AIRSCHED\\_DEFAULT\\_LOG\\_FILENAME](#) ("airshed.log")
- const std::string [K\\_AIRSCHED\\_DEFAULT\\_INPUT\\_FILENAME](#) (STDAIR\_SAMPLE\_DIR"/schedule03.csv")
- const std::string [K\\_AIRSCHED\\_DEFAULT\\_BOOKING\\_REQUEST](#) ("NCE BKK NCE 2007-04-21 2007-03-21 08:32:00 C 1 DF RO 5 NONE 10:00:00 2000.0 20.0")
- std::string [createStringFromWordList](#) (const [WordList\\_T](#) &iWordList)
- template<class T >  
std::ostream & [operator<<](#) (std::ostream &os, const std::vector< T > &v)
- int [readConfiguration](#) (int argc, char \*argv[], bool &iolsBuiltin, bool &ioReadBookingRequestFromCmdLine, stdair::Filename\_T &ioInputFilename, std::string &ioLogFilename, std::string &ioBookingRequestString)
- stdair::BookingRequestStruct [parseBookingRequest](#) (const std::string &iRequestOption)
- int [main](#) (int argc, char \*argv[])



## Variables

- const bool [K\\_AIRSCHED\\_DEFAULT\\_BUILT\\_IN\\_INPUT](#) = false
- const bool [K\\_AIRSCHED\\_DEFAULT\\_BOOKING\\_REQUEST\\_MODE](#) = false
- const int [K\\_AIRSCHED\\_EARLY\\_RETURN\\_STATUS](#) = 99

## 24.13.1 Typedef Documentation

## 24.13.1.1 typedef std::vector&lt;std::string&gt; WordList\_T

Definition at line 24 of file [airsched.cpp](#).

## 24.13.2 Function Documentation

## 24.13.2.1 const std::string K\_AIRSCHED\_DEFAULT\_LOG\_FILENAME ( "airsched.log" )

Default name and location for the log file.

Referenced by [readConfiguration\(\)](#).

## 24.13.2.2 const std::string K\_AIRSCHED\_DEFAULT\_INPUT\_FILENAME ( STDAIR\_SAMPLE\_DIR"/schedule03.csv" )

Default name and location for the (CSV) input file.

Referenced by [readConfiguration\(\)](#).

## 24.13.2.3 const std::string K\_AIRSCHED\_DEFAULT\_BOOKING\_REQUEST ( "NCE BKK NCE 2007-04-21 2007-03-21 08:32:00 C 1 DF RO 5 NONE 10:00:00 2000.0 20.0" )

Default booking request string, to be seached against the AirSched network.

Referenced by [main\(\)](#).

## 24.13.2.4 std::string createStringFromWordList ( const WordList\_T &amp; iWordList )

Definition at line 59 of file [airsched.cpp](#).

Referenced by [readConfiguration\(\)](#).

## 24.13.2.5 template&lt;class T&gt; std::ostream&amp; operator&lt;&lt; ( std::ostream &amp; os, const std::vector&lt; T&gt; &amp; v )

Definition at line 77 of file [airsched.cpp](#).

## 24.13.2.6 int readConfiguration ( int argc, char \* argv[], bool &amp; iolsBuiltin, bool &amp; ioReadBookingRequestFromCmdLine, stdair::Filename\_T &amp; ioInputFilename, std::string &amp; ioLogFilename, std::string &amp; ioBookingRequestString )

Read and parse the command line options.

Definition at line 87 of file [airsched.cpp](#).

References [createStringFromWordList\(\)](#), [K\\_AIRSCHED\\_DEFAULT\\_BOOKING\\_REQUEST\\_MODE](#), [K\\_AIRSCHED\\_DEFAULT\\_BUILT\\_IN\\_INPUT](#), [K\\_AIRSCHED\\_DEFAULT\\_INPUT\\_FILENAME\(\)](#), [K\\_AIRSCHED\\_DEFAULT\\_LOG\\_FILENAME\(\)](#), and [K\\_AIRSCHED\\_EARLY\\_RETURN\\_STATUS](#).

Referenced by [main\(\)](#).

## 24.13.2.7 stdair::BookingRequestStruct parseBookingRequest ( const std::string &amp; iRequestOption )

Definition at line 230 of file [airsched.cpp](#).

Referenced by [main\(\)](#).

## 24.13.2.8 int main ( int argc, char \* argv[] )

Definition at line 335 of file [airsched.cpp](#).

References [AIRSCHED::AIRSCHED\\_Service::buildSampleBom\(\)](#), [AIRSCHED::AIRSCHED\\_Service::buildSegmentPathList\(\)](#), [K\\_AIRSCHED\\_DEFAULT\\_BOOKING\\_REQUEST\(\)](#), [K\\_AIRSCHED\\_EARLY\\_RETURN\\_STATUS](#), [AIRSCHED::AIRSCHED\\_Service::parseAndLoad\(\)](#), [parseBookingRequest\(\)](#), and [readConfiguration\(\)](#).

## 24.13.3 Variable Documentation

## 24.13.3.1 const bool K\_AIRSCHED\_DEFAULT\_BUILT\_IN\_INPUT = false

Default for the BOM tree building. The BOM tree can either be built-in or provided by an input file. That latter must then be given with the -s option.

Definition at line 44 of file [airsched.cpp](#).

Referenced by [readConfiguration\(\)](#).

## 24.13.3.2 const bool K\_AIRSCHED\_DEFAULT\_BOOKING\_REQUEST\_MODE = false

Default for the input type. It can be either built-in or provided by an input file. That latter must then be given with the -i option.

Definition at line 50 of file [airsched.cpp](#).

Referenced by [readConfiguration\(\)](#).

## 24.13.3.3 const int K\_AIRSCHED\_EARLY\_RETURN\_STATUS = 99

Early return status (so that it can be differentiated from an error).

Definition at line 84 of file [airsched.cpp](#).

Referenced by [main\(\)](#), and [readConfiguration\(\)](#).

## 24.14 airsched.cpp

```

00001 // STL
00002 #include <cassert>
00003 #include <sstream>
00004 #include <fstream>
00005 #include <string>
00006 // Boost (Extended STL)
00007 #include <boost/date_time/posix_time/posix_time.hpp>
00008 #include <boost/date_time/gregorian/gregorian.hpp>
00009 #include <boost/program_options.hpp>
00010 #include <boost/tokenizer.hpp>
00011 #include <boost/lexical_cast.hpp>
00012 // StdAir
00013 #include <stdair/STDAIR_Service.hpp>
00014 #include <stdair/bom/BomDisplay.hpp>
00015 #include <stdair/bom/BookingRequestStruct.hpp>
00016 #include <stdair/bom/TravelSolutionStruct.hpp>
00017 #include <stdair/service/Logger.hpp>
00018 // AirSched
00019 #include <airsched/AIRSCHED_Service.hpp>
00020 #include <airsched/batches/BookingRequestParser.hpp>
00021 #include <airsched/config/airsched-paths.hpp>
00022
00023 // ////////// Type definitions //////////
00024 typedef std::vector<std::string> WordList_T;
00025
00026
00027 // ////////// Constants //////////
00031 const std::string K_AIRSCHED_DEFAULT_LOG_FILENAME
    ("airsched.log");
00032
00036 const std::string K_AIRSCHED_DEFAULT_INPUT_FILENAME
    (STDAIR_SAMPLE_DIR
    "/schedule03.csv");
00037
00038

```

```

00044 const bool K_AIRSCHED_DEFAULT_BUILT_IN_INPUT =
    false;
00045
00050 const bool K_AIRSCHED_DEFAULT_BOOKING_REQUEST_MODE
    = false;
00051
00056 const std::string K_AIRSCHED_DEFAULT_BOOKING_REQUEST
    ("NCE BKK NCE 2007-04-21 2007-03-21 08:32:00 C 1 DF RO 5 NONE 10:00:00 2000.0
    20.0");
00057
00058 // //////////////////////////////////////
00059 std::string createStringFromWordList (const WordList_T
& iWordList) {
00060     std::ostringstream oStr;
00061
00062     unsigned short idx = iWordList.size();
00063     for (WordList_T::const_iterator itWord = iWordList.begin();
00064          itWord != iWordList.end(); ++itWord, --idx) {
00065         const std::string& lWord = *itWord;
00066         oStr << lWord;
00067         if (idx > 1) {
00068             oStr << " ";
00069         }
00070     }
00071
00072     return oStr.str();
00073 }
00074
00075 // ////////// Parsing of Options & Configuration //////////
00076 // A helper function to simplify the main part.
00077 template<class T> std::ostream& operator<< (std::ostream& os,
00078 const std::vector<T>& v) {
00079     std::copy (v.begin(), v.end(), std::ostream_iterator<T> (std::cout, " "));
00080     return os;
00081 }
00082
00084 const int K_AIRSCHED_EARLY_RETURN_STATUS = 99;
00085
00087 int readConfiguration (int argc, char* argv[],
00088 bool& ioIsBuiltin, bool& ioReadBookingRequestFromCmdLine
,
00089 stdair::Filename_T& ioInputFilename,
00090 std::string& ioLogFilename,
00091 std::string& ioBookingRequestString) {
00092
00093     // Default for the built-in input
00094     ioIsBuiltin = K_AIRSCHED_DEFAULT_BUILT_IN_INPUT
;
00095
00096     // Default for the booking request mode (whether it is read from
command-line)
00097     ioReadBookingRequestFromCmdLine = K_AIRSCHED_DEFAULT_BOOKING_REQUEST_MODE
;
00098
00099     //
00100     WordList_T lWordList;
00101
00102     // Declare a group of options that will be allowed only on command line
00103     boost::program_options::options_description generic ("Generic options");
00104     generic.add_options()
00105         ("prefix", "print installation prefix")
00106         ("version,v", "print version string")
00107         ("help,h", "produce help message");
00108
00109     // Declare a group of options that will be allowed both on command
00110     // line and in config file
00111     boost::program_options::options_description config ("Configuration");
00112     config.add_options()
00113         ("builtin,b",
00114          "The sample BOM tree can be either built-in or parsed from input files. In
that latter case, the -i/--input option must be specified as well")
00115         ("input,i",
00116          boost::program_options::value< std::string >(&ioInputFilename)->
default_value(K_AIRSCHED_DEFAULT_INPUT_FILENAME),
00117          "(CSV) input file specifying the schedule (flight-period) entries")
00118         ("log,l",
00119          boost::program_options::value< std::string >(&ioLogFilename)->
default_value(K_AIRSCHED_DEFAULT_LOG_FILENAME),
00120          "Filename for the logs")
00121         ("read_booking_request,r",
00122          "Indicates that a booking request is given as a command-line option. That
latter must then be given with the -b/--bkg_req option")
00123         ("bkg_req,q",
00124          boost::program_options::value< WordList_T >(&lWordList)->multitoken(),
00125          "Booking request word list (e.g. 'NCE BKK NCE 2007-04-21 2007-04-21
10:00:00 C 1 DF RO 5 NONE 10:00:00 2000.0 20.0'), which should be located at the end of
the command line (otherwise, the other options would be interpreted as part of

```

```

that booking request word list)")
00126     ;
00127
00128     // Hidden options, will be allowed both on command line and
00129     // in config file, but will not be shown to the user.
00130     boost::program_options::options_description hidden ("Hidden options");
00131     hidden.add_options()
00132         ("copyright",
00133          boost::program_options::value< std::vector<std::string> >(),
00134          "Show the copyright (license)");
00135
00136     boost::program_options::options_description cmdline_options;
00137     cmdline_options.add(generic).add(config).add(hidden);
00138
00139     boost::program_options::options_description config_file_options;
00140     config_file_options.add(config).add(hidden);
00141
00142     boost::program_options::options_description visible ("Allowed options");
00143     visible.add(generic).add(config);
00144
00145     boost::program_options::positional_options_description p;
00146     p.add ("copyright", -1);
00147
00148     boost::program_options::variables_map vm;
00149     boost::program_options::
00150         store (boost::program_options::command_line_parser (argc, argv).
00151              options (cmdline_options).positional(p).run(), vm);
00152
00153     std::ifstream ifs ("airsched.cfg");
00154     boost::program_options::store (parse_config_file (ifs, config_file_options),
00155                                   vm);
00156     boost::program_options::notify (vm);
00157
00158     if (vm.count ("help")) {
00159         std::cout << visible << std::endl;
00160         return K_AIRSCHEDED_EARLY_RETURN_STATUS;
00161     }
00162
00163     if (vm.count ("version")) {
00164         std::cout << PACKAGE_NAME << ", version " << PACKAGE_VERSION << std::endl;
00165         return K_AIRSCHEDED_EARLY_RETURN_STATUS;
00166     }
00167
00168     if (vm.count ("prefix")) {
00169         std::cout << "Installation prefix: " << PREFIXDIR << std::endl;
00170         return K_AIRSCHEDED_EARLY_RETURN_STATUS;
00171     }
00172
00173     if (vm.count ("builtin")) {
00174         ioIsBuiltin = true;
00175     }
00176     const std::string isBuiltinStr = (ioIsBuiltin == true)?"yes":"no";
00177     std::cout << "The BOM should be built-in? " << isBuiltinStr << std::endl;
00178
00179     //
00180     std::ostringstream oErrorMessageStr;
00181     oErrorMessageStr << "Either the -b/--builtin option, or the -i/--input option
00182
00183         << " must be specified";
00184
00185     if (ioIsBuiltin == false) {
00186         if (vm.count ("input")) {
00187             ioInputFilename = vm["input"].as< std::string >();
00188             std::cout << "Input filename is: " << ioInputFilename << std::endl;
00189         } else {
00190             // The built-in option is not selected. However, no schedule input file
00191             // is specified
00192             std::cerr << oErrorMessageStr.str() << std::endl;
00193         }
00194     }
00195
00196     //
00197     if (vm.count ("read_booking_request")) {
00198         ioReadBookingRequestFromCmdLine = true;
00199     }
00200     const std::string readBookingRequestFromCmdLineStr =
00201         (ioReadBookingRequestFromCmdLine == true)?"yes":"no";
00202     std::cout << "A booking request is to be given as command-line option? "
00203         << readBookingRequestFromCmdLineStr << std::endl;
00204
00205     if (ioReadBookingRequestFromCmdLine == true) {
00206
00207         if (lWordList.empty() == true) {
00208             std::cerr << "When the --read_booking_request/-r option is given, "
00209                 << "a query must also be provided (with the --bkg_req/-b "
00210                 << "option at the end of the command-line)" << std::endl;

```

```

00211         return K_AIRSCHED_EARLY_RETURN_STATUS;
00212     }
00213
00214     // Rebuild the booking request query string
00215     ioBookingRequestString = createStringFromWordList (
00216         lWordList);
00217     std::cout << "The booking request string is: " << ioBookingRequestString
00218         << std::endl;
00219 }
00220
00221 if (vm.count ("log")) {
00222     ioLogFilename = vm["log"].as< std::string >();
00223     std::cout << "Log filename is: " << ioLogFilename << std::endl;
00224 }
00225
00226 return 0;
00227 }
00228 // //////////////////////////////////////
00229 stdair::BookingRequestStruct
00230 parseBookingRequest (const std::string& iRequestOption) {
00231     typedef boost::tokenizer<boost::char_separator<char> > tokenizer;
00232     boost::char_separator<char> sep(" -");
00233
00234     tokenizer tokens (iRequestOption, sep);
00235
00236     // Origin (e.g., "NCE")
00237     tokenizer::iterator tok_iter = tokens.begin();
00238     assert (tok_iter != tokens.end());
00239     const stdair::AirportCode_T iOrigin (*tok_iter);
00240
00241     // Destination (e.g., "BKK")
00242     ++tok_iter; assert (tok_iter != tokens.end());
00243     const stdair::AirportCode_T iDestination (*tok_iter);
00244
00245     // POS (e.g., "NCE")
00246     ++tok_iter; assert (tok_iter != tokens.end());
00247     const stdair::AirportCode_T iPOS (*tok_iter);
00248
00249     // Preferred departure date (e.g., "2007-04-21")
00250     ++tok_iter; assert (tok_iter != tokens.end());
00251     const short lDepDateYear = boost::lexical_cast<short> (*tok_iter);
00252     ++tok_iter; assert (tok_iter != tokens.end());
00253     const short lDepDateMonth = boost::lexical_cast<short> (*tok_iter);
00254     ++tok_iter; assert (tok_iter != tokens.end());
00255     const short lDepDateDay = boost::lexical_cast<short> (*tok_iter);
00256     const stdair::Date_T iDepartureDate (lDepDateYear, lDepDateMonth, lDepDateDay)
00257 ;
00258
00259 // Request date (e.g., "2007-03-21")
00260 ++tok_iter; assert (tok_iter != tokens.end());
00261 const short lReqDateYear = boost::lexical_cast<short> (*tok_iter);
00262 ++tok_iter; assert (tok_iter != tokens.end());
00263 const short lReqDateMonth = boost::lexical_cast<short> (*tok_iter);
00264 ++tok_iter; assert (tok_iter != tokens.end());
00265 const short lReqDateDay = boost::lexical_cast<short> (*tok_iter);
00266 const stdair::Date_T iRequestDate (lReqDateYear, lReqDateMonth, lReqDateDay);
00267
00268 // Request time (e.g., "08:34:23")
00269 ++tok_iter; assert (tok_iter != tokens.end());
00270 const short lReqTimeHours = boost::lexical_cast<short> (*tok_iter);
00271 ++tok_iter; assert (tok_iter != tokens.end());
00272 const short lReqTimeMinutes = boost::lexical_cast<short> (*tok_iter);
00273 ++tok_iter; assert (tok_iter != tokens.end());
00274 const short lReqTimeSeconds = boost::lexical_cast<short> (*tok_iter);
00275 const stdair::Duration_T iRequestTime (lReqTimeHours, lReqTimeMinutes,
00276     lReqTimeSeconds);
00277
00278 // Request date-time (aggregation of the two items above)
00279 const stdair::DateTime_T iRequestDateTime (iRequestDate, iRequestTime);
00280
00281 // Preferred cabin (e.g., "C")
00282 ++tok_iter; assert (tok_iter != tokens.end());
00283 const stdair::CabinCode_T iPreferredCabin (*tok_iter);
00284
00285 // Party size (e.g., 1)
00286 ++tok_iter; assert (tok_iter != tokens.end());
00287 const stdair::NbOfSeats_T iPartySize = 1;
00288
00289 // Channel (e.g., "DF")
00290 ++tok_iter; assert (tok_iter != tokens.end());
00291 const stdair::ChannelLabel_T iChannel (*tok_iter);
00292
00293 // Trip type (e.g., "RO")
00294 ++tok_iter; assert (tok_iter != tokens.end());
00295 const stdair::TripType_T iTripType (*tok_iter);

```

```

00296 // Stay duration (e.g., 5)
00297 ++tok_iter; assert (tok_iter != tokens.end());
00298 const stdair::DayDuration_T iStayDuration = 5;
00299
00300 // Frequent flyer (e.g., "NONE")
00301 ++tok_iter; assert (tok_iter != tokens.end());
00302 const stdair::FrequentFlyer_T iFrequentFlyerType ("NONE");
00303
00304 // Preferred departure time (e.g., "10:00:00")
00305 ++tok_iter; assert (tok_iter != tokens.end());
00306 const short lPrefTimeHours = boost::lexical_cast<short> (*tok_iter);
00307 ++tok_iter; assert (tok_iter != tokens.end());
00308 const short lPrefTimeMinutes = boost::lexical_cast<short> (*tok_iter);
00309 ++tok_iter; assert (tok_iter != tokens.end());
00310 const short lPrefTimeSeconds = boost::lexical_cast<short> (*tok_iter);
00311 const stdair::Duration_T iPreferredDepartureTime (lPrefTimeHours,
00312                                                    lPrefTimeMinutes,
00313                                                    lPrefTimeSeconds);
00314
00315 // Willingness-to-pay (e.g., 2000.0)
00316 ++tok_iter; assert (tok_iter != tokens.end());
00317 const stdair::WTP_T iWTP = 2000.0;
00318
00319 // Value of time (e.g., 20.0)
00320 ++tok_iter; assert (tok_iter != tokens.end());
00321 const stdair::PriceValue_T iValueOfTime = 20.0;
00322
00323 // Build and return the booking request structure
00324 return stdair::BookingRequestStruct (iOrigin,
00325                                     iDestination, iPOS,
00326                                     iDepartureDate, iRequestDateTime,
00327                                     iPreferredCabin, iPartySize,
00328                                     iChannel, iTripType, iStayDuration,
00329                                     iFrequentFlyerType,
00330                                     iPreferredDepartureTime, iWTP,
00331                                     iValueOfTime);
00332 }
00333
00334 // ////////// M A I N //////////
00335 int main (int argc, char* argv[]) {
00336
00337     // State whether the BOM tree should be built-in or parsed from an
00338     // input file
00339     bool isBuiltin;
00340
00341     // A booking request should be given as command-line option
00342     bool readBookingRequestFromCmdLine;
00343
00344     // Input file name
00345     stdair::Filename_T lInputFilename;
00346
00347     // Output log File
00348     stdair::Filename_T lLogFilename;
00349
00350     // Booking request string
00351     std::string lBookingRequestString;
00352
00353     // Call the command-line option parser
00354     const int lOptionParserStatus =
00355         readConfiguration (argc, argv, isBuiltin,
00356                           readBookingRequestFromCmdLine,
00357                           lInputFilename, lLogFilename, lBookingRequestString);
00358
00359     if (lOptionParserStatus == K_AIRSCHED_EARLY_RETURN_STATUS
00360     ) {
00361         return 0;
00362     }
00363
00364     // Set the log parameters
00365     std::ofstream logOutputFile;
00366     // Open and clean the log outputfile
00367     logOutputFile.open (lLogFilename.c_str());
00368     logOutputFile.clear();
00369
00370     // Initialise the AirSched service object
00371     const stdair::BasLogParams lLogParams (stdair::LOG::DEBUG, logOutputFile);
00372     AIRSCHED::AIRSCHED_Service airschedService (
00373         lLogParams);
00374
00375     // Check whether or not (CSV) input files should be read
00376     if (isBuiltin == true) {
00377         // Build the sample BOM tree
00378         airschedService.buildSampleBom();
00379     } else {
00380         // Build the BOM tree from parsing input files

```

```

00380     airschedService.parseAndLoad (lInputFilename);
00381 }
00382
00383 // Check whether or not a booking request is given as a command-line option
00384 if (readBookingRequestFromCmdLine == false) {
00385     lBookingRequestString = K_AIRSCHED_DEFAULT_BOOKING_REQUEST
;
00386 }
00387
00388 // DEBUG
00389 STDAIR_LOG_DEBUG("Booking request string: '" << lBookingRequestString << "'")
;
00390
00391 // Create a booking request object
00392 const stdair::BookingRequestStruct& lBookingRequest =
00393     parseBookingRequest (lBookingRequestString);
00394
00395 //
00396 stdair::TravelSolutionList_T lTravelSolutionList;
00397 airschedService.buildSegmentPathList (lTravelSolutionList
, lBookingRequest);
00398
00399 // DEBUG
00400 STDAIR_LOG_DEBUG ("Parsed booking request: " << lBookingRequest);
00401
00402 // DEBUG
00403 std::ostream oStream;
00404 stdair::BomDisplay::csvDisplay (oStream, lTravelSolutionList);
00405 STDAIR_LOG_DEBUG (oStream.str());
00406
00407 // Close the Log outputFile
00408 logOutputFile.close();
00409
00410 return 0;
00411 }

```

## 24.15 airsched/batches/BookingRequestParser.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <fstream>
#include <boost/date_time/posix_time/posix_time.hpp>
#include <boost/date_time/gregorian/gregorian.hpp>
#include <boost/spirit/home/classic/core.hpp>
#include <boost/spirit/home/classic/attribute.hpp>
#include <boost/spirit/home/classic/utility/functor_parser.hpp>
#include <boost/spirit/home/classic/utility/loops.hpp>
#include <boost/spirit/home/classic/utility/chset.hpp>
#include <boost/spirit/home/classic/utility/config.hpp>
#include <boost/spirit/home/classic/iterator/file_iterator.hpp>
#include <boost/spirit/home/classic/actor/push_back_actor.hpp>
#include <boost/spirit/home/classic/actor/assign_actor.hpp>
#include <stdair/service/Logger.hpp>
#include <airsched/batches/BookingRequestParser.hpp>

```

### Classes

- struct [airsched::store\\_place\\_element](#)
- struct [airsched::store\\_date](#)
- struct [airsched::store\\_airline\\_sign](#)
- struct [airsched::store\\_airline\\_code](#)
- struct [airsched::store\\_airline\\_name](#)
- struct [airsched::store\\_passenger\\_number](#)
- struct [airsched::store\\_adult\\_passenger\\_type](#)
- struct [airsched::store\\_child\\_passenger\\_type](#)
- struct [airsched::store\\_pet\\_passenger\\_type](#)

- struct [airsched::SearchStringParser](#)
- struct [airsched::SearchStringParser::definition< ScannerT >](#)

#### Namespaces

- namespace [airsched](#)

#### Macros

- `#define` [BOOST\\_SPIRIT\\_DEBUG](#)

#### Typedefs

- typedef char [char\\_t](#)
- typedef char const \* [iterator\\_t](#)
- typedef  
boost::spirit::classic::scanner  
< [iterator\\_t](#) > [scanner\\_t](#)
- typedef  
boost::spirit::classic::rule  
< [scanner\\_t](#) > [rule\\_t](#)

#### Functions

- SearchString\_T [airsched::parseBookingRequest](#) (const std::string &iSearchString)

#### Variables

- boost::spirit::classic::int\_parser  
< unsigned int, 10, 1, 1 > [airsched::int1\\_p](#)
- boost::spirit::classic::uint\_parser  
< unsigned int, 10, 1, 1 > [airsched::uint1\\_p](#)
- boost::spirit::classic::uint\_parser  
< unsigned int, 10, 1, 2 > [airsched::uint1\\_2\\_p](#)
- boost::spirit::classic::uint\_parser  
< int, 10, 2, 2 > [airsched::uint2\\_p](#)
- boost::spirit::classic::uint\_parser  
< int, 10, 2, 4 > [airsched::uint2\\_4\\_p](#)
- boost::spirit::classic::uint\_parser  
< int, 10, 4, 4 > [airsched::uint4\\_p](#)
- boost::spirit::classic::uint\_parser  
< int, 10, 1, 4 > [airsched::uint1\\_4\\_p](#)

### 24.15.1 Macro Definition Documentation

#### 24.15.1.1 `#define BOOST_SPIRIT_DEBUG`

Definition at line 12 of file [BookingRequestParser.cpp](#).

### 24.15.2 Typedef Documentation

#### 24.15.2.1 typedef char `char_t`

Definition at line 28 of file [BookingRequestParser.cpp](#).



## 24.15.2.2 typedef char const\* iterator\_t

Definition at line 29 of file [BookingRequestParser.cpp](#).

## 24.15.2.3 typedef boost::spirit::classic::scanner&lt;iterator\_t&gt; scanner\_t

Definition at line 31 of file [BookingRequestParser.cpp](#).

## 24.15.2.4 typedef boost::spirit::classic::rule&lt;scanner\_t&gt; rule\_t

Definition at line 32 of file [BookingRequestParser.cpp](#).

## 24.16 BookingRequestParser.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 #include <fstream>
00008 // Boost (Extended STL)
00009 #include <boost/date_time/posix_time/posix_time.hpp>
00010 #include <boost/date_time/gregorian/gregorian.hpp>
00011 // Boost Spirit (Parsing)
00012 #define BOOST_SPIRIT_DEBUG
00013 #include <boost/spirit/home/classic/core.hpp>
00014 #include <boost/spirit/home/classic/attribute.hpp>
00015 #include <boost/spirit/home/classic/utility/functor_parser.hpp>
00016 #include <boost/spirit/home/classic/utility/loops.hpp>
00017 #include <boost/spirit/home/classic/utility/chset.hpp>
00018 #include <boost/spirit/home/classic/utility/confix.hpp>
00019 #include <boost/spirit/home/classic/iterator/file_iterator.hpp>
00020 #include <boost/spirit/home/classic/actor/push_back_actor.hpp>
00021 #include <boost/spirit/home/classic/actor/assign_actor.hpp>
00022 // StdAir
00023 #include <stdair/service/Logger.hpp>
00024 // AirSched
00025 #include <airsched/batches/BookingRequestParser.hpp>
00026 >
00027 // Type definitions
00028 typedef char char_t;
00029 typedef char const* iterator_t;
00030 //typedef boost::spirit::classic::file_iterator<char_t> iterator_t;
00031 typedef boost::spirit::classic::scanner<iterator_t> scanner_t;
00032 typedef boost::spirit::classic::rule<scanner_t> rule_t;
00033
00034 namespace airsched {
00035
00036     struct store_place_element {
00037         store_place_element (SearchString_T&
00038             ioSearchString)
00039             : _searchString (ioSearchString) {}
00040
00041         void operator() (iterator_t iStr, iterator_t
00042             iStrEnd) const {
00043             std::string lPlace (iStr, iStrEnd);
00044             // std::cout << "Place: " << lPlace << std::endl;
00045
00046             // Set the place
00047             _searchString._tmpPlace._name += " " + lPlace;
00048
00049             // Add the parsed place to the list
00050             // _searchString._placeList.push_back (_searchString._tmpPlace);
00051         }
00052     };
00053
00054     SearchString_T& _searchString;
00055 };
00056
00057 struct store_date {
00058     store_date (SearchString_T& ioSearchString)
00059         : _searchString (ioSearchString) {}
00060
00061     void operator() (iterator_t iStr, iterator_t
00062         iStrEnd) const {
00063         _searchString._tmpDate._date = _searchString
00064             ._tmpDate.getDate();
00065         // std::cout << "Board date: "
00066         // << _searchString._date << std::endl;

```

```

00068
00069     // Add the parsed date to the list
00070     _searchString._dateList.push_back (_searchString
00071     ._tmpDate);
00072 }
00073 SearchString_T& _searchString;
00074 };
00075
00076 struct store_airline_sign {
00077     store_airline_sign (SearchString_T&
00078     ioSearchString)
00079     : _searchString (ioSearchString) {}
00080
00081     void operator() (bool iAirlineSign) const {
00082         _searchString._tmpAirline._isPreferred
00083         = !iAirlineSign;
00084         // std::cout << "Airline is preferred: " << iAirlineSign << std::endl;
00085     }
00086 };
00087 SearchString_T& _searchString;
00088 };
00089
00090 struct store_airline_code {
00091     store_airline_code (SearchString_T&
00092     ioSearchString)
00093     : _searchString (ioSearchString) {}
00094
00095     void operator() (iterator_t iStr, iterator_t
00096     iStrEnd) const {
00097         std::string lAirlineCode (iStr, iStrEnd);
00098         _searchString._tmpAirline._code =
00099         lAirlineCode;
00100         // std::cout << "Airline code: " << lAirlineCode << std::endl;
00101
00102         // Add the parsed airline to the list
00103         _searchString._airlineList.push_back (
00104         _searchString._tmpAirline);
00105     }
00106 SearchString_T& _searchString;
00107 };
00108
00109 struct store_airline_name {
00110     store_airline_name (SearchString_T&
00111     ioSearchString)
00112     : _searchString (ioSearchString) {}
00113
00114     void operator() (iterator_t iStr, iterator_t
00115     iStrEnd) const {
00116         std::string lAirlineName (iStr, iStrEnd);
00117         _searchString._tmpAirline._name =
00118         lAirlineName;
00119         // std::cout << "Airline: " << lAirlineName << std::endl;
00120
00121         // Add the parsed airline to the list
00122         _searchString._airlineList.push_back (
00123         _searchString._tmpAirline);
00124     }
00125 SearchString_T& _searchString;
00126 };
00127
00128 struct store_passenger_number {
00129     store_passenger_number (SearchString_T&
00130     ioSearchString)
00131     : _searchString (ioSearchString) {}
00132
00133     void operator() (unsigned int iNumber) const {
00134         _searchString._tmpPassenger._number =
00135         iNumber;
00136         // std::cout << "Number of passengers: " << iNumber << std::endl;
00137     }
00138 SearchString_T& _searchString;
00139 };
00140
00141 struct store_adult_passenger_type {
00142     store_adult_passenger_type (SearchString_T
00143     & ioSearchString)
00144     : _searchString (ioSearchString) {}
00145
00146     void operator() (iterator_t iStr, iterator_t
00147     iStrEnd) const {
00148         std::string lPassengerType (iStr, iStrEnd);
00149         _searchString._tmpPassenger._type =
00150         Passenger_T::ADULT;

```

```

00154         // std::cout << "Passenger type: " << lPassengerType << std::endl;
00155
00156         // Add the parsed passenger to the list
00157         _searchString._passengerList.push_back (
00158             _searchString._tmpPassenger);
00159     }
00160     SearchString_T& _searchString;
00161 };
00162
00163 struct store_child_passenger_type {
00164     store_child_passenger_type (SearchString_T
00165 & ioSearchString)
00166         : _searchString (ioSearchString) {}
00167
00168     void operator() (iterator_t iStr, iterator_t
00169 iStrEnd) const {
00170         std::string lPassengerType (iStr, iStrEnd);
00171         _searchString._tmpPassenger._type =
00172 Passenger_T::CHILD;
00173         // std::cout << "Passenger type: " << lPassengerType << std::endl;
00174
00175         // Add the parsed passenger to the list
00176         _searchString._passengerList.push_back (
00177             _searchString._tmpPassenger);
00178     }
00179     SearchString_T& _searchString;
00180 };
00181
00182 struct store_pet_passenger_type {
00183     store_pet_passenger_type (SearchString_T
00184 & ioSearchString)
00185         : _searchString (ioSearchString) {}
00186
00187     void operator() (iterator_t iStr, iterator_t
00188 iStrEnd) const {
00189         std::string lPassengerType (iStr, iStrEnd);
00190         _searchString._tmpPassenger._type =
00191 Passenger_T::PET;
00192         // std::cout << "Passenger type: " << lPassengerType << std::endl;
00193
00194         // Add the parsed passenger to the list
00195         _searchString._passengerList.push_back (
00196             _searchString._tmpPassenger);
00197     }
00198     SearchString_T& _searchString;
00199 };
00200
00201 // //////////// Utilities ////////////
00202 boost::spirit::classic::int_parser<unsigned int, 10, 1, 1> int1_p;
00203 boost::spirit::classic::uint_parser<unsigned int, 10, 1, 1> uint1_p;
00204 boost::spirit::classic::uint_parser<unsigned int, 10, 1, 2> uint1_2_p;
00205
00206 boost::spirit::classic::uint_parser<int, 10, 2, 2> uint2_p;
00207 boost::spirit::classic::uint_parser<int, 10, 2, 4> uint2_4_p;
00208 boost::spirit::classic::uint_parser<int, 10, 4, 4> uint4_p;
00209 boost::spirit::classic::uint_parser<int, 10, 1, 4> uint1_4_p;
00210
00211 //
00212 // Our calculator grammar (using subrules)
00213 //
00214 using namespace boost::spirit::classic;
00215
00216 struct SearchStringParser :
00217     public boost::spirit::classic::grammar<SearchStringParser> {
00218     SearchStringParser (SearchString_T&
00219 ioSearchString)
00220         : _searchString (ioSearchString) {}
00221
00222     template <typename ScannerT>
00223     struct definition {
00224         definition (SearchStringParser const& self) {
00225             search_string = places
00226                 >> !( dates )
00227                 >> *( preferred_airlines )
00228                 >> *( passengers )
00229                 ;
00230             places =
00231                 +( place_element )
00232                 ;
00233         }
00234     };

```

```

00271
00272     place_element =
00273         lexeme_d[ (repeat_p(1,20) [chset_p("a-z")]) [store_place_element
(self._searchString)] ]
00274     ;
00275
00276     dates =
00277         date[store_date(self._searchString)]
00278         >> !date[store_date(self._searchString)]
00279     ;
00280
00281     date =
00282         ( month | day )
00283         >> boost::spirit::classic::chset_p("/")
00284         >> ( day | month )
00285         >> ! ( boost::spirit::classic::chset_p("/")
00286                 >> year )
00287     ;
00288
00289     day =
00290         lexeme_d[ limit_d(1u,31u) [uint1_2_p] [assign_a(self.
_searchString._tmpDate._day)] ]
00291     ;
00292
00293     month =
00294         lexeme_d[ limit_d(1u,12u) [uint1_2_p] [assign_a(self.
_searchString._tmpDate._month)] ]
00295     ;
00296
00297     year =
00298         lexeme_d[ limit_d(2000u,2099u) [uint4_p] [assign_a(self.
_searchString._tmpDate._year)] ]
00299         | lexeme_d[ limit_d(0u,99u) [uint2_p] [assign_a(self.
_searchString._tmpDate._year)] ]
00300     ;
00301
00302     preferred_airlines =
00303         !(boost::spirit::classic::sign_p) [store_airline_sign
(self._searchString)]
00304         >> airline_code | airline_name
00305     ;
00306
00307     airline_code =
00308         lexeme_d[ (repeat_p(2,3) [chset_p("0-9a-z")]) [store_airline_code
(self._searchString)] ]
00309     ;
00310
00311     airline_name =
00312         lexeme_d[ (repeat_p(4,20) [chset_p("0-9a-z")]) [store_airline_name
(self._searchString)] ]
00313     ;
00314
00315     passengers =
00316         passenger_number >> passenger_type
00317     ;
00318
00319     passenger_number =
00320         lexeme_d[ limit_d(1u, 9u) [uint1_p] [store_passenger_number
(self._searchString)] ]
00321     ;
00322
00323     passenger_type =
00324         passenger_adult_type[store_adult_passenger_type
(self._searchString)]
00325         | passenger_child_type[store_child_passenger_type
(self._searchString)]
00326         | passenger_pet_type[store_pet_passenger_type
(self._searchString)]
00327     ;
00328
00329     passenger_adult_type =
00330         lexeme_d[ as_lower_d [ str_p("adult") >> !ch_p('s') ] ]
00331     ;
00332
00333     passenger_child_type =
00334         lexeme_d[ as_lower_d [ str_p("child") >> !str_p("ren") ] ]
00335     ;
00336
00337     passenger_pet_type =
00338         lexeme_d[ as_lower_d [ str_p("dog") | str_p("cat") >> !ch_p('s') ] ]
00339     ;
00340
00341     BOOST_SPIRIT_DEBUG_NODE (search_string);
00342     BOOST_SPIRIT_DEBUG_NODE (places);
00343     BOOST_SPIRIT_DEBUG_NODE (place_element);
00344     BOOST_SPIRIT_DEBUG_NODE (dates);
00345     BOOST_SPIRIT_DEBUG_NODE (date);

```

```

00346         BOOST_SPIRIT_DEBUG_NODE (day);
00347         BOOST_SPIRIT_DEBUG_NODE (month);
00348         BOOST_SPIRIT_DEBUG_NODE (year);
00349         BOOST_SPIRIT_DEBUG_NODE (preferred_airlines);
00350         BOOST_SPIRIT_DEBUG_NODE (airline_code);
00351         BOOST_SPIRIT_DEBUG_NODE (airline_name);
00352         BOOST_SPIRIT_DEBUG_NODE (passengers);
00353         BOOST_SPIRIT_DEBUG_NODE (passenger_number);
00354         BOOST_SPIRIT_DEBUG_NODE (passenger_type);
00355         BOOST_SPIRIT_DEBUG_NODE (passenger_adult_type);
00356         BOOST_SPIRIT_DEBUG_NODE (passenger_child_type);
00357         BOOST_SPIRIT_DEBUG_NODE (passenger_pet_type);
00358     }
00359
00360     boost::spirit::classic::rule<ScannerT> search_string, places,
place_element,
00361     dates, date, month, day, year,
00362     preferred_airlines, airline_code, airline_name,
00363     passengers, passenger_number, passenger_type, passenger_adult_type,
00364     passenger_child_type, passenger_pet_type;
00365
00366     boost::spirit::classic::rule<ScannerT> const& start() const { return
search_string; }
00367 };
00368
00369     SearchString_T& _searchString;
00370 };
00371
00372 // //////////////////////////////////////
00373 SearchString_T parseBookingRequest (const
std::string& iSearchString) {
00374     SearchString_T oSearchStringStruct;
00375
00376     // Read the search string
00377     iterator_t lStringIterator = iSearchString.c_str();
00378
00379     // Instantiate the structure that will hold the result of the parsing.
00380     SearchStringParser lSearchStringParser (
oSearchStringStruct);
00381     boost::spirit::classic::parse_info<iterator_t> info =
00382     boost::spirit::classic::parse (lStringIterator, lSearchStringParser,
00383     boost::spirit::classic::space_p);
00384
00385     STDAIR_LOG_DEBUG ("-----");
00386
00387     bool hasBeenParsingSuccessful = info.full;
00388     if (hasBeenParsingSuccessful == true) {
00389         STDAIR_LOG_DEBUG ("Parsing succeeded");
00390     }
00391     else {
00392         STDAIR_LOG_DEBUG ("Parsing failed");
00393     }
00394     STDAIR_LOG_DEBUG ("-----");
00395
00396     return oSearchStringStruct;
00397 }
00398
00399 }

```

## 24.17 airsched/batches/BookingRequestParser.hpp File Reference

```

#include <string>
#include <vector>

```

### Classes

- struct [airsched::Place\\_T](#)
- struct [airsched::Date\\_T](#)
- struct [airsched::Airline\\_T](#)
- struct [airsched::Passenger\\_T](#)
- struct [airsched::SearchString\\_T](#)

## Namespaces

- namespace [airsched](#)

## Typedefs

- typedef std::vector< Place\_T > [airsched::PlaceList\\_T](#)
- typedef std::vector< Date\_T > [airsched::DateList\\_T](#)
- typedef std::vector< Airline\_T > [airsched::AirlineList\\_T](#)
- typedef std::vector< Passenger\_T > [airsched::PassengerList\\_T](#)

## Functions

- SearchString\_T [airsched::parseBookingRequest](#) (const std::string &iSearchString)

## 24.18 BookingRequestParser.hpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <string>
00006 #include <vector>
00007
00008 namespace airsched {
00009
00011     struct Place_T {
00012         // Attributes
00013         std::string _name;
00014         std::string _code;
00016         Place_T () : _name (""), _code ("") {}
00017         /* Display. */
00018         void display() const {
00019             std::cout << "Place: " << _name << " (" << _code << ")" <<
std::endl;
00020         }
00021     };
00022
00024     typedef std::vector<Place_T> PlaceList_T;
00025
00027     struct Date_T {
00028         // Attributes
00029         boost::gregorian::date _date;
00030         unsigned int _reldays;
00031         unsigned int _day;
00032         unsigned int _month;
00033         unsigned int _year;
00035         Date_T () : _reldays (14), _day (1), _month (1),
_year (1970) {}
00036         /* Display. */
00037         void display() const {
00038             std::cout << "Date: " << _date << " (" << _day << "/" << _month
00039             << "/" << _year << ")", i.e. in " << _reldays << "
days"
00040             << std::endl;
00041         }
00043         boost::gregorian::date getDate() const {
00044             return boost::gregorian::date (_year, _month, _day);
00045         }
00046     };
00047
00049     typedef std::vector<Date_T> DateList_T;
00050
00052     struct Airline_T {
00053         // Attributes
00054         bool _isPreferred;
00055         std::string _name;
00056         std::string _code;
00058         Airline_T () : _isPreferred (true), _name (""),
_code ("") {}
00059         /* Display. */
00060         void display() const {
00061             const std::string isPreferredStr = (_isPreferred)?"+":"-";
00062             std::cout << "Airline: " << isPreferredStr << _name << " (" << _code
<< ")" <<
00063             << std::endl;

```

```

00064     }
00065 };
00066
00068 typedef std::vector<Airline_T> AirlineList_T;
00069
00071 struct Passenger_T {
00072     // Attributes
00073     typedef enum { ADULT = 0, CHILD, PET, LAST_VALUE }
00074     PassengerType_T;
00075     static const std::string _labels[LAST_VALUE];
00076     PassengerType_T _type;
00077     unsigned short _number;
00078     Passenger_T () : _type(ADULT), _number(1) {}
00079     /* Display. */
00080     void display() const {
00081         std::cout << "Passenger: " << _number << " (" << _labels[
00082             _type] << ")"
00083             << std::endl;
00084     };
00085
00087     const std::string Passenger_T::_labels[
00088         Passenger_T::LAST_VALUE] =
00089         { "Adult", "Child", "Pet" };
00091     typedef std::vector<Passenger_T> PassengerList_T;
00092
00094     struct SearchString_T {
00095         // Attributes
00096         PlaceList_T _placeList;
00097         DateList_T _dateList;
00098         AirlineList_T _airlineList;
00099         PassengerList_T _passengerList;
00100
00102         SearchString_T () {}
00103
00104         /* Display. */
00105         void display() const {
00106             std::cout << std::endl;
00107
00108             for (PlaceList_T::const_iterator itPlace = _placeList.begin();
00109                 itPlace != _placeList.end(); ++itPlace) {
00110                 const Place_T& lPlace = *itPlace;
00111                 lPlace.display();
00112             }
00113
00114             for (DateList_T::const_iterator itDate = _dateList.begin();
00115                 itDate != _dateList.end(); ++itDate) {
00116                 const Date_T& lDate = *itDate;
00117                 lDate.display();
00118             }
00119
00120             for (AirlineList_T::const_iterator itAirline = _airlineList.
00121                 begin();
00122                 itAirline != _airlineList.end(); ++itAirline) {
00123                 const Airline_T& lAirline = *itAirline;
00124                 lAirline.display();
00125             }
00126             for (PassengerList_T::const_iterator itPassenger = _passengerList
00127                 .begin();
00128                 itPassenger != _passengerList.end(); ++itPassenger) {
00129                 const Passenger_T& lPassenger = *itPassenger;
00130                 lPassenger.display();
00131             }
00132             std::cout << "-- Staging --" << std::endl;
00133             _tmpPlace.display();
00134         }
00135
00136         // /// Staging ///
00137         Place_T _tmpPlace;
00138         Date_T _tmpDate;
00139         Airline_T _tmpAirline;
00140         Passenger_T _tmpPassenger;
00141     };
00142
00144     //
00145     // The booking request grammar (using subrules)
00146     //
00148     SearchString_T parseBookingRequest (const
00149         std::string& iSearchString);
00150 }

```

## 24.19 airsched/bom/AirportList.hpp File Reference

```
#include <set>
#include <vector>
#include <stdair/stdair_basic_types.hpp>
```

### Namespaces

- namespace [AIRSCHED](#)

### Typedefs

- typedef std::set  
    < stdair::AirportCode\_T > [AIRSCHED::AirportList\\_T](#)
- typedef std::vector  
    < stdair::AirportCode\_T > [AIRSCHED::AirportOrderedList\\_T](#)

## 24.20 AirportList.hpp

```
00001 #ifndef __AIRSCHED_BOM_AIRPORTLIST_HPP
00002 #define __AIRSCHED_BOM_AIRPORTLIST_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <set>
00009 #include <vector>
00010 // StdAir
00011 #include <stdair/stdair_basic_types.hpp>
00012
00013 namespace AIRSCHED {
00014
00016     typedef std::set<stdair::AirportCode_T> AirportList_T;
00017     typedef std::vector<stdair::AirportCode_T> AirportOrderedList_T
00018 ;
00019 }
00020 #endif // __AIRSCHED_BOM_AIRPORTLIST_HPP
```

## 24.21 airsched/bom/BomDisplay.cpp File Reference

```
#include <cassert>
#include <ostream>
#include <stdair/basic/BasConst_BomDisplay.hpp>
#include <stdair/bom/BomManager.hpp>
#include <stdair/bom/BomRoot.hpp>
#include <airsched/bom/ReachableUniverse.hpp>
#include <airsched/bom/BomDisplay.hpp>
```

### Classes

- struct [AIRSCHED::FlagSaver](#)

### Namespaces

- namespace [AIRSCHED](#)



## 24.22 BomDisplay.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <ostream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_BomDisplay.hpp>
00009 #include <stdair/bom/BomManager.hpp>
00010 #include <stdair/bom/BomRoot.hpp>
00011 // AirSched
00012 #include <airsched/bom/ReachableUniverse.hpp>
00013 #include <airsched/bom/BomDisplay.hpp>
00014
00015 namespace AIRSCHED {
00016
00022     struct FlagSaver {
00023     public:
00025         FlagSaver (std::ostream& oStream)
00026             : _oStream (oStream), _streamFlags (oStream.flags()) {
00027         }
00028
00030         ~FlagSaver() {
00031             // Reset formatting flags of the given output stream
00032             _oStream.flags (_streamFlags);
00033         }
00034
00035     private:
00037         std::ostream& _oStream;
00039         std::ios::fmtflags _streamFlags;
00040     };
00041
00042 // //////////////////////////////////////
00043 std::string BomDisplay::csvDisplay (const
stdair::BomRoot& iBomRoot) {
00044     std::ostringstream oStream;
00045
00049     oStream << std::endl;
00050     oStream << "=====
"
00051         << std::endl;
00052     oStream << "BomRoot: " << iBomRoot.describeKey() << std::endl;
00053     oStream << "=====
"
00054         << std::endl;
00055
00056     // Check whether there are ReachableUniverse objects
00057     if (stdair::BomManager::hasList<ReachableUniverse> (iBomRoot) == false) {
00058         return oStream.str();
00059     }
00060
00061     // Retrieve the ReachableUniverse list
00062     const ReachableUniverseList_T&
lReachableUniverseList =
00063         stdair::BomManager::getList<ReachableUniverse> (iBomRoot);
00064
00065     // Browse the networks for each departure airport
00066     for (ReachableUniverseList_T::const_iterator itReachableUniverse =
00067         lReachableUniverseList.begin();
00068         itReachableUniverse != lReachableUniverseList.end();
00069         ++itReachableUniverse) {
00070         ReachableUniverse* lReachableUniverse_ptr = *
itReachableUniverse;
00071         assert (lReachableUniverse_ptr != NULL);
00072
00073         // Display the reachable universe
00074         csvDisplay (oStream, *lReachableUniverse_ptr);
00075     }
00076
00077     return oStream.str();
00078 }
00079
00080 // //////////////////////////////////////
00081 void BomDisplay::csvDisplay (std::ostream& oStream,
00082                             const ReachableUniverse&
iReachableUniverse) {
00083     // Save the formatting flags for the given STL output stream
00084     FlagSaver flagSaver (oStream);
00085
00089     oStream << "+++++" << std::endl;
00090
00090     oStream << iReachableUniverse.toString();
00091     oStream << "+++++" << std::endl;
00092 }

```

```
00093
00094 }
```

## 24.23 airsched/bom/BomDisplay.hpp File Reference

```
#include <iosfwd>
#include <string>
```

### Classes

- class [AIRSCHEDED::BomDisplay](#)  
*Utility class to display AirSched objects with a pretty format.*

### Namespaces

- namespace [stdair](#)  
*Forward declarations.*
- namespace [AIRSCHEDED](#)

## 24.24 BomDisplay.hpp

```
00001 #ifndef __AIRSCHEDED_BOM_BOMDISPLAY_HPP
00002 #define __AIRSCHEDED_BOM_BOMDISPLAY_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // AirSched
00011
00013 namespace stdair {
00014     class BomRoot;
00015 }
00016
00017 namespace AIRSCHEDED {
00018
00020     class ReachableUniverse;
00021
00026     class BomDisplay {
00027     public:
00028         // ////////////////////////////////// Display support methods //////////////////////////////////
00037         static std::string csvDisplay (const stdair::BomRoot&);
00038
00047         static void csvDisplay (std::ostream&, const ReachableUniverse
00048             &);
00049     };
00050 }
00051 #endif // __AIRSCHEDED_BOM_BOMDISPLAY_HPP
```

## 24.25 airsched/bom/FareFamilyStruct.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <airsched/bom/FareFamilyStruct.hpp>
```

### Namespaces

- namespace [AIRSCHEDED](#)

## 24.26 FareFamilyStruct.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // AIRSCHED
00008 #include <airsched/bom/FareFamilyStruct.hpp>
00009
00010 namespace AIRSCHED {
00011
00012 // //////////////////////////////////////
00013 FareFamilyStruct::
00014 FareFamilyStruct (const stdair::FamilyCode_T& iFamilyCode,
00015                  const stdair::ClassList_String_T& iClasses)
00016     : _familyCode (iFamilyCode),
00017       _classes (iClasses) {
00018 }
00019
00020 // //////////////////////////////////////
00021 const std::string FareFamilyStruct::describe()
00022 const {
00023     std::ostringstream ostr;
00024     ostr << "          " << _familyCode << " " << _classes <<
00025     ", ";
00026     return ostr.str();
00027 }

```

## 24.27 airsched/bom/FareFamilyStruct.hpp File Reference

```

#include <string>
#include <vector>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/basic/StructAbstract.hpp>

```

## Classes

- struct [AIRSCHED::FareFamilyStruct](#)

## Namespaces

- namespace [AIRSCHED](#)

## Typedefs

- typedef std::vector  
< FareFamilyStruct > [AIRSCHED::FareFamilyStructList\\_T](#)

## 24.28 FareFamilyStruct.hpp

```

00001 #ifndef __AIRSCHED_BOM_FAREFAMILYSTRUCT_HPP
00002 #define __AIRSCHED_BOM_FAREFAMILYSTRUCT_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009 #include <vector>
00010 // StdAir
00011 #include <stdair/stdair_basic_types.hpp>
00012 #include <stdair/basic/StructAbstract.hpp>
00013
00014 namespace AIRSCHED {

```

```

00015
00017 struct FareFamilyStruct : public stdair::StructAbstract {
00018     // Attributes
00019     stdair::FamilyCode_T _familyCode;
00020     stdair::ClassList_String_T _classes;
00021
00023     FareFamilyStruct (const stdair::FamilyCode_T&,
00024                     const stdair::ClassList_String_T&);
00025
00027     const std::string describe() const;
00028 };
00029
00031 typedef std::vector<FareFamilyStruct> FareFamilyStructList_T
00032 ;
00033 }
00034 #endif // __AIRSCHED_BOM_FAREFAMILYSTRUCT_HPP

```

## 24.29 airsched/bom/FlightPeriodStruct.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <stdair/basic/BasConst_Period_BOM.hpp>
#include <stdair/service/Logger.hpp>
#include <airsched/AIRSCHED_Types.hpp>
#include <airsched/bom/FlightPeriodStruct.hpp>

```

### Namespaces

- namespace [AIRSCHED](#)

## 24.30 FlightPeriodStruct.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_Period_BOM.hpp>
00009 #include <stdair/service/Logger.hpp>
00010 // AirSched
00011 #include <airsched/AIRSCHED_Types.hpp>
00012 #include <airsched/bom/FlightPeriodStruct.hpp>
00013 >
00014 namespace AIRSCHED {
00015
00016 // //////////////////////////////////////
00017 FlightPeriodStruct::FlightPeriodStruct
00018 ()
00019     : _dateRange (stdair::BOOST_DEFAULT_DATE_PERIOD),
00020       _dow (stdair::DEFAULT_DOW_STRING),
00021       _legAlreadyDefined (false), _itSeconds (0) {
00022 }
00023
00024 // //////////////////////////////////////
00024 stdair::Date_T FlightPeriodStruct::getDate() const
00025 {
00026     return stdair::Date_T (_itYear, _itMonth, _itDay);
00027 }
00028
00029 // //////////////////////////////////////
00029 stdair::Duration_T FlightPeriodStruct::getTime()
00030 const {
00031     return boost::posix_time::hours (_itHours)
00032         + boost::posix_time::minutes (_itMinutes)
00033         + boost::posix_time::seconds (_itSeconds);
00034 }
00035
00036 // //////////////////////////////////////
00036 const std::string FlightPeriodStruct::describe()
00037 const {

```

```

00037     std::ostringstream ostr;
00038     ostr << _airlineCode << _flightNumber << ", " <<
00039     _dateRange
00039         << " - " << _dow << std::endl;
00040
00041     for (LegStructList_T::const_iterator itLeg = _legList.begin();
00042          itLeg != _legList.end(); ++itLeg) {
00043         const LegStruct& lLeg = *itLeg;
00044         ostr << lLeg.describe();
00045     }
00046
00047     for (SegmentStructList_T::const_iterator itSegment = _segmentList
00048 .begin();
00048         itSegment != _segmentList.end(); ++itSegment) {
00049         const SegmentStruct& lSegment = *itSegment;
00050         ostr << lSegment.describe();
00051     }
00052
00053     //ostr << "[Debug] - Staging Leg: ";
00054     //ostr << _itLeg.describe();
00055     //ostr << "[Debug] - Staging Cabin: ";
00056     //ostr << _itCabin.describe();
00057
00058     return ostr.str();
00059 }
00060
00061 // //////////////////////////////////////
00062 void FlightPeriodStruct::addAirport (const
00063 std::air::AirportCode_T& iAirport) {
00064     AirportList_T::const_iterator itAirport = _airportList.find (
00065 iAirport);
00066     if (itAirport == _airportList.end()) {
00067         // Add the airport code to the airport set
00068         const bool insertSuccessful = _airportList.insert (iAirport).
00069 second;
00070         if (insertSuccessful == false) {
00071             // TODO: throw an exception
00072         }
00073         // Add the airport code to the airport vector
00074         _airportOrderedList.push_back (iAirport);
00075     }
00076
00077 // //////////////////////////////////////
00078 void FlightPeriodStruct::buildSegments () {
00079     // The list of airports encompasses all the airports on which
00080     // the flight takes off or lands. Moreover, that list is
00081     // time-ordered: the first airport is the initial departure of
00082     // the flight, and the last airport is the eventual point of
00083     // rest of the flight.
00084     // Be l the size of the ordered list of airports.
00085     // We want to generate all the segment combinations from the legs
00086     // and, hence, from all the possible (time-ordered) airport pairs.
00087     // Thus, we both iterator on i=0...l-1 and j=i+1...l
00088     assert (_airportOrderedList.size() >= 2);
00089
00090     _segmentList.clear();
00091     for (AirportOrderedList_T::const_iterator itAirport_i =
00092         _airportOrderedList.begin();
00093          itAirport_i != _airportOrderedList.end()-1; ++
00094 itAirport_i) {
00095         for (AirportOrderedList_T::const_iterator itAirport_j = itAirport_i + 1;
00096             itAirport_j != _airportOrderedList.end(); ++
00097 itAirport_j) {
00098             SegmentStruct lSegmentStruct;
00099             lSegmentStruct._boardingPoint = *itAirport_i;
00100             lSegmentStruct._offPoint = *itAirport_j;
00101             _segmentList.push_back (lSegmentStruct);
00102         }
00103     }
00104     // Clear the lists of airports, so that it is ready for the next flight
00105     _airportList.clear();
00106     _airportOrderedList.clear();
00107 }
00108
00109 // //////////////////////////////////////
00110 void FlightPeriodStruct::
00111 addSegmentCabin (const SegmentStruct& iSegment,
00112                 const SegmentCabinStruct& iCabin) {
00113     // Retrieve the Segment structure corresponding to the (boarding, off)
00114     point
00115     // pair.
00116     SegmentStructList_T::iterator itSegment = _segmentList.begin();

```

```

00116     for ( ; itSegment != _segmentList.end(); ++itSegment) {
00117         const SegmentStruct& lSegment = *itSegment;
00118
00119         const stdair::AirportCode_T& lBoardingPoint = iSegment._boardingPoint
;
00120         const stdair::AirportCode_T& lOffPoint = iSegment._offPoint;
00121         if (lSegment._boardingPoint == lBoardingPoint
00122             && lSegment._offPoint == lOffPoint) {
00123             break;
00124         }
00125     }
00126
00132     if (itSegment == _segmentList.end()) {
00133         std::ostringstream ostr;
00134         ostr << "Within the schedule input file, there is a flight, for which "
00135             << "the airports of segments and those of the legs "
00136             << "do not correspond";
00137         STDAIR_LOG_ERROR (ostr.str());
00138         throw SegmentDateNotFoundException (ostr.str(
));
00139     }
00140
00141     // Add the Cabin structure to the Segment Cabin structure.
00142     assert (itSegment != _segmentList.end());
00143     SegmentStruct& lSegment = *itSegment;
00144     lSegment._cabinList.push_back (iCabin);
00145 }
00146
00147 // ////////////////////////////////////////
00148 void FlightPeriodStruct::
00149 addSegmentCabin (const SegmentCabinStruct&
iCabin) {
00150     // Iterate on all the Segment structures (as they get the same cabin
00151     // definitions)
00152     for (SegmentStructList_T::iterator itSegment = _segmentList.
begin();
00153         itSegment != _segmentList.end(); ++itSegment) {
00154         SegmentStruct& lSegment = *itSegment;
00155
00156         lSegment._cabinList.push_back (iCabin);
00157     }
00158 }
00159
00160 // ////////////////////////////////////////
00161 void FlightPeriodStruct::
00162 addFareFamily (const SegmentStruct& iSegment,
00163               const SegmentCabinStruct& iCabin,
00164               const FareFamilyStruct& iFareFamily) {
00165     // Retrieve the Segment structure corresponding to the (boarding, off)
point
00166     // pair.
00167     SegmentStructList_T::iterator itSegment = _segmentList.begin();
00168     for ( ; itSegment != _segmentList.end(); ++itSegment) {
00169         const SegmentStruct& lSegment = *itSegment;
00170
00171         const stdair::AirportCode_T& lBoardingPoint = iSegment._boardingPoint
;
00172         const stdair::AirportCode_T& lOffPoint = iSegment._offPoint;
00173         if (lSegment._boardingPoint == lBoardingPoint
00174             && lSegment._offPoint == lOffPoint) {
00175             break;
00176         }
00177     }
00178
00184     if (itSegment == _segmentList.end()) {
00185         std::ostringstream ostr;
00186         ostr << "Within the schedule input file, there is a flight, for which "
00187             << "the airports of segments and those of the legs "
00188             << "do not correspond";
00189         STDAIR_LOG_ERROR (ostr.str());
00190         throw SegmentDateNotFoundException (ostr.str(
));
00191     }
00192
00193     // Add the Cabin structure to the Segment Cabin structure.
00194     assert (itSegment != _segmentList.end());
00195     SegmentStruct& lSegment = *itSegment;
00196
00197     // Retrieve the Segment cabin structure given the cabin code
00198     SegmentCabinStructList_T::iterator itCabin = lSegment._cabinList.
begin();
00199     for ( ; itCabin != lSegment._cabinList.end(); ++itCabin) {
00200         const SegmentCabinStruct& lCabin = *itCabin;
00201
00202         const stdair::CabinCode_T& lCabinCode = lCabin._cabinCode;
00203         if (iCabin._cabinCode == lCabinCode) {
00204             break;

```

```

00205     }
00206 }
00207
00213 if (itCabin == lSegment._cabinList.end()) {
00214     std::ostringstream oStr;
00215     oStr << "Within the schedule input file, there is a flight "
00216         << "for which the cabin code does not exist.";
00217     STDAIR_LOG_ERROR (oStr.str());
00218     throw SegmentDateNotFoundException (oStr.str(
00219 ));
00219 }
00220
00221 // Add the Cabin structure to the Segment Cabin structure.
00222 assert (itCabin != lSegment._cabinList.end());
00223 SegmentCabinStruct& lCabin = *itCabin;
00224 lCabin._fareFamilies.push_back(iFareFamily);
00225 }
00226
00227 // //////////////////////////////////////
00228 void FlightPeriodStruct::
00229 addFareFamily (const SegmentCabinStruct&
00230 iCabin,
00231               const FareFamilyStruct& iFareFamily) {
00232     // Iterate on all the Segment structures (as they get the same cabin
00233     // definitions)
00234     for (SegmentStructList_T::iterator itSegment = _segmentList.
00235         begin();
00236         itSegment != _segmentList.end(); ++itSegment) {
00237         SegmentStruct& lSegment = *itSegment;
00238
00239         // Retrieve the Segment cabin structure given the cabin code
00240         SegmentCabinStructList_T::iterator itCabin = lSegment._cabinList
00241             .begin();
00242         for ( ; itCabin != lSegment._cabinList.end(); ++itCabin) {
00243             const SegmentCabinStruct& lCabin = *itCabin;
00244
00245             const stdair::CabinCode_T& lCabinCode = lCabin._cabinCode;
00246             if (iCabin._cabinCode == lCabinCode) {
00247                 break;
00248             }
00249         }
00250
00251         if (itCabin == lSegment._cabinList.end()) {
00252             std::ostringstream oStr;
00253             oStr << "Within the schedule input file, there is a flight "
00254                 << "for which the cabin code does not exist.";
00255             STDAIR_LOG_ERROR (oStr.str());
00256             throw SegmentDateNotFoundException (oStr.
00257                 str());
00258         }
00259
00260         // Add the Cabin structure to the Segment Cabin structure.
00261         assert (itCabin != lSegment._cabinList.end());
00262         SegmentCabinStruct& lCabin = *itCabin;
00263         lCabin._fareFamilies.push_back(iFareFamily);
00264     }
00265 }
00266
00267 }
00268
00269 }

```

## 24.31 airsched/bom/FlightPeriodStruct.hpp File Reference

```

#include <string>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/basic/StructAbstract.hpp>
#include <stdair/bom/DoWStruct.hpp>
#include <airsched/bom/LegCabinStruct.hpp>
#include <airsched/bom/LegStruct.hpp>
#include <airsched/bom/SegmentStruct.hpp>
#include <airsched/bom/SegmentCabinStruct.hpp>
#include <airsched/bom/FareFamilyStruct.hpp>
#include <airsched/bom/AirportList.hpp>

```

## Classes

- struct AIRSCHED::FlightPeriodStruct

## Namespaces

- namespace AIRSCHED

## 24.32 FlightPeriodStruct.hpp

```

00001 #ifndef __AIRSCHED_BOM_FLIGHTPERIODSTRUCT_HPP
00002 #define __AIRSCHED_BOM_FLIGHTPERIODSTRUCT_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // StdAir
00010 #include <stdair/stdair_basic_types.hpp>
00011 #include <stdair/basic/StructAbstract.hpp>
00012 #include <stdair/bom/DoWStruct.hpp>
00013 // AirSched
00014 #include <airsched/bom/LegCabinStruct.hpp>
00015 #include <airsched/bom/LegStruct.hpp>
00016 #include <airsched/bom/SegmentStruct.hpp>
00017 #include <airsched/bom/SegmentCabinStruct.hpp>
00018 >
00019 #include <airsched/bom/FareFamilyStruct.hpp>
00020 #include <airsched/bom/AirportList.hpp>
00021
00022 namespace AIRSCHED {
00023
00026     struct FlightPeriodStruct : public stdair::StructAbstract {
00027
00029         stdair::Date_T getDate() const;
00030
00032         stdair::Duration_T getTime() const;
00033
00035         const std::string describe() const;
00036
00039         void addAirport (const stdair::AirportCode_T&);
00040
00042         void buildSegments();
00043
00050         void addSegmentCabin (const SegmentStruct&,
00051                             const SegmentCabinStruct&);
00052
00058         void addSegmentCabin (const SegmentCabinStruct
00059                               &);
00066         void addFareFamily (const SegmentStruct&,
00067                             const SegmentCabinStruct&,
00068                             const FareFamilyStruct&);
00069
00075         void addFareFamily (const SegmentCabinStruct
00076                               &,
00077                             const FareFamilyStruct&);
00081         FlightPeriodStruct();
00082
00083         // Attributes
00084         stdair::AirlineCode_T _airlineCode;
00085         stdair::FlightNumber_T _flightNumber;
00086         stdair::DatePeriod_T _dateRange;
00087         stdair::DoWStruct _dow;
00088         LegStructList_T _legList;
00089         SegmentStructList_T _segmentList;
00090
00093         bool _legAlreadyDefined;
00094         LegStruct _itLeg;
00095         LegCabinStruct _itLegCabin;
00096
00098         stdair::Date_T _dateRangeStart;
00099         stdair::Date_T _dateRangeEnd;
00100         unsigned int _itYear;
00101         unsigned int _itMonth;
00102         unsigned int _itDay;
00103         int _dateOffset;
00104

```



```

00106     long _itHours;
00107     long _itMinutes;
00108     long _itSeconds;
00109
00112     AirportList_T _airportList;
00113     AirportOrderedList_T _airportOrderedList
00114 ;
00116     bool _areSegmentDefinitionsSpecific;
00117     SegmentStruct _itSegment;
00118     SegmentCabinStruct _itSegmentCabin;
00119 };
00120
00121 }
00122 #endif // __AIRSCHED_BOM_FLIGHTPERIODSTRUCT_HPP

```

## 24.33 airsched/bom/LegCabinStruct.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <stdair/bom/LegCabin.hpp>
#include <airsched/bom/LegCabinStruct.hpp>

```

### Namespaces

- namespace [AIRSCHED](#)

## 24.34 LegCabinStruct.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // STDAIR
00008 #include <stdair/bom/LegCabin.hpp>
00009 // AIRSCHED
00010 #include <airsched/bom/LegCabinStruct.hpp>
00011
00012 namespace AIRSCHED {
00013
00014     // //////////////////////////////////////
00015     const std::string LegCabinStruct::describe() const {
00016         std::ostringstream ostr;
00017         ostr << " " << _cabinCode << " " << _capacity <<
00018         ", ";
00019         return ostr.str();
00020     }
00021
00022     // //////////////////////////////////////
00023     void LegCabinStruct::fill (stdair::LegCabin& ioLegCabin)
00024     const {
00025         // Set the Capacity
00026         ioLegCabin.setCapacities (_capacity);
00027     }
00028 }

```

## 24.35 airsched/bom/LegCabinStruct.hpp File Reference

```

#include <string>
#include <vector>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/basic/StructAbstract.hpp>

```

## Classes

- struct [AIRSCHEd::LegCabinStruct](#)

## Namespaces

- namespace [stdair](#)  
*Forward declarations.*
- namespace [AIRSCHEd](#)

## Typedefs

- typedef std::vector  
< LegCabinStruct > [AIRSCHEd::LegCabinStructList\\_T](#)

## 24.36 LegCabinStruct.hpp

```

00001 #ifndef __AIRSCHEd_BOM_LEGcABINSTRUCT_HPP
00002 #define __AIRSCHEd_BOM_LEGcABINSTRUCT_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009 #include <vector>
00010 // StdAir
00011 #include <stdair/stdair_inventory_types.hpp>
00012 #include <stdair/basic/StructAbstract.hpp>
00013
00014 // Forward declarations
00015 namespace stdair {
00016     class LegCabin;
00017 }
00018
00019 namespace AIRSCHEd {
00020
00022     struct LegCabinStruct : public stdair::StructAbstract {
00023         // Attributes
00024         stdair::CabinCode_T _cabinCode;
00025         stdair::CabinCapacity_T _capacity;
00026
00029         void fill (stdair::LegCabin&) const;
00030
00032         const std::string describe() const;
00033     };
00034
00036     typedef std::vector<LegCabinStruct> LegCabinStructList_T;
00037
00038 }
00039 #endif // __AIRSCHEd_BOM_LEGcABINSTRUCT_HPP

```

## 24.37 airsched/bom/LegStruct.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <stdair/basic/BasConst_Period_BOM.hpp>
#include <stdair/bom/LegDate.hpp>
#include <airsched/bom/LegStruct.hpp>

```

## Namespaces

- namespace [AIRSCHEd](#)

## 24.38 LegStruct.cpp

```

00001 ///////////////////////////////////////////////////////////////////
00002 // Import section
00003 ///////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // STDAIR
00008 #include <stdair/basic/BasConst_Period_BOM.hpp>
00009 #include <stdair/bom/LegDate.hpp>
00010 // AIRSCHED
00011 #include <airsched/bom/LegStruct.hpp>
00012
00013 namespace AIRSCHED {
00014
00015 ///////////////////////////////////////////////////////////////////
00016 LegStruct::LegStruct ()
00017 : _boardingDateOffset (stdair::DEFAULT_DATE_OFFSET),
00018   _offDateOffset (stdair::DEFAULT_DATE_OFFSET) {
00019 }
00020
00021 ///////////////////////////////////////////////////////////////////
00022 const std::string LegStruct::describe() const {
00023     std::ostringstream ostr;
00024     ostr << " " << _boardingPoint << " / "
00025           << boost::posix_time::to_simple_string(_boardingTime);
00026     if (_boardingDateOffset.days() != 0) {
00027         ostr << " [" << _boardingDateOffset.days() << "]"";
00028     }
00029     ostr << " -- " << _offPoint << " / "
00030           << boost::posix_time::to_simple_string(_offTime);
00031     if (_offDateOffset.days() != 0) {
00032         ostr << " [" << _offDateOffset.days() << "]"";
00033     }
00034     ostr << " --> "
00035           << boost::posix_time::to_simple_string(_elapsed)
00036           << std::endl;
00037     for (LegCabinStructList_T::const_iterator itCabin = _cabinList.
begin();
00038          itCabin != _cabinList.end(); itCabin++) {
00039         const LegCabinStruct& lCabin = *itCabin;
00040         ostr << lCabin.describe();
00041     }
00042     ostr << std::endl;
00043     return ostr.str();
00044 }
00045
00046 ///////////////////////////////////////////////////////////////////
00047 void LegStruct::fill (const stdair::Date_T& iRefDate,
00048                      stdair::LegDate& ioLegDate) const {
00049     // Set the Off Point
00050     ioLegDate.setOffPoint (_offPoint);
00051
00052     // Set the Boarding Date
00053     ioLegDate.setBoardingDate (iRefDate + _boardingDateOffset
);
00054
00055     // Set the Boarding Time
00056     ioLegDate.setBoardingTime (_boardingTime);
00057
00058     // Set the Off Date
00059     ioLegDate.setOffDate (iRefDate + _offDateOffset);
00060
00061     // Set the Off Time
00062     ioLegDate.setOffTime (_offTime);
00063
00064     // Set the Elapsed Time
00065     ioLegDate.setElapsedTime (_elapsed);
00066 }
00067
00068 }
00069

```

## 24.39 airsched/bom/LegStruct.hpp File Reference

```

#include <string>
#include <vector>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/basic/StructAbstract.hpp>
#include <airsched/bom/LegCabinStruct.hpp>

```

## Classes

- struct [AIRSCHED::LegStruct](#)

## Namespaces

- namespace [stdair](#)  
*Forward declarations.*
- namespace [AIRSCHED](#)

## Typedefs

- typedef std::vector< LegStruct > [AIRSCHED::LegStructList\\_T](#)

## 24.40 LegStruct.hpp

```

00001 #ifndef __AIRSCHED_BOM_LEGSTRUCT_HPP
00002 #define __AIRSCHED_BOM_LEGSTRUCT_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009 #include <vector>
00010 // StdAir
00011 #include <stdair/stdair_basic_types.hpp>
00012 #include <stdair/basic/StructAbstract.hpp>
00013 // AirSched
00014 #include <airsched/bom/LegCabinStruct.hpp>
00015
00016 // Forward declarations
00017 namespace stdair {
00018     class LegDate;
00019 }
00020
00021 namespace AIRSCHED {
00022
00024     struct LegStruct : public stdair::StructAbstract {
00025         // Attributes
00026         stdair::AirportCode_T _boardingPoint;
00027         stdair::DateOffset_T _boardingDateOffset;
00028         stdair::Duration_T _boardingTime;
00029         stdair::AirportCode_T _offPoint;
00030         stdair::DateOffset_T _offDateOffset;
00031         stdair::Duration_T _offTime;
00032         stdair::Duration_T _elapsed;
00033         LegCabinStructList_T _cabinList;
00034
00040         void fill (const stdair::Date_T& iRefDate, stdair::LegDate&) const;
00041
00043         const std::string describe() const;
00044
00046         LegStruct ();
00047     };
00048
00050     typedef std::vector<LegStruct> LegStructList_T;
00051
00052 }
00053 #endif // __AIRSCHED_BOM_LEGSTRUCT_HPP

```

## 24.41 airsched/bom/OnDPeriodStruct.cpp File Reference

```
#include <cassert>
#include <iostream>
#include <stdair/basic/BasConst_Period_BOM.hpp>
#include <stdair/basic/BasConst_General.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/service/Logger.hpp>
#include <airsched/bom/OnDPeriodStruct.hpp>
```

## Namespaces

- namespace [AIRSCHED](#)

## 24.42 OnDPeriodStruct.cpp

```
00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <iostream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_Period_BOM.hpp>
00009 #include <stdair/basic/BasConst_General.hpp>
00010 #include <stdair/basic/BasConst_Inventory.hpp>
00011 #include <stdair/service/Logger.hpp>
00012 // AIRSCHED
00013 #include <airsched/bom/OnDPeriodStruct.hpp>
00014
00015 namespace AIRSCHED {
00016 // //////////////////////////////////////
00017 OnDPeriodStruct::OnDPeriodStruct ()
00018 : _datePeriod (stdair::BOOST_DEFAULT_DATE_PERIOD),
00019   _timeRangeStart (stdair::NULL_BOOST_TIME_DURATION),
00020   _timeRangeEnd (stdair::NULL_BOOST_TIME_DURATION),
00021   _nbOfAirlines (stdair::DEFAULT_NBFAIRLINES),
00022   _airlineCode (stdair::DEFAULT_NULL_AIRLINE_CODE),
00023   _classCode (stdair::DEFAULT_NULL_CLASS_CODE),
00024   _itSeconds (0) {
00025 }
00026
00027 // //////////////////////////////////////
00028 stdair::Date_T OnDPeriodStruct::getDate() const {
00029     return stdair::Date_T (_itYear, _itMonth, _itDay);
00030 }
00031
00032 // //////////////////////////////////////
00033 stdair::Duration_T OnDPeriodStruct::getTime() const {
00034     return boost::posix_time::hours (_itHours)
00035         + boost::posix_time::minutes (_itMinutes)
00036         + boost::posix_time::seconds (_itSeconds);
00037 }
00038
00039 // //////////////////////////////////////
00040 const std::string OnDPeriodStruct::describe() const
00041 {
00042     std::ostringstream ostr;
00043     ostr << _origin << "-" << _destination << ", "
00044         << _datePeriod << ", between "
00045         << boost::posix_time::to_simple_string(_timeRangeStart)
00046         << " to "
00047         << boost::posix_time::to_simple_string(_timeRangeEnd) <<
00048         ", "
00049         << _classCode << ", "
00050         << _airlineCode << ", "
00051         << std::endl;
00052     return ostr.str();
00053 }
00054 // //////////////////////////////////////
00055 const std::string OnDPeriodStruct::describeTSKey
00056 () const {
00057     std::ostringstream ostr;
00058     ostr << _origin << "-" << _destination << ", "
```

```

00058         << _airlineCode << ", " << _classCode <<
std::endl;
00059
00060     return ostr.str();
00061 }
00062
00063 // //////////////////////////////////////
00064 const stdair::AirlineCode_T& OnDPeriodStruct::getFirstAirlineCode
00065 () const {
00066     assert (_airlineCodeList.size() > 0);
00067     stdair::AirlineCodeList_T::const_iterator itFirstAirlineCode =
00068         _airlineCodeList.begin();
00069     return *itFirstAirlineCode;
00070 }
00071 }

```

## 24.43 airsched/bom/OnDPeriodStruct.hpp File Reference

```

#include <string>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/basic/StructAbstract.hpp>

```

### Classes

- struct [AIRSCHEDED::OnDPeriodStruct](#)

### Namespaces

- namespace [AIRSCHEDED](#)

## 24.44 OnDPeriodStruct.hpp

```

00001 #ifndef __AIRSCHEDED_BOM_ONDPERIODSTRUCT_HPP
00002 #define __AIRSCHEDED_BOM_ONDPERIODSTRUCT_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // StdAir
00010 #include <stdair/stdair_inventory_types.hpp>
00011 #include <stdair/basic/StructAbstract.hpp>
00012
00013 namespace AIRSCHEDED {
00014     struct OnDPeriodStruct : public stdair::StructAbstract {
00015     public:
00016         // ////////////////////////////////// Getters //////////////////////////////////
00017         const stdair::AirlineCode_T& getFirstAirlineCode ()
00018         const;
00019
00020         stdair::Date_T getDate() const;
00021
00022         stdair::Duration_T getTime() const;
00023
00024         // ////////////////////////////////// Display Methods //////////////////////////////////
00025         const std::string describe() const;
00026
00027         const std::string describeTSKey() const;
00028
00029     public:
00030         OnDPeriodStruct ();
00031
00032     public:
00033         // Attributes
00034         stdair::AirportCode_T _origin;
00035         stdair::AirportCode_T _destination;
00036         stdair::DatePeriod_T _datePeriod;
00037         stdair::Duration_T _timeRangeStart;
00038         stdair::Duration_T _timeRangeEnd;
00039         stdair::NbOfAirlines_T _nbOfAirlines;
00040
00041     };
00042 }
00043
00044 #endif

```

```

00047     stdair::AirlineCode_T _airlineCode;
00048     stdair::ClassCode_T _classCode;
00049     stdair::AirlineCodeList_T _airlineCodeList;
00050     stdair::ClassCodeList_T _classCodeList;
00051
00053     stdair::Date_T _dateRangeStart;
00054     stdair::Date_T _dateRangeEnd;
00055     unsigned int _itYear;
00056     unsigned int _itMonth;
00057     unsigned int _itDay;
00058
00060     long _itHours;
00061     long _itMinutes;
00062     long _itSeconds;
00063 };
00064 }
00065 #endif // __AIRSCHED_BOM_ONDPERIODSTRUCT_HPP

```

## 24.45 airsched/bom/OriginDestinationSet.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <boost/archive/text_iarchive.hpp>
#include <boost/archive/text_oarchive.hpp>
#include <boost/serialization/access.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <airsched/bom/OriginDestinationSet.hpp>

```

### Namespaces

- namespace [AIRSCHED](#)

### Functions

- template void [AIRSCHED::OriginDestinationSet::serialize< ba::text\\_oarchive >](#) (ba::text\_oarchive &, unsigned int)
- template void [AIRSCHED::OriginDestinationSet::serialize< ba::text\\_iarchive >](#) (ba::text\_iarchive &, unsigned int)

## 24.46 OriginDestinationSet.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost.Serialization
00008 #include <boost/archive/text_iarchive.hpp>
00009 #include <boost/archive/text_oarchive.hpp>
00010 #include <boost/serialization/access.hpp>
00011 // StdAir
00012 #include <stdair/basic/BasConst_Inventory.hpp>
00013 // AirSched
00014 #include <airsched/bom/OriginDestinationSet.hpp>
00015 >
00016 namespace AIRSCHED {
00017
00018 // //////////////////////////////////////
00019 OriginDestinationSet::OriginDestinationSet ()
00020 : _key (stdair::DEFAULT_ORIGIN), _parent (NULL) {
00021     assert (false);
00022 }
00023
00024 // //////////////////////////////////////
00025 OriginDestinationSet::OriginDestinationSet (const OriginDestinationSet&)
00026 : _key (stdair::DEFAULT_ORIGIN), _parent (NULL) {
00027     assert (false);

```

```

00028     }
00029
00030     // //////////////////////////////////////
00031     OriginDestinationSet::OriginDestinationSet (const Key_T& iKey)
00032         : _key (iKey), _parent (NULL) {
00033     }
00034
00035     // //////////////////////////////////////
00036     OriginDestinationSet::~OriginDestinationSet
00037     () {
00038     }
00039
00040     // //////////////////////////////////////
00041     std::string OriginDestinationSet::toString()
00042     const {
00043         std::ostringstream oStr;
00044         oStr << _key.toString();
00045         return oStr.str();
00046     }
00047
00048     // //////////////////////////////////////
00049     void OriginDestinationSet::serialisationImplementationExport() const {
00050         std::ostringstream oStr;
00051         boost::archive::text_oarchive oa (oStr);
00052         oa << *this;
00053     }
00054
00055     // //////////////////////////////////////
00056     void OriginDestinationSet::serialisationImplementationImport() {
00057         std::istringstream iStr;
00058         boost::archive::text_iarchive ia (iStr);
00059         ia >> *this;
00060     }
00061
00062     // //////////////////////////////////////
00063     template<class Archive>
00064     void OriginDestinationSet::serialize (Archive&
00065     ioArchive,
00066     const unsigned int iFileVersion) {
00067         ioArchive & _key;
00068     }
00069
00070     // //////////////////////////////////////
00071     // Explicit template instantiation
00072     namespace ba = boost::archive;
00073     template
00074     void OriginDestinationSet::serialize<ba::text_oarchive> (ba::text_oarchive&,
00075     unsigned int);
00076     template
00077     void OriginDestinationSet::serialize<ba::text_iarchive> (ba::text_iarchive&,
00078     unsigned int);
00079     // //////////////////////////////////////

```

## 24.47 airsched/bom/OriginDestinationSet.hpp File Reference

```

#include <iosfwd>
#include <string>
#include <stdair/bom/BomAbstract.hpp>
#include <airsched/bom/OriginDestinationSetKey.hpp>
#include <airsched/bom/OriginDestinationSetTypes.hpp>

```

### Classes

- class [AIRSCHED::OriginDestinationSet](#)  
Class representing a simple sub-network.

### Namespaces

- namespace [boost](#)  
Forward declarations.



- namespace `boost::serialization`
- namespace `stdair`
  - Forward declarations.*
- namespace `AIRSCHEd`

## 24.48 OriginDestinationSet.hpp

```

00001 #ifndef __AIRSCHEd_BOM_ORIGINDESTINATIONSET_HPP
00002 #define __AIRSCHEd_BOM_ORIGINDESTINATIONSET_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/bom/BomAbstract.hpp>
00012 // AirSched
00013 #include <airsched/bom/OriginDestinationSetKey.hpp>
00014 #include <airsched/bom/OriginDestinationSetTypes.hpp>
00015
00017 namespace boost {
00018     namespace serialization {
00019         class access;
00020     }
00021 }
00022
00024 namespace stdair {
00025     template <typename BOM> class FacBom;
00026     class FacBomManager;
00027 }
00028
00029 namespace AIRSCHEd {
00030
00044     class OriginDestinationSet : public stdair::BomAbstract {
00048         template <typename BOM> friend class stdair::FacBom;
00049         friend class stdair::FacBomManager;
00050         friend class boost::serialization::access;
00051
00052     public:
00053         // ////////// Type definitions //////////
00057         typedef OriginDestinationSetKey Key_T;
00058
00059     public:
00061         // ////////// Getters //////////
00065         const Key_T& getKey() const {
00066             return _key;
00067         }
00072         const stdair::AirportCode_T& getDestination() const {
00073             return _key.getOffPoint();
00074         }
00075
00079         stdair::BomAbstract* const getParent() const {
00080             return _parent;
00081         }
00082
00086         const stdair::HolderMap_T& getHolderMap() const {
00087             return _holderMap;
00088         }
00089
00090     public:
00092         // ////////// Display support methods //////////
00098         void toStream (std::ostream& ioOut) const {
00099             ioOut << toString();
00100         }
00101
00107         void fromStream (std::istream& ioIn) {
00108         }
00109
00113         std::string toString() const;
00114
00118         const std::string describeKey() const {
00119             return _key.toString();
00120         }
00121
00122

```

```

00123 public:
00124     // //////////// (Boost) Serialisation support methods ////////////
00128     template<class Archive>
00129     void serialize (Archive& ar, const unsigned int iFileVersion);
00130
00131 private:
00136     void serialisationImplementationExport() const;
00137     void serialisationImplementationImport();
00138
00139 protected:
00140     // //////////// Constructors and destructors ////////////
00141     OriginDestinationSet (const Key_T&);
00146     ~OriginDestinationSet();
00151
00152 private:
00156     OriginDestinationSet();
00157     OriginDestinationSet (const OriginDestinationSet
00161 &);
00162
00163 protected:
00164     // //////////// Attributes ////////////
00168     Key_T _key;
00169
00173     stdair::BomAbstract* _parent;
00174
00178     stdair::HolderMap_T _holderMap;
00179 };
00180
00181 }
00182 #endif // __AIRSCHED_BOM_ORIGINDESTINATIONSET_HPP
00183

```

## 24.49 airsched/bom/OriginDestinationSetKey.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <boost/archive/text_iarchive.hpp>
#include <boost/archive/text_oarchive.hpp>
#include <boost/serialization/access.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <airsched/bom/OriginDestinationSetKey.hpp>

```

### Namespaces

- namespace [AIRSCHED](#)

### Functions

- template void [AIRSCHED::OriginDestinationSetKey::serialize< ba::text\\_oarchive >](#) (ba::text\_oarchive &, unsigned int)
- template void [AIRSCHED::OriginDestinationSetKey::serialize< ba::text\\_iarchive >](#) (ba::text\_iarchive &, unsigned int)

## 24.50 OriginDestinationSetKey.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost.Serialization
00008 #include <boost/archive/text_iarchive.hpp>
00009 #include <boost/archive/text_oarchive.hpp>
00010 #include <boost/serialization/access.hpp>
00011 // StdAir

```

```

00012 #include <stdair/basic/BasConst_Inventory.hpp>
00013 // AirSched
00014 #include <airsched/bom/OriginDestinationSetKey.hpp>
00015 >
00016 namespace AIRSCHED {
00017 ///////////////////////////////////////////////////////////////////
00018 OriginDestinationSetKey::OriginDestinationSetKey()
00019 : _destination (stdair::DEFAULT_DESTINATION) {
00020     assert (false);
00021 }
00022 ///////////////////////////////////////////////////////////////////
00023 OriginDestinationSetKey::
00024 OriginDestinationSetKey (const stdair::AirportCode_T& iDestination)
00025 : _destination (iDestination) {
00026 }
00027 ///////////////////////////////////////////////////////////////////
00028 OriginDestinationSetKey (const OriginDestinationSetKey
00029 & iKey)
00030 : _destination (iKey._destination) {
00031 }
00032 ///////////////////////////////////////////////////////////////////
00033 void OriginDestinationSetKey::toStream (
00034     std::ostream& ioOut) const {
00035     ioOut << "OriginDestinationSetKey: " << toString() << std::endl;
00036 }
00037 ///////////////////////////////////////////////////////////////////
00038 void OriginDestinationSetKey::fromStream (
00039     std::istream& ioIn) {
00040 }
00041 ///////////////////////////////////////////////////////////////////
00042 const std::string OriginDestinationSetKey::toString()
00043 const {
00044     std::ostringstream oStr;
00045     oStr << _destination;
00046     return oStr.str();
00047 }
00048 ///////////////////////////////////////////////////////////////////
00049 void OriginDestinationSetKey::serialisationImplementationExport() const {
00050     std::ostringstream oStr;
00051     boost::archive::text_oarchive oa (oStr);
00052     oa << *this;
00053 }
00054 ///////////////////////////////////////////////////////////////////
00055 void OriginDestinationSetKey::serialisationImplementationImport() {
00056     std::istringstream iStr;
00057     boost::archive::text_iarchive ia (iStr);
00058     ia >> *this;
00059 }
00060 ///////////////////////////////////////////////////////////////////
00061 template<class Archive>
00062 void OriginDestinationSetKey::serialize (
00063     Archive& ioArchive,
00064     const unsigned int iFileVersion) {
00065     ioArchive & _destination;
00066 }
00067 ///////////////////////////////////////////////////////////////////
00068 // Explicit template instantiation
00069 namespace ba = boost::archive;
00070 template
00071 void OriginDestinationSetKey::serialize<ba::text_oarchive> (ba::text_oarchive
00072 &,
00073     unsigned int);
00074 template
00075 void OriginDestinationSetKey::serialize<ba::text_iarchive> (ba::text_iarchive
00076 &,
00077     unsigned int);
00078 ///////////////////////////////////////////////////////////////////
00079 }
00080 }

```

## 24.51 airsched/bom/OriginDestinationSetKey.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/bom/KeyAbstract.hpp>
```

### Classes

- struct [AIRSCHEDED::OriginDestinationSetKey](#)  
Structure representing the key of a sub-network.

### Namespaces

- namespace [boost](#)  
Forward declarations.
- namespace [boost::serialization](#)
- namespace [AIRSCHEDED](#)

## 24.52 OriginDestinationSetKey.hpp

```
00001 #ifndef __AIRSCHEDED_BOM_ORIGINDESTINATIONSETKEY_HPP
00002 #define __AIRSCHEDED_BOM_ORIGINDESTINATIONSETKEY_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_basic_types.hpp>
00012 #include <stdair/bom/KeyAbstract.hpp>
00013
00015 namespace boost {
00016     namespace serialization {
00017         class access;
00018     }
00019 }
00020
00021 namespace AIRSCHEDED {
00022
00030     struct OriginDestinationSetKey : public
stdair::KeyAbstract {
00031         friend class boost::serialization::access;
00032
00033         // ////////////////////////////////// Constructors and destructors //////////////////////////////////
00034     private:
00038         OriginDestinationSetKey();
00039
00040     public:
00044         OriginDestinationSetKey (const stdair::AirportCode_T
& iDestination);
00045
00049         OriginDestinationSetKey (const
OriginDestinationSetKey&);
00050
00054         ~OriginDestinationSetKey();
00055
00056
00057     public:
00058         // ////////////////////////////////// Getters //////////////////////////////////
00062         const stdair::AirportCode_T& getOffPoint() const {
00063             return _destination;
00064         }
00065
00066
00067     public:
00068         // ////////////////////////////////// Display support methods //////////////////////////////////
00074         void toStream (std::ostream& ioOut) const;
00075
```

```

00081     void fromStream (std::istream& ioIn);
00082
00092     const std::string toString() const;
00093
00094
00095 public:
00096     // ////////// (Boost) Serialisation support methods //////////
00100     template<class Archive>
00101     void serialize (Archive& ar, const unsigned int iFileVersion);
00102
00103 private:
00108     void serialisationImplementationExport() const;
00109     void serialisationImplementationImport();
00110
00111
00112 private:
00113     // ////////// Attributes //////////
00117     stdair::AirportCode_T _destination;
00118 };
00119
00120 }
00121 #endif // __AIRSCHEDED_BOM_ORIGINDESTINATIONSETKEY_HPP

```

## 24.53 airsched/bom/OriginDestinationSetTypes.hpp File Reference

```

#include <map>
#include <list>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/bom/key_types.hpp>

```

### Namespaces

- namespace [AIRSCHEDED](#)

### Typedefs

- typedef std::list  
< OriginDestinationSet \* > [AIRSCHEDED::OriginDestinationSetList\\_T](#)
- typedef std::map< const  
stdair::MapKey\_T,  
OriginDestinationSet \* > [AIRSCHEDED::OriginDestinationSetMap\\_T](#)

## 24.54 OriginDestinationSetTypes.hpp

```

00001 // //////////////////////////////////////
00002 #ifndef __AIRSCHEDED_BOM_ORIGINDESTINATIONSETTYPES_HPP
00003 #define __AIRSCHEDED_BOM_ORIGINDESTINATIONSETTYPES_HPP
00004
00005 // //////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // StdAir
00012 #include <stdair/stdair_basic_types.hpp>
00013 #include <stdair/bom/key_types.hpp>
00014
00015 namespace AIRSCHEDED {
00016
00017     // Forward declarations.
00018     class OriginDestinationSet;
00019
00021     typedef std::list<OriginDestinationSet*> OriginDestinationSetList_T
;
00022
00024     typedef std::map<const stdair::MapKey_T,
00025                     OriginDestinationSet*>
OriginDestinationSetMap_T;
00026

```

```

00027 }
00028 #endif // __AIRSCHED_BOM_ORIGINDESTINATIONSETTYPES_HPP
00029

```

## 24.55 airsched/bom/ReachableUniverse.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <boost/archive/text_iarchive.hpp>
#include <boost/archive/text_oarchive.hpp>
#include <boost/serialization/access.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <airsched/bom/ReachableUniverse.hpp>
#include <airsched/bom/SegmentPathPeriod.hpp>

```

### Namespaces

- namespace [AIRSCHED](#)

### Functions

- template void [AIRSCHED::ReachableUniverse::serialize< ba::text\\_oarchive >](#) (ba::text\_oarchive &, unsigned int)
- template void [AIRSCHED::ReachableUniverse::serialize< ba::text\\_iarchive >](#) (ba::text\_iarchive &, unsigned int)

## 24.56 ReachableUniverse.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost.Serialization
00008 #include <boost/archive/text_iarchive.hpp>
00009 #include <boost/archive/text_oarchive.hpp>
00010 #include <boost/serialization/access.hpp>
00011 // StdAir
00012 #include <stdair/basic/BasConst_Inventory.hpp>
00013 // AirSched
00014 #include <airsched/bom/ReachableUniverse.hpp>
00015 #include <airsched/bom/SegmentPathPeriod.hpp>
00016
00017 namespace AIRSCHED {
00018
00019     // //////////////////////////////////////
00020     ReachableUniverse::ReachableUniverse()
00021         : _key (stdair::DEFAULT_ORIGIN), _parent (NULL) {
00022         assert (false);
00023     }
00024
00025     // //////////////////////////////////////
00026     ReachableUniverse::ReachableUniverse (const ReachableUniverse&)
00027         : _key (stdair::DEFAULT_ORIGIN), _parent (NULL) {
00028         assert (false);
00029     }
00030
00031     // //////////////////////////////////////
00032     ReachableUniverse::ReachableUniverse (const Key_T& iKey)
00033         : _key (iKey), _parent (NULL) {
00034     }
00035
00036     // //////////////////////////////////////
00037     ReachableUniverse::~ReachableUniverse ()
00038     {
00039

```

```

00040 // //////////////////////////////////////
00041 std::string ReachableUniverse::toString() const {
00042     std::ostringstream ostr;
00043     ostr << _key.toString();
00044     return ostr.str();
00045 }
00046
00047 // //////////////////////////////////////
00048 void ReachableUniverse::serialisationImplementationExport() const {
00049     std::ostringstream ostr;
00050     boost::archive::text_oarchive oa (ostr);
00051     oa << *this;
00052 }
00053
00054 // //////////////////////////////////////
00055 void ReachableUniverse::serialisationImplementationImport() {
00056     std::istringstream istr;
00057     boost::archive::text_iarchive ia (istr);
00058     ia >> *this;
00059 }
00060
00061 // //////////////////////////////////////
00062 template<class Archive>
00063 void ReachableUniverse::serialize (Archive&
ioArchive,
00064                                     const unsigned int iFileVersion) {
00065     ioArchive & _key;
00066 }
00067
00068 // //////////////////////////////////////
00069 // Explicit template instantiation
00070 namespace ba = boost::archive;
00071 template
00072 void ReachableUniverse::serialize<ba::text_oarchive> (ba::text_oarchive&,
00073                                                         unsigned int);
00074 template
00075 void ReachableUniverse::serialize<ba::text_iarchive> (ba::text_iarchive&,
00076                                                         unsigned int);
00077 // //////////////////////////////////////
00078
00079 }
00080

```

## 24.57 airsched/bom/ReachableUniverse.hpp File Reference

```

#include <iosfwd>
#include <string>
#include <stdair/bom/BomAbstract.hpp>
#include <airsched/bom/ReachableUniverseKey.hpp>
#include <airsched/bom/ReachableUniverseTypes.hpp>
#include <airsched/bom/SegmentPathPeriodTypes.hpp>

```

### Classes

- class [AIRSCHED::ReachableUniverse](#)  
Class representing the root of the schedule-related BOM tree.

### Namespaces

- namespace [boost](#)  
Forward declarations.
- namespace [boost::serialization](#)
- namespace [stdair](#)  
Forward declarations.
- namespace [AIRSCHED](#)

## 24.58 ReachableUniverse.hpp

```

00001 #ifndef __AIRSCHED_BOM_REACHABLEUNIVERSE_HPP
00002 #define __AIRSCHED_BOM_REACHABLEUNIVERSE_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/bom/BomAbstract.hpp>
00012 // AirSched
00013 #include <airsched/bom/ReachableUniverseKey.hpp>
00014 >
00015 #include <airsched/bom/ReachableUniverseTypes.hpp>
00016 >
00017 #include <airsched/bom/SegmentPathPeriodTypes.hpp>
00018 >
00019
00020 namespace boost {
00021     namespace serialization {
00022         class access;
00023     }
00024 }
00025
00026 namespace stdair {
00027     template <typename BOM> class FacBom;
00028     class FacBomManager;
00029 }
00030
00031 namespace AIRSCHED {
00032
00033     class ReachableUniverse : public stdair::BomAbstract {
00034     public:
00035         template <typename BOM> friend class stdair::FacBom;
00036         friend class stdair::FacBomManager;
00037         friend class SegmentPathGenerator;
00038         friend class boost::serialization::access;
00039
00040     public:
00041         // ////////////////////////////////// Type definitions //////////////////////////////////
00042         typedef ReachableUniverseKey Key_T;
00043
00044     public:
00045         // ////////////////////////////////// Getters //////////////////////////////////
00046         const Key_T& getKey() const {
00047             return _key;
00048         }
00049
00050         const stdair::AirportCode_T& getOrigin() const {
00051             return _key.getBoardingPoint();
00052         }
00053
00054         stdair::BomAbstract* const getParent() const {
00055             return _parent;
00056         }
00057
00058         const stdair::HolderMap_T& getHolderMap() const {
00059             return _holderMap;
00060         }
00061
00062         const SegmentPathPeriodListList_T&
00063         getSegmentPathPeriodListList() const {
00064             return _segmentPathPeriodListList;
00065         }
00066
00067     public:
00068         // ////////////////////////////////// Display support methods //////////////////////////////////
00069         void toStream (std::ostream& ioOut) const {
00070             ioOut << toString();
00071         }
00072
00073         void fromStream (std::istream& ioIn) {
00074
00075         }
00076
00077         std::string toString() const;
00078
00079         const std::string describeKey() const {
00080             return _key.toString();
00081         }
00082
00083     public:
00084         // ////////////////////////////////// (Boost) Serialisation support methods //////////////////////////////////
00085         template<class Archive>

```



```

00134     void serialize (Archive& ar, const unsigned int iFileVersion);
00135
00136 private:
00141     void serialisationImplementationExport() const;
00142     void serialisationImplementationImport();
00143
00144
00145 protected:
00146     // ////////// Constructors and destructors //////////
00150     ReachableUniverse (const Key_T&);
00151
00155     ~ReachableUniverse();
00156
00157 private:
00161     ReachableUniverse();
00162
00166     ReachableUniverse (const ReachableUniverse
&);
00167
00168
00169 protected:
00170     // ////////// Attributes //////////
00174     Key_T _key;
00175
00179     stdair::BomAbstract* _parent;
00180
00184     stdair::HolderMap_T _holderMap;
00185
00191     SegmentPathPeriodListList_T
    _segmentPathPeriodListList;
00192 };
00193
00194 }
00195 #endif // __AIRSCHED_BOM_REACHABLEUNIVERSE_HPP
00196

```

## 24.59 airsched/bom/ReachableUniverseKey.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <boost/archive/text_iarchive.hpp>
#include <boost/archive/text_oarchive.hpp>
#include <boost/serialization/access.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <airsched/bom/ReachableUniverseKey.hpp>

```

### Namespaces

- namespace [AIRSCHED](#)

### Functions

- template void [AIRSCHED::ReachableUniverseKey::serialize< ba::text\\_oarchive >](#) (ba::text\_oarchive &, unsigned int)
- template void [AIRSCHED::ReachableUniverseKey::serialize< ba::text\\_iarchive >](#) (ba::text\_iarchive &, unsigned int)

## 24.60 ReachableUniverseKey.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost.Serialization
00008 #include <boost/archive/text_iarchive.hpp>
00009 #include <boost/archive/text_oarchive.hpp>
00010 #include <boost/serialization/access.hpp>

```

```

00011 // StdAir
00012 #include <stdair/basic/BasConst_Inventory.hpp>
00013 // AirSched
00014 #include <airsched/bom/ReachableUniverseKey.hpp>
00015
00016 namespace AIRSCHEM {
00017
00018 // //////////////////////////////////////
00019 ReachableUniverseKey::ReachableUniverseKey()
00020 : _origin (stdair::DEFAULT_ORIGIN) {
00021     assert (false);
00022 }
00023
00024 // //////////////////////////////////////
00025 ReachableUniverseKey::
00026 ReachableUniverseKey (const ReachableUniverseKey& iKey)
00027 : _origin (iKey._origin) {
00028 }
00029
00030 // //////////////////////////////////////
00031 ReachableUniverseKey::
00032 ReachableUniverseKey (const stdair::AirportCode_T& iAirportCode)
00033 : _origin (iAirportCode) {
00034 }
00035
00036 // //////////////////////////////////////
00037 ReachableUniverseKey::~ReachableUniverseKey
00038 () {
00039 }
00040
00041 // //////////////////////////////////////
00042 void ReachableUniverseKey::toStream (
00043     std::ostream& ioOut) const {
00044     ioOut << "ReachableUniverseKey: " << toString() << std::endl;
00045 }
00046 // //////////////////////////////////////
00047 void ReachableUniverseKey::fromStream (
00048     std::istream& ioIn) {
00049 }
00050 // //////////////////////////////////////
00051 const std::string ReachableUniverseKey::toString
00052 () const {
00053     std::ostringstream oStr;
00054     oStr << _origin;
00055     return oStr.str();
00056 }
00057 // //////////////////////////////////////
00058 void ReachableUniverseKey::serialisationImplementationExport() const {
00059     std::ostringstream oStr;
00060     boost::archive::text_oarchive oa (oStr);
00061     oa << *this;
00062 }
00063 // //////////////////////////////////////
00064 void ReachableUniverseKey::serialisationImplementationImport() {
00065     std::istringstream iStr;
00066     boost::archive::text_iarchive ia (iStr);
00067     ia >> *this;
00068 }
00069 // //////////////////////////////////////
00070 template<class Archive>
00071 void ReachableUniverseKey::serialize (Archive&
00072     ioArchive,
00073     const unsigned int iFileVersion) {
00074     ioArchive & _origin;
00075 }
00076 // //////////////////////////////////////
00077 // Explicit template instantiation
00078 namespace ba = boost::archive;
00079 template
00080 void ReachableUniverseKey::serialize<ba::text_oarchive> (ba::text_oarchive&,
00081     unsigned int);
00082 template
00083 void ReachableUniverseKey::serialize<ba::text_iarchive> (ba::text_iarchive&,
00084     unsigned int);
00085 // //////////////////////////////////////
00086 }
00087

```

## 24.61 airsched/bom/ReachableUniverseKey.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/bom/KeyAbstract.hpp>
```

### Classes

- struct [AIRSCHEDED::ReachableUniverseKey](#)  
Structure representing the key of the schedule-related BOM tree root.

### Namespaces

- namespace [boost](#)  
Forward declarations.
- namespace [boost::serialization](#)
- namespace [AIRSCHEDED](#)

## 24.62 ReachableUniverseKey.hpp

```
00001 #ifndef __AIRSCHEDED_BOM_REACHABLEUNIVERSEKEY_HPP
00002 #define __AIRSCHEDED_BOM_REACHABLEUNIVERSEKEY_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_basic_types.hpp>
00012 #include <stdair/bom/KeyAbstract.hpp>
00013
00015 namespace boost {
00016     namespace serialization {
00017         class access;
00018     }
00019 }
00020
00021 namespace AIRSCHEDED {
00022
00033     struct ReachableUniverseKey : public stdair::KeyAbstract
00034     {
00035         friend class boost::serialization::access;
00036
00037         // ////////////////////////////////// Constructors and destructors //////////////////////////////////
00038     private:
00039         ReachableUniverseKey();
00040
00041     public:
00042         ReachableUniverseKey (const stdair::AirportCode_T&
00043                               iOrigin);
00044
00045         ReachableUniverseKey (const ReachableUniverseKey
00046                               &);
00047
00048         ~ReachableUniverseKey();
00049
00050     public:
00051         // ////////////////////////////////// Getters //////////////////////////////////
00052         const stdair::AirportCode_T& getBoardingPoint() const {
00053             return _origin;
00054         }
00055
00056     public:
00057         // ////////////////////////////////// Display support methods //////////////////////////////////
00058         void toStream (std::ostream& ioOut) const;
```

```

00085     void fromStream (std::istream& ioIn);
00086
00096     const std::string toString() const;
00097
00098
00099 public:
00100     // ////////// (Boost) Serialisation support methods //////////
00104     template<class Archive>
00105     void serialize (Archive& ar, const unsigned int iFileVersion);
00106
00107 private:
00112     void serialisationImplementationExport() const;
00113     void serialisationImplementationImport();
00114
00115
00116 private:
00117     // ////////// Attributes //////////
00122     stdair::AirportCode_T _origin;
00123 };
00124
00125 }
00126
00127 #endif // __AIRSCHED_BOM_REACHABLEUNIVERSEKEY_HPP

```

## 24.63 airsched/bom/ReachableUniverseTypes.hpp File Reference

```

#include <map>
#include <list>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/bom/key_types.hpp>

```

### Namespaces

- namespace [AIRSCHED](#)

### Typedefs

- typedef std::list  
< ReachableUniverse \* > [AIRSCHED::ReachableUniverseList\\_T](#)
- typedef std::map< const  
stdair::MapKey\_T,  
ReachableUniverse \* > [AIRSCHED::ReachableUniverseMap\\_T](#)

## 24.64 ReachableUniverseTypes.hpp

```

00001 // //////////////////////////////////////
00002 #ifndef __AIRSCHED_BOM_REACHABLEUNIVERSETYPES_HPP
00003 #define __AIRSCHED_BOM_REACHABLEUNIVERSETYPES_HPP
00004
00005 // //////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // StdAir
00012 #include <stdair/stdair_basic_types.hpp>
00013 #include <stdair/bom/key_types.hpp>
00014
00015 namespace AIRSCHED {
00016
00017     // Forward declarations.
00018     class ReachableUniverse;
00019
00021     typedef std::list<ReachableUniverse*> ReachableUniverseList_T
00022 ;
00024     typedef std::map<const stdair::MapKey_T,
00025                     ReachableUniverse*> ReachableUniverseMap_T
00026 ;

```

```

00026
00027 }
00028 #endif // __AIRSCHED_BOM_REACHABLEUNIVERSETYPES_HPP
00029

```

## 24.65 airsched/bom/SegmentCabinStruct.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <stdair/bom/SegmentCabin.hpp>
#include <airsched/bom/SegmentCabinStruct.hpp>

```

### Namespaces

- namespace [AIRSCHED](#)

## 24.66 SegmentCabinStruct.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // STDAIR
00008 #include <stdair/bom/SegmentCabin.hpp>
00009 // AIRSCHED
00010 #include <airsched/bom/SegmentCabinStruct.hpp>
00011 >
00012 namespace AIRSCHED {
00013
00014 // //////////////////////////////////////
00015 const std::string SegmentCabinStruct::describe()
00016 const {
00017     std::ostringstream ostr;
00018     ostr << " " << _cabinCode << " " << _classes;
00019     return ostr.str();
00020 }
00021 // //////////////////////////////////////
00022 void SegmentCabinStruct::fill (stdair::SegmentCabin&
00023 ioSegmentCabin) const {
00024 }
00025 }

```

## 24.67 airsched/bom/SegmentCabinStruct.hpp File Reference

```

#include <string>
#include <vector>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/basic/StructAbstract.hpp>
#include <airsched/bom/FareFamilyStruct.hpp>

```

### Classes

- struct [AIRSCHED::SegmentCabinStruct](#)

### Namespaces

- namespace [stdair](#)

*Forward declarations.*

- namespace AIRSCHED

#### Typedefs

- typedef std::vector  
< SegmentCabinStruct > AIRSCHED::SegmentCabinStructList\_T

### 24.68 SegmentCabinStruct.hpp

```

00001 #ifndef __AIRSCHED_BOM_SEGMENTCABINSTRUCT_HPP
00002 #define __AIRSCHED_BOM_SEGMENTCABINSTRUCT_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009 #include <vector>
00010 // StdAir
00011 #include <stdair/stdair_basic_types.hpp>
00012 #include <stdair/basic/StructAbstract.hpp>
00013 // AirSched
00014 #include <airsched/bom/FareFamilyStruct.hpp>
00015
00016 // Forward declarations
00017 namespace stdair {
00018     class SegmentCabin;
00019 }
00020
00021 namespace AIRSCHED {
00022
00024     struct SegmentCabinStruct : public stdair::StructAbstract {
00025         // Attributes
00026         stdair::CabinCode_T _cabinCode;
00027         stdair::ClassList_String_T _classes;
00028         stdair::FamilyCode_T _itFamilyCode;
00029         FareFamilyStructList_T _fareFamilies;
00030
00033         void fill (stdair::SegmentCabin&) const;
00034
00036         const std::string describe() const;
00037
00038     };
00039
00041     typedef std::vector<SegmentCabinStruct> SegmentCabinStructList_T
00042 ;
00043 }
00044 #endif // __AIRSCHED_BOM_SEGMENTCABINSTRUCT_HPP

```

### 24.69 airsched/bom/SegmentPathPeriod.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <boost/archive/text_iarchive.hpp>
#include <boost/archive/text_oarchive.hpp>
#include <boost/serialization/access.hpp>
#include <stdair/basic/BasConst_General.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/basic/BasConst_Period_BOM.hpp>
#include <stdair/basic/BasConst_TravelSolution.hpp>
#include <stdair/bom/Inventory.hpp>
#include <stdair/bom/FlightPeriod.hpp>
#include <stdair/bom/SegmentPeriod.hpp>
#include <stdair/bom/BomManager.hpp>
#include <airsched/bom/SegmentPathPeriod.hpp>

```

## Namespaces

- namespace AIRSCHED

## Functions

- template void AIRSCHED::SegmentPathPeriod::serialize< ba::text\_oarchive > (ba::text\_oarchive &, unsigned int)
- template void AIRSCHED::SegmentPathPeriod::serialize< ba::text\_iarchive > (ba::text\_iarchive &, unsigned int)

## 24.70 SegmentPathPeriod.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost.Serialization
00008 #include <boost/archive/text_iarchive.hpp>
00009 #include <boost/archive/text_oarchive.hpp>
00010 #include <boost/serialization/access.hpp>
00011 // StdAir
00012 #include <stdair/basic/BasConst_General.hpp>
00013 #include <stdair/basic/BasConst_Inventory.hpp>
00014 #include <stdair/basic/BasConst_Period_BOM.hpp>
00015 #include <stdair/basic/BasConst_TravelSolution.hpp>
00016 #include <stdair/bom/Inventory.hpp>
00017 #include <stdair/bom/FlightPeriod.hpp>
00018 #include <stdair/bom/SegmentPeriod.hpp>
00019 #include <stdair/bom/BomManager.hpp>
00020 // AirSched
00021 #include <airsched/bom/SegmentPathPeriod.hpp>
00022
00023 namespace AIRSCHED {
00024
00025     // //////////////////////////////////////
00026     SegmentPathPeriod::SegmentPathPeriod()
00027         : _key (stdair::PeriodStruct (stdair::BOOST_DEFAULT_DATE_PERIOD,
00028                                     stdair::DEFAULT_DOW_STRING),
00029               stdair::NULL_BOOST_TIME_DURATION, stdair::NULL_BOOST_TIME_DURATION
00030     ,
00031         DateOffsetList_T(),
00032         stdair::DEFAULT_NBOFAIRLINES),
00033         _parent (NULL) {
00034         assert (false);
00035     }
00036
00037     // //////////////////////////////////////
00038     SegmentPathPeriod::SegmentPathPeriod (const SegmentPathPeriod& iSPP)
00039         : _key (iSPP._key), _parent (NULL) {
00040         assert (false);
00041     }
00042
00043     // //////////////////////////////////////
00044     SegmentPathPeriod::SegmentPathPeriod (const Key_T& iKey)
00045         : _key (iKey), _parent (NULL) {
00046     }
00047
00048     // //////////////////////////////////////
00049     SegmentPathPeriod::~SegmentPathPeriod()
00050     {
00051     }
00052
00053     // //////////////////////////////////////
00054     std::string SegmentPathPeriod::toString() const {
00055         std::ostringstream oStr;
00056         oStr << _key.toString();
00057         return oStr.str();
00058     }
00059
00060     // //////////////////////////////////////
00061     void SegmentPathPeriod::serialisationImplementationExport() const {
00062         std::ostringstream oStr;
00063         boost::archive::text_oarchive oa (oStr);
00064         oa << *this;
00065     }

```

```

00065 // //////////////////////////////////////
00066 void SegmentPathPeriod::serialisationImplementationImport() {
00067     std::istream iStr;
00068     boost::archive::text_iarchive ia (iStr);
00069     ia >> *this;
00070 }
00071
00072 // //////////////////////////////////////
00073 template<class Archive>
00074 void SegmentPathPeriod::serialize (Archive&
00075 ioArchive,
00076                                     const unsigned int iFileVersion) {
00077     ioArchive & _key;
00078 }
00079 // //////////////////////////////////////
00080 // Explicit template instantiation
00081 namespace ba = boost::archive;
00082 template
00083 void SegmentPathPeriod::serialize<ba::text_oarchive> (ba::text_oarchive&,
00084                                                         unsigned int);
00085 template
00086 void SegmentPathPeriod::serialize<ba::text_iarchive> (ba::text_iarchive&,
00087                                                         unsigned int);
00088 // //////////////////////////////////////
00089
00090 // //////////////////////////////////////
00091 stdair::SegmentPeriod* SegmentPathPeriod::getLastSegmentPeriod
00092 () const {
00093     // Retrieve the last segment of the list
00094     const stdair::SegmentPeriodList_T& lSegmentPeriodList =
00095         stdair::BomManager::getList<stdair::SegmentPeriod> (*this);
00096     stdair::SegmentPeriodList_T::const_reverse_iterator itLastSegment =
00097         lSegmentPeriodList.rbegin();
00098     if (itLastSegment == lSegmentPeriodList.rend()) {
00099         return NULL;
00100     }
00101     stdair::SegmentPeriod* oSegment_ptr = *itLastSegment;
00102     assert (oSegment_ptr != NULL);
00103     return oSegment_ptr;
00104 }
00105
00106 // //////////////////////////////////////
00107
00108 // //////////////////////////////////////
00109 stdair::SegmentPeriod* SegmentPathPeriod::getFirstSegmentPeriod
00110 () const {
00111     // Retrieve the first segment of the list
00112     const stdair::SegmentPeriodList_T& lSegmentPeriodList =
00113         stdair::BomManager::getList<stdair::SegmentPeriod> (*this);
00114     stdair::SegmentPeriodList_T::const_iterator itFirstSegment =
00115         lSegmentPeriodList.begin();
00116     if (itFirstSegment == lSegmentPeriodList.end()) {
00117         return NULL;
00118     }
00119     stdair::SegmentPeriod* oSegment_ptr = *itFirstSegment;
00120     assert (oSegment_ptr != NULL);
00121     return oSegment_ptr;
00122 }
00123
00124 // //////////////////////////////////////
00125
00126 // //////////////////////////////////////
00127 const stdair::AirportCode_T& SegmentPathPeriod::getDestination
00128 () const {
00129     const stdair::SegmentPeriod* lLastSegment_ptr = getLastSegmentPeriod
00130 ();
00131     assert (lLastSegment_ptr != NULL);
00132     return lLastSegment_ptr->getOffPoint();
00133 }
00134
00135 // //////////////////////////////////////
00136 bool SegmentPathPeriod::
00137 isAirlineFlown (const stdair::AirlineCode_T& iAirlineCode)
00138 const {
00139     bool oAirlineFlown = false;
00140     const stdair::SegmentPeriodList_T& lSegmentPeriodList =
00141         stdair::BomManager::getList<stdair::SegmentPeriod> (*this);
00142     for (stdair::SegmentPeriodList_T::const_iterator itSegmentPeriod =
00143         lSegmentPeriodList.begin();
00144         itSegmentPeriod != lSegmentPeriodList.end(); ++itSegmentPeriod) {
00145         const stdair::SegmentPeriod* lSegmentPeriod_ptr = *itSegmentPeriod;
00146         assert (lSegmentPeriod_ptr != NULL);
00147     }
00148 }

```



```

00146     const stdair::FlightPeriod& lFlightPeriod =
00147         stdair::BomManager::getParent<stdair::FlightPeriod>
00148         (*lSegmentPeriod_ptr);
00149     const stdair::Inventory& lInventory =
00150         stdair::BomManager::getParent<stdair::Inventory> (lFlightPeriod);
00151     const stdair::AirlineCode_T& lSegmentAirlineCode =
00152         lInventory.getAirlineCode ();
00153     if (lSegmentAirlineCode == iAirlineCode) {
00154         oAirlineFlown = true;
00155         break;
00156     }
00157     return oAirlineFlown;
00158 }
00159
00160 // //////////////////////////////////////
00161 SegmentPathPeriodKey SegmentPathPeriod::
00162 connectWithAnotherSegment(const SegmentPathPeriod
00163 & iSingleSegmentPath) const {
00164     SegmentPathPeriodKey oSegmentPathPeriodKey;
00165     // Retrieve the (only) segment period of the single segment path.
00166     const stdair::SegmentPeriod* lNextSegmentPeriod_ptr =
00167         iSingleSegmentPath.getFirstSegmentPeriod();
00168     assert (lNextSegmentPeriod_ptr != NULL);
00169     // Retrive the last segment period of the current segment path and check
00170     // if the combination of the last segment and the next segment that we
00171     // want to add to the current segment path will create a new segment
00172     // (i.e., the two segment period belongs to the same flight number).
00173     const stdair::SegmentPeriod* lLastSegmentPeriod_ptr = getLastSegmentPeriod
00174 ();
00175     assert (lLastSegmentPeriod_ptr != NULL);
00176     const stdair::FlightPeriod& lLastFlightPeriod = stdair::BomManager::
00177         getParent<stdair::FlightPeriod> (*lLastSegmentPeriod_ptr);
00178     const stdair::Inventory& lLastInventory =
00179         stdair::BomManager::getParent<stdair::Inventory> (lLastFlightPeriod);
00180     const stdair::FlightPeriod& lNextFlightPeriod = stdair::BomManager::
00181         getParent<stdair::FlightPeriod> (*lNextSegmentPeriod_ptr);
00182     const stdair::Inventory& lNextInventory =
00183         stdair::BomManager::getParent<stdair::Inventory> (lNextFlightPeriod);
00184     if (lLastFlightPeriod.getFlightNumber() == lNextFlightPeriod.getFlightNumber()
00185         && lLastInventory.getAirlineCode() == lNextInventory.getAirlineCode())
00186     {
00187         return oSegmentPathPeriodKey;
00188     }
00189     // Check if the new segment period will create a circle.
00190     const stdair::AirportCode_T& lDestination =
00191         lNextSegmentPeriod_ptr->getOffPoint();
00192     if (checkCircle (lDestination) == true) {
00193         return oSegmentPathPeriodKey;
00194     }
00195     // Check if a passenger can connect from the last segment of the
00196     // current segment path to the first segment of the to-be-added
00197     // segment path. If yes, build a new departure period for the new
00198     // segment path.
00199     DateOffsetList_T lBoardingDateOffsetList =
00200         getBoardingDateOffsetList ();
00201     const stdair::PeriodStruct& lCurrentDeparturePeriod = getDeparturePeriod
00202 ();
00203     const stdair::PeriodStruct& lNextDeparturePeriod =
00204         iSingleSegmentPath.getDeparturePeriod();
00205     const stdair::Duration_T& lLastOffTime =
00206         lLastSegmentPeriod_ptr->getOffTime();
00207     const stdair::Duration_T& lNextBoardingTime =
00208         lNextSegmentPeriod_ptr->getBoardingTime();
00209     // If the next boarding time is later than the last off time, check if
00210     // the passengers will have enough time for the transfer. If the next
00211     // boarding time is earlier than the last off time, check if the passengers
00212     // can connect to a flight in the next day.
00213     if (lNextBoardingTime >= lLastOffTime) {
00214         const stdair::Duration_T lStopTime = lNextBoardingTime - lLastOffTime;
00215         if (lStopTime < stdair::DEFAULT_MINIMAL_CONNECTION_TIME) {
00216             return oSegmentPathPeriodKey;
00217         } else {
00218             // Calulcate the date offset of the next segment compare to
00219             // the first one. In this case, this value is equal to the offset
00220             // of the off date of the last segment compare to the boarding date
00221             // of the first segment.
00222             const stdair::DateOffset_T& lLastBoardingDateOffset =
00223                 lBoardingDateOffsetList.at (getNbOfSegments() - 1);

```

```

00227     const stdair::DateOffset_T lNextBoardingDateOffset =
00228         lLastBoardingDateOffset + lLastSegmentPeriod_ptr->getOffDateOffset()
00229         - lLastSegmentPeriod_ptr->getBoardingDateOffset();
00230     const stdair::DateOffset_T lNegativeNextBoardingDateOffset =
00231         stdair::DateOffset_T(0) - lNextBoardingDateOffset;
00232
00233     // Compute the adjusted departure period of the next segment by
00234     // subtracting the origin one with the boarding date offset.
00235     const stdair::PeriodStruct lAdjustedNextDeparturePeriod =
00236         lNextDeparturePeriod.addDateOffset(lNegativeNextBoardingDateOffset);
00237
00238     // Build the intersection of the two periods.
00239     const stdair::PeriodStruct lNewDeparturePeriod =
00240         lCurrentDeparturePeriod.intersection(lAdjustedNextDeparturePeriod);
00241     stdair::Duration_T lNewElapsed = getElapsedTime() +
lStopTime +
00242         lNextSegmentPeriod_ptr->getElapsedTime();
00243     lBoardingDateOffsetList.push_back(lNextBoardingDateOffset);
00244     oSegmentPathPeriodKey.setPeriod(lNewDeparturePeriod);
00245     oSegmentPathPeriodKey.setElapsedTime(lNewElapsed);
00246 }
00247 } else {
00248     const stdair::Duration_T lStopTime =
00249         lNextBoardingTime - lLastOffTime + stdair::Duration_T(24, 0, 0);
00250     if (lStopTime < stdair::DEFAULT_MINIMAL_CONNECTION_TIME) {
00251         return oSegmentPathPeriodKey;
00252     } else {
00253         // Calculate the date offset of the next segment compare to
00254         // the first one.
00255         const stdair::DateOffset_T& lLastBoardingDateOffset =
00256             lBoardingDateOffsetList.at(getNbOfSegments() - 1);
00257         const stdair::DateOffset_T lNextBoardingDateOffset =
00258             lLastBoardingDateOffset + lLastSegmentPeriod_ptr->getOffDateOffset()
00259             - lLastSegmentPeriod_ptr->getBoardingDateOffset() +
00260             stdair::DateOffset_T(1);
00261         const stdair::DateOffset_T lNegativeNextBoardingDateOffset =
00262             stdair::DateOffset_T(0) - lNextBoardingDateOffset;
00263
00264         // Compute the adjusted departure period of the next segment by
00265         // subtracting the origin one with the boarding date offset.
00266         const stdair::PeriodStruct lAdjustedNextDeparturePeriod =
00267             lNextDeparturePeriod.addDateOffset(lNegativeNextBoardingDateOffset);
00268
00269         // Build the intersection of the two periods.
00270         const stdair::PeriodStruct lNewDeparturePeriod =
00271             lCurrentDeparturePeriod.intersection(lAdjustedNextDeparturePeriod);
00272         stdair::Duration_T lNewElapsed = getElapsedTime() +
lStopTime +
00273             lNextSegmentPeriod_ptr->getElapsedTime();
00274         lBoardingDateOffsetList.push_back(lNextBoardingDateOffset);
00275         oSegmentPathPeriodKey.setPeriod(lNewDeparturePeriod);
00276         oSegmentPathPeriodKey.setElapsedTime(lNewElapsed);
00277     }
00278 }
00279
00280     const stdair::Duration_T& lBoardingTime = getBoardingTime();
00281     oSegmentPathPeriodKey.setBoardingTime(lBoardingTime);
00282     oSegmentPathPeriodKey.setBoardingDateOffsetList(
lBoardingDateOffsetList);
00283
00284     return oSegmentPathPeriodKey;
00285 }
00286
00287 // //////////////////////////////////////
00288 bool SegmentPathPeriod::
00289 checkCircle(const stdair::AirlineCode_T& iDestination) const {
00290     const stdair::SegmentPeriodList_T& lSegmentPeriodList =
00291         stdair::BomManager::getList<stdair::SegmentPeriod>(*this);
00292     for (stdair::SegmentPeriodList_T::const_iterator itSegment =
00293         lSegmentPeriodList.begin();
00294         itSegment != lSegmentPeriodList.end(); ++itSegment) {
00295         const stdair::SegmentPeriod* lCurrentSegment_ptr = *itSegment;
00296         assert(lCurrentSegment_ptr != NULL);
00297         const stdair::AirlineCode_T& lCurrentBoardingPoint =
00298             lCurrentSegment_ptr->getBoardingPoint();
00299         if (lCurrentBoardingPoint == iDestination) {
00300             return true;
00301         }
00302     }
00303     return false;
00304 }
00305
00306 // //////////////////////////////////////
00307 bool SegmentPathPeriod::
00308 isDepartureDateValid(const stdair::Date_T&
iDepartureDate) const {
00309     const stdair::PeriodStruct& lPeriod = getDeparturePeriod

```

```

    () ;
00310
00311     // Check if the departure date is within the date range.
00312     const stdair::DatePeriod_T& lDeparturePeriod = lPeriod.getDateRange ();
00313     if (lDeparturePeriod.contains (iDepartureDate) == false) {
00314         return false;
00315     }
00316
00317     // Check if the departure date is valid within the DOW.
00318     // 0 = Sunday, 1 = Monday, etc.
00319     const short lDay = iDepartureDate.day_of_week ();
00320     const stdair::DoWStruct& lDoW = lPeriod.getDoW ();
00321     if (lDoW.getStandardDayOfWeek (lDay) == false) {
00322         return false;
00323     }
00324
00325     return true;
00326 }
00327
00328 }

```

## 24.71 airsched/bom/SegmentPathPeriod.hpp File Reference

```

#include <iosfwd>
#include <string>
#include <stdair/bom/BomAbstract.hpp>
#include <airsched/bom/SegmentPathPeriodKey.hpp>
#include <airsched/bom/SegmentPathPeriodTypes.hpp>

```

### Classes

- class [AIRSCHED::SegmentPathPeriod](#)  
Class representing a segment/path.

### Namespaces

- namespace [boost](#)  
Forward declarations.
- namespace [boost::serialization](#)
- namespace [stdair](#)  
Forward declarations.
- namespace [AIRSCHED](#)

## 24.72 SegmentPathPeriod.hpp

```

00001 #ifndef __AIRSCHED_BOM_SEGMENTPATHPERIOD_HPP
00002 #define __AIRSCHED_BOM_SEGMENTPATHPERIOD_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/bom/BomAbstract.hpp>
00012 // AirSched
00013 #include <airsched/bom/SegmentPathPeriodKey.hpp>
00014 >
00014 #include <airsched/bom/SegmentPathPeriodTypes.hpp>
00015 >
00015
00017 namespace boost {
00018     namespace serialization {
00019         class access;
00020     }
00021 }

```

```

00022
00024 namespace stdair {
00025     template <typename BOM> class FacBom;
00026     class FacBomManager;
00027     class SegmentPeriod;
00028 }
00029
00030 namespace AIRSCHED {
00031
00039     class SegmentPathPeriod : public stdair::BomAbstract {
00043         template <typename BOM> friend class stdair::FacBom;
00044         friend class stdair::FacBomManager;
00045         friend class boost::serialization::access;
00046
00047     public:
00048         // ////////// Type definitions //////////
00052         typedef SegmentPathPeriodKey Key_T;
00053
00054
00055     public:
00056         // ////////// Getters //////////
00060         const Key_T& getKey() const {
00061             return _key;
00062         }
00063
00067         stdair::BomAbstract* const getParent() const {
00068             return _parent;
00069         }
00070
00072         const stdair::PeriodStruct& getDeparturePeriod() const {
00073             return _key.getPeriod();
00074         }
00075
00077         const DateOffsetList_T& getBoardingDateOffsetList
00078         () const {
00079             return _key.getBoardingDateOffsetList();
00080         }
00082         const stdair::NbOfSegments_T getNbOfSegments() const {
00083             return _key.getNbOfSegments();
00084         }
00085
00087         const stdair::NbOfAirlines_T& getNbOfAirlines() const {
00088             return _key.getNbOfAirlines();
00089         }
00090
00092         const stdair::Duration_T& getElapsedTime() const {
00093             return _key.getElapsedTime();
00094         }
00095
00097         const stdair::Duration_T& getBoardingTime() const {
00098             return _key.getBoardingTime();
00099         }
00100
00104         const stdair::HolderMap_T& getHolderMap() const {
00105             return _holderMap;
00106         }
00107
00113         stdair::SegmentPeriod* getLastSegmentPeriod() const;
00114
00120         stdair::SegmentPeriod* getFirstSegmentPeriod() const;
00121
00126         const stdair::AirportCode_T& getDestination() const;
00127
00128
00129     public:
00130         // ////////// Business methods //////////
00148         Key_T connectWithAnotherSegment (const
SegmentPathPeriod&) const;
00149
00155         bool checkCircle (const stdair::AirportCode_T&) const;
00156
00161         bool isAirlineFlown (const stdair::AirlineCode_T&) const;
00162
00167         bool isDepartureDateValid (const stdair::Date_T&) const
;
00168
00169     public:
00170         // ////////// Display support methods //////////
00176         void toStream (std::ostream& ioOut) const {
00177             ioOut << toString();
00178         }
00179
00185         void fromStream (std::istream& ioIn) {
00186         }
00187
00191         std::string toString() const;

```

```

00192
00196     const std::string describeKey() const {
00197         return _key.toString();
00198     }
00199
00200
00201 public:
00202     // ////////// (Boost) Serialisation support methods //////////
00206     template<class Archive>
00207     void serialize (Archive& ar, const unsigned int iFileVersion);
00208
00209 private:
00214     void serialisationImplementationExport() const;
00215     void serialisationImplementationImport();
00216
00217
00218 protected:
00219     // ////////// Constructors and destructors //////////
00223     SegmentPathPeriod (const Key_T&);
00224
00228     ~SegmentPathPeriod();
00229
00230 private:
00234     SegmentPathPeriod();
00235
00239     SegmentPathPeriod (const SegmentPathPeriod
&);
00240
00241
00242 protected:
00243     // ////////// Attributes //////////
00249     Key_T _key;
00250
00254     stdair::BomAbstract* _parent;
00255
00262     stdair::HolderMap_T _holderMap;
00263 };
00264
00265 }
00266 #endif // __AIRSCHED_BOM_SEGMENTPATHPERIOD_HPP
00267

```

## 24.73 airsched/bom/SegmentPathPeriodKey.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <boost/archive/text_iarchive.hpp>
#include <boost/archive/text_oarchive.hpp>
#include <boost/serialization/access.hpp>
#include <stdair/basic/BasConst_General.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/basic/BasConst_Period_BOM.hpp>
#include <stdair/basic/BasConst_TravelSolution.hpp>
#include <airsched/bom/SegmentPathPeriodKey.hpp>

```

### Namespaces

- namespace [AIRSCHED](#)

### Functions

- template void [AIRSCHED::SegmentPathPeriodKey::serialize< ba::text\\_oarchive >](#) (ba::text\_oarchive &, unsigned int)
- template void [AIRSCHED::SegmentPathPeriodKey::serialize< ba::text\\_iarchive >](#) (ba::text\_iarchive &, unsigned int)

## 24.74 SegmentPathPeriodKey.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost.Serialization
00008 #include <boost/archive/text_iarchive.hpp>
00009 #include <boost/archive/text_oarchive.hpp>
00010 #include <boost/serialization/access.hpp>
00011 // StdAir
00012 #include <stdair/basic/BasConst_General.hpp>
00013 #include <stdair/basic/BasConst_Inventory.hpp>
00014 #include <stdair/basic/BasConst_Period_BOM.hpp>
00015 #include <stdair/basic/BasConst_TravelSolution.hpp>
00016 // AirSched
00017 #include <airsched/bom/SegmentPathPeriodKey.hpp>
00018 >
00019 namespace AIRSCHED {
00020
00021 // //////////////////////////////////////
00022 SegmentPathPeriodKey::SegmentPathPeriodKey
00023 ()
00024 : _period (stdair::BOOST_DEFAULT_DATE_PERIOD, stdair::DEFAULT_DOW_STRING),
00025   _boardingTime (stdair::NULL_BOOST_TIME_DURATION),
00026   _elapsed (stdair::NULL_BOOST_TIME_DURATION),
00027   _nbOfAirlines (stdair::DEFAULT_NBFAIRLINES) {
00028 }
00029
00030 SegmentPathPeriodKey::SegmentPathPeriodKey
00031 (const SegmentPathPeriodKey& iSPPK)
00032 : _period (iSPPK._period),
00033   _boardingTime (iSPPK._boardingTime),
00034   _elapsed (iSPPK._elapsed),
00035   _boardingDateOffsetList (iSPPK._boardingDateOffsetList),
00036   _nbOfAirlines (iSPPK._nbOfAirlines) {
00037 }
00038
00039 SegmentPathPeriodKey::
00040 SegmentPathPeriodKey (const stdair::PeriodStruct&
00041 iPeriod,
00042                      const stdair::Duration_T& iBoardingTime,
00043                      const stdair::Duration_T& iElapsedTime,
00044                      const DateOffsetList_T&
00045 iBoardingDateOffsetList,
00046                      const stdair::NbOfAirlines_T& iNbOfAirlines)
00047 : _period (iPeriod),
00048   _boardingTime (iBoardingTime),
00049   _elapsed (iElapsedTime),
00050   _boardingDateOffsetList (iBoardingDateOffsetList),
00051   _nbOfAirlines (iNbOfAirlines) {
00052 }
00053 SegmentPathPeriodKey::~SegmentPathPeriodKey
00054 () {
00055 }
00056
00057 void SegmentPathPeriodKey::toStream (
00058 std::ostream& ioOut) const {
00059   ioOut << "SegmentPathPeriodKey: " << toString() << std::endl;
00060 }
00061
00062 void SegmentPathPeriodKey::fromStream (
00063 std::istream& ioIn) {
00064 }
00065
00066 const std::string SegmentPathPeriodKey::toString
00067 () const {
00068   std::ostringstream oStr;
00069   oStr << _period.describeShort() << ", "
00070     << _boardingTime << ", " << _elapsed << ", ";
00071   for (DateOffsetList_T::const_iterator itOffset =
00072         _boardingDateOffsetList.begin();
00073        itOffset != _boardingDateOffsetList.end(); ++itOffset) {
00074     const stdair::DateOffset_T& lDateOffset = *itOffset;
00075     oStr << lDateOffset.days() << ", ";
00076   }

```

```

00077
00078     ostr << _nbOfAirlines ;
00079     return ostr.str();
00080 }
00081
00082 // //////////////////////////////////////
00083 void SegmentPathPeriodKey::serialisationImplementationExport() const {
00084     std::ostringstream ostr;
00085     boost::archive::text_oarchive oa (ostr);
00086     oa << *this;
00087 }
00088
00089 // //////////////////////////////////////
00090 void SegmentPathPeriodKey::serialisationImplementationImport() {
00091     std::istreamstream istr;
00092     boost::archive::text_iarchive ia (istr);
00093     ia >> *this;
00094 }
00095
00096 // //////////////////////////////////////
00097 template<class Archive>
00098 void SegmentPathPeriodKey::serialize (Archive&
00099 ioArchive,
00100                                     const unsigned int iFileVersion) {
00101     //ioArchive & _period & _boardingTime & _elapsed & _nbOfAirlines;
00102     std::string lBTStr = boost::posix_time::to_simple_string (_boardingTime);
00103     std::string lElapsedStr = boost::posix_time::to_simple_string (_elapsed);
00104     ioArchive & lBTStr & lElapsedStr & _nbOfAirlines;
00105 }
00106
00107 // //////////////////////////////////////
00108 // Explicit template instantiation
00109 namespace ba = boost::archive;
00110 template
00111 void SegmentPathPeriodKey::serialize<ba::text_oarchive> (ba::text_oarchive&,
00112                                                         unsigned int);
00113 template
00114 void SegmentPathPeriodKey::serialize<ba::text_iarchive> (ba::text_iarchive&,
00115                                                         unsigned int);
00116 // //////////////////////////////////////
00117
00118 }
00119
00120 }
00121

```

## 24.75 airsched/bom/SegmentPathPeriodKey.hpp File Reference

```

#include <iosfwd>
#include <string>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_date_time_types.hpp>
#include <stdair/bom/KeyAbstract.hpp>
#include <stdair/bom/PeriodStruct.hpp>
#include <airsched/bom/SegmentPathPeriodTypes.hpp>

```

### Classes

- struct [AIRSCHED::SegmentPathPeriodKey](#)  
Structure representing the key of a segment/path.

### Namespaces

- namespace [boost](#)  
Forward declarations.
- namespace [boost::serialization](#)
- namespace [AIRSCHED](#)

## 24.76 SegmentPathPeriodKey.hpp

```
00001 #ifndef __AIRSCHED_BOM_SEGMENTPATHPERIODKEY_HPP
```

```

00002 #define __AIRSCHEDED_BOM_SEGMENTPATHPERIODKEY_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_basic_types.hpp>
00012 #include <stdair/stdair_date_time_types.hpp>
00013 #include <stdair/bom/KeyAbstract.hpp>
00014 #include <stdair/bom/PeriodStruct.hpp>
00015 // AirSched
00016 #include <airsched/bom/SegmentPathPeriodTypes.hpp>
00017
00018 namespace boost {
00019     namespace serialization {
00020         class access;
00021     }
00022 }
00023
00024 namespace AIRSCHEDED {
00025     struct SegmentPathPeriodKey : public stdair::KeyAbstract
00026     {
00027         friend class boost::serialization::access;
00028
00029         // ////////////////////////////////// Constructors and destructors //////////////////////////////////
00030     public:
00031         SegmentPathPeriodKey (const stdair::PeriodStruct&,
00032                               const stdair::Duration_T& iBoardingTime,
00033                               const stdair::Duration_T& iElapsed,
00034                               const DateOffsetList_T&,
00035                               const stdair::NbOfAirlines_T&);
00036
00037         SegmentPathPeriodKey();
00038
00039         SegmentPathPeriodKey (const SegmentPathPeriodKey
00040                               &);
00041
00042         ~SegmentPathPeriodKey();
00043
00044     public:
00045         // ////////////////////////////////// Getters //////////////////////////////////
00046         const stdair::PeriodStruct& getPeriod() const {
00047             return _period;
00048         }
00049
00050         const DateOffsetList_T& getBoardingDateOffsetList
00051         () const {
00052             return _boardingDateOffsetList;
00053         }
00054
00055         const stdair::NbOfSegments_T getNbOfSegments() const {
00056             return _boardingDateOffsetList.size();
00057         }
00058
00059         const stdair::NbOfAirlines_T& getNbOfAirlines() const {
00060             return _nbOfAirlines;
00061         }
00062
00063         const stdair::Duration_T& getElapsedTime() const {
00064             return _elapsed;
00065         }
00066
00067         const stdair::Duration_T& getBoardingTime() const {
00068             return _boardingTime;
00069         }
00070
00071     public:
00072         // ////////////////////////////////// Setters //////////////////////////////////
00073         void setPeriod (const stdair::PeriodStruct& iPeriod) {
00074             _period = iPeriod;
00075         }
00076
00077         void setBoardingDateOffsetList (const
00078         DateOffsetList_T& iList) {
00079             _boardingDateOffsetList = iList;
00080         }
00081
00082         void setNbOfAirlines (const stdair::NbOfAirlines_T&
00083         iNbOfAirlines) {
00084             _nbOfAirlines = iNbOfAirlines;
00085         }
00086
00087         void setElapsedTime (const stdair::Duration_T& iElapsed) {
00088             _elapsed = iElapsed;
00089         }
00090
00091         void setBoardingTime (const stdair::Duration_T& iBoardingTime) {
00092             _boardingTime = iBoardingTime;
00093         }
00094     };
00095 }

```



```

00122     }
00123
00125     void setElapsedTime (const stdair::Duration_T& iElapsed) {
00126         _elapsed = iElapsed;
00127     }
00128
00130     void setBoardingTime (const stdair::Duration_T&
00131 iBoardingTime) {
00132         _boardingTime = iBoardingTime;
00133     }
00134
00135 public:
00136     // //////////// Business methods ////////////
00138     const bool isValid () const {
00139         return _period.isValid ();
00140     }
00141
00142
00143 public:
00144     // //////////// Display support methods ////////////
00150     void toStream (std::ostream& ioOut) const;
00151
00157     void fromStream (std::istream& ioIn);
00158
00168     const std::string toString() const;
00169
00170
00171 public:
00172     // //////////// (Boost) Serialisation support methods ////////////
00176     template<class Archive>
00177     void serialize (Archive& ar, const unsigned int iFileVersion);
00178
00179 private:
00184     void serialisationImplementationExport() const;
00185     void serialisationImplementationImport();
00186
00187
00188 private:
00189     // //////////// Attributes ////////////
00193     stdair::PeriodStruct _period;
00194
00198     stdair::Duration_T _boardingTime;
00199
00203     stdair::Duration_T _elapsed;
00204
00209     DateOffsetList_T _boardingDateOffsetList;
00210
00214     stdair::NbOfAirlines_T _nbOfAirlines;
00215 };
00216
00217 }
00218 #endif // __AIRSCHED_BOM_SEGMENTPATHPERIODKEY_HPP

```

## 24.77 airsched/bom/SegmentPathPeriodTypes.hpp File Reference

```

#include <map>
#include <vector>
#include <list>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_date_time_types.hpp>
#include <stdair/bom/key_types.hpp>

```

### Namespaces

- namespace [AIRSCHED](#)

### Typedefs

- typedef std::list  
< SegmentPathPeriod \* > [AIRSCHED::SegmentPathPeriodList\\_T](#)

- typedef std::multimap< const stdair::MapKey\_T, SegmentPathPeriod \* > AIRSCHED::SegmentPathPeriodMultimap\_T
- typedef std::vector< const SegmentPathPeriod \* > AIRSCHED::SegmentPathPeriodLightList\_T
- typedef std::vector< SegmentPathPeriodLightList\_T > AIRSCHED::SegmentPathPeriodListList\_T
- typedef std::vector< stdair::DateOffset\_T > AIRSCHED::DateOffsetList\_T

## 24.78 SegmentPathPeriodTypes.hpp

```

00001 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00002 #ifndef __AIRSCHED_BOM_SEGMENTPATHPERIODTYPES_HPP
00003 #define __AIRSCHED_BOM_SEGMENTPATHPERIODTYPES_HPP
00004
00005 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00006 // Import section
00007 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <vector>
00011 #include <list>
00012 // StdAir
00013 #include <stdair/stdair_basic_types.hpp>
00014 #include <stdair/stdair_date_time_types.hpp>
00015 #include <stdair/bom/key_types.hpp>
00016
00017 namespace AIRSCHED {
00018
00020     class SegmentPathPeriod;
00021
00023     typedef std::list<SegmentPathPeriod*> SegmentPathPeriodList_T
00024 ;
00026     typedef std::multimap<const stdair::MapKey_T,
00027                          SegmentPathPeriod*>
00028     SegmentPathPeriodMultimap_T;
00030     typedef std::vector<const SegmentPathPeriod*> SegmentPathPeriodLightList_T
00031 ;
00033     typedef std::vector<SegmentPathPeriodLightList_T>SegmentPathPeriodListList_T
00034 ;
00036     typedef std::vector<stdair::DateOffset_T> DateOffsetList_T;
00037 }
00038 #endif // __AIRSCHED_BOM_SEGMENTPATHPERIODTYPES_HPP
00039

```

## 24.79 airsched/bom/SegmentPeriodHelper.cpp File Reference

```

#include <cassert>
#include <stdair/basic/BasConst_General.hpp>
#include <stdair/bom/SegmentPeriod.hpp>
#include <airsched/bom/SegmentPeriodHelper.hpp>

```

### Namespaces

- namespace AIRSCHED

## 24.80 SegmentPeriodHelper.cpp

```

00001 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00002 // Import section
00003 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>

```

```

00006 // STDAIR
00007 #include <stdair/basic/BasConst_General.hpp>
00008 #include <stdair/bom/SegmentPeriod.hpp>
00009 // AIRSCHED
00010 #include <airsched/bom/SegmentPeriodHelper.hpp>
00011 >
00012 namespace AIRSCHED {
00013 // ///////////////////////////////////////////////////////////////////
00014 void SegmentPeriodHelper::fill (
00015     stdair::SegmentPeriod& ioSegmentPeriod,
00016     const SegmentStruct&
00017     iSegmentStruct) {
00018     // Browse the list of segment cabins and fill the cabin booking
00019     // class map of the BOM segment period.
00020     for (SegmentCabinStructList_T::const_iterator itCabin =
00021         iSegmentStruct._cabinList.begin();
00022         itCabin != iSegmentStruct._cabinList.end(); ++itCabin) {
00023         const SegmentCabinStruct& lSegmentCabinStruct = *
00024             itCabin;
00025         ioSegmentPeriod.
00026             addCabinBookingClassList (lSegmentCabinStruct._cabinCode,
00027                                     lSegmentCabinStruct._classes);
00028     }
00029 }
00030 // ///////////////////////////////////////////////////////////////////
00031 void SegmentPeriodHelper::fill (
00032     stdair::SegmentPeriod& ioSegmentPeriod,
00033     const LegStructList_T&
00034     iLegList) {
00035     const stdair::AirportCode_T& lBoardingPoint =
00036         ioSegmentPeriod.getBoardingPoint ();
00037     const stdair::AirportCode_T& lOffPoint = ioSegmentPeriod.getOffPoint ();
00038     stdair::Duration_T lElapsedTime;
00039     // Find the leg which has the same boarding point.
00040     LegStructList_T::const_iterator itLeg = iLegList.begin ();
00041     while (itLeg != iLegList.end()) {
00042         const LegStruct& lLeg = *itLeg;
00043         if (lLeg._boardingPoint == lBoardingPoint) {
00044             break;
00045         } else {
00046             ++itLeg;
00047         }
00048     }
00049     assert (itLeg != iLegList.end());
00050     const LegStruct& lFirstLeg = *itLeg;
00051     stdair::AirportCode_T lCurrentOffPoint = lFirstLeg._offPoint;
00052     stdair::Duration_T lCurrentOffTime = lFirstLeg._offTime;
00053     // Update the elapsed time.
00054     lElapsedTime += lFirstLeg._elapsed;
00055     // Find the last used leg.
00056     while (lCurrentOffPoint != lOffPoint) {
00057         ++itLeg;
00058         assert (itLeg != iLegList.end());
00059     }
00060     const LegStruct& lCurrentLeg = *itLeg;
00061     assert (lCurrentOffPoint == lCurrentLeg._boardingPoint);
00062     // As the boarding point of the current leg is the same as the off point
00063     // of the previous leg (by construction), there is no time difference.
00064     const stdair::Duration_T lStopOverTime =
00065         lCurrentLeg._boardingTime - lCurrentOffTime;
00066     lElapsedTime += lStopOverTime;
00067     // Add the elapsed time of the current leg
00068     lElapsedTime += lCurrentLeg._elapsed;
00069     lCurrentOffTime = lCurrentLeg._offTime;
00070     lCurrentOffPoint = lCurrentLeg._offPoint;
00071 }
00072 const LegStruct& lLastLeg = *itLeg;
00073 // Update the attributes of the segment-period.
00074 ioSegmentPeriod.setBoardingTime (lFirstLeg._boardingTime);
00075 ioSegmentPeriod.setOffTime (lLastLeg._offTime);
00076 ioSegmentPeriod.setBoardingDateOffset (lFirstLeg._boardingDateOffset);
00077 ioSegmentPeriod.setOffDateOffset (lLastLeg._offDateOffset);
00078 ioSegmentPeriod.setElapsedTime (lElapsedTime);
00079 }
00080 }
00081 }
00082 }
00083 }
00084 }

```

## 24.81 airsched/bom/SegmentPeriodHelper.hpp File Reference

```
#include <airsched/bom/LegStruct.hpp>
#include <airsched/bom/SegmentStruct.hpp>
```

### Classes

- class [AIRSCHED::SegmentPeriodHelper](#)

### Namespaces

- namespace [stdair](#)  
*Forward declarations.*
- namespace [AIRSCHED](#)

## 24.82 SegmentPeriodHelper.hpp

```
00001 #ifndef __AIRSCHED_BOM_SEGMENTPERIODHELPER_HPP
00002 #define __AIRSCHED_BOM_SEGMENTPERIODHELPER_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // AIRSCHED
00008 #include <airsched/bom/LegStruct.hpp>
00009 #include <airsched/bom/SegmentStruct.hpp>
00010
00011 // Forward declarations
00012 namespace stdair {
00013     class SegmentPeriod;
00014 }
00015
00016 namespace AIRSCHED {
00019     class SegmentPeriodHelper {
00020     public:
00021         // ////////////////////////////////// Business Methods //////////////////////////////////
00024         static void fill (stdair::SegmentPeriod&, const SegmentStruct
&);
00025
00028         static void fill (stdair::SegmentPeriod&, const LegStructList_T
&);
00029     };
00030
00031 }
00032 #endif // __AIRSCHED_BOM_SEGMENTPERIODHELPER_HPP
```

## 24.83 airsched/bom/SegmentStruct.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/bom/SegmentDate.hpp>
#include <airsched/bom/SegmentStruct.hpp>
```

### Namespaces

- namespace [AIRSCHED](#)

## 24.84 SegmentStruct.cpp

```
00001 // //////////////////////////////////////
00002 // Import section
```

```

00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // STDAIR
00008 #include <stdair/bom/SegmentDate.hpp>
00009 // AIRSCHED
00010 #include <airsched/bom/SegmentStruct.hpp>
00011
00012 namespace AIRSCHED {
00013
00014 // //////////////////////////////////////
00015 const std::string SegmentStruct::describe() const {
00016     std::ostringstream ostr;
00017     ostr << " " << _boardingPoint << " / "
00018         << boost::posix_time::to_simple_string(_boardingTime)
00019         << " -- " << _offPoint << " / "
00020         << boost::posix_time::to_simple_string(_offTime)
00021         << " --> "
00022         << boost::posix_time::to_simple_string(_elapsed)
00023         << std::endl;
00024     for (SegmentCabinStructList_T::const_iterator itCabin =
00025         _cabinList.begin(); itCabin != _cabinList.end();
00026         itCabin++) {
00027         const SegmentCabinStruct& lCabin = *itCabin;
00028         ostr << lCabin.describe();
00029     }
00030     ostr << std::endl;
00031     return ostr.str();
00032 }
00033
00034 // //////////////////////////////////////
00035 void SegmentStruct::fill (stdair::SegmentDate&
ioSegmentDate) const {
00036     // Note that some parameters (boarding date, boarding time, off
00037     // date, off time, elapsed time) are set by
00038     // SegmentDate::fillFromRouting() when the routing (with legs) is
00039     // built. So, it is useless to set those parameters here.
00040
00041     // At that time, there are no other parameters.
00042 }
00043
00044 }

```

## 24.85 airsched/bom/SegmentStruct.hpp File Reference

```

#include <string>
#include <vector>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/basic/StructAbstract.hpp>
#include <airsched/bom/SegmentCabinStruct.hpp>

```

### Classes

- struct [AIRSCHED::SegmentStruct](#)

### Namespaces

- namespace [stdair](#)  
Forward declarations.
- namespace [AIRSCHED](#)

### Typedefs

- typedef std::vector  
< SegmentStruct > [AIRSCHED::SegmentStructList\\_T](#)

## 24.86 SegmentStruct.hpp

```

00001 #ifndef __AIRSCHED_BOM_SEGMENTSTRUCT_HPP
00002 #define __AIRSCHED_BOM_SEGMENTSTRUCT_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009 #include <vector>
00010 // StdAir
00011 #include <stdair/stdair_basic_types.hpp>
00012 #include <stdair/basic/StructAbstract.hpp>
00013 // AirSched
00014 #include <airsched/bom/SegmentCabinStruct.hpp>
00015 >
00016 // Forward declarations
00017 namespace stdair {
00018     class SegmentDate;
00019 }
00020
00021 namespace AIRSCHED {
00022
00024     struct SegmentStruct : public stdair::StructAbstract {
00025         // Attributes
00026         stdair::AirportCode_T _boardingPoint;
00027         stdair::Date_T _boardingDate;
00028         stdair::Duration_T _boardingTime;
00029         stdair::AirportCode_T _offPoint;
00030         stdair::Date_T _offDate;
00031         stdair::Duration_T _offTime;
00032         stdair::Duration_T _elapsed;
00033         SegmentCabinStructList_T _cabinList;
00034
00037         void fill (stdair::SegmentDate&) const;
00038
00040         const std::string describe() const;
00041     };
00042
00044     typedef std::vector<SegmentStruct> SegmentStructList_T;
00045
00046 }
00047 #endif // __AIRSCHED_BOM_SEGMENTSTRUCT_HPP

```

## 24.87 airsched/command/InventoryGenerator.cpp File Reference

```

#include <cassert>
#include <boost/date_time/date_iterator.hpp>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/bom/BomManager.hpp>
#include <stdair/bom/BomRoot.hpp>
#include <stdair/bom/Inventory.hpp>
#include <stdair/bom/FlightPeriod.hpp>
#include <stdair/bom/SegmentPeriod.hpp>
#include <stdair/factory/FacBomManager.hpp>
#include <stdair/service/Logger.hpp>
#include <airsched/bom/FlightPeriodStruct.hpp>
#include <airsched/bom/SegmentPeriodHelper.hpp>
#include <airsched/command/InventoryGenerator.hpp>

```

## Namespaces

- namespace [AIRSCHED](#)

## 24.88 InventoryGenerator.cpp

```

00001 // //////////////////////////////////////

```

```

00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 // Boost
00007 #include <boost/date_time/date_iterator.hpp>
00008 // StdAir
00009 #include <stdair/stdair_basic_types.hpp>
00010 #include <stdair/basic/BasConst_Inventory.hpp>
00011 #include <stdair/bom/BomManager.hpp>
00012 #include <stdair/bom/BomRoot.hpp>
00013 #include <stdair/bom/Inventory.hpp>
00014 #include <stdair/bom/FlightPeriod.hpp>
00015 #include <stdair/bom/SegmentPeriod.hpp>
00016 #include <stdair/factory/FacBomManager.hpp>
00017 #include <stdair/service/Logger.hpp>
00018 // AirSched
00019 #include <airsched/bom/FlightPeriodStruct.hpp>
00020 #include <airsched/bom/SegmentPeriodHelper.hpp>
00021 #include <airsched/command/InventoryGenerator.hpp>
00022
00023 namespace AIRSCHED {
00024
00025 // //////////////////////////////////////
00026 void InventoryGenerator::
00027     createFlightPeriod (stdair::BomRoot& ioBomRoot,
00028                        const FlightPeriodStruct& iFlightPeriodStruct) {
00029
00030     const stdair::AirlineCode_T& lAirlineCode = iFlightPeriodStruct.
00031         _airlineCode;
00032
00033     // Instantiate an inventory object (if not exist)
00034     // for the given key (airline code)
00035     stdair::Inventory* lInventory_ptr = stdair::BomManager::
00036         getObjectPtr<stdair::Inventory> (ioBomRoot, lAirlineCode);
00037     if (lInventory_ptr == NULL) {
00038         stdair::InventoryKey lKey (lAirlineCode);
00039         lInventory_ptr =
00040             &stdair::FacBom<stdair::Inventory>::instance().create (lKey);
00041         stdair::FacBomManager::addToListAndMap (ioBomRoot, *lInventory_ptr);
00042         stdair::FacBomManager::linkWithParent (ioBomRoot, *lInventory_ptr);
00043     }
00044     assert (lInventory_ptr != NULL);
00045
00046     // Create the flight-period key.
00047     const stdair::PeriodStruct lPeriod (iFlightPeriodStruct._dateRange,
00048                                         iFlightPeriodStruct._dow);
00049     const stdair::FlightPeriodKey
00050         lFlightPeriodKey (iFlightPeriodStruct._flightNumber, lPeriod);
00051
00052     // Check that the flight-period object is not already created.
00053     stdair::FlightPeriod* lFlightPeriod_ptr = stdair::BomManager::
00054         getObjectPtr<stdair::FlightPeriod> (*lInventory_ptr,
00055                                             lFlightPeriodKey.toString());
00056     if (lFlightPeriod_ptr != NULL) {
00057         throw stdair::ObjectCreationDuplicationException ("");
00058     }
00059     assert (lFlightPeriod_ptr == NULL);
00060
00061     // Instantiate a flight-period object with the given key.
00062     lFlightPeriod_ptr = &stdair::FacBom<stdair::FlightPeriod>::
00063         instance().create (lFlightPeriodKey);
00064     stdair::FacBomManager::addToListAndMap (*lInventory_ptr, *lFlightPeriod_ptr);
00065     stdair::FacBomManager::linkWithParent (*lInventory_ptr, *lFlightPeriod_ptr);
00066
00067     // Create the segment-periods.
00068     createSegmentPeriods (*lFlightPeriod_ptr, iFlightPeriodStruct);
00069 }
00070
00071 // //////////////////////////////////////
00072 void InventoryGenerator::
00073     createSegmentPeriods (stdair::FlightPeriod& ioFlightPeriod,
00074                          const FlightPeriodStruct& iFlightPeriodStruct) {
00075
00076     // Iterate on the segment structures.
00077     const SegmentStructList_T& lSegmentList =
00078         iFlightPeriodStruct._segmentList;
00079     for (SegmentStructList_T::const_iterator itSegment = lSegmentList.begin();
00080          itSegment != lSegmentList.end(); ++itSegment) {
00081         const SegmentStruct& lSegment = *itSegment;

```

```

00082
00083     // Set the segment-period primary key.
00084     const stdair::AirportCode_T& lBoardingPoint = lSegment._boardingPoint;
00085     const stdair::AirportCode_T& lOffPoint = lSegment._offPoint;
00086     const stdair::SegmentPeriodKey lSegmentPeriodKey (lBoardingPoint,
00087                                                       lOffPoint);
00088
00089     // Instantiate a segment-period with the key.
00090     stdair::SegmentPeriod& lSegmentPeriod = stdair::
00091         FacBom<stdair::SegmentPeriod>::instance().create (lSegmentPeriodKey);
00092     stdair::FacBomManager::addToListAndMap (ioFlightPeriod, lSegmentPeriod);
00093     stdair::FacBomManager::linkWithParent (ioFlightPeriod, lSegmentPeriod);
00094
00095     // Set the segment-period attributes.
00096     SegmentPeriodHelper::fill (lSegmentPeriod,
00097                               lSegment);
00097     SegmentPeriodHelper::fill (lSegmentPeriod,
00098                               iFlightPeriodStruct._legList);
00098 }
00099 }
00100
00101 }

```

## 24.89 airsched/command/InventoryGenerator.hpp File Reference

```

#include <stdair/command/CmdAbstract.hpp>
#include <airsched/AIRSCHEDED_Types.hpp>

```

### Classes

- class [AIRSCHEDED::InventoryGenerator](#)

### Namespaces

- namespace [stdair](#)  
Forward declarations.
- namespace [AIRSCHEDED](#)
- namespace [AIRSCHEDED::ScheduleParserHelper](#)

## 24.90 InventoryGenerator.hpp

```

00001 #ifndef __AIRSCHEDED_CMD_INVENTORYGENERATOR_HPP
00002 #define __AIRSCHEDED_CMD_INVENTORYGENERATOR_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // StdAir
00008 #include <stdair/command/CmdAbstract.hpp>
00009 // AirSched
00010 #include <airsched/AIRSCHEDED_Types.hpp>
00011
00012 // Forward declarations
00013 namespace stdair {
00014     class BomRoot;
00015     class FlightPeriod;
00016 }
00017
00018 namespace AIRSCHEDED {
00019
00020     // Forward declarations
00021     struct FlightPeriodStruct;
00022     struct LegStruct;
00023     struct SegmentStruct;
00024     struct LegCabinStruct;
00025     struct SegmentCabinStruct;
00026     namespace ScheduleParserHelper {
00027         struct doEndFlight;
00028     }
00029
00031     class InventoryGenerator : public stdair::CmdAbstract {

```



```

00032     // Only the following class may use methods of InventoryGenerator.
00033     // Indeed, as those methods build the BOM, it is not good to expose
00034     // them publicly.
00035     friend class FlightPeriodFileParser;
00036     friend class FFFlightPeriodFileParser;
00037     friend struct ScheduleParserHelper::doEndFlight
;
00038     friend class ScheduleParser;
00039
00040 private:
00041     static void createFlightPeriod (stdair::BomRoot&,
00042                                     const FlightPeriodStruct&
);
00043
00044     static void createSegmentPeriods (stdair::FlightPeriod&,
00045                                       const FlightPeriodStruct
&);
00046
00047 };
00048
00049 };
00050
00051 };
00052 }
00053 #endif // __AIRSCHED_CMD_INVENTORYGENERATOR_HPP

```

## 24.91 airsched/command/OnDParser.cpp File Reference

```

#include <cassert>
#include <stdair/basic/BasFileMgr.hpp>
#include <stdair/bom/BomRoot.hpp>
#include <airsched/command/OnDParserHelper.hpp>
#include <airsched/command/OnDParser.hpp>

```

### Namespaces

- namespace [AIRSCHED](#)

## 24.92 OnDParser.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 // StdAir
00007 #include <stdair/basic/BasFileMgr.hpp>
00008 #include <stdair/bom/BomRoot.hpp>
00009 // AirSched
00010 #include <airsched/command/OnDParserHelper.hpp>
00011
00012 #include <airsched/command/OnDParser.hpp>
00013 namespace AIRSCHED {
00014
00015     // //////////////////////////////////////
00016     void OnDParser::generateOnDPeriods (const
stdair::Filename_T& iFilename,
stdair::BomRoot& ioBomRoot) {
00017
00018         // Check that the file path given as input corresponds to an actual file
00019         const bool doesExistAndIsReadable =
stdair::BasFileMgr::doesExistAndIsReadable (iFilename);
00020
00021         if (doesExistAndIsReadable == false) {
00022             throw OnDInputFileNotFoundExpection ("The
O&D file " + iFilename
+ " does not exist or can not be "
"read");
00023         }
00024
00025         // Initialise the O&D-Period file parser.
00026         OnDPeriodFileParser lOnDPeriodParser (iFilename,
ioBomRoot);
00027
00028         // Parse the CSV-formatted O&D input file, and generate the
00029         // corresponding O&D-Period for the airlines.
00030
00031
00032
00033

```

```

00034     lOnDPeriodParser.generateOnDPeriods();
00035 }
00036
00037 }
```

## 24.93 airsched/command/OnDParser.hpp File Reference

```

#include <string>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/command/CmdAbstract.hpp>
```

### Classes

- class [AIRSCHED::OnDParser](#)  
*Class wrapping the parser entry point.*

### Namespaces

- namespace [stdair](#)  
*Forward declarations.*
- namespace [AIRSCHED](#)

## 24.94 OnDParser.hpp

```

00001 #ifndef __AIRSCHED_CMD_ONDPARSER_HPP
00002 #define __AIRSCHED_CMD_ONDPARSER_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // StdAir
00010 #include <stdair/stdair_basic_types.hpp>
00011 #include <stdair/command/CmdAbstract.hpp>
00012
00014 namespace stdair {
00015     class BomRoot;
00016 }
00017
00018 namespace AIRSCHED {
00019
00023     class OnDParser : public stdair::CmdAbstract {
00024     public:
00031         static void generateOnDPeriods (const stdair::Filename_T&
00032                                         ,
00033                                         stdair::BomRoot&);
00034     };
00035 }
00036 #endif // __AIRSCHED_CMD_ONDPARSER_HPP
```

## 24.95 airsched/command/OnDParserHelper.cpp File Reference

```

#include <cassert>
#include <stdair/basic/BasFileMgr.hpp>
#include <stdair/bom/BomRoot.hpp>
#include <stdair/service/Logger.hpp>
#include <airsched/command/OnDParserHelper.hpp>
#include <airsched/command/OnDPeriodGenerator.hpp>
```

## Namespaces

- namespace AIRSCHED
- namespace AIRSCHED::OnDParserHelper

## Functions

- chset\_t AIRSCHED::OnDParserHelper::alpha\_cap\_set\_p ("A-Z")
- repeat\_p\_t AIRSCHED::OnDParserHelper::airport\_p (chset\_t("0-9A-Z").derived(), 3, 3)
- repeat\_p\_t AIRSCHED::OnDParserHelper::airline\_code\_p (alpha\_cap\_set\_p.derived(), 2, 3)
- bounded4\_p\_t AIRSCHED::OnDParserHelper::year\_p (uint4\_p.derived(), 2000u, 2099u)
- bounded2\_p\_t AIRSCHED::OnDParserHelper::month\_p (uint2\_p.derived(), 1u, 12u)
- bounded2\_p\_t AIRSCHED::OnDParserHelper::day\_p (uint2\_p.derived(), 1u, 31u)
- bounded2\_p\_t AIRSCHED::OnDParserHelper::hours\_p (uint2\_p.derived(), 0u, 23u)
- bounded2\_p\_t AIRSCHED::OnDParserHelper::minutes\_p (uint2\_p.derived(), 0u, 59u)
- bounded2\_p\_t AIRSCHED::OnDParserHelper::seconds\_p (uint2\_p.derived(), 0u, 59u)
- chset\_t AIRSCHED::OnDParserHelper::class\_code\_p ("A-Z")

## Variables

- uint2\_p\_t AIRSCHED::OnDParserHelper::uint2\_p
- uint4\_p\_t AIRSCHED::OnDParserHelper::uint4\_p
- uint1\_4\_p\_t AIRSCHED::OnDParserHelper::uint1\_4\_p

## 24.96 OnDParserHelper.cpp

```

00001 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00002 // Import section
00003 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 // StdAir
00007 #include <stdair/basic/BasFileMgr.hpp>
00008 #include <stdair/bom/BomRoot.hpp>
00009 #include <stdair/service/Logger.hpp>
00010 // AIRSCHED
00011 #include <airsched/command/OnDParserHelper.hpp>
00012 #include <airsched/command/OnDPeriodGenerator.hpp>
00013
00014 namespace AIRSCHED {
00015
00016     namespace OnDParserHelper {
00017
00018         //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00019         //
00020         // Semantic actions
00021         //
00022         //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00023
00024         ParserSemanticAction::
00025         ParserSemanticAction (OnDPeriodStruct
00026         & ioOnDPeriod)
00027         : _onDPeriod (ioOnDPeriod) {
00028         }
00029
00030         //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00031         storeOrigin::storeOrigin (OnDPeriodStruct
00032         & ioOnDPeriod)
00033         : ParserSemanticAction (ioOnDPeriod) {
00034         }
00035
00036         //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00037         void storeOrigin::operator() (iterator_t
00038         iStr,
00039         iterator_t iStrEnd) const {
00040             std::string lOrigin (iStr, iStrEnd);
00041             //STDAIR_LOG_DEBUG ( "Origin: " << lOrigin << std::endl);
00042         }
00043     }
00044 }

```

```

00040         // Set the origin
00041         _onDPeriod._origin = lOrigin;
00042         _onDPeriod._nbOfAirlines = 0;
00043         _onDPeriod._airlineCode = "";
00044         _onDPeriod._classCode = "";
00045         _onDPeriod._airlineCodeList.clear();
00046         _onDPeriod._classCodeList.clear();
00047     }
00048
00049     // ////////////////////////////////////////
00050     storeDestination::storeDestination (
00051         OnDPeriodStruct& ioOnDPeriod)
00052     : ParserSemanticAction (ioOnDPeriod) {
00053     }
00054
00055     // ////////////////////////////////////////
00056     void storeDestination::operator() (iterator_t
00057         iStr,
00058                                     iterator_t iStrEnd) const {
00059         std::string lDestination (iStr, iStrEnd);
00060         //STDAIR_LOG_DEBUG ("Destination: " << lDestination << std::endl);
00061
00062         // Set the destination
00063         _onDPeriod._destination = lDestination;
00064     }
00065
00066     // ////////////////////////////////////////
00067     storeDateRangeStart::
00068     storeDateRangeStart (OnDPeriodStruct&
00069         ioOnDPeriod)
00070     : ParserSemanticAction (ioOnDPeriod) {
00071     }
00072
00073     // ////////////////////////////////////////
00074     void storeDateRangeStart::operator() (
00075         iterator_t iStr,
00076                                     iterator_t iStrEnd) const {
00077         _onDPeriod._dateRangeStart = _onDPeriod
00078             .getDate();
00079         /*STDAIR_LOG_DEBUG ("Date Range Start: "
00080             << _onDPeriod._dateRangeStart << std::endl);*/
00081
00082         // Reset the number of seconds
00083         _onDPeriod._itSeconds = 0;
00084     }
00085
00086     // ////////////////////////////////////////
00087     storeDateRangeEnd::
00088     storeDateRangeEnd (OnDPeriodStruct&
00089         ioOnDPeriod)
00090     : ParserSemanticAction (ioOnDPeriod) {
00091     }
00092
00093     // ////////////////////////////////////////
00094     void storeDateRangeEnd::operator() (
00095         iterator_t iStr,
00096                                     iterator_t iStrEnd) const {
00097         // As a Boost date period (COM::DatePeriod_T) defines the last day of
00098         // the period to be end-date - one day, we have to add one day to that
00099         // end date before.
00100         const stdair::DateOffset_T oneDay (1);
00101         _onDPeriod._dateRangeEnd = _onDPeriod.
00102             getDate() + oneDay;
00103         /*STDAIR_LOG_DEBUG ( "Date Range End: "
00104             << _onDPeriod._dateRangeEnd << std::endl);*/
00105
00106         // Transform the date pair (i.e., the date range) into a date period
00107         _onDPeriod._datePeriod =
00108             stdair::DatePeriod_T (_onDPeriod._dateRangeStart
00109                 ,
00110                                 _onDPeriod._dateRangeEnd);
00111
00112         // Reset the number of seconds
00113         _onDPeriod._itSeconds = 0;
00114     }
00115
00116     // ////////////////////////////////////////
00117     storeStartTime::
00118     storeStartTime (OnDPeriodStruct&
00119         ioOnDPeriod)
00120     : ParserSemanticAction (ioOnDPeriod) {
00121     }
00122
00123     // ////////////////////////////////////////
00124     void storeStartTime::operator() (
00125         iterator_t iStr,
00126                                     iterator_t iStrEnd) const {

```

```

00116     _onDPeriod._timeRangeStart = _onDPeriod
    .getTime();
00117
00118     // Reset the number of seconds
00119     _onDPeriod._itSeconds = 0;
00120 }
00121
00122 // ////////////////////////////////////////
00123 storeEndRangeTime::
00124 storeEndRangeTime (OnDPeriodStruct&
ioOnDPeriod)
00125 : ParserSemanticAction (ioOnDPeriod) {
00126 }
00127
00128 // ////////////////////////////////////////
00129 void storeEndRangeTime::operator() (
iterator_t iStr,
00130                                     iterator_t iStrEnd) const {
00131     _onDPeriod._timeRangeEnd = _onDPeriod.
getTime();
00132
00133     // Reset the number of seconds
00134     _onDPeriod._itSeconds = 0;
00135 }
00136
00137 // ////////////////////////////////////////
00138 storeAirlineCode::
00139 storeAirlineCode (OnDPeriodStruct&
ioOnDPeriod)
00140 : ParserSemanticAction (ioOnDPeriod) {
00141 }
00142
00143 // ////////////////////////////////////////
00144 void storeAirlineCode::operator() (iterator_t
iStr,
00145                                     iterator_t iStrEnd) const {
00146     const std::string lAirlineCodeStr (iStr, iStrEnd);
00147     const stdair::AirlineCode_T lAirlineCode(lAirlineCodeStr);
00148     // Test if the OnD Period Struct stands for interline products
00149     if (_onDPeriod._airlineCodeList.size() > 0) {
00150         // update the airline code
00151         std::ostringstream ostr;
00152         ostr << _onDPeriod._airlineCode << lAirlineCode;
00153         _onDPeriod._airlineCode = ostr.str();
00154         // Update the number of airlines if necessary
00155         const stdair::AirlineCode_T lPreviousAirlineCode =
00156             _onDPeriod._airlineCodeList.back();
00157         if (lPreviousAirlineCode != lAirlineCode) {
00158             _onDPeriod._nbOfAirlines = _onDPeriod
._nbOfAirlines + 1;
00159         }
00160     }
00161     else {
00162         _onDPeriod._airlineCode = lAirlineCode;
00163         _onDPeriod._nbOfAirlines = 1;
00164     }
00165     _onDPeriod._airlineCodeList.push_back (
lAirlineCode);
00166
00167     //STDAIR_LOG_DEBUG ( "Airline code: " << lAirlineCode << std::endl);
00168 }
00169
00170 // ////////////////////////////////////////
00171 storeClassCode::
00172 storeClassCode (OnDPeriodStruct&
ioOnDPeriod)
00173 : ParserSemanticAction (ioOnDPeriod) {
00174 }
00175
00176 // ////////////////////////////////////////
00177 void storeClassCode::operator() (char iChar)
const {
00178     std::ostringstream ostr;
00179     ostr << iChar;
00180     std::string classCodeStr = ostr.str();
00181     const stdair::ClassCode_T lClassCode (classCodeStr);
00182     _onDPeriod._classCodeList.push_back(lClassCode);
00183     /*STDAIR_LOG_DEBUG ("Class Code: "
00184         << lClassCode << std::endl);*/
00185     // Insertion of this Class Code in the whole classCode name
00186     std::ostringstream ostrr;
00187     ostrr << _onDPeriod._classCode << classCodeStr;
00188     _onDPeriod._classCode = ostrr.str();
00189 }
00190
00191
00192 // ////////////////////////////////////////

```

```

00193     doEndOnD::doEndOnD (stdair::BomRoot& ioBomRoot,
OnDPeriodStruct& ioOnDPeriod)
00194         : ParserSemanticAction (ioOnDPeriod),
00195         _bomRoot (ioBomRoot) {
00196     }
00197
00198     // ////////////////////////////////////////
00199     void doEndOnD::operator() (iterator_t iStr,
iterator_t iStrEnd) const {
00200
00201         // DEBUG: Display the result
00202         // STDAIR_LOG_DEBUG ("FareRule " << _onDPeriod.describe());
00203
00204         // Generation of the O&D-Period object.
00205         OnDPeriodGenerator::createOnDPeriod (_bomRoot, _onDPeriod
);
00206     }
00207
00208     // ////////////////////////////////////////
00209     //
00210     // Utility Parsers
00211     //
00212     // ////////////////////////////////////////
00213
00215     uint2_p_t uint2_p;
00216
00218     uint4_p_t uint4_p;
00219
00221     uint1_4_p_t uint1_4_p;
00222
00224     chset_t alpha_cap_set_p ("A-Z");
00225
00227     repeat_p_t airport_p (chset_t ("0-9A-Z").derived()
, 3, 3);
00228
00230     repeat_p_t airline_code_p (alpha_cap_set_p
.derived(), 2, 3);
00231
00233     bounded4_p_t year_p (uint4_p.derived(), 2000u,
2099u);
00234
00236     bounded2_p_t month_p (uint2_p.derived(), 1u, 12u)
;
00237
00239     bounded2_p_t day_p (uint2_p.derived(), 1u, 31u);
00240
00242     bounded2_p_t hours_p (uint2_p.derived(), 0u, 23u)
;
00243
00245     bounded2_p_t minutes_p (uint2_p.derived(), 0u,
59u);
00246
00248     bounded2_p_t seconds_p (uint2_p.derived(), 0u,
59u);
00249
00251     chset_t class_code_p ("A-Z");
00252
00254     //
00255     // (Boost Spirit) Grammar Definition
00256     //
00258
00259     // ////////////////////////////////////////
00260     OnDParser::
00261     OnDParser (stdair::BomRoot& ioBomRoot, OnDPeriodStruct
& ioOnDPeriod)
00262         : _bomRoot (ioBomRoot), _onDPeriod (ioOnDPeriod) {
00263     }
00264
00265     // ////////////////////////////////////////
00266     template<typename ScannerT>
00267     OnDParser::definition<ScannerT>::definition
(OnDParser const& self) {
00268
00269         ond_list = *( boost::spirit::classic::comment_p("//")
| boost::spirit::classic::comment_p("/*", "*/")
| ond )
;
00270
00272
00273
00274         ond = ond_key
>> + ( ';' >> segment )
>> ond_end[doEndOnD(self._bomRoot, self._onDPeriod)]
;
00275
00276
00277
00278
00279         ond_end = boost::spirit::classic::ch_p(';')
;
00280
00281
00282         ond_key = (airport_p)[storeOrigin(self._onDPeriod)]

```

```

00283         >> ';' >> (airport_p)[storeDestination(self.
_onDPeriod)]
00284         >> ';' >> date[storeDateRangeStart(self._onDPeriod)]
00285         >> ';' >> date[storeDateRangeEnd(self._onDPeriod)]
00286         >> ';' >> time[storeStartRangeTime(self._onDPeriod)]
00287         >> ';' >> time[storeEndRangeTime(self._onDPeriod)]
00288         ;
00289
00290     date = boost::spirit::classic::
00291         lexeme_d[(year_p)[boost::spirit::classic::
00292             assign_a(self._onDPeriod._itYear)]
00293             >> '-'
00294             >> (month_p)[boost::spirit::classic::
00295                 assign_a(self._onDPeriod._itMonth)]
00296             >> '-'
00297             >> (day_p)[boost::spirit::classic::
00298                 assign_a(self._onDPeriod._itDay)]]
00299     ;
00300
00301     time = boost::spirit::classic::
00302         lexeme_d[(hours_p)[boost::spirit::classic::
00303             assign_a(self._onDPeriod._itHours)]
00304             >> ':'
00305             >> (minutes_p)[boost::spirit::classic::
00306                 assign_a(self._onDPeriod._itMinutes)]
00307             >> !(':' >> (seconds_p)[boost::spirit::classic::
00308                 assign_a(self._onDPeriod._itSeconds)])]
00309     ;
00310
00311     segment = boost::spirit::classic::
00312         lexeme_d[(airline_code_p)[storeAirlineCode
00313             (self._onDPeriod)]]
00314         >> ';' >> (class_code_p)[storeClassCode(self.
_onDPeriod)]
00315     ;
00316     //BOOST_SPIRIT_DEBUG_NODE (OnDParser);
00317     BOOST_SPIRIT_DEBUG_NODE (ond_list);
00318     BOOST_SPIRIT_DEBUG_NODE (ond);
00319     BOOST_SPIRIT_DEBUG_NODE (segment);
00320     BOOST_SPIRIT_DEBUG_NODE (ond_key);
00321     BOOST_SPIRIT_DEBUG_NODE (ond_end);
00322     BOOST_SPIRIT_DEBUG_NODE (date);
00323     BOOST_SPIRIT_DEBUG_NODE (time);
00324
00325 }
00326
00327 ///////////////////////////////////////////////////////////////////
00328 template<typename ScannerT>
00329 boost::spirit::classic::rule<ScannerT> const&
00330 OnDParser::definition<ScannerT>::start
00331 () const {
00332     return ond_list;
00333 }
00334
00335 //
00336 // Entry class for the file parser
00337 //
00338 //
00339 ///////////////////////////////////////////////////////////////////
00340 OnDPeriodFileParser::OnDPeriodFileParser
00341 (const stdair::Filename_T& iFilename,
00342     stdair::BomRoot& ioBomRoot)
00343 : _filename (iFilename), _bomRoot (ioBomRoot) {
00344     init();
00345 }
00346
00347 ///////////////////////////////////////////////////////////////////
00348 void OnDPeriodFileParser::init() {
00349     // Check that the file exists and is readable
00350     const bool doesExistAndIsReadable =
00351         stdair::BasFileMgr::doesExistAndIsReadable (_filename);
00352
00353     if (doesExistAndIsReadable == false) {
00354         STDAIR_LOG_ERROR ("The O&D file " << _filename
00355             << " does not exist or can not be read.");
00356         throw OnDInputFileNotFoundException ("The
00357             O&D file " + _filename
00358                 + " does not exist or can not be
00359             read");
00360     }
00361
00362     // Open the file
00363     _startIterator = iterator_t (_filename);

```

```

00364
00365 // Check that the filename exists and can be open
00366 if (!_startIterator) {
00367     STDAIR_LOG_DEBUG ("The O&D file " << _filename << " can not be open."
00368                     << std::endl);
00369     throw OnDInputFileNotFoundException ("The file " + _filename
00370                                         + " does not exist or can not be
read");
00371 }
00372
00373 // Create an EOF iterator
00374 _endIterator = _startIterator.make_end();
00375 }
00376
00377 // //////////////////////////////////////
00378 bool OnDPeriodFileParser::generateOnDPeriods
00379 () {
00380     bool oResult = false;
00381     STDAIR_LOG_DEBUG ("Parsing O&D input file: " << _filename);
00382
00383     // Initialise the parser (grammar) with the helper/staging structure.
00384     OnDParserHelper::OnDParser lODParser (_bomRoot,
_onDPeriod);
00385
00386     // Launch the parsing of the file and, thanks to the doEndOnD
00387     // call-back structure, filling the worldSchedule (Fares)
00388     boost::spirit::classic::parse_info<iterator_t> info =
00389         boost::spirit::classic::parse (_startIterator, _endIterator, lODParser,
00390                                         boost::spirit::classic::space_p);
00391
00392     // Retrieves whether or not the parsing was successful
00393     oResult = info.hit;
00394
00395     const std::string hasBeenFullyReadStr = (info.full == true) ? "not " ;
00396     if (oResult == true) {
00397         STDAIR_LOG_DEBUG ("Parsing of O&D input file: " << _filename
00398                         << " succeeded: read " << info.length
00399                         << " characters. The input file has "
00400                         << hasBeenFullyReadStr
00401                         << "been fully read. Stop point: " << info.stop);
00402     }
00403     else {
00404         // TODO: decide whether to throw an exception
00405         STDAIR_LOG_ERROR ("Parsing of O&D input file: " << _filename
00406                         << " failed: read " << info.length
00407                         << " characters. The input file has "
00408                         << hasBeenFullyReadStr
00409                         << "been fully read. Stop point: " << info.stop);
00410     }
00411
00412     return oResult;
00413 }
00414 }

```

## 24.97 airsched/command/OnDParserHelper.hpp File Reference

```

#include <string>
#include <boost/date_time/posix_time/posix_time.hpp>
#include <boost/date_time/gregorian/gregorian.hpp>
#include <stdair/command/CmdAbstract.hpp>
#include <airsched/AIRSCHEDED_Types.hpp>
#include <airsched/basic/BasParserTypes.hpp>
#include <airsched/bom/OnDPeriodStruct.hpp>

```

### Classes

- struct [AIRSCHEDED::OnDParserHelper::ParserSemanticAction](#)
- struct [AIRSCHEDED::OnDParserHelper::storeOrigin](#)
- struct [AIRSCHEDED::OnDParserHelper::storeDestination](#)
- struct [AIRSCHEDED::OnDParserHelper::storeDateRangeStart](#)
- struct [AIRSCHEDED::OnDParserHelper::storeDateRangeEnd](#)
- struct [AIRSCHEDED::OnDParserHelper::storeStartRangeTime](#)



- struct AIRSCHEDED::OnDParserHelper::storeEndRangeTime
- struct AIRSCHEDED::OnDParserHelper::storeAirlineCode
- struct AIRSCHEDED::OnDParserHelper::storeClassCode
- struct AIRSCHEDED::OnDParserHelper::doEndOnD
- struct AIRSCHEDED::OnDParserHelper::OnDParser
- struct AIRSCHEDED::OnDParserHelper::OnDParser::definition< ScannerT >
- class AIRSCHEDED::OnDPeriodFileParser

## Namespaces

- namespace stdair
  - Forward declarations.
- namespace AIRSCHEDED
- namespace AIRSCHEDED::OnDParserHelper

## 24.98 OnDParserHelper.hpp

```

00001 #ifndef __AIRSCHEDED_CMD_ONDPARSERHELPER_HPP
00002 #define __AIRSCHEDED_CMD_ONDPARSERHELPER_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // Boost (Extended STL)
00010 #include <boost/date_time/posix_time/posix_time.hpp>
00011 #include <boost/date_time/gregorian/gregorian.hpp>
00012 // StdAir
00013 #include <stdair/command/CmdAbstract.hpp>
00014 // AirSched
00015 #include <airsched/AIRSCHEDED_Types.hpp>
00016 #include <airsched/basic/BasParserTypes.hpp>
00017 #include <airsched/bom/OnDPeriodStruct.hpp>
00018
00019 // Forward declarations
00020 namespace stdair {
00021     class BomRoot;
00022 }
00023
00024 namespace AIRSCHEDED {
00025
00026     namespace OnDParserHelper {
00027
00028         // //////////////////////////////////////
00029         //
00030         // Semantic actions
00031         //
00032         // //////////////////////////////////////
00033         struct ParserSemanticAction {
00034             ParserSemanticAction (OnDPeriodStruct&
00035 );
00036             OnDPeriodStruct& _onDPeriod;
00037         };
00038
00039         struct storeOrigin : public ParserSemanticAction
00040         {
00041             storeOrigin (OnDPeriodStruct&);
00042             void operator() (iterator_t iStr, iterator_t
00043 iStrEnd) const;
00044         };
00045
00046         struct storeDestination : public ParserSemanticAction
00047         {
00048             storeDestination (OnDPeriodStruct&);
00049             void operator() (iterator_t iStr, iterator_t
00050 iStrEnd) const;
00051         };
00052
00053         struct storeDateRangeStart : public ParserSemanticAction
00054         {
00055             storeDateRangeStart (OnDPeriodStruct&);
00056             void operator() (iterator_t iStr, iterator_t
00057 iStrEnd) const;
00058         };
00059
00060         struct storeDateRangeEnd : public ParserSemanticAction
00061         {
00062             storeDateRangeEnd (OnDPeriodStruct&);
00063             void operator() (iterator_t iStr, iterator_t
00064 iStrEnd) const;
00065         };
00066     }
00067 }
00068
00069 #endif

```

```

00066     struct storeDateRangeEnd : public ParserSemanticAction
00067     {
00068         storeDateRangeEnd (OnDPeriodStruct&);
00070         void operator() (iterator_t iStr, iterator_t
iStrEnd) const;
00071     };
00072
00074     struct storeStartRangeTime : public ParserSemanticAction
00075     {
00076         storeStartRangeTime (OnDPeriodStruct&);
00078         void operator() (iterator_t iStr, iterator_t
iStrEnd) const;
00079     };
00080
00082     struct storeEndRangeTime : public ParserSemanticAction
00083     {
00084         storeEndRangeTime (OnDPeriodStruct&);
00086         void operator() (iterator_t iStr, iterator_t
iStrEnd) const;
00087     };
00088
00090     struct storeAirlineCode : public ParserSemanticAction
00091     {
00092         storeAirlineCode (OnDPeriodStruct&);
00094         void operator() (iterator_t iStr, iterator_t
iStrEnd) const;
00095     };
00096
00098     struct storeClassCode : public ParserSemanticAction
00099     {
00100         storeClassCode (OnDPeriodStruct&);
00102         void operator() (char iChar) const;
00103     };
00104
00106     struct doEndOnD : public ParserSemanticAction {
00108         doEndOnD (stdair::BomRoot&, OnDPeriodStruct&);
00110         void operator() (iterator_t iStr, iterator_t
iStrEnd) const;
00112         stdair::BomRoot& _bomRoot;
00113     };
00114
00116     //
00117     // (Boost Spirit) Grammar Definition
00118     //
00120
00127     struct OnDParser :
00128     public boost::spirit::classic::grammar<OnDParser> {
00129
00130         OnDParser (stdair::BomRoot&, OnDPeriodStruct&);
00131
00132         template <typename ScannerT>
00133         struct definition {
00134             definition (OnDParser const& self);
00135
00136             // Instantiation of rules
00137             boost::spirit::classic::rule<ScannerT> ond_list, ond,
segment,
00138                 ond_key, ond_end, date, time;
00139
00141             boost::spirit::classic::rule<ScannerT> const& start() const;
00142         };
00143
00144         // Parser Context
00145         stdair::BomRoot& _bomRoot;
00146         OnDPeriodStruct& _onDPeriod;
00147     };
00148
00149
00151     //
00152     // Entry class for the file parser
00153     //
00155
00161     class OnDPeriodFileParser : public stdair::CmdAbstract {
00162     public:
00164         OnDPeriodFileParser (const stdair::Filename_T& iFilename
,
00165                             stdair::BomRoot& ioBomRoot);
00166
00168         bool generateOnDPeriods ();
00169
00170     private:
00172         void init();
00173
00174     private:
00175         // Attributes
00177         stdair::Filename_T _filename;
00178

```

```

00180     iterator_t _startIterator;
00181
00182     iterator_t _endIterator;
00183
00184     stdair::BomRoot& _bomRoot;
00185
00186     OnDPeriodStruct _onDPeriod;
00187 };
00188
00189 #endif // __AIRSCHED_CMD_ONDPARSERHELPER_HPP

```

## 24.99 airsched/command/OnDPeriodGenerator.cpp File Reference

```

#include <cassert>
#include <stdair/stdair_date_time_types.hpp>
#include <stdair/bom/BomManager.hpp>
#include <stdair/bom/BomRoot.hpp>
#include <stdair/factory/FacBomManager.hpp>
#include <stdair/service/Logger.hpp>
#include <airsched/bom/OnDPeriodStruct.hpp>
#include <airsched/command/OnDPeriodGenerator.hpp>

```

### Namespaces

- namespace [AIRSCHED](#)

## 24.100 OnDPeriodGenerator.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 // StdAir
00007 #include <stdair/stdair_date_time_types.hpp>
00008 #include <stdair/bom/BomManager.hpp>
00009 #include <stdair/bom/BomRoot.hpp>
00010 #include <stdair/factory/FacBomManager.hpp>
00011 #include <stdair/service/Logger.hpp>
00012 // AirSched
00013 #include <airsched/bom/OnDPeriodStruct.hpp>
00014 #include <airsched/command/OnDPeriodGenerator.hpp>
00015 >
00016 namespace AIRSCHED {
00017
00018 // //////////////////////////////////////
00019 void OnDPeriodGenerator::
00020     createOnDPeriod (stdair::BomRoot& ioBomRoot,
00021                     const OnDPeriodStruct& iOnDPeriodStruct) {
00022 }
00023 }

```

## 24.101 airsched/command/OnDPeriodGenerator.hpp File Reference

```

#include <stdair/command/CmdAbstract.hpp>
#include <airsched/AIRSCHED_Types.hpp>

```

### Classes

- class [AIRSCHED::OnDPeriodGenerator](#)

*Class handling the generation / instantiation of the O&D-Period BOM.*

## Namespaces

- namespace [stdair](#)  
*Forward declarations.*
- namespace [AIRSCHED](#)
- namespace [AIRSCHED::OnDParserHelper](#)

## 24.102 OnDPeriodGenerator.hpp

```

00001 #ifndef __AIRSCHED_CMD_ONDPERIODGENERATOR_HPP
00002 #define __AIRSCHED_CMD_ONDPERIODGENERATOR_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // StdAir
00008 #include <stdair/command/CmdAbstract.hpp>
00009 // AirSched
00010 #include <airsched/AIRSCHED_Types.hpp>
00011
00013 namespace stdair {
00014     class BomRoot;
00015 }
00016
00017 namespace AIRSCHED {
00018
00020     struct OnDPeriodStruct_T;
00021     namespace OnDParserHelper {
00022         struct doEndOnD;
00023     }
00024
00029     class OnDPeriodGenerator : public stdair::CmdAbstract {
00035         friend class OnDPeriodFileParser;
00036         friend struct OnDParserHelper::doEndOnD;
00037         friend class OnDParser;
00038
00039     private:
00048         static void createOnDPeriod (stdair::BomRoot&, const OnDPeriodStruct
00049         &);
00049     };
00050
00051 }
00052 #endif // __AIRSCHED_CMD_ONDPERIODGENERATOR_HPP

```

## 24.103 airsched/command/ScheduleParser.cpp File Reference

```

#include <cassert>
#include <string>
#include <stdair/basic/BasFileMgr.hpp>
#include <stdair/bom/BomRoot.hpp>
#include <airsched/command/SegmentPathGenerator.hpp>
#include <airsched/command/ScheduleParserHelper.hpp>
#include <airsched/command/ScheduleParser.hpp>

```

## Namespaces

- namespace [AIRSCHED](#)

## 24.104 ScheduleParser.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <string>
00007 // StdAir

```

```

00008 #include <stdair/basic/BasFileMgr.hpp>
00009 #include <stdair/bom/BomRoot.hpp>
00010 // AirSched
00011 #include <airsched/command/SegmentPathGenerator.hpp>
00012 #include <airsched/command/ScheduleParserHelper.hpp>
00013 #include <airsched/command/ScheduleParser.hpp>
00014
00015 namespace AIRSCHED {
00016
00017 // //////////////////////////////////////
00018 void ScheduleParser::generateInventories (
00019     const stdair::Filename_T& iFilename,
00020                                     stdair::BomRoot& ioBomRoot) {
00021     // Check that the file path given as input corresponds to an actual file
00022     const bool doesExistAndIsReadable =
00023         stdair::BasFileMgr::doesExistAndIsReadable (iFilename);
00024
00025     if (doesExistAndIsReadable == false) {
00026         throw ScheduleInputFileNotFoundException
00027             ("The schedule file " + iFilename
00028              + " does not exist or can not "
00029              "be read");
00030     }
00031
00032     // Initialise the Flight-Period file parser.
00033     FlightPeriodFileParser lFlightPeriodParser (ioBomRoot
00034 , iFilename);
00035
00036     // Parse the CSV-formatted schedule input file, and generate the
00037     // corresponding Inventories for the airlines.
00038     lFlightPeriodParser.generateInventories();
00039
00040     // Build the network from the schedule.
00041     SegmentPathGenerator::createSegmentPathNetwork
00042         (ioBomRoot);
00043 }
00044 }

```

## 24.105 airsched/command/ScheduleParser.hpp File Reference

```

#include <string>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/command/CmdAbstract.hpp>

```

### Classes

- class [AIRSCHED::ScheduleParser](#)

### Namespaces

- namespace [stdair](#)  
*Forward declarations.*
- namespace [AIRSCHED](#)

## 24.106 ScheduleParser.hpp

```

00001 #ifndef __AIRSCHED_CMD_SCHEDULEPARSER_HPP
00002 #define __AIRSCHED_CMD_SCHEDULEPARSER_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // StdAir
00010 #include <stdair/stdair_basic_types.hpp>

```

```

00011 #include <stdair/command/CmdAbstract.hpp>
00012
00013 // Forward declarations.
00014 namespace stdair {
00015     class BomRoot;
00016 }
00017
00018 namespace AIRSCHED {
00019
00021     class ScheduleParser : public stdair::CmdAbstract {
00022     public:
00028         static void generateInventories (const
stdair::Filename_T&,
00029                                         stdair::BomRoot&);
00030     };
00031 }
00032 #endif // __AIRSCHED_CMD_SCHEDULEPARSER_HPP

```

## 24.107 airsched/command/ScheduleParserHelper.cpp File Reference

```

#include <cassert>
#include <stdair/basic/BasFileMgr.hpp>
#include <stdair/bom/BomRoot.hpp>
#include <stdair/service/Logger.hpp>
#include <airsched/command/ScheduleParserHelper.hpp>
#include <airsched/command/InventoryGenerator.hpp>

```

### Namespaces

- namespace [AIRSCHED](#)
- namespace [AIRSCHED::ScheduleParserHelper](#)

### Functions

- repeat\_p\_t [AIRSCHED::ScheduleParserHelper::airline\\_code\\_p](#) (chset\_t("0-9A-Z").derived(), 2, 3)
- bounded1\_4\_p\_t [AIRSCHED::ScheduleParserHelper::flight\\_number\\_p](#) (uint1\_4\_p.derived(), 0u, 9999u)
- bounded4\_p\_t [AIRSCHED::ScheduleParserHelper::year\\_p](#) (uint4\_p.derived(), 2000u, 2099u)
- bounded2\_p\_t [AIRSCHED::ScheduleParserHelper::month\\_p](#) (uint2\_p.derived(), 1u, 12u)
- bounded2\_p\_t [AIRSCHED::ScheduleParserHelper::day\\_p](#) (uint2\_p.derived(), 1u, 31u)
- repeat\_p\_t [AIRSCHED::ScheduleParserHelper::dow\\_p](#) (chset\_t("0-1").derived().derived(), 7, 7)
- repeat\_p\_t [AIRSCHED::ScheduleParserHelper::airport\\_p](#) (chset\_t("0-9A-Z").derived(), 3, 3)
- bounded2\_p\_t [AIRSCHED::ScheduleParserHelper::hours\\_p](#) (uint2\_p.derived(), 0u, 23u)
- bounded2\_p\_t [AIRSCHED::ScheduleParserHelper::minutes\\_p](#) (uint2\_p.derived(), 0u, 59u)
- bounded2\_p\_t [AIRSCHED::ScheduleParserHelper::seconds\\_p](#) (uint2\_p.derived(), 0u, 59u)
- chset\_t [AIRSCHED::ScheduleParserHelper::cabin\\_code\\_p](#) ("A-Z")
- repeat\_p\_t [AIRSCHED::ScheduleParserHelper::class\\_code\\_list\\_p](#) (chset\_t("A-Z").derived(), 1, 26)

### Variables

- int1\_p\_t [AIRSCHED::ScheduleParserHelper::int1\\_p](#)
- uint2\_p\_t [AIRSCHED::ScheduleParserHelper::uint2\\_p](#)
- uint4\_p\_t [AIRSCHED::ScheduleParserHelper::uint4\\_p](#)
- uint1\_4\_p\_t [AIRSCHED::ScheduleParserHelper::uint1\\_4\\_p](#)
- int1\_p\_t [AIRSCHED::ScheduleParserHelper::family\\_code\\_p](#)

## 24.108 ScheduleParserHelper.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 // StdAir
00007 #include <stdair/basic/BasFileMgr.hpp>
00008 #include <stdair/bom/BomRoot.hpp>
00009 #include <stdair/service/Logger.hpp>
00010 // AIRSCHED
00011 // #define BOOST_SPIRIT_DEBUG
00012 #include <airsched/command/ScheduleParserHelper.hpp>
00013 #include <airsched/command/InventoryGenerator.hpp>
00014 >
00015 namespace bsc = boost::spirit::classic;
00016
00017 namespace AIRSCHED {
00018
00019     namespace ScheduleParserHelper {
00020
00021         // //////////////////////////////////////
00022         // Semantic actions
00023         // //////////////////////////////////////
00024
00025         ParserSemanticAction::
00026         ParserSemanticAction (FlightPeriodStruct
00027 & ioFlightPeriod)
00028         : _flightPeriod (ioFlightPeriod) {
00029         }
00030
00031         // //////////////////////////////////////
00032         storeAirlineCode::
00033         storeAirlineCode (FlightPeriodStruct&
00034 ioFlightPeriod)
00035         : ParserSemanticAction (ioFlightPeriod) {
00036         }
00037
00038         // //////////////////////////////////////
00039         void storeAirlineCode::operator() (iterator_t
00040 iStr,
00041                                     iterator_t iStrEnd) const {
00042         const stdair::AirlineCode_T lAirlineCode (iStr, iStrEnd);
00043         _flightPeriod._airlineCode = lAirlineCode;
00044
00045         // As that's the beginning of a new flight, the list of legs
00046         // must be reset
00047         _flightPeriod._legList.clear();
00048         }
00049
00050         // //////////////////////////////////////
00051         storeFlightNumber::
00052         storeFlightNumber (FlightPeriodStruct
00053 & ioFlightPeriod)
00054         : ParserSemanticAction (ioFlightPeriod) {
00055         }
00056
00057         // //////////////////////////////////////
00058         void storeFlightNumber::operator() (unsigned
00059 int iNumber) const {
00060         _flightPeriod._flightNumber = iNumber;
00061         }
00062
00063         // //////////////////////////////////////
00064         storeDateRangeStart::
00065         storeDateRangeStart (FlightPeriodStruct
00066 & ioFlightPeriod)
00067         : ParserSemanticAction (ioFlightPeriod) {
00068         }
00069
00070         // //////////////////////////////////////
00071         void storeDateRangeStart::operator() (
00072 iterator_t iStr,
00073                                     iterator_t iStrEnd) const {
00074         _flightPeriod._dateRangeStart = _flightPeriod
00075 .getDate();
00076
00077         // Reset the number of seconds
00078         _flightPeriod._itSeconds = 0;
00079         }
00080
00081         // //////////////////////////////////////
00082         storeDateRangeEnd::
00083         storeDateRangeEnd (FlightPeriodStruct

```

```

    & ioFlightPeriod)
00076     : ParserSemanticAction (ioFlightPeriod) {
00077     }
00078
00079     // //////////////////////////////////////
00080 void storeDateRangeEnd::operator() (
iterator_t iStr,
00081                                     iterator_t iStrEnd) const {
00082     // As a Boost date period (DatePeriod_T) defines the last day of
00083     // the period to be end-date - one day, we have to add one day to that
00084     // end date before.
00085     const stdair::DateOffset_T oneDay (1);
00086     _flightPeriod._dateRangeEnd = _flightPeriod
.getDate() + oneDay;
00087
00088     // Transform the date pair (i.e., the date range) into a date period
00089     _flightPeriod._dateRange =
00090         stdair::DatePeriod_T (_flightPeriod._dateRangeStart
,
00091                               _flightPeriod._dateRangeEnd
);
00092
00093     // Reset the number of seconds
00094     _flightPeriod._itSeconds = 0;
00095 }
00096
00097 // //////////////////////////////////////
00098 storeDow::storeDow (FlightPeriodStruct&
ioFlightPeriod)
00099     : ParserSemanticAction (ioFlightPeriod) {
00100     }
00101
00102     // //////////////////////////////////////
00103 void storeDow::operator() (iterator_t iStr,
iterator_t iStrEnd) const {
00104     stdair::DOW_String_T lDow (iStr, iStrEnd);
00105     _flightPeriod._dow = lDow;
00106 }
00107
00108 // //////////////////////////////////////
00109 storeLegBoardingPoint::
00110 storeLegBoardingPoint (FlightPeriodStruct
& ioFlightPeriod)
00111     : ParserSemanticAction (ioFlightPeriod) {
00112     }
00113
00114     // //////////////////////////////////////
00115 void storeLegBoardingPoint::operator() (
iterator_t iStr,
00116                                     iterator_t iStrEnd) const
{
00117     stdair::AirportCode_T lBoardingPoint (iStr, iStrEnd);
00118
00119     // If a leg has already been parsed, add it to the FlightPeriod
00120     if (_flightPeriod._legAlreadyDefined ==
true) {
00121         _flightPeriod._legList.push_back (_flightPeriod
._itLeg);
00122     } else {
00123         _flightPeriod._legAlreadyDefined = true;
00124     }
00125
00126     // Set the (new) boarding point
00127     _flightPeriod._itLeg._boardingPoint =
lBoardingPoint;
00128
00129     // As that's the beginning of a new leg, the list of cabins
00130     // must be reset
00131     _flightPeriod._itLeg._cabinList.clear();
00132
00133     // Add the airport code if it is not already stored in the airport lists
00134     _flightPeriod.addAirport (lBoardingPoint);
00135 }
00136
00137 // //////////////////////////////////////
00138 storeLegOffPoint::
00139 storeLegOffPoint (FlightPeriodStruct&
ioFlightPeriod)
00140     : ParserSemanticAction (ioFlightPeriod) {
00141     }
00142
00143     // //////////////////////////////////////
00144 void storeLegOffPoint::operator() (iterator_t
iStr,
00145                                     iterator_t iStrEnd) const {
00146     stdair::AirportCode_T lOffPoint (iStr, iStrEnd);
00147     _flightPeriod._itLeg._offPoint = lOffPoint;

```



```

00148
00149     // Add the airport code if it is not already stored in the airport lists
00150     _flightPeriod.addAirport (lOffPoint);
00151 }
00152
00153 // ////////////////////////////////////////
00154 storeBoardingTime::
00155 storeBoardingTime (FlightPeriodStruct
& ioFlightPeriod)
00156 : ParserSemanticAction (ioFlightPeriod) {
00157 }
00158
00159 // ////////////////////////////////////////
00160 void storeBoardingTime::operator() (
iterator_t iStr,
                                iterator_t iStrEnd) const {
00161     _flightPeriod._itLeg._boardingTime =
00162     _flightPeriod.getTime();
00163
00164     // Reset the number of seconds
00165     _flightPeriod._itSeconds = 0;
00166
00167     // Reset the date off-set
00168     _flightPeriod._dateOffset = 0;
00169 }
00170
00171 // ////////////////////////////////////////
00172 storeOffTime::
00173 storeOffTime (FlightPeriodStruct&
ioFlightPeriod)
00174 : ParserSemanticAction (ioFlightPeriod) {
00175 }
00176
00177 // ////////////////////////////////////////
00178 void storeOffTime::operator() (iterator_t
iStr,
                                iterator_t iStrEnd) const {
00179     _flightPeriod._itLeg._offTime = _flightPeriod
00180     .getTime();
00181
00182     // Reset the number of seconds
00183     _flightPeriod._itSeconds = 0;
00184
00185     // As the boarding date off set is optional, it can be set only
00186     // afterwards, based on the staging date off-set value
00187     // (_flightPeriod._dateOffset).
00188     const stdair::DateOffset_T lDateOffset (_flightPeriod.
_dateOffset);
00189     _flightPeriod._itLeg._boardingDateOffset
= lDateOffset;
00190 }
00191
00192 // ////////////////////////////////////////
00193 storeElapsedTime::
00194 storeElapsedTime (FlightPeriodStruct&
ioFlightPeriod)
00195 : ParserSemanticAction (ioFlightPeriod) {
00196 }
00197
00198 // ////////////////////////////////////////
00199 void storeElapsedTime::operator() (iterator_t
iStr,
                                iterator_t iStrEnd) const {
00200     _flightPeriod._itLeg._elapsed = _flightPeriod
00201     .getTime();
00202
00203     // Reset the number of seconds
00204     _flightPeriod._itSeconds = 0;
00205
00206     // As the boarding date off set is optional, it can be set only
00207     // afterwards, based on the staging date off-set value
00208     // (_flightPeriod._dateOffset).
00209     const stdair::DateOffset_T lDateOffset (_flightPeriod.
_dateOffset);
00210     _flightPeriod._itLeg._offDateOffset =
lDateOffset;
00211 }
00212
00213 // ////////////////////////////////////////
00214 storeLegCabinCode::
00215 storeLegCabinCode (FlightPeriodStruct
& ioFlightPeriod)
00216 : ParserSemanticAction (ioFlightPeriod) {
00217 }
00218
00219 // ////////////////////////////////////////
00220 void storeLegCabinCode::operator() (char

```

```

iChar) const {
00221     _flightPeriod._itLegCabin._cabinCode =
iChar;
00222     //std::cout << "Cabin code: " << iChar << std::endl;
00223 }
00224
00225 // //////////////////////////////////////
00226     storeCapacity::
00227     storeCapacity (FlightPeriodStruct&
ioFlightPeriod)
00228     : ParserSemanticAction (ioFlightPeriod) {
00229 }
00230
00231 // //////////////////////////////////////
00232     void storeCapacity::operator() (double iReal)
const {
00233     _flightPeriod._itLegCabin._capacity =
iReal;
00234     //std::cout << "Capacity: " << iReal << std::endl;
00235
00236     // The capacity is the last (according to the arrival order
00237     // within the schedule input file) detail of the leg cabin. Hence,
00238     // when a capacity is parsed, it means that the full cabin
00239     // details have already been parsed as well: the cabin can
00240     // thus be added to the leg.
00241     _flightPeriod._itLeg._cabinList.push_back (
_flightPeriod._itLegCabin);
00242 }
00243
00244 // //////////////////////////////////////
00245     storeSegmentSpecificity::
00246     storeSegmentSpecificity (FlightPeriodStruct
& ioFlightPeriod)
00247     : ParserSemanticAction (ioFlightPeriod) {
00248 }
00249
00250 // //////////////////////////////////////
00251     void storeSegmentSpecificity::operator()
(char iChar) const {
00252         if (iChar == '0') {
00253             _flightPeriod._areSegmentDefinitionsSpecific
= false;
00254         } else {
00255             _flightPeriod._areSegmentDefinitionsSpecific
= true;
00256         }
00257
00258         // Do a few sanity checks: the two lists should get exactly the same
00259         // content (in terms of airport codes). The only difference is that one
00260         // is a STL set, and the other a STL vector.
00261         assert (_flightPeriod._airportList.size()
== _flightPeriod._airportOrderedList
.size());
00262         assert (_flightPeriod._airportList.size() >= 2);
00263
00264         // Since all the legs have now been parsed, we get all the airports
00265         // and the segments may be built.
00266         _flightPeriod.buildSegments();
00267     }
00268
00269 // //////////////////////////////////////
00270     storeSegmentBoardingPoint::
00271     storeSegmentBoardingPoint (FlightPeriodStruct
& ioFlightPeriod)
00272     : ParserSemanticAction (ioFlightPeriod) {
00273 }
00274
00275 // //////////////////////////////////////
00276     void storeSegmentBoardingPoint::operator()
(iterator_t iStr,
iterator_t iStrEnd)
const {
00277         stdair::AirportCode_T lBoardingPoint (iStr, iStrEnd);
00278         _flightPeriod._itSegment._boardingPoint
= lBoardingPoint;
00279     }
00280
00281 // //////////////////////////////////////
00282     storeSegmentOffPoint::
00283     storeSegmentOffPoint (FlightPeriodStruct
& ioFlightPeriod)
00284     : ParserSemanticAction (ioFlightPeriod) {
00285 }
00286
00287 // //////////////////////////////////////
00288     void storeSegmentOffPoint::operator() (
iterator_t iStr,

```

```

00291                                     iterator_t iStrEnd) const
00292 {
00293     stdair::AirportCode_T lOffPoint (iStr, iStrEnd);
00294     _flightPeriod._itSegment._offPoint =
00295     lOffPoint;
00296     // //////////////////////////////////////
00297     storeSegmentCabinCode::
00298     storeSegmentCabinCode (FlightPeriodStruct
00299     & ioFlightPeriod)
00300     : ParserSemanticAction (ioFlightPeriod) {
00301     }
00302     // //////////////////////////////////////
00303     void storeSegmentCabinCode::operator() (
00304     char iChar) const {
00305         _flightPeriod._itSegmentCabin._cabinCode
00306         = iChar;
00307     }
00308     // //////////////////////////////////////
00309     storeClasses::
00310     storeClasses (FlightPeriodStruct&
00311     ioFlightPeriod)
00312     : ParserSemanticAction (ioFlightPeriod) {
00313     }
00314     // //////////////////////////////////////
00315     void storeClasses::operator() (iterator_t
00316     iStr,
00317                                     iterator_t iStrEnd) const {
00318         std::string lClasses (iStr, iStrEnd);
00319         _flightPeriod._itSegmentCabin._classes
00320         = lClasses;
00321         // The list of classes is the last (according to the arrival order
00322         // within the schedule input file) detail of the segment cabin. Hence,
00323         // when a list of classes is parsed, it means that the full segment
00324         // cabin details have already been parsed as well: the segment cabin
00325         // can thus be added to the segment.
00326         if (_flightPeriod._areSegmentDefinitionsSpecific
00327         == true) {
00328             _flightPeriod.addSegmentCabin (
00329             _flightPeriod._itSegment,
00330             _flightPeriod.
00331             _itSegmentCabin);
00332         } else {
00333             _flightPeriod.addSegmentCabin (
00334             _flightPeriod._itSegmentCabin);
00335         }
00336     }
00337     // //////////////////////////////////////
00338     storeFamilyCode::
00339     storeFamilyCode (FlightPeriodStruct&
00340     ioFlightPeriod)
00341     : ParserSemanticAction (ioFlightPeriod) {
00342     }
00343     // //////////////////////////////////////
00344     void storeFamilyCode::operator() (int iCode)
00345     const {
00346         std::ostringstream ostr;
00347         ostr << iCode;
00348         _flightPeriod._itSegmentCabin._itFamilyCode
00349         = ostr.str();
00350     }
00351     // //////////////////////////////////////
00352     storeFClasses::
00353     storeFClasses (FlightPeriodStruct&
00354     ioFlightPeriod)
00355     : ParserSemanticAction (ioFlightPeriod) {
00356     }
00357     // //////////////////////////////////////
00358     void storeFClasses::operator() (iterator_t
00359     iStr,
00360                                     iterator_t iStrEnd) const {
00361         std::string lClasses (iStr, iStrEnd);
00362         FareFamilyStruct lFareFamily(_flightPeriod.
00363         _itSegmentCabin._itFamilyCode,
00364                                     lClasses);
00365         // The list of classes is the last (according to the arrival order
00366         // within the schedule input file) detail of the segment cabin. Hence,

```

```

00360         // when a list of classes is parsed, it means that the full segment
00361         // cabin details have already been parsed as well: the segment cabin
00362         // can thus be added to the segment.
00363         if (_flightPeriod._areSegmentDefinitionsSpecific
== true) {
00364             _flightPeriod.addFareFamily (_flightPeriod
._itSegment,
00365                                     _flightPeriod._itSegmentCabin
,
00366                                     lFareFamily);
00367         } else {
00368             _flightPeriod.addFareFamily (_flightPeriod
._itSegmentCabin,
00369                                     lFareFamily);
00370         }
00371     }
00372
00373     // //////////////////////////////////////
00374     doEndFlight::
00375     doEndFlight (stdair::BomRoot& ioBomRoot,
00376                 FlightPeriodStruct& ioFlightPeriod)
00377         : ParserSemanticAction (ioFlightPeriod),
00378           _bomRoot (ioBomRoot) {
00379     }
00380
00381     // //////////////////////////////////////
00382     // void doEndFlight::operator() (char iChar) const {
00383     void doEndFlight::operator() (iterator_t
iStr,
00384                                 iterator_t iStrEnd) const {
00385
00386         assert (_flightPeriod._legAlreadyDefined
== true);
00387         _flightPeriod._legList.push_back (_flightPeriod
._itLeg);
00388
00389         // The lists of legs and cabins must be reset
00390         _flightPeriod._legAlreadyDefined = false;
00391         _flightPeriod._itLeg._cabinList.clear();
00392
00393         // DEBUG: Display the result
00394         STDAIR_LOG_DEBUG ("FlightPeriod: " << _flightPeriod.describe
());
00395
00396         // Create the FlightPeriod BOM objects, and potentially the intermediary
00397         // objects (e.g., Inventory).
00398         InventoryGenerator::createFlightPeriod (_bomRoot, _flightPeriod
);
00399     }
00400
00401     // //////////////////////////////////////
00402     //
00403     // Utility Parsers
00404     //
00405     // //////////////////////////////////////
00408     int1_p_t int1_p;
00409
00411     uint2_p_t uint2_p;
00412
00414     uint4_p_t uint4_p;
00415
00417     uint1_4_p_t uint1_4_p;
00418
00420     repeat_p_t airline_code_p (chset_t("0-9A-Z")
.derived(), 2, 3);
00421
00423     bounded1_4_p_t flight_number_p (uint1_4_p
.derived(), 0u, 9999u);
00424
00426     bounded4_p_t year_p (uint4_p.derived(), 2000u,
2099u);
00427
00429     bounded2_p_t month_p (uint2_p.derived(), 1u, 12u)
;
00430
00432     bounded2_p_t day_p (uint2_p.derived(), 1u, 31u);
00433
00435     repeat_p_t dow_p (chset_t("0-1").derived().derived(),
7, 7);
00436
00438     repeat_p_t airport_p (chset_t("0-9A-Z").derived()
, 3, 3);
00439
00441     bounded2_p_t hours_p (uint2_p.derived(), 0u, 23u)
;
00442

```

```

00444     bounded2_p_t minutes_p (uint2_p.derived(), 0u,
00445                             59u);
00446
00447     bounded2_p_t seconds_p (uint2_p.derived(), 0u,
00448                             59u);
00449
00450     chset_t cabin_code_p ("A-Z");
00451
00452     intl_p_t family_code_p;
00453
00454     repeat_p_t class_code_list_p (chset_t("
00455 A-Z").derived(), 1, 26);
00456
00457
00458
00459     // //////////////////////////////////////
00460     // (Boost Spirit) Grammar Definition
00461     // //////////////////////////////////////
00462
00463     // //////////////////////////////////////
00464     FlightPeriodParser::
00465     FlightPeriodParser (stdair::BomRoot& ioBomRoot,
00466                       FlightPeriodStruct& ioFlightPeriod)
00467       : _bomRoot (ioBomRoot),
00468         _flightPeriod (ioFlightPeriod) {
00469     }
00470
00471     // //////////////////////////////////////
00472     template<typename ScannerT>
00473     FlightPeriodParser::definition<ScannerT>::
00474     definition (FlightPeriodParser const& self)
00475     {
00476         flight_period_list = *(not_to_be_parsed
00477                               | flight_period )
00478         ;
00479
00480         not_to_be_parsed = bsc::
00481         lexeme_d[bsc::comment_p("//") | bsc::comment_p("/*", "*/")
00482                 | bsc::eol_p];
00483
00484         flight_period = flight_key
00485         >> +(';' >> leg )
00486         >> ';' >> segment_section
00487         >> flight_period_end[doEndFlight (self._bomRoot, self.
00488 _flightPeriod)]
00489         ;
00490
00491         flight_period_end =
00492         bsc::ch_p(';')
00493         ;
00494
00495         flight_key = airline_code
00496         >> ';' >> flight_number
00497         >> ';' >> date[storeDateRangeStart (self.
00498 _flightPeriod)]
00499         >> ';' >> date[storeDateRangeEnd (self._flightPeriod)]
00500         >> ';' >> dow[storeDow (self._flightPeriod)]
00501         ;
00502
00503         airline_code = bsc::
00504         lexeme_d[(airline_code_p) [storeAirlineCode
00505 (self._flightPeriod) ] ]
00506         ;
00507
00508         flight_number = bsc::
00509         lexeme_d[(flight_number_p) [storeFlightNumber
00510 (self._flightPeriod) ] ]
00511         ;
00512
00513         date = bsc::
00514         lexeme_d[(year_p) [bsc::assign_a (self._flightPeriod._itYear)]
00515                 >> '-'
00516                 >> (month_p) [bsc::assign_a (self._flightPeriod._itMonth)
00517                 >> '-'
00518                 >> (day_p) [bsc::assign_a (self._flightPeriod._itDay)]
00519                 ]
00520         ;
00521
00522         dow = bsc::lexeme_d[ dow_p ]
00523         ;
00524
00525         leg = leg_key >> ';' >> leg_details >> +(';' >> leg_cabin_details )
00526         ;
00527
00528         leg_key =
00529         (airport_p) [storeLegBoardingPoint (self.

```

```

_flightPeriod)]
00526     >> ';'
00527     >> (airport_p)[storeLegOffPoint(self,
_flightPeriod)]
00528     ;
00529
00530     leg_details =
00531         time[storeBoardingTime(self._flightPeriod)]
00532         >> !(date_offset)
00533         >> ';'
00534         >> time[storeOffTime(self._flightPeriod)]
00535         >> !(date_offset)
00536         >> ';'
00537         >> time[storeElapsedTime(self._flightPeriod)]
00538         ;
00539
00540     time =bsc::
00541         lexeme_d[(hours_p)[bsc::assign_a(self._flightPeriod._itHours)]
00542         >> ':'
00543         >> (minutes_p)[bsc::assign_a(self._flightPeriod.
_itMinutes)]
00544         >> ':'
00545         >> (seconds_p)[bsc::assign_a(self._flightPeriod.
_itSeconds))]
00546     ]
00547     ;
00548
00549     date_offset =bsc::ch_p('/')
00550     >> (int1_p)[bsc::assign_a(self._flightPeriod._dateOffset)]
00551     ;
00552
00553     leg_cabin_details = (cabin_code_p)[storeLegCabinCode
(self._flightPeriod)]
00554     >> ';' >> (bsc::ureal_p)[storeCapacity(self._flightPeriod)
]
00555     ;
00556
00557     segment_key =
00558         (airport_p)[storeSegmentBoardingPoint
(self._flightPeriod)]
00559         >> ';'
00560         >> (airport_p)[storeSegmentOffPoint(self,
_flightPeriod)]
00561     ;
00562
00563     segment_section =
00564         generic_segment | specific_segment_list
00565     ;
00566
00567     generic_segment =bsc::
00568         ch_p('0')[storeSegmentSpecificity(self,
_flightPeriod)]
00569         >> +(';' >> segment_cabin_details)
00570     ;
00571
00572     specific_segment_list =bsc::
00573         ch_p('1')[storeSegmentSpecificity(self,
_flightPeriod)]
00574         >> +(';' >> segment_key >> full_segment_cabin_details)
00575     ;
00576
00577     full_segment_cabin_details =
00578         +(';' >> segment_cabin_details)
00579     ;
00580
00581     segment_cabin_details =
00582         (cabin_code_p)[storeSegmentCabinCode(
self._flightPeriod)]
00583         >> ';' >> (class_code_list_p)[storeClasses
(self._flightPeriod)]
00584         >> *(';' >> family_cabin_details)
00585     ;
00586
00587     family_cabin_details =
00588         (family_code_p)[storeFamilyCode(self,
_flightPeriod)]
00589         >> ';'
00590         >> (class_code_list_p)[storeFClasses(self,
._flightPeriod)]
00591     ;
00592
00593     // BOOST_SPIRIT_DEBUG_NODE (FlightPeriodParser);
00594     BOOST_SPIRIT_DEBUG_NODE (flight_period_list);
00595     BOOST_SPIRIT_DEBUG_NODE (flight_period);
00596     BOOST_SPIRIT_DEBUG_NODE (not_to_be_parsed);
00597     BOOST_SPIRIT_DEBUG_NODE (flight_period_end);
00598     BOOST_SPIRIT_DEBUG_NODE (flight_key);

```

```

00599     BOOST_SPIRIT_DEBUG_NODE (airline_code);
00600     BOOST_SPIRIT_DEBUG_NODE (flight_number);
00601     BOOST_SPIRIT_DEBUG_NODE (date);
00602     BOOST_SPIRIT_DEBUG_NODE (dow);
00603     BOOST_SPIRIT_DEBUG_NODE (leg);
00604     BOOST_SPIRIT_DEBUG_NODE (leg_key);
00605     BOOST_SPIRIT_DEBUG_NODE (leg_details);
00606     BOOST_SPIRIT_DEBUG_NODE (time);
00607     BOOST_SPIRIT_DEBUG_NODE (date_offset);
00608     BOOST_SPIRIT_DEBUG_NODE (leg_cabin_details);
00609     BOOST_SPIRIT_DEBUG_NODE (segment_section);
00610     BOOST_SPIRIT_DEBUG_NODE (segment_key);
00611     BOOST_SPIRIT_DEBUG_NODE (generic_segment);
00612     BOOST_SPIRIT_DEBUG_NODE (specific_segment_list);
00613     BOOST_SPIRIT_DEBUG_NODE (full_segment_cabin_details);
00614     BOOST_SPIRIT_DEBUG_NODE (segment_cabin_details);
00615     BOOST_SPIRIT_DEBUG_NODE (family_cabin_details);
00616 }
00617
00618 // //////////////////////////////////////
00619 template<typename ScannerT>
00620 bsc::rule<ScannerT> const&
00621 FlightPeriodParser::definition<ScannerT>::start
00622 () const {
00623     return flight_period_list;
00624 }
00625 }
00626
00627 //
00628 // Entry class for the file parser
00629 //
00630 //
00631 //
00632 // //////////////////////////////////////
00633 FlightPeriodFileParser::
00634 FlightPeriodFileParser (stdair::BomRoot& ioBomRoot,
00635                         const stdair::Filename_T& iFilename)
00636 : _filename (iFilename), _bomRoot (ioBomRoot) {
00637     init();
00638 }
00639
00640 //
00641 // //////////////////////////////////////
00642 void FlightPeriodFileParser::init() {
00643     // Check that the file exists and is readable
00644     const bool doesExistAndIsReadable =
00645         stdair::BasFileMgr::doesExistAndIsReadable (_filename);
00646
00647     if (doesExistAndIsReadable == false) {
00648         STDAIR_LOG_ERROR ("The schedule file " << _filename
00649             << " does not exist or can not be read.");
00650
00651         throw ScheduleInputFileNotFoundException
00652             ("The schedule file " + _filename
00653             + " does not exist or can not
00654             be read");
00655     }
00656
00657     // Open the file
00658     _startIterator = iterator_t (_filename);
00659
00660     // Check the filename exists and can be open
00661     if (!_startIterator) {
00662         STDAIR_LOG_ERROR ("The schedule file " << _filename << " can not be open.
00663         "
00664             << std::endl);
00665
00666         throw ScheduleInputFileNotFoundException ("The file " + _filename
00667             + " does not exist or can not
00668             be read");
00669     }
00670
00671     // Create an EOF iterator
00672     _endIterator = _startIterator.make_end();
00673 }
00674
00675 // //////////////////////////////////////
00676 bool FlightPeriodFileParser::generateInventories
00677 () {
00678     bool oResult = false;
00679
00680     STDAIR_LOG_DEBUG ("Parsing schedule input file: " << _filename);
00681
00682     // Initialise the parser (grammar) with the helper/staging structure.
00683     ScheduleParserHelper::FlightPeriodParser
00684     lFPParser (_bomRoot,
00685                 _flightPeriod);

```

```

00681
00682 // Launch the parsing of the file and, thanks to the doEndFlight
00683 // call-back structure, the building of the whole BomRoot BOM
00684 // (i.e., including Inventory, FlightDate, LegDate, SegmentDate, etc.)
00685 bsc::parse_info<iterator_t> info =
00686     bsc::parse (_startIterator, _endIterator, lFPParser,
00687                 bsc::space_p - bsc::eol_p);
00688
00689 // Retrieves whether or not the parsing was successful
00690 oResult = info.hit;
00691
00692 const std::string hasBeenFullyReadStr = (info.full == true)?"":"not ";
00693 if (oResult == true) {
00694     STDAIR_LOG_DEBUG ("Parsing of schedule input file: " << _filename
00695                       << " succeeded: read " << info.length
00696                       << " characters. The input file has "
00697                       << hasBeenFullyReadStr
00698                       << "been fully read. Stop point: " << info.stop);
00699 } else {
00700     // TODO: decide whether to throw an exception
00701     STDAIR_LOG_ERROR ("Parsing of schedule input file: " << _filename
00702                      << " failed: read " << info.length
00703                      << " characters. The input file has "
00704                      << hasBeenFullyReadStr
00705                      << "been fully read. Stop point: " << info.stop);
00706 }
00707
00708
00709 return oResult;
00710 }
00711
00712 }

```

## 24.109 airsched/command/ScheduleParserHelper.hpp File Reference

```

#include <string>
#include <stdair/command/CmdAbstract.hpp>
#include <airsched/AIRSCHEDED_Types.hpp>
#include <airsched/basic/BasParserTypes.hpp>
#include <airsched/bom/FlightPeriodStruct.hpp>

```

### Classes

- struct [AIRSCHEDED::ScheduleParserHelper::ParserSemanticAction](#)
- struct [AIRSCHEDED::ScheduleParserHelper::storeAirlineCode](#)
- struct [AIRSCHEDED::ScheduleParserHelper::storeFlightNumber](#)
- struct [AIRSCHEDED::ScheduleParserHelper::storeDateRangeStart](#)
- struct [AIRSCHEDED::ScheduleParserHelper::storeDateRangeEnd](#)
- struct [AIRSCHEDED::ScheduleParserHelper::storeDow](#)
- struct [AIRSCHEDED::ScheduleParserHelper::storeLegBoardingPoint](#)
- struct [AIRSCHEDED::ScheduleParserHelper::storeLegOffPoint](#)
- struct [AIRSCHEDED::ScheduleParserHelper::storeBoardingTime](#)
- struct [AIRSCHEDED::ScheduleParserHelper::storeOffTime](#)
- struct [AIRSCHEDED::ScheduleParserHelper::storeElapsedTime](#)
- struct [AIRSCHEDED::ScheduleParserHelper::storeLegCabinCode](#)
- struct [AIRSCHEDED::ScheduleParserHelper::storeCapacity](#)
- struct [AIRSCHEDED::ScheduleParserHelper::storeSegmentSpecificity](#)
- struct [AIRSCHEDED::ScheduleParserHelper::storeSegmentBoardingPoint](#)
- struct [AIRSCHEDED::ScheduleParserHelper::storeSegmentOffPoint](#)
- struct [AIRSCHEDED::ScheduleParserHelper::storeSegmentCabinCode](#)
- struct [AIRSCHEDED::ScheduleParserHelper::storeClasses](#)
- struct [AIRSCHEDED::ScheduleParserHelper::storeFamilyCode](#)
- struct [AIRSCHEDED::ScheduleParserHelper::storeFClasses](#)
- struct [AIRSCHEDED::ScheduleParserHelper::doEndFlight](#)
- struct [AIRSCHEDED::ScheduleParserHelper::FlightPeriodParser](#)



- struct AIRSCHED::ScheduleParserHelper::FlightPeriodParser::definition< ScannerT >
- class AIRSCHED::FlightPeriodFileParser

## Namespaces

- namespace stdair  
    *Forward declarations.*
- namespace AIRSCHED
- namespace AIRSCHED::ScheduleParserHelper

## 24.110 ScheduleParserHelper.hpp

```

00001 #ifndef __AIRSCHED_CMD_SCHEDULEPARSERHELPER_HPP
00002 #define __AIRSCHED_CMD_SCHEDULEPARSERHELPER_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // StdAir
00010 #include <stdair/command/CmdAbstract.hpp>
00011 // AirSched
00012 #include <airsched/AIRSCHED_Types.hpp>
00013 #include <airsched/basic/BasParserTypes.hpp>
00014 #include <airsched/bom/FlightPeriodStruct.hpp>
00015 >
00016 // Forward declarations
00017 namespace stdair {
00018     class BomRoot;
00019 }
00020
00021 namespace AIRSCHED {
00022
00023     namespace ScheduleParserHelper {
00024
00025         // //////////////////////////////////////
00026         // Semantic actions
00027         // //////////////////////////////////////
00029         struct ParserSemanticAction {
00031             ParserSemanticAction (FlightPeriodStruct
00033             &);
00034             FlightPeriodStruct& _flightPeriod;
00035         };
00037         struct storeAirlineCode : public ParserSemanticAction
00039         {
00041             storeAirlineCode (FlightPeriodStruct&);
00042             void operator() (iterator_t iStr, iterator_t
00043             iStrEnd) const;
00044         };
00045         struct storeFlightNumber : public ParserSemanticAction
00047         {
00049             storeFlightNumber (FlightPeriodStruct&
00050             );
00051             void operator() (unsigned int iNumber) const;
00052         };
00053         struct storeDateRangeStart : public ParserSemanticAction
00055         {
00057             storeDateRangeStart (FlightPeriodStruct
00058             &);
00059             void operator() (iterator_t iStr, iterator_t
00060             iStrEnd) const;
00061         };
00062         struct storeDateRangeEnd : public ParserSemanticAction
00064         {
00066             storeDateRangeEnd (FlightPeriodStruct&
00067             );
00068             void operator() (iterator_t iStr, iterator_t
00069             iStrEnd) const;
00070         };
00071         struct storeDow : public ParserSemanticAction {
00072             storeDow (FlightPeriodStruct&);
00073             void operator() (iterator_t iStr, iterator_t

```

```

        iStrEnd) const;
00074     };
00075
00077     struct storeLegBoardingPoint : public
ParserSemanticAction {
00079         storeLegBoardingPoint (FlightPeriodStruct
&);
00081         void operator() (iterator_t iStr, iterator_t
iStrEnd) const;
00082     };
00083
00085     struct storeLegOffPoint : public ParserSemanticAction
{
00087         storeLegOffPoint (FlightPeriodStruct&);
00089         void operator() (iterator_t iStr, iterator_t
iStrEnd) const;
00090     };
00091
00093     struct storeBoardingTime : public ParserSemanticAction
{
00095         storeBoardingTime (FlightPeriodStruct&
);
00097         void operator() (iterator_t iStr, iterator_t
iStrEnd) const;
00098     };
00099
00101     struct storeOffTime : public ParserSemanticAction
{
00103         storeOffTime (FlightPeriodStruct&);
00105         void operator() (iterator_t iStr, iterator_t
iStrEnd) const;
00106     };
00107
00109     struct storeElapsedTime : public ParserSemanticAction
{
00111         storeElapsedTime (FlightPeriodStruct&);
00113         void operator() (iterator_t iStr, iterator_t
iStrEnd) const;
00114     };
00115
00117     struct storeLegCabinCode : public ParserSemanticAction
{
00119         storeLegCabinCode (FlightPeriodStruct&
);
00121         void operator() (char iChar) const;
00122     };
00123
00125     struct storeCapacity : public ParserSemanticAction
{
00127         storeCapacity (FlightPeriodStruct&);
00129         void operator() (double iReal) const;
00130     };
00131
00136     struct storeSegmentSpecificity : public
ParserSemanticAction {
00138         storeSegmentSpecificity (FlightPeriodStruct
&);
00140         void operator() (char iChar) const;
00141     };
00142
00144     struct storeSegmentBoardingPoint : public
ParserSemanticAction {
00146         storeSegmentBoardingPoint (FlightPeriodStruct
&);
00148         void operator() (iterator_t iStr, iterator_t
iStrEnd) const;
00149     };
00150
00152     struct storeSegmentOffPoint : public
ParserSemanticAction {
00154         storeSegmentOffPoint (FlightPeriodStruct
&);
00156         void operator() (iterator_t iStr, iterator_t
iStrEnd) const;
00157     };
00158
00160     struct storeSegmentCabinCode : public
ParserSemanticAction {
00162         storeSegmentCabinCode (FlightPeriodStruct
&);
00164         void operator() (char iChar) const;
00165     };
00166
00168     struct storeClasses : public ParserSemanticAction
{
00170         storeClasses (FlightPeriodStruct&);
00172         void operator() (iterator_t iStr, iterator_t

```

```

iStrEnd) const;
00173     };
00174
00176     struct storeFamilyCode : public ParserSemanticAction
    {
00178         storeFamilyCode (FlightPeriodStruct&);
00180         void operator() (int iCode) const;
00181     };
00182
00184     struct storeFClasses : public ParserSemanticAction
    {
00186         storeFClasses (FlightPeriodStruct&);
00188         void operator() (iterator_t iStr, iterator_t
iStrEnd) const;
00189     };
00190
00192     struct doEndFlight : public ParserSemanticAction
    {
00194         doEndFlight (stdair::BomRoot&, FlightPeriodStruct
&);
00196         void operator() (iterator_t iStr, iterator_t
iStrEnd) const;
00198         stdair::BomRoot& _bomRoot;
00199     };
00200
00201     //
00203     // (Boost Spirit) Grammar Definition
00204     //
00205     //
00207
00249     struct FlightPeriodParser :
00250     public boost::spirit::classic::grammar<FlightPeriodParser> {
00251
00252         FlightPeriodParser (stdair::BomRoot&,
FlightPeriodStruct&);
00253
00254         template <typename ScannerT>
00255         struct definition {
00256             definition (FlightPeriodParser const& self)
;
00257
00258             // Instantiation of rules
00259             boost::spirit::classic::rule<ScannerT> flight_period_list
, flight_period,
00260             not_to_be_parsed, flight_period_end,
flight_key, airline_code,
00261             flight_number, date, dow, time, date_offset
'
00262             leg, leg_key, leg_details, leg_cabin_details
'
00263             segment_section, segment_key,
full_segment_cabin_details,
00264             segment_cabin_details, full_family_cabin_details
'
00265             family_cabin_details, generic_segment
, specific_segment_list;
00266
00268             boost::spirit::classic::rule<ScannerT> const& start() const;
00269         };
00270
00271         // Parser Context
00272         stdair::BomRoot& _bomRoot;
00273         FlightPeriodStruct& _flightPeriod;
00274     };
00275
00276 }
00281
00282 //
00283 // Entry class for the file parser
00284 //
00286
00291 class FlightPeriodFileParser : public
stdair::CmdAbstract {
00292 public:
00294     FlightPeriodFileParser (stdair::BomRoot& ioBomRoot,
00295                             const stdair::Filename_T& iFilename);
00296
00298     bool generateInventories ();
00299
00300 private:
00302     void init();
00303
00304 private:
00305     // Attributes
00307     stdair::Filename_T _filename;
00308
00310     iterator_t _startIterator;

```

```

00311
00313     iterator_t _endIterator;
00314
00316     stdair::BomRoot& _bomRoot;
00317
00319     FlightPeriodStruct _flightPeriod;
00320 };
00321
00322 }
00323 #endif // __AIRSCHED_CMD_SCHEDULEPARSERHELPER_HPP

```

## 24.111 airsched/command/SegmentPathGenerator.cpp File Reference

```

#include <cassert>
#include <vector>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/bom/BomManager.hpp>
#include <stdair/bom/BomRoot.hpp>
#include <stdair/bom/Inventory.hpp>
#include <stdair/bom/FlightPeriod.hpp>
#include <stdair/bom/SegmentPeriod.hpp>
#include <stdair/factory/FacBomManager.hpp>
#include <stdair/service/Logger.hpp>
#include <airsched/bom/ReachableUniverse.hpp>
#include <airsched/bom/OriginDestinationSet.hpp>
#include <airsched/bom/SegmentPathPeriod.hpp>
#include <airsched/command/SegmentPathGenerator.hpp>

```

### Namespaces

- namespace [AIRSCHED](#)

## 24.112 SegmentPathGenerator.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <vector>
00007 // StdAir
00008 #include <stdair/basic/BasConst_Inventory.hpp>
00009 #include <stdair/bom/BomManager.hpp>
00010 #include <stdair/bom/BomRoot.hpp>
00011 #include <stdair/bom/Inventory.hpp>
00012 #include <stdair/bom/FlightPeriod.hpp>
00013 #include <stdair/bom/SegmentPeriod.hpp>
00014 #include <stdair/factory/FacBomManager.hpp>
00015 #include <stdair/service/Logger.hpp>
00016 // AirSched
00017 #include <airsched/bom/ReachableUniverse.hpp>
00018 #include <airsched/bom/OriginDestinationSet.hpp>
00019 #include <airsched/bom/SegmentPathPeriod.hpp>
00020 #include <airsched/command/SegmentPathGenerator.hpp>
00021
00022 namespace AIRSCHED {
00023
00024 // //////////////////////////////////////
00025 void SegmentPathGenerator::
00026 createSegmentPathNetwork (const stdair::BomRoot&
00027 iBomRoot) {
00028     // Build the list of single-segment segment path objects.
00029     const stdair::InventoryList_T& lInventoryList =
00030         stdair::BomManager::getList<stdair::Inventory> (iBomRoot);
00031     for (stdair::InventoryList_T::const_iterator itInv = lInventoryList.begin()
00032 ;
00033         itInv != lInventoryList.end(); ++itInv) {

```

```

00033     const stdair::Inventory* lCurrentInventory_ptr = *itInv;
00034     assert (lCurrentInventory_ptr != NULL);
00035
00036     //
00037     createSinglePaths (*lCurrentInventory_ptr);
00038 }
00039
00040 // Build the list of i-fixed-length segment path objects. In other words,
00041 // build the whole segment path network.
00042 for (stdair::NbOfSegments_T i = 2;
00043      i <= stdair::MAXIMAL_NUMBER_OF_SEGMENTS_IN_OND; ++i) {
00044     buildSegmentPathNetwork (iBomRoot, i);
00045 }
00046 }
00047
00048 // //////////////////////////////////////
00049 void SegmentPathGenerator::
00050 createSinglePaths (const stdair::Inventory& iInventory) {
00051
00052     const stdair::FlightPeriodList_T& lFlightPeriodList =
00053         stdair::BomManager::getList<stdair::FlightPeriod> (iInventory);
00054     for (stdair::FlightPeriodList_T::const_iterator itFlightPeriod =
00055          lFlightPeriodList.begin();
00056          itFlightPeriod != lFlightPeriodList.end(); ++itFlightPeriod) {
00057         const stdair::FlightPeriod* lCurrentFlightPeriod_ptr = *itFlightPeriod;
00058         assert (lCurrentFlightPeriod_ptr != NULL);
00059
00060         //
00061         createSinglePaths (*lCurrentFlightPeriod_ptr);
00062     }
00063 }
00064
00065 // //////////////////////////////////////
00066 void SegmentPathGenerator::
00067 createSinglePaths (const stdair::FlightPeriod& iFlightPeriod) {
00068
00069     const stdair::SegmentPeriodList_T& lSegmentPeriodList =
00070         stdair::BomManager::getList<stdair::SegmentPeriod> (iFlightPeriod);
00071     for (stdair::SegmentPeriodList_T::const_iterator itSegmentPeriod =
00072          lSegmentPeriodList.begin();
00073          itSegmentPeriod != lSegmentPeriodList.end(); ++itSegmentPeriod) {
00074         stdair::SegmentPeriod* lCurrentSegmentPeriod_ptr = *itSegmentPeriod;
00075         assert (lCurrentSegmentPeriod_ptr != NULL);
00076
00077         //
00078         createSinglePath (*lCurrentSegmentPeriod_ptr);
00079     }
00080 }
00081
00082 // //////////////////////////////////////
00083 void SegmentPathGenerator::
00084 createSinglePath (stdair::SegmentPeriod& ioSegmentPeriod) {
00085
00086     // Retrieve the BOM tree root
00087     const stdair::AirportCode_T& lOrigin = ioSegmentPeriod.getBoardingPoint();
00088     const stdair::FlightPeriod& lFlightPeriod =
00089         stdair::BomManager::getParent<stdair::FlightPeriod> (ioSegmentPeriod);
00090     const stdair::Inventory& lInventory =
00091         stdair::BomManager::getParent<stdair::Inventory> (lFlightPeriod);
00092     stdair::BomRoot& lBomRoot =
00093         stdair::BomManager::getParent<stdair::BomRoot> (lInventory);
00094
00095     // Retrieve the ReachableUniverse (if existing) which corresponds
00096     // to the origin. If it does not exist, then create one.
00097     ReachableUniverse* lReachableUniverse_ptr =
00098         stdair::BomManager::getObjectPtr<ReachableUniverse> (lBomRoot, lOrigin);
00099     if (lReachableUniverse_ptr == NULL) {
00100         ReachableUniverseKey lKey (lOrigin);
00101         lReachableUniverse_ptr =
00102             &stdair::FacBom<ReachableUniverse>::instance().create (lKey);
00103         stdair::FacBomManager::addToListAndMap (lBomRoot, *lReachableUniverse_ptr
00104 );
00105         stdair::FacBomManager::linkWithParent (lBomRoot, *lReachableUniverse_ptr
00106 );
00107     }
00108     assert (lReachableUniverse_ptr != NULL);
00109
00110     //
00111     createSinglePath (*lReachableUniverse_ptr, ioSegmentPeriod);
00112 }
00113
00114 // //////////////////////////////////////
00115 void SegmentPathGenerator::
00116 createSinglePath (ReachableUniverse& ioReachableUniverse,
00117                  stdair::SegmentPeriod& ioSegmentPeriod) {
00118
00119     const stdair::AirportCode_T& lDestination = ioSegmentPeriod.getOffPoint();

```

```

00118
00119 // Retrieve the origin-destination set (if existing) which corresponds
00120 // to the destination. If it does not exist, then create one.
00121 OriginDestinationSet* lOriginDestinationSet_ptr =
00122     stdair::BomManager::getObjectPtr<OriginDestinationSet>(
ioReachableUniverse,
00123
00124     lDestination);
00125
00126 if (lOriginDestinationSet_ptr == NULL) {
00127     OriginDestinationSetKey lKey (lDestination);
00128     lOriginDestinationSet_ptr =
00129         &stdair::FacBom<OriginDestinationSet>::instance().create (lKey);
00130     stdair::FacBomManager::addToListAndMap (ioReachableUniverse,
00131         *lOriginDestinationSet_ptr);
00132     stdair::FacBomManager::linkWithParent (ioReachableUniverse,
00133         *lOriginDestinationSet_ptr);
00134 }
00135 assert (lOriginDestinationSet_ptr != NULL);
00136
00137 // Create a segment path period and add it to the corresponding
00138 // origin-destination set and reachable-universe.
00139 const stdair::FlightPeriod& lFlightPeriod =
00140     stdair::BomManager::getParent<stdair::FlightPeriod> (ioSegmentPeriod);
00141 const stdair::PeriodStruct& lPeriodOfFlight = lFlightPeriod.getPeriod();
00142
00143 // The departure period of the segment is the departure period of
00144 // the flight plus the boarding date offset of the segment.
00145 const stdair::DateOffset_T& lBoardingDateOffset =
00146     ioSegmentPeriod.getBoardingDateOffset();
00147
00148 const stdair::PeriodStruct lPeriodOfSegment =
00149     lPeriodOfFlight.addDateOffset (lBoardingDateOffset);
00150
00151 const stdair::Duration_T& lBoardingTime = ioSegmentPeriod.getBoardingTime()
;
00152 const stdair::Duration_T& lElapsed = ioSegmentPeriod.getElapsedTime();
00153
00154 DateOffsetList_T lDateOffsetList;
00155 const stdair::DateOffset_T lFirstDateOffset (0);
00156 lDateOffsetList.push_back (lFirstDateOffset);
00157
00158 const SegmentPathPeriodKey lSegmentPathKey (lPeriodOfSegment,
00159     lBoardingTime, lElapsed,
00160     lDateOffsetList, 1);
00161
00162 SegmentPathPeriod& lSegmentPathPeriod =
00163     stdair::FacBom<SegmentPathPeriod>::instance().create (lSegmentPathKey);
00164
00165 addSegmentPathPeriod (ioReachableUniverse, lSegmentPathPeriod);
00166
00167 // Link the SegmentPathPeriod object with its parent, namely
00168 // OriginDestinationSet
00169 stdair::FacBomManager::addToList (*lOriginDestinationSet_ptr,
00170     lSegmentPathPeriod);
00171 stdair::FacBomManager::linkWithParent (*lOriginDestinationSet_ptr,
00172     lSegmentPathPeriod);
00173
00174 // Link the SegmentPathPeriod and SegmentPeriod objects. Note that
00175 // the SegmentPeriod object has already a parent, namely FlightPeriod.
00176 stdair::FacBomManager::addToList (lSegmentPathPeriod,
00177     ioSegmentPeriod);
00178 }
00179
00180 // //////////////////////////////////////
00181 void SegmentPathGenerator::
00182 addSegmentPathPeriod (ReachableUniverse& ioReachableUniverse,
00183     const SegmentPathPeriod& iSegmentPathPeriod) {
00184
00185     const stdair::NbOfSegments_T& lNbOfSegments =
00186         iSegmentPathPeriod.getNbOfSegments();
00187
00188     assert (lNbOfSegments > 0
00189         && lNbOfSegments <= stdair::MAXIMAL_NUMBER_OF_SEGMENTS_IN_OND);
00190
00191     // If needed, initialise the list of lists with empty fixed-length
00192     // segment path period lists.
00193
00194     SegmentPathPeriodListList_T&
00195     lSegmentPathPeriodListList =
00196         ioReachableUniverse._segmentPathPeriodListList;
00197     while (lSegmentPathPeriodListList.size() < lNbOfSegments) {
00198         SegmentPathPeriodLightList_T
00199         lSegmentPathPeriodList;
00200         lSegmentPathPeriodListList.push_back (lSegmentPathPeriodList);
00201     }
00202
00203 // Retrieve the i-fixed-length segment path period list (i = number of

```

```

00207     // segments).
00208     SegmentPathPeriodLightList_T&
lSegmentPathPeriodList =
00209     lSegmentPathPeriodListList.at (lNbOfSegments-1);
00210
00211     // Add the SegmentPathPeriod to that fixed-length-path list.
00212     lSegmentPathPeriodList.push_back (&iSegmentPathPeriod);
00213 }
00214
00215 // //////////////////////////////////////
00216 void SegmentPathGenerator::
00217     buildSegmentPathNetwork (const stdair::BomRoot& iBomRoot,
00218                             const stdair::NbOfSegments_T& lNbOfSegments) {
00219
00220     const ReachableUniverseList_T&
lReachableUniverseList =
00221     stdair::BomManager::getList<ReachableUniverse> (iBomRoot);
00222     for (ReachableUniverseList_T::const_iterator itReachableUniverse =
00223         lReachableUniverseList.begin();
00224         itReachableUniverse != lReachableUniverseList.end();
00225         ++itReachableUniverse) {
00226         ReachableUniverse* lReachableUniverse_ptr = *itReachableUniverse;
00227         assert (lReachableUniverse_ptr != NULL);
00228
00229         //
00230         buildSegmentPathNetwork (*lReachableUniverse_ptr, lNbOfSegments);
00231     }
00232 }
00233
00234 // //////////////////////////////////////
00235 void SegmentPathGenerator::
00236     buildSegmentPathNetwork (ReachableUniverse& ioReachableUniverse,
00237                             const stdair::NbOfSegments_T& iNbOfSegments) {
00238
00239     // The goal of that method is to build the i-fixed-length
00240     // segment path period objects, knowing that all the
00241     // lower-fixed-length segment path period objects have already been
00242     // built during the previous steps. Once an i-fixed-length
00243     // segment path period object is created, it is added to the list of
00244     // the (fixed-length segment path period object) lists.
00245
00246     // Hence, at that iteration, by construction, the list of the
00247     // (fixed-length segment path period object) lists should already get
00248     // a size of i-1, if there were such possibilities (in terms of
00249     // segment path period). In that case, at the end of the method, its
00250     // size should be of i.
00251
00252     // If the size of the list of the (fixed-length segment path period
00253     // object) lists is (strictly) less than i-1, it means that that
00254     // reachable universe has no more possibilities of destinations. We
00255     // are thus done at that stage.
00256     const SegmentPathPeriodListList_T&
lSegmentPathPeriodListList =
00257     ioReachableUniverse.getSegmentPathPeriodListList();
00258     const unsigned short lNbOfSegments_m1 = iNbOfSegments - 1;
00259     assert (lNbOfSegments_m1 >= 0);
00260     if (lSegmentPathPeriodListList.size() < lNbOfSegments_m1) {
00261         return;
00262     }
00263
00264     // Retrieve the (i-1)-fixed-length segment path period list (i = number of
00265     // segments).
00266
00267     // Note that a STL vector starts at 0, whereas the number of segments
00268     // starts at 1. Hence, (i-1) for the length (in number of segments)
00269     // corresponds to [lNbOfSegments-2] for the STL vector.
00270
00271     // As the lSegmentPathPeriodListList may change during the next loop
00272     // iterations (as some SegmentPathPeriod objects are created and linked to
00273     // ReachableUniverse), we need to take the initial copy of that list.
00274     const SegmentPathPeriodLightList_T
lSegmentPathPeriodLightList_im1 =
00275     lSegmentPathPeriodListList.at (iNbOfSegments-2);
00276
00277     // Iterate on the (i-1)-fixed-length segment path period objects, in order
00278     // to build a i-fixed-length segment path period objects.
00279     // There are two steps:
00280     // 1. Retrieve the airport-dates at a (i-1) length (in number of segments)
00281     //    of the origin airport-date.
00282     // 2. From each of such (i-1) airport-date, add the single-segment pathes
00283     //    to the (i-1)-length pathes, so as to make i-length pathes.
00284     for (SegmentPathPeriodLightList_T::const_iterator itSegmentPathPeriodList =
00285         lSegmentPathPeriodLightList_im1.begin();
00286         itSegmentPathPeriodList != lSegmentPathPeriodLightList_im1.end();
00287         ++itSegmentPathPeriodList) {
00288         const SegmentPathPeriod* lSegmentPathPeriod_im1_ptr =
00289             *itSegmentPathPeriodList;

```

```

00295     assert (lSegmentPathPeriod_iml_ptr != NULL);
00296
00297     // Get the reachable-universe departing from the destination of
00298     // the current segment path period.
00299     const stdair::AirportCode_T& lDestination_iml =
00300         lSegmentPathPeriod_iml_ptr->getDestination();
00301     const stdair::BomRoot& lBomRoot =
00302         stdair::BomManager::getParent<stdair::BomRoot> (ioReachableUniverse);
00303     const ReachableUniverse* lReachableUniverseFromDestination_iml_ptr =
00304         stdair::BomManager::getObjectPtr<ReachableUniverse> (lBomRoot,
00305                                                             lDestination_iml);
00306
00307     // If there is no ReachableUniverse corresponding to the destination (off
00308     // point of the last SegmentDate), it means that the destination is
00309     // an end point (no other SegmentDate is starting from there).
00310     // Hence, there is nothing else to do for now for that (final)
00311     // destination, and we can process the next (i-1)-segment path period.
00312     if (lReachableUniverseFromDestination_iml_ptr == NULL) {
00313         continue;
00314     }
00315     assert (lReachableUniverseFromDestination_iml_ptr != NULL);
00316
00317     // Retrieve the single-segment segment path period list,
00318     // so as to make a i-length SegmentPathPeriod.
00319     const SegmentPathPeriodListList_T&
00320         lSegmentPathPeriodListListFromDestination_iml =
00321         lReachableUniverseFromDestination_iml_ptr->
00322         getSegmentPathPeriodListList();
00323     assert (lSegmentPathPeriodListListFromDestination_iml.size() >= 1);
00324
00325     // As the lSegmentPathPeriodListListFromDestination_iml may change during
00326     // the next loop iterations (as some SegmentPathPeriod objects are
00327     // created and linked to ReachableUniverse), we need to take the initial
00328     // copy of that list.
00329     const SegmentPathPeriodLightList_T
00330         lSingleSegmentPathPeriodLightListFromDestination_iml =
00331         lSegmentPathPeriodListListFromDestination_iml.at (0);
00332
00333     for (SegmentPathPeriodLightList_T::const_iterator
00334         itSegmentPathPeriodFromDestination_iml =
00335         lSingleSegmentPathPeriodLightListFromDestination_iml.begin();
00336         itSegmentPathPeriodFromDestination_iml
00337         != lSingleSegmentPathPeriodLightListFromDestination_iml.end();
00338         ++itSegmentPathPeriodFromDestination_iml) {
00339         const SegmentPathPeriod*
00340         lSingleSegmentPathPeriodFromDestination_iml_ptr=
00341             *itSegmentPathPeriodFromDestination_iml;
00342         assert (lSingleSegmentPathPeriodFromDestination_iml_ptr != NULL);
00343
00344         // Check if the (i-1)-length segment path period can be fused with the
00345         // single segment path period in order to create an i-length
00346         // segment path period. The function will return a valid or non-valid
00347         // segment path period key.
00348
00349         // The two segment path period above can be fused (and will produce a
00350         // valid new segment path period key) if:
00351         // 1. A passenger can connect from the last segment of the
00352         // first segment path and the first segment of the next segment path.
00353         // 2. There is no circle within the new segment path.
00354         // 3. The intersection of the two periods is non-empty.
00355         SegmentPathPeriodKey lSegmentPathPeriodKey_i =
00356             lSegmentPathPeriod_iml_ptr->connectWithAnotherSegment (*
00357             lSingleSegmentPathPeriodFromDestination_iml_ptr);
00358
00359         if (lSegmentPathPeriodKey_i.isValid () == false) {
00360             continue;
00361         }
00362
00363         // Get the off point of the single-segment SegmentPathPeriod
00364         // attached to the intermediate destination (iml). That off point is
00365         // at a length i of the initial ReachableUniverse: (i-1) + 1.
00366         const stdair::AirportCode_T& lDestination_i =
00367             lSingleSegmentPathPeriodFromDestination_iml_ptr->getDestination();
00368
00369         // Build the i-length SegmentPathPeriod
00370         // Get the parameters of the last segment
00371         stdair::SegmentPeriod* lSegmentPeriod_l_ptr =
00372             lSingleSegmentPathPeriodFromDestination_iml_ptr->
00373             getFirstSegmentPeriod();
00374         assert (lSegmentPeriod_l_ptr != NULL);
00375
00376         // Calculate the number of airlines flown by the i-length
00377         // segment path period
00378         const stdair::FlightPeriod& lFlightPeriod = stdair::BomManager::
00379             getParent<stdair::FlightPeriod> (*lSegmentPeriod_l_ptr);
00380         const stdair::Inventory& lInventory =

```



```

00378         stdair::BomManager::getParent<stdair::Inventory> (lFlightPeriod);
00379     const stdair::AirlineCode_T& lAirlineCode_1 = lInventory.getAirlineCode(
);
00380     stdair::NbOfAirlines_T lNbOfAirlines_i =
00381         lSegmentPathPeriod_iml_ptr->getNbOfAirlines();
00382     if (lSegmentPathPeriod_iml_ptr->isAirlineFlown(lAirlineCode_1) == false
){
00383         ++lNbOfAirlines_i;
00384     }
00385     lSegmentPathPeriodKey_i.setNbOfAirlines (lNbOfAirlines_i);
00386
00387     // Create the new segment path and add it to the dedicated lists.
00388     OriginDestinationSet* lOriginDestinationSet_ptr = stdair::BomManager::
00389         getObjectPtr<OriginDestinationSet>(ioReachableUniverse, lDestination_i
);
00390     if (lOriginDestinationSet_ptr == NULL) {
00391         OriginDestinationSetKey lKey (lDestination_i);
00392         lOriginDestinationSet_ptr =
00393             &stdair::FacBom<OriginDestinationSet>::instance().create (lKey);
00394         stdair::FacBomManager::addToListAndMap (ioReachableUniverse,
00395             *lOriginDestinationSet_ptr);
00396         stdair::FacBomManager::linkWithParent (ioReachableUniverse,
00397             *lOriginDestinationSet_ptr);
00398     }
00399     assert (lOriginDestinationSet_ptr != NULL);
00400
00401
00402     SegmentPathPeriod& lSegmentPathPeriod_i = stdair::
00403         FacBom<SegmentPathPeriod>::instance().create (lSegmentPathPeriodKey_i
);
00404     stdair::FacBomManager::addToList (*lOriginDestinationSet_ptr,
00405         lSegmentPathPeriod_i);
00406     stdair::FacBomManager::linkWithParent (*lOriginDestinationSet_ptr,
00407         lSegmentPathPeriod_i);
00408
00409     // Clone the list of SegmentPeriod references of the given
00410     // SegmentPathPeriod object (passed as the second parameter).
00411     stdair::FacBomManager::
00412         cloneHolder<stdair::SegmentPeriod> (lSegmentPathPeriod_i,
00413             *lSegmentPathPeriod_iml_ptr);
00414
00415
00416     // Add the SegmentPeriod reference to the dedicated list within
00417     // the SegmentPathPeriod. Note that this must be done before
00418     // the link between the SegmentPathPeriod and
00419     // ReachableUniverse, as that latter method uses the number of
00420     // segments within the SegmentPathPeriod object.
00421     stdair::FacBomManager::addToList (lSegmentPathPeriod_i,
00422         *lSegmentPeriod_l_ptr);
00423
00424     addSegmentPathPeriod (ioReachableUniverse, lSegmentPathPeriod_i);
00425 }
00426 }
00427 }
00428 }
00429 }
00430 }
00431 }
00432 }
00433 }
00434 }
00435 }

```

## 24.113 airsched/command/SegmentPathGenerator.hpp File Reference

```

#include <vector>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/command/CmdAbstract.hpp>
#include <airsched/AIRSCHED_Types.hpp>

```

### Classes

- class [AIRSCHED::SegmentPathGenerator](#)  
Class handling the generation / instantiation of the network BOM.

### Namespaces

- namespace [stdair](#)  
Forward declarations.
- namespace [AIRSCHED](#)

## 24.114 SegmentPathGenerator.hpp

```

00001 #ifndef __AIRSCHED_CMD_SEGMENTPATHGENERATOR_HPP
00002 #define __AIRSCHED_CMD_SEGMENTPATHGENERATOR_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <vector>
00009 // StdAir
00010 #include <stdair/stdair_basic_types.hpp>
00011 #include <stdair/command/CmdAbstract.hpp>
00012 // AirSched
00013 #include <airsched/AIRSCHED_Types.hpp>
00014
00016 namespace stdair {
00017     class BomRoot;
00018     class Inventory;
00019     class FlightPeriod;
00020     class SegmentPeriod;
00021 }
00022
00023 namespace AIRSCHED {
00024
00026     class ReachableUniverse;
00027     class OriginDestinationSet;
00028     class SegmentPathPeriod;
00029
00030
00034     class SegmentPathGenerator : public stdair::CmdAbstract {
00035     public:
00039         static void createSegmentPathNetwork (const
stdair::BomRoot&);
00040
00041     private:
00046         static void createSinglePaths (const stdair::Inventory&);
00047         static void createSinglePaths (const stdair::FlightPeriod&);
00048
00053         static void createSinglePath (stdair::SegmentPeriod&);
00054         static void createSinglePath (ReachableUniverse&,
stdair::SegmentPeriod&);
00055
00059         static void buildSegmentPathNetwork (const stdair::BomRoot&,
const stdair::NbOfSegments_T&);
00060
00061         static void buildSegmentPathNetwork (ReachableUniverse&,
const stdair::NbOfSegments_T&);
00062
00063
00067         static void addSegmentPathPeriod (ReachableUniverse&,
const SegmentPathPeriod&
00068     );
00069     };
00070
00071 }
00072 #endif // __AIRSCHED_CMD_SEGMENTPATHGENERATOR_HPP

```

## 24.115 airsched/command/SegmentPathProvider.cpp File Reference

```

#include <cassert>
#include <string>
#include <sstream>
#include <stdair/basic/BasConst_BomDisplay.hpp>
#include <stdair/bom/BomManager.hpp>
#include <stdair/bom/BomRoot.hpp>
#include <stdair/bom/Inventory.hpp>
#include <stdair/bom/FlightPeriod.hpp>
#include <stdair/bom/SegmentPeriod.hpp>
#include <stdair/bom/BookingRequestStruct.hpp>
#include <stdair/bom/TravelSolutionStruct.hpp>
#include <stdair/service/Logger.hpp>
#include <airsched/bom/ReachableUniverse.hpp>
#include <airsched/bom/OriginDestinationSet.hpp>
#include <airsched/bom/SegmentPathPeriod.hpp>
#include <airsched/command/SegmentPathProvider.hpp>

```

## Namespaces

- namespace AIRSCHED

## 24.116 SegmentPathProvider.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <string>
00007 #include <sstream>
00008 // StdAir
00009 #include <stdair/basic/BasConst_BomDisplay.hpp>
00010 #include <stdair/bom/BomManager.hpp>
00011 #include <stdair/bom/BomRoot.hpp>
00012 #include <stdair/bom/Inventory.hpp>
00013 #include <stdair/bom/FlightPeriod.hpp>
00014 #include <stdair/bom/SegmentPeriod.hpp>
00015 #include <stdair/bom/BookingRequestStruct.hpp>
00016 #include <stdair/bom/TravelSolutionStruct.hpp>
00017 #include <stdair/service/Logger.hpp>
00018 // AirSched
00019 #include <airsched/bom/ReachableUniverse.hpp>
00020 #include <airsched/bom/OriginDestinationSet.hpp>
00021 >
00022 #include <airsched/bom/SegmentPathPeriod.hpp>
00023 #include <airsched/command/SegmentPathProvider.hpp>
00024 >
00023 namespace AIRSCHED {
00024
00025 // //////////////////////////////////////
00026 void SegmentPathProvider::
00027 buildSegmentPathList (stdair::TravelSolutionList_T& ioTravelSolutionList,
00028                      const stdair::BomRoot& iBomRoot,
00029                      const stdair::BookingRequestStruct& iBookingRequest) {
00030     // Retrieve the reachable universe object corresponding to the
00031     // origin of the booking request.
00032     const stdair::AirportCode_T& lOrigin = iBookingRequest.getOrigin ();
00033     const ReachableUniverse* lReachableUniverse_ptr =
00034         stdair::BomManager::getObjectPtr<ReachableUniverse> (iBomRoot, lOrigin);
00035     if (lReachableUniverse_ptr != NULL) {
00036         buildSegmentPathList (ioTravelSolutionList, *lReachableUniverse_ptr,
00037                             iBookingRequest);
00038     }
00039 }
00040
00041 // //////////////////////////////////////
00042 void SegmentPathProvider::
00043 buildSegmentPathList (stdair::TravelSolutionList_T& ioTravelSolutionList,
00044                      const ReachableUniverse& iReachableUniverse,
00045                      const stdair::BookingRequestStruct& iBookingRequest) {
00046     // Retrieve the origin-destination set objet corresponding to the
00047     // destination of the booking request.
00048     const stdair::AirportCode_T& lDestination = iBookingRequest.getDestination (
00049 );
00050     const OriginDestinationSet* lOriginDestinationSet_ptr =
00051         stdair::BomManager::getObjectPtr<OriginDestinationSet> (
00052 iReachableUniverse,
00053                                     lDestination);
00054     if (lOriginDestinationSet_ptr != NULL) {
00055         buildSegmentPathList (ioTravelSolutionList, *lOriginDestinationSet_ptr,
00056                             iBookingRequest);
00057     }
00058
00059 // //////////////////////////////////////
00060 void SegmentPathProvider::
00061 buildSegmentPathList (stdair::TravelSolutionList_T& ioTravelSolutionList,
00062                      const OriginDestinationSet& iOriginDestinationSet,
00063                      const stdair::BookingRequestStruct& iBookingRequest) {
00064     // Retrieve the departure date of the booking request.
00065     const stdair::Date_T& lPreferredDepartureDate =
00066         iBookingRequest.getPreferredDepartureDate ();
00067
00068     // Browse the list of segment path periods and find those which content
00069     // the preferred departure date.
00070     const SegmentPathPeriodList_T&
00071     lSegmentPathPeriodList =
00072         stdair::BomManager::getList<SegmentPathPeriod> (iOriginDestinationSet);
00073     for (SegmentPathPeriodList_T::const_iterator itSegmentPath =

```

```

00073         lSegmentPathPeriodList.begin ();
00074         itSegmentPath != lSegmentPathPeriodList.end (); ++itSegmentPath) {
00075             const SegmentPathPeriod* lCurrentSegmentPath_ptr = *itSegmentPath;
00076             assert (lCurrentSegmentPath_ptr != NULL);
00077             if (lCurrentSegmentPath_ptr->isDepartureDateValid(lPreferredDepartureDate)
) {
00078                 buildSegmentPathList (ioTravelSolutionList, *lCurrentSegmentPath_ptr,
00079                                     iBookingRequest);
00080             }
00081         }
00082     }
00083
00084     // ////////////////////////////////////////
00085     void SegmentPathProvider::
00086     buildSegmentPathList (stdair::TravelSolutionList_T& ioTravelSolutionList,
00087                         const SegmentPathPeriod& iSegmentPathPeriod,
00088                         const stdair::BookingRequestStruct& iBookingRequest) {
00089         // Create a new travel solution.
00090         stdair::TravelSolutionStruct lTravelSolution;
00091
00092         // Browse the list of segments and retrieve the necessary informations
00093         // for identifying the corresponding segment-date.
00094         const stdair::Date_T& lPreferredDepartureDate =
00095             iBookingRequest.getPreferredDepartureDate ();
00096         const stdair::SegmentPeriodList_T& lSegmentPeriodList =
00097             stdair::BomManager::getList<stdair::SegmentPeriod> (iSegmentPathPeriod);
00098         const DateOffsetList_T& lBoardingDateOffsetList =
00099             iSegmentPathPeriod.getBoardingDateOffsetList ();
00100         assert (lSegmentPeriodList.size() == lBoardingDateOffsetList.size());
00101         DateOffsetList_T::const_iterator itOffset = lBoardingDateOffsetList.begin()
;
00102         for (stdair::SegmentPeriodList_T::const_iterator itSegment =
00103             lSegmentPeriodList.begin();
00104             itSegment != lSegmentPeriodList.end(); ++itSegment) {
00105             const stdair::SegmentPeriod* lSegmentPeriod_ptr = *itSegment;
00106             assert (lSegmentPeriod_ptr != NULL);
00107             const stdair::DateOffset_T& lBoardingDateOffset = *itOffset;
00108
00109             // Find the corresponding segment-date within the segment period.
00110             const stdair::DateOffset_T& lSegmentBoardingDateOffset =
00111                 lSegmentPeriod_ptr->getBoardingDateOffset();
00112             const stdair::Date_T& lReferenceFlightDate = lPreferredDepartureDate
00113                 + lBoardingDateOffset - lSegmentBoardingDateOffset;
00114
00115             // Build the whole segment-date key string.
00116             const stdair::FlightPeriod& lFlightPeriod =
00117                 stdair::BomManager::getParent<stdair::FlightPeriod>
00118                 (*lSegmentPeriod_ptr);
00119             const stdair::Inventory& lInventory =
00120                 stdair::BomManager::getParent<stdair::Inventory> (lFlightPeriod);
00121             const stdair::Duration_T lBoardingTime = lSegmentPeriod_ptr->
getBoardingTime();
00122             std::ostringstream oStr;
00123             oStr << lInventory.getAirlineCode()
00124                 << stdair::DEFAULT_KEY_FLD_DELIMITER
00125                 << lFlightPeriod.getFlightNumber()
00126                 << stdair::DEFAULT_KEY_SUB_FLD_DELIMITER
00127                 << boost::gregorian::to_simple_string (lReferenceFlightDate)
00128                 << stdair::DEFAULT_KEY_FLD_DELIMITER
00129                 << lSegmentPeriod_ptr->getBoardingPoint()
00130                 << stdair::DEFAULT_KEY_SUB_FLD_DELIMITER
00131                 << lSegmentPeriod_ptr->getOffPoint()
00132                 << stdair::DEFAULT_KEY_FLD_DELIMITER
00133                 << lBoardingTime;
00134
00135             lTravelSolution.addSegment (oStr.str());
00136             ++itOffset;
00137         }
00138         ioTravelSolutionList.push_back (lTravelSolution);
00139     }
00140
00141 }

```

## 24.117 airsched/command/SegmentPathProvider.hpp File Reference

```

#include <stdair/bom/TravelSolutionTypes.hpp>
#include <stdair/command/CmdAbstract.hpp>

```

## Classes

- class [AIRSCHED::SegmentPathProvider](#)  
*Class building the travel solutions from airline schedules.*

## Namespaces

- namespace [stdair](#)  
*Forward declarations.*
- namespace [AIRSCHED](#)

## 24.118 SegmentPathProvider.hpp

```

00001 #ifndef __AIRSCHED_COM_CMD_SEGMENTPATHPROVIDER_HPP
00002 #define __AIRSCHED_COM_CMD_SEGMENTPATHPROVIDER_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // StdAir
00008 #include <stdair/bom/TravelSolutionTypes.hpp>
00009 #include <stdair/command/CmdAbstract.hpp>
00010
00012 namespace stdair {
00013     class BomRoot;
00014     struct BookingRequestStruct;
00015 }
00016
00017 namespace AIRSCHED {
00018
00020     class ReachableUniverse;
00021     class OriginDestinationSet;
00022     class SegmentPathPeriod;
00023
00027     class SegmentPathProvider : public stdair::CmdAbstract {
00028         friend class AIRSCHED_Service;
00029
00030     private:
00031         // ////////////////////////////////// Business Methods //////////////////////////////////
00042         static void buildSegmentPathList (stdair::TravelSolutionList_T&,
00043                                           const stdair::BomRoot&,
00044                                           const stdair::BookingRequestStruct&);
00045
00056         static void buildSegmentPathList (stdair::TravelSolutionList_T&,
00057                                           const ReachableUniverse&
00058                                           ,
00059                                           const stdair::BookingRequestStruct&);
00070         static void buildSegmentPathList (stdair::TravelSolutionList_T&,
00071                                           const OriginDestinationSet
00072                                           &,
00073                                           const stdair::BookingRequestStruct&);
00084         static void buildSegmentPathList (stdair::TravelSolutionList_T&,
00085                                           const SegmentPathPeriod&
00086                                           ,
00087                                           const stdair::BookingRequestStruct&);
00088     };
00089 }
00090 #endif // __AIRSCHED_COM_CMD_SEGMENTPATHPROVIDER_HPP

```

## 24.119 airsched/command/Simulator.cpp File Reference

```

#include <cassert>
#include <string>
#include <sstream>
#include <stdair/basic/BasConst_General.hpp>
#include <stdair/bom/BomManager.hpp>
#include <stdair/bom/BookingRequestStruct.hpp>
#include <stdair/service/Logger.hpp>
#include <airsched/command/Simulator.hpp>

```

## Namespaces

- namespace [AIRSCHED](#)

## 24.120 Simulator.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <string>
00007 #include <sstream>
00008 // StdAir
00009 #include <stdair/basic/BasConst_General.hpp>
00010 #include <stdair/bom/BomManager.hpp>
00011 #include <stdair/bom/BookingRequestStruct.hpp>
00012 #include <stdair/service/Logger.hpp>
00013 // AIRSCHED
00014 #include <airsched/command/Simulator.hpp>
00015
00016 namespace AIRSCHED {
00017
00018 // //////////////////////////////////////
00019 void Simulator::simulate (stdair::BomRoot& ioBomRoot) {
00020
00021     // Delegate to the dedicated StdAir utility class
00022     // std::ostringstream oStream;
00023     // stdair::BomManager::display (oStream, ioBomRoot);
00024
00025     // DEBUG
00026     // STDAIR_LOG_DEBUG ("BOM Tree: ");
00027     // STDAIR_LOG_DEBUG (oStream.str());
00028
00029     // TODO: do not hardcode the booking request (get it from the
00030     // demand generation module instead).
00031     // stdair::BookingRequestStruct ("LHR", "JFK", stdair::Date_T (2009, 01,
16),
00032     //                                stdair::DEFAULT_DATETIME, "Y", 1);
00033 }
00034
00035 }

```

## 24.121 airsched/command/Simulator.hpp File Reference

```
#include <stdair/command/CmdAbstract.hpp>
```

## Classes

- class [AIRSCHED::Simulator](#)

## Namespaces

- namespace [stdair](#)  
*Forward declarations.*
- namespace [AIRSCHED](#)

## 24.122 Simulator.hpp

```

00001 #ifndef __AIRSCHED_COM_CMD_SIMULATOR_HPP
00002 #define __AIRSCHED_COM_CMD_SIMULATOR_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section

```

```

00006 // //////////////////////////////////////
00007 // StdAir
00008 #include <stdair/command/CmdAbstract.hpp>
00009
00010 // Forward declarations
00011 namespace stdair {
00012     class BomRoot;
00013 }
00014
00015 namespace AIRSCHED {
00016
00018     class Simulator : public stdair::CmdAbstract {
00019     public:
00020
00021         // ////////// Business Methods //////////
00024         static void simulate (stdair::BomRoot&);
00025     };
00026
00027 }
00028 #endif // __AIRSCHED_COM_CMD_SIMULATOR_HPP

```

## 24.123 airsched/command/TravelSolutionParser.cpp File Reference

```

#include <sstream>
#include <fstream>
#include <cassert>
#include <stdair/stdair_exceptions.hpp>
#include <stdair/basic/BasConst_TravelSolution.hpp>
#include <stdair/basic/BasFileMgr.hpp>
#include <stdair/bom/BomRoot.hpp>
#include <stdair/service/Logger.hpp>
#include <airsched/command/TravelSolutionParser.hpp>

```

### Namespaces

- namespace [AIRSCHED](#)

## 24.124 TravelSolutionParser.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <sstream>
00006 #include <fstream>
00007 #include <cassert>
00008 // StdAir
00009 #include <stdair/stdair_exceptions.hpp>
00010 #include <stdair/basic/BasConst_TravelSolution.hpp>
00011 #include <stdair/basic/BasFileMgr.hpp>
00012 #include <stdair/bom/BomRoot.hpp>
00013 #include <stdair/service/Logger.hpp>
00014 // AirSched
00015 #include <airsched/command/TravelSolutionParser.hpp>
00016
00017 namespace AIRSCHED {
00018
00019     // //////////////////////////////////////
00020     bool TravelSolutionParser::
00021     parseInputFileAndBuildBom (const std::string&
00022     iInputFileName) {
00023         bool hasReadBeenSuccessful = false;
00024
00025         // Check that the file path given as input corresponds to an actual file
00026         const bool doesExistAndIsReadable =
00027             stdair::BasFileMgr::doesExistAndIsReadable (iInputFileName);
00028         if (doesExistAndIsReadable == false) {
00029             std::ostringstream oMessage;
00030             oMessage << "The input file, '" << iInputFileName
00031                 << "', can not be retrieved on the file-system";
00032             throw stdair::FileNotFoundException (oMessage.str());
00033         }
00034     }
00035 }

```

```

00032     }
00033
00034     // Open the input file
00035     std::ifstream inputFile (iInputFileName.c_str());
00036     if (! inputFile) {
00037         STDAIR_LOG_ERROR ("Can not open input file '" << iInputFileName << "'");
00038         throw new stdair::FileNotFoundException ("Can not open input file '"
00039             + iInputFileName + "'");
00040     }
00041
00042     char buffer[80];
00043     double dval = 0.0;
00044     std::string dvalStr;
00045     short i = 1;
00046     bool hasAllPArms = true;
00047
00048     stdair::AirportCode_T dAirport;
00049     stdair::AirportCode_T aAirport;
00050     stdair::Date_T depDate;
00051     stdair::Duration_T depTime;
00052     stdair::Duration_T arTime;
00053     stdair::Duration_T dur;
00054     //bool Ref;
00055     stdair::AirlineCode_T airline;
00056     stdair::CabinCode_T cabin;
00057     //stdair::FlightNumber_T flightNum;
00058     //stdair::Fare_T fare;
00059     //int lagsNum;
00060     //bool SNS;
00061     //bool change;
00062
00063     while (inputFile.getline (buffer, sizeof (buffer), ',')) {
00064         std::istream iStringStr (buffer);
00065
00066         bool hasRead = false;
00067
00068         if (i == 1) {
00069             hasAllPArms = true;
00070         }
00071
00072         if (i>=1 && i<=14) {
00073             hasRead = (iStringStr >> dvalStr);
00074         }
00075
00076         if (i == 15) {
00077             hasRead = (iStringStr >> dval);
00078         }
00079
00080         if (hasRead) {
00081             if (i == 1) {
00082                 dAirport = dvalStr;
00083             }
00084             else if (i == 2) {
00085                 aAirport = dvalStr;
00086                 // std::cout << "City Pair = '" << dAiport
00087                 // << "-" << aAirport << "'" << std::endl;
00088             }
00089             else if (i == 3) {
00090                 depDate = boost::gregorian::from_simple_string (dvalStr);
00091                 // std::cout << "Date = '" << depDate << "'" << std::endl;
00092             }
00093             else if (i == 4) {
00094                 depTime = boost::posix_time::duration_from_string (dvalStr);
00095             }
00096             else if (i == 5) {
00097                 arTime = boost::posix_time::duration_from_string (dvalStr);
00098             }
00099             else if (i == 6) {
00100                 dur = boost::posix_time::duration_from_string (dvalStr);
00101             }
00102             else if (i == 7) {
00103                 //if (dvalStr == "refundable fare")
00104                 // Ref = true;
00105                 //else Ref = false;
00106             }
00107             else if (i == 8) {
00108                 airline = dvalStr;
00109             }
00110             else if (i == 9) {
00111                 cabin = dvalStr;
00112             }
00113             else if (i == 10) {
00114                 //flightNum = dval;
00115             }
00116             else if (i == 11) {
00117                 //fare = dval;
00118             }

```



```

00119         } else if (i == 12) {
00120             //lagsNum = dval;
00121
00122         } else if (i == 13) {
00123             //if (dvalStr == "Saturday Nigth Stay mandatory")
00124             //    SNS = true;
00125             //else SNS = false;
00126
00127         } else if (i == 14) {
00128             //if (dvalStr == "changeable fare")
00129             //    change = true;
00130             //else change = false;
00131             i = 0;
00132         }
00133
00134         //
00135         ++i;
00136
00137     } else {
00138         hasAllPArms = false;
00139     }
00140 }
00141
00142 if (hasAllPArms && i == 1) {
00143     STDAIR_LOG_DEBUG ("Successfully read");
00144 }
00145
00146 //
00147 if (!inputFile.eof()) {
00148     STDAIR_LOG_ERROR ("Problem when reading input file '" << iInputFileName
00149                     << "'");
00150     return hasReadBeenSuccessful;
00151 }
00152
00153 //
00154 hasReadBeenSuccessful = true;
00155 return hasReadBeenSuccessful;
00156 }
00157
00158 }

```

## 24.125 airsched/command/TravelSolutionParser.hpp File Reference

```

#include <string>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/command/CmdAbstract.hpp>

```

### Classes

- class [AIRSCHEDED::TravelSolutionParser](#)  
Class filling the *TravelSolutionHolder* structure (representing a list of classes/travelSolutions) from a given input file.

### Namespaces

- namespace [AIRSCHEDED](#)

## 24.126 TravelSolutionParser.hpp

```

00001 #ifndef __AIRSCHEDED_CMD_TRAVELSOLUTIONPARSER_HPP
00002 #define __AIRSCHEDED_CMD_TRAVELSOLUTIONPARSER_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // StdAir
00010 #include <stdair/stdair_basic_types.hpp>
00011 #include <stdair/command/CmdAbstract.hpp>
00012
00013 namespace AIRSCHEDED {

```

```

00014
00019     class TravelSolutionParser : public stdair::CmdAbstract {
00020     public:
00028         static bool parseInputFileAndBuildBom (const
stdair::Filename_T&);
00029     };
00030 }
00031 #endif // __AIRSCHED_CMD_TRAVELSOLUTIONPARSER_HPP

```

```

*/
#ifndef __AIRSCHED_PATHS_HPP__
#define __AIRSCHED_PATHS_HPP__

#define PACKAGE "airsched"
#define PACKAGE_NAME "AIRSCHED"
#define PACKAGE_VERSION "0.1.4"
#define PREFIXDIR "/usr"
#define EXEC_PREFIX "/usr"
#define BINDIR "/usr/bin"
#define LIBDIR "/usr/lib"
#define LIBEXECDIR "/usr/libexec"
#define SBINDIR "/usr/sbin"
#define SYSCONFDIR "/usr/etc"
#define INCLUDEDIR "/usr/include"
#define DATAROOTDIR "/usr/share"
#define DATADIR "/usr/share"
#define DOCDIR "/usr/share/doc/airsched-0.1.4"
#define MANDIR "/usr/share/man"
#define INFODIR "/usr/share/info"
#define HTMLDIR "/usr/share/doc/airsched-0.1.4/html"
#define PDFDIR "/usr/share/doc/airsched-0.1.4/html"
#define STDAIR_SAMPLE_DIR "/usr/share/stdair/samples"

#endif // __AIRSCHED_PATHS_HPP__

/*!

```

```

*/
#ifndef __AIRSCHED_PATHS_HPP__
#define __AIRSCHED_PATHS_HPP__

#define PACKAGE "@PACKAGE@"
#define PACKAGE_NAME "@PACKAGE_NAME@"
#define PACKAGE_VERSION "@PACKAGE_VERSION@"
#define PREFIXDIR "@prefix@"
#define EXEC_PREFIX "@exec_prefix@"
#define BINDIR "@bindir@"
#define LIBDIR "@libdir@"
#define LIBEXECDIR "@libexecdir@"
#define SBINDIR "@sbindir@"
#define SYSCONFDIR "@sysconfdir@"
#define INCLUDEDIR "@includedir@"
#define DATAROOTDIR "@datarootdir@"
#define DATADIR "@datadir@"
#define DOCDIR "@docdir@"
#define MANDIR "@mandir@"
#define INFODIR "@infodir@"
#define HTMLDIR "@htmldir@"
#define PDFDIR "@pdfdir@"
#define STDAIR_SAMPLE_DIR "@sampledir@"

#endif // __AIRSCHED_PATHS_HPP__

/*!

```

## 24.127 airsched-paths.hpp

```

00001
00005 #ifndef __AIRSCHED_PATHS_HPP__
00006 #define __AIRSCHED_PATHS_HPP__
00007
00008 #define PACKAGE "airsched"
00009 #define PACKAGE_NAME "AIRSCHED"
00010 #define PACKAGE_VERSION "0.1.4"
00011 #define PREFIXDIR "/usr"
00012 #define EXEC_PREFIX "/usr"
00013 #define BINDIR "/usr/bin"
00014 #define LIBDIR "/usr/lib"
00015 #define LIBEXECDIR "/usr/libexec"
00016 #define SBINDIR "/usr/sbin"
00017 #define SYSCONFDIR "/usr/etc"
00018 #define INCLUDEDIR "/usr/include"
00019 #define DATAROOTDIR "/usr/share"

```

```

00020 #define DATADIR "/usr/share"
00021 #define DOCDIR "/usr/share/doc/airsched-0.1.4"
00022 #define MANDIR "/usr/share/man"
00023 #define INFODIR "/usr/share/info"
00024 #define HTMLDIR "/usr/share/doc/airsched-0.1.4/html"
00025 #define PDFDIR "/usr/share/doc/airsched-0.1.4/html"
00026 #define STDAIR_SAMPLE_DIR "/usr/share/stdair/samples"
00027
00028 #endif // __AIRSCHED_PATHS_HPP__
00029

```

## 24.128 airsched/config/airsched-paths.hpp.in File Reference

### 24.129 airsched-paths.hpp.in

```

00001
00005 #ifndef __AIRSCHED_PATHS_HPP__
00006 #define __AIRSCHED_PATHS_HPP__
00007
00008 #define PACKAGE "@PACKAGE@"
00009 #define PACKAGE_NAME "@PACKAGE_NAME@"
00010 #define PACKAGE_VERSION "@PACKAGE_VERSION@"
00011 #define PREFIXDIR "@prefix@"
00012 #define EXEC_PREFIX "@exec_prefix@"
00013 #define BINDIR "@bindir@"
00014 #define LIBDIR "@libdir@"
00015 #define LIBEXECDIR "@libexecdir@"
00016 #define SBINDIR "@sbindir@"
00017 #define SYSCONFDIR "@sysconfdir@"
00018 #define INCLUDEDIR "@includedir@"
00019 #define DATAROOTDIR "@datarootdir@"
00020 #define DATADIR "@datadir@"
00021 #define DOCDIR "@docdir@"
00022 #define MANDIR "@mandir@"
00023 #define INFODIR "@infodir@"
00024 #define HTMLDIR "@htmldir@"
00025 #define PDFDIR "@pdfdir@"
00026 #define STDAIR_SAMPLE_DIR "@sampledir@"
00027
00028 #endif // __AIRSCHED_PATHS_HPP__
00029

```

## 24.130 airsched/factory/FacAIRSCHEDServiceContext.cpp File Reference

```

#include <cassert>
#include <stdair/service/FacSupervisor.hpp>
#include <airsched/factory/FacAIRSCHEDServiceContext.hpp>
#include <airsched/service/AIRSCHED_ServiceContext.hpp>

```

### Namespaces

- namespace [AIRSCHED](#)

### 24.131 FacAIRSCHEDServiceContext.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 // StdAir
00007 #include <stdair/service/FacSupervisor.hpp>
00008 // AirSched
00009 #include <airsched/factory/FacAIRSCHEDServiceContext.hpp>
00010 #include <airsched/service/AIRSCHED_ServiceContext.hpp>
00011 >
00012 namespace AIRSCHED {
00013
00014     FacAIRSCHEDServiceContext* FacAIRSCHEDServiceContext::_instance = NULL;

```

```

00015
00016 // //////////////////////////////////////
00017 FacAIRSCHEDServiceContext::~FacAIRSCHEDServiceContext
00018 () {
00019     _instance = NULL;
00020 }
00021 // //////////////////////////////////////
00022 FacAIRSCHEDServiceContext&
00023 FacAIRSCHEDServiceContext::instance () {
00024     if (_instance == NULL) {
00025         _instance = new FacAIRSCHEDServiceContext();
00026         assert (_instance != NULL);
00027
00028         stdair::FacSupervisor::instance().
00029             registerServiceFactory (_instance);
00030     }
00031     return *_instance;
00032 }
00033 // //////////////////////////////////////
00034 AIRSCHED_ServiceContext&
00035 FacAIRSCHEDServiceContext::create () {
00036     AIRSCHED_ServiceContext* aServiceContext_ptr = NULL;
00037     aServiceContext_ptr = new AIRSCHED_ServiceContext();
00038     assert (aServiceContext_ptr != NULL);
00039
00040     // The new object is added to the Bom pool
00041     _pool.push_back (aServiceContext_ptr);
00042
00043     return *aServiceContext_ptr;
00044 }
00045
00046 }

```

## 24.132 airsched/factory/FacAIRSCHEDServiceContext.hpp File Reference

```

#include <stdair/stdair_basic_types.hpp>
#include <stdair/service/FacServiceAbstract.hpp>

```

### Classes

- class [AIRSCHED::FacAIRSCHEDServiceContext](#)  
*Factory for the service context.*

### Namespaces

- namespace [AIRSCHED](#)

## 24.133 FacAIRSCHEDServiceContext.hpp

```

00001 #ifndef __AIRSCHED_FAC_FACAIRSCHEDSERVICECONTEXT_HPP
00002 #define __AIRSCHED_FAC_FACAIRSCHEDSERVICECONTEXT_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // StdAir
00008 #include <stdair/stdair_basic_types.hpp>
00009 #include <stdair/service/FacServiceAbstract.hpp>
00010
00011 namespace AIRSCHED {
00012
00013     class AIRSCHED_ServiceContext;
00014
00015     class FacAIRSCHEDServiceContext : public
00016         stdair::FacServiceAbstract {
00017     public:
00018
00019         static FacAIRSCHEDServiceContext& instance

```

```

    () ;
00029
00036     ~FacAIRSCHEDServiceContext () ;
00037
00045     AIRSCHED_ServiceContext& create () ;
00046
00047
00048     protected:
00054         FacAIRSCHEDServiceContext () {}
00055
00056     private:
00060         static FacAIRSCHEDServiceContext* _instance;
00061
00062     };
00063 }
00064 #endif // __AIRSCHED_FAC_FACAIRSCHEDSERVICECONTEXT_HPP

```

## 24.134 airsched/factory/FacServiceAbstract.cpp File Reference

```

#include <assert.h>
#include <airsched/service/ServiceAbstract.hpp>
#include <airsched/factory/FacServiceAbstract.hpp>

```

### Namespaces

- namespace [AIRSCHED](#)

## 24.135 FacServiceAbstract.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // C
00005 #include <assert.h>
00006 // TRAVEL-CCM
00007 #include <airsched/service/ServiceAbstract.hpp>
00008
00008 #include <airsched/factory/FacServiceAbstract.hpp>
00009
00009 namespace AIRSCHED {
00010
00011 // //////////////////////////////////////
00012 // FacServiceAbstract::~FacServiceAbstract
00013
00014 () {
00015     clean ();
00016 }
00017
00017 // //////////////////////////////////////
00018 void FacServiceAbstract::clean() {
00019     for (ServicePool_T::iterator itService = _pool.begin();
00020          itService != _pool.end(); itService++) {
00021         ServiceAbstract* currentService_ptr = *itService;
00022         assert (currentService_ptr != NULL);
00023
00024         delete (currentService_ptr); currentService_ptr = NULL;
00025     }
00026
00027     // Empty the pool of Service Factories
00028     _pool.clear();
00029 }
00030
00031 }

```

## 24.136 airsched/factory/FacServiceAbstract.hpp File Reference

```

#include <vector>

```

## Classes

- class [AIRSCHED::FacServiceAbstract](#)

## Namespaces

- namespace [AIRSCHED](#)

## 24.137 FacServiceAbstract.hpp

```

00001 #ifndef __AIRSCHED_FAC_FACSERVICEABSTRACT_HPP
00002 #define __AIRSCHED_FAC_FACSERVICEABSTRACT_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <vector>
00009
00010 namespace AIRSCHED {
00011
00012     // Forward declarations
00013     class ServiceAbstract;
00014
00016     class FacServiceAbstract {
00017     public:
00018
00020         typedef std::vector<ServiceAbstract*> ServicePool_T;
00021
00023         virtual ~FacServiceAbstract();
00024
00026         void clean();
00027
00028     protected:
00031         FacServiceAbstract() {}
00032
00034         ServicePool_T _pool;
00035     };
00036 }
00037 #endif // __AIRSCHED_FAC_FACSERVICEABSTRACT_HPP

```

## 24.138 airsched/service/AIRSCHED\_Service.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <boost/make_shared.hpp>
#include <stdair/basic/BasChronometer.hpp>
#include <stdair/bom/BomManager.hpp>
#include <stdair/bom/BookingRequestStruct.hpp>
#include <stdair/bom/TravelSolutionStruct.hpp>
#include <stdair/service/Logger.hpp>
#include <stdair/STDAIR_Service.hpp>
#include <airsched/basic/BasConst_AIRSCHED_Service.hpp>
#include <airsched/factory/FacAIRSCHEDServiceContext.hpp>
#include <airsched/command/Simulator.hpp>
#include <airsched/command/ScheduleParser.hpp>
#include <airsched/command/OnDParser.hpp>
#include <airsched/command/SegmentPathProvider.hpp>
#include <airsched/command/InventoryGenerator.hpp>
#include <airsched/command/SegmentPathGenerator.hpp>
#include <airsched/service/AIRSCHED_ServiceContext.hpp>
#include <airsched/AIRSCHED_Service.hpp>

```

## Namespaces

- namespace [AIRSCHED](#)

## 24.139 AIRSCHED\_Service.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost
00008 #include <boost/make_shared.hpp>
00009 // StdAir
00010 #include <stdair/basic/BasChronometer.hpp>
00011 #include <stdair/bom/BomManager.hpp>
00012 #include <stdair/bom/BookingRequestStruct.hpp>
00013 #include <stdair/bom/TravelSolutionStruct.hpp>
00014 #include <stdair/service/Logger.hpp>
00015 #include <stdair/STDAIR_Service.hpp>
00016 // AirSched
00017 #include <airsched/basic/BasConst_AIRSCHED_Service.hpp>
00018 >
00019 #include <airsched/factory/FacAIRSCHEDServiceContext.hpp>
00020 >
00021 #include <airsched/command/Simulator.hpp>
00022 #include <airsched/command/ScheduleParser.hpp>
00023 >
00024 #include <airsched/command/OnDParser.hpp>
00025 #include <airsched/command/SegmentPathProvider.hpp>
00026 >
00027 #include <airsched/command/InventoryGenerator.hpp>
00028 >
00029 #include <airsched/command/SegmentPathGenerator.hpp>
00030 >
00031 #include <airsched/service/AIRSCHED_ServiceContext.hpp>
00032 >
00033 #include <airsched/AIRSCHED_Service.hpp>
00034
00035 namespace AIRSCHED {
00036
00037 // //////////////////////////////////////
00038 AIRSCHED_Service::AIRSCHED_Service() : _airschedServiceContext (NULL) {
00039     assert (false);
00040 }
00041
00042 // //////////////////////////////////////
00043 AIRSCHED_Service::AIRSCHED_Service (const AIRSCHED_Service& iService)
00044 : _airschedServiceContext (NULL) {
00045     assert (false);
00046 }
00047
00048 // //////////////////////////////////////
00049 AIRSCHED_Service::AIRSCHED_Service (const stdair::BasLogParams& iLogParams)
00050 : _airschedServiceContext (NULL) {
00051
00052     // Initialise the STDAIR service handler
00053     stdair::STDAIR_ServicePtr_T lSTDAIR_Service_ptr =
00054         initStdAirService (iLogParams);
00055
00056     // Initialise the service context
00057     initServiceContext ();
00058
00059     // Add the StdAir service context to the AirSched service context
00060     // [note AirSched owns the STDAIR service resources here.
00061     const bool ownStdairService = true;
00062     addStdAirService (lSTDAIR_Service_ptr, ownStdairService);
00063
00064     // Initialise the (remaining of the) context
00065     initAirschedService();
00066 }
00067
00068 // //////////////////////////////////////
00069 AIRSCHED_Service::AIRSCHED_Service (const stdair::BasLogParams& iLogParams,
00070                                     const stdair::BasDBParams& iDBParams)
00071 : _airschedServiceContext (NULL) {
00072
00073     // Initialise the STDAIR service handler
00074     stdair::STDAIR_ServicePtr_T lSTDAIR_Service_ptr =
00075         initStdAirService (iLogParams, iDBParams);
00076
00077     // Initialise the service context

```

```

00071     initServiceContext();
00072
00073     // Add the StdAir service context to the AirSched service context
00074     // \note AirSched owns the STDAIR service resources here.
00075     const bool ownStdairService = true;
00076     addStdAirService (lSTDAIR_Service_ptr, ownStdairService);
00077
00078     // Initialise the (remaining of the) context
00079     initAirschedService();
00080 }
00081
00082 // //////////////////////////////////////
00083 AIRSCHED_Service::
00084 AIRSCHED_Service (stdair::STDAIR_ServicePtr_T ioSTDAIRServicePtr)
00085 : _airschedServiceContext (NULL) {
00086
00087     // Initialise the service context
00088     initServiceContext();
00089
00090     // Add the StdAir service context to the AirSched service context.
00091     // \note AirSched does not own the STDAIR service resources here.
00092     const bool doesNotOwnStdairService = false;
00093     addStdAirService (ioSTDAIRServicePtr, doesNotOwnStdairService);
00094
00095     // Initialise the context
00096     initAirschedService();
00097 }
00098
00099 // //////////////////////////////////////
00100 AIRSCHED_Service::~AIRSCHED_Service() {
00101     // Delete/Clean all the objects from memory
00102     finalise();
00103 }
00104
00105 // //////////////////////////////////////
00106 void AIRSCHED_Service::finalise() {
00107     assert (_airschedServiceContext != NULL);
00108     // Reset the (Boost.)Smart pointer pointing on the STDAIR_Service object.
00109     _airschedServiceContext->reset();
00110 }
00111
00112 // //////////////////////////////////////
00113 void AIRSCHED_Service::initServiceContext() {
00114     // Initialise the service context
00115     AIRSCHED_ServiceContext& lAIRSCHED_ServiceContext =
00116         FacAIRSCHEDServiceContext::instance().
00117         create();
00118     _airschedServiceContext = &lAIRSCHED_ServiceContext;
00119 }
00120
00121 // //////////////////////////////////////
00122 void AIRSCHED_Service::
00123 addStdAirService (stdair::STDAIR_ServicePtr_T ioSTDAIR_Service_ptr,
00124                  const bool iOwnStdairService) {
00125
00126     // Retrieve the AirSched service context
00127     assert (_airschedServiceContext != NULL);
00128     AIRSCHED_ServiceContext& lAIRSCHED_ServiceContext =
00129         *_airschedServiceContext;
00130
00131     // Store the STDAIR service object within the (AirSched) service context
00132     lAIRSCHED_ServiceContext.setSTDAIR_Service (ioSTDAIR_Service_ptr,
00133                                                iOwnStdairService);
00134 }
00135
00136 // //////////////////////////////////////
00137 stdair::STDAIR_ServicePtr_T AIRSCHED_Service::
00138 initStdAirService (const stdair::BasLogParams& iLogParams) {
00139
00140     stdair::STDAIR_ServicePtr_T lSTDAIR_Service_ptr =
00141         boost::make_shared<stdair::STDAIR_Service> (iLogParams);
00142
00143     return lSTDAIR_Service_ptr;
00144 }
00145
00146 // //////////////////////////////////////
00147 stdair::STDAIR_ServicePtr_T AIRSCHED_Service::
00148 initStdAirService (const stdair::BasLogParams& iLogParams,
00149                  const stdair::BasDBParams& iDBParams) {
00150
00151     stdair::STDAIR_ServicePtr_T lSTDAIR_Service_ptr =
00152         boost::make_shared<stdair::STDAIR_Service> (iLogParams, iDBParams);
00153
00154     return lSTDAIR_Service_ptr;
00155 }
00156
00157 // //////////////////////////////////////

```



```

00171 void AIRSCHED_Service::initAirschedService() {
00172     // Do nothing at this stage. A sample BOM tree may be built by
00173     // calling the buildSampleBom() method
00174 }
00175
00176 // //////////////////////////////////////
00177 void AIRSCHED_Service::
00178 parseAndLoad (const stdair::Filename_T& iScheduleInputFilename)
00179 {
00180     // Retrieve the BOM root object.
00181     assert (_airschedServiceContext != NULL);
00182     AIRSCHED_ServiceContext& lAIRSCHED_ServiceContext =
00183         *_airschedServiceContext;
00184     stdair::STDAIR_Service& lSTDAIR_Service =
00185         lAIRSCHED_ServiceContext.getSTDAIR_Service();
00186     stdair::BomRoot& lBomRoot = lSTDAIR_Service.getBomRoot();
00187
00188     // Parse the schedule input file, and generate the Inventories
00189     stdair::BasChronometer lINVGeneration; lINVGeneration.start();
00190     ScheduleParser::generateInventories (
00191         iScheduleInputFilename, lBomRoot);
00192     const double lGenerationMeasure = lINVGeneration.elapsed();
00193
00194     // DEBUG
00195     STDAIR_LOG_DEBUG ("Inventory generation time: " << lGenerationMeasure);
00196 }
00197
00198 // //////////////////////////////////////
00199 void AIRSCHED_Service::
00200 parseAndLoad (const stdair::Filename_T& iScheduleInputFilename,
00201               const stdair::Filename_T& iODInputFilename) {
00202     // First, build the airline inventories from the schedule file
00203     parseAndLoad (iScheduleInputFilename);
00204
00205     // Retrieve the BOM tree root
00206     assert (_airschedServiceContext != NULL);
00207     AIRSCHED_ServiceContext& lAIRSCHED_ServiceContext =
00208         *_airschedServiceContext;
00209     stdair::STDAIR_Service& lSTDAIR_Service =
00210         lAIRSCHED_ServiceContext.getSTDAIR_Service();
00211     stdair::BomRoot& lBomRoot = lSTDAIR_Service.getBomRoot();
00212
00213     // Parse the O&D input file, and generate the O&D periods
00214     stdair::BasChronometer lOnDGeneration; lOnDGeneration.start();
00215     OnDParser::generateOnDPeriods (
00216         iODInputFilename, lBomRoot);
00217     const double lGenerationMeasure = lOnDGeneration.elapsed();
00218
00219     // DEBUG
00220     STDAIR_LOG_DEBUG ("O&D generation time: " << lGenerationMeasure);
00221 }
00222
00223 // //////////////////////////////////////
00224 void AIRSCHED_Service::buildSampleBom() {
00225     // Retrieve the AirSched service context
00226     if (_airschedServiceContext == NULL) {
00227         throw stdair::NonInitialisedServiceException ("The AirSched service has "
00228                                                         "not been initialised");
00229     }
00230     assert (_airschedServiceContext != NULL);
00231
00232     // Retrieve the AirSched service context and whether it owns the Stdair
00233     // service
00234     AIRSCHED_ServiceContext& lAIRSCHED_ServiceContext =
00235         *_airschedServiceContext;
00236     const bool doesOwnStdairService =
00237         lAIRSCHED_ServiceContext.getOwnStdairServiceFlag();
00238
00239     // Retrieve the StdAir service object from the (AirSched) service context
00240     stdair::STDAIR_Service& lSTDAIR_Service =
00241         lAIRSCHED_ServiceContext.getSTDAIR_Service();
00242
00243     if (doesOwnStdairService == true) {
00244         //
00245         lSTDAIR_Service.buildSampleBom();
00246     }
00247
00248     stdair::BomRoot& lBomRoot = lSTDAIR_Service.getBomRoot();
00249     SegmentPathGenerator::createSegmentPathNetwork
00250     (lBomRoot);
00251 }
00252
00253 // //////////////////////////////////////
00254 std::string AIRSCHED_Service::

```

```

00274 jsonExport (const stdair::AirlineCode_T& iAirlineCode,
00275             const stdair::FlightNumber_T& iFlightNumber,
00276             const stdair::Date_T& iDepartureDate) const {
00277
00278     // Retrieve the AirSched service context
00279     if (_airschedServiceContext == NULL) {
00280         throw stdair::NonInitialisedServiceException ("The AirSched service "
00281                                                     "has not been initialised")
00282     };
00283     assert (_airschedServiceContext != NULL);
00284
00285     // Retrieve the StdAir service object from the (AirSched) service context
00286     AIRSCHED_ServiceContext& lAIRSCHED_ServiceContext =
00287         *_airschedServiceContext;
00288     stdair::STDAIR_Service& lSTDAIR_Service =
00289         lAIRSCHED_ServiceContext.getSTDAIR_Service();
00290
00291     // Delegate the JSON export to the dedicated service
00292     return lSTDAIR_Service.jsonExport (iAirlineCode, iFlightNumber,
00293                                       iDepartureDate);
00294 }
00295
00296 // //////////////////////////////////////
00297 std::string AIRSCHED_Service::csvDisplay() const
00298 {
00299     // Retrieve the AirSched service context
00300     if (_airschedServiceContext == NULL) {
00301         throw stdair::NonInitialisedServiceException ("The AirSched service has "
00302                                                     "not been initialised");
00303     }
00304     assert (_airschedServiceContext != NULL);
00305
00306     // Retrieve the STDAIR service object from the (AirSched) service context
00307     AIRSCHED_ServiceContext& lAIRSCHED_ServiceContext =
00308         *_airschedServiceContext;
00309     stdair::STDAIR_Service& lSTDAIR_Service =
00310         lAIRSCHED_ServiceContext.getSTDAIR_Service();
00311
00312     // Delegate the BOM building to the dedicated service
00313     return lSTDAIR_Service.csvDisplay();
00314 }
00315
00316 // //////////////////////////////////////
00317 std::string AIRSCHED_Service::
00318 csvDisplay (const stdair::AirlineCode_T& iAirlineCode,
00319            const stdair::FlightNumber_T& iFlightNumber,
00320            const stdair::Date_T& iDepartureDate) const {
00321
00322     // Retrieve the AirSched service context
00323     if (_airschedServiceContext == NULL) {
00324         throw stdair::NonInitialisedServiceException ("The AirSched service has "
00325                                                     "not been initialised");
00326     }
00327     assert (_airschedServiceContext != NULL);
00328
00329     // Retrieve the STDAIR service object from the (AirSched) service context
00330     AIRSCHED_ServiceContext& lAIRSCHED_ServiceContext =
00331         *_airschedServiceContext;
00332     stdair::STDAIR_Service& lSTDAIR_Service =
00333         lAIRSCHED_ServiceContext.getSTDAIR_Service();
00334
00335     // Delegate the BOM display to the dedicated service
00336     return lSTDAIR_Service.csvDisplay (iAirlineCode, iFlightNumber,
00337                                       iDepartureDate);
00338 }
00339
00340 // //////////////////////////////////////
00341 void AIRSCHED_Service::simulate() {
00342
00343     // Retrieve the AirSched service context
00344     if (_airschedServiceContext == NULL) {
00345         throw stdair::NonInitialisedServiceException ("The AirSched service has "
00346                                                     "not been initialised");
00347     }
00348     assert (_airschedServiceContext != NULL);
00349
00350     // Retrieve the BOM tree root
00351     AIRSCHED_ServiceContext& lAIRSCHED_ServiceContext =
00352         *_airschedServiceContext;
00353     stdair::STDAIR_Service& lSTDAIR_Service =
00354         lAIRSCHED_ServiceContext.getSTDAIR_Service();
00355     stdair::BomRoot& lBomRoot = lSTDAIR_Service.getBomRoot();
00356
00357     // Call the underlying Use Case (command)
00358     stdair::BasChronometer lSimulateChronometer; lSimulateChronometer.start();

```

```

00359     Simulator::simulate (lBomRoot);
00360     const double lSimulateMeasure = lSimulateChronometer.elapsed();
00361
00362     // DEBUG
00363     STDAIR_LOG_DEBUG ("Simulation: " << lSimulateMeasure << " - "
00364                     << lAIRSCHEd_ServiceContext.display());
00365 }
00366
00367 // //////////////////////////////////////
00368 void AIRSCHEd_Service::
00369 buildSegmentPathList (stdair::TravelSolutionList_T&
ioTravelSolutionList,
00370                       const stdair::BookingRequestStruct& iBookingRequest) {
00371
00372     if (_airschedServiceContext == NULL) {
00373         throw stdair::NonInitialisedServiceException ("The AirSched service has "
00374                                                     "not been initialised");
00375     }
00376     assert (_airschedServiceContext != NULL);
00377
00378     // Retrieve the BOM tree root
00379     AIRSCHEd_ServiceContext& lAIRSCHEd_ServiceContext =
00380         *_airschedServiceContext;
00381     stdair::STDAIR_Service& lSTDAIR_Service =
00382         lAIRSCHEd_ServiceContext.getSTDAIR_Service();
00383     stdair::BomRoot& lBomRoot = lSTDAIR_Service.getBomRoot();
00384
00385     // Delegate the call to the dedicated command
00386     stdair::BasChronometer lBuildChronometer; lBuildChronometer.start();
00387     SegmentPathProvider::buildSegmentPathList
(ioTravelSolutionList,
00388                                     lBomRoot, iBookingRequest);
00389     const double lBuildMeasure = lBuildChronometer.elapsed();
00390
00391     // DEBUG
00392     STDAIR_LOG_DEBUG ("Segment-path build: " << lBuildMeasure << " - "
00393                     << lAIRSCHEd_ServiceContext.display());
00394 }
00395
00396 }

```

## 24.140 airsched/service/AIRSCHEd\_ServiceContext.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <stdair/STDAIR_Service.hpp>
#include <airsched/basic/BasConst_AIRSCHEd_Service.hpp>
#include <airsched/service/AIRSCHEd_ServiceContext.hpp>

```

### Namespaces

- namespace [AIRSCHEd](#)

### 24.141 AIRSCHEd\_ServiceContext.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/STDAIR_Service.hpp>
00009 // AirSched
00010 #include <airsched/basic/BasConst_AIRSCHEd_Service.hpp>
00011 #include <airsched/service/AIRSCHEd_ServiceContext.hpp>
00012
00013 namespace AIRSCHEd {
00014
00015 // //////////////////////////////////////
00016 AIRSCHEd_ServiceContext::AIRSCHEd_ServiceContext ()
00017     : _ownStdairService (false) {

```

```

00018     }
00019
00020     // //////////////////////////////////////
00021     AIRSCHEd_ServiceContext::
00022     AIRSCHEd_ServiceContext (const AIRSCHEd_ServiceContext&) {
00023         assert (false);
00024     }
00025
00026     // //////////////////////////////////////
00027     AIRSCHEd_ServiceContext::~AIRSCHEd_ServiceContext() {
00028     }
00029
00030     // //////////////////////////////////////
00031     stdair::STDAIR_Service& AIRSCHEd_ServiceContext::getSTDAIR_Service() const {
00032         assert (_stdairService != NULL);
00033         return *_stdairService;
00034     }
00035
00036     // //////////////////////////////////////
00037     const std::string AIRSCHEd_ServiceContext::shortDisplay() const {
00038         std::ostringstream oStr;
00039         oStr << "AIRSCHEd_ServiceContext -- Owns StdAir service: "
00040             << _ownStdairService;
00041         return oStr.str();
00042     }
00043
00044     // //////////////////////////////////////
00045     const std::string AIRSCHEd_ServiceContext::display() const {
00046         std::ostringstream oStr;
00047         oStr << shortDisplay();
00048         return oStr.str();
00049     }
00050
00051     // //////////////////////////////////////
00052     const std::string AIRSCHEd_ServiceContext::describe() const {
00053         return shortDisplay();
00054     }
00055
00056     // //////////////////////////////////////
00057     void AIRSCHEd_ServiceContext::reset() {
00058         if (_ownStdairService == true) {
00059             _stdairService.reset();
00060         }
00061     }
00062
00063 }

```

## 24.142 airsched/service/AIRSCHEd\_ServiceContext.hpp File Reference

```

#include <string>
#include <boost/shared_ptr.hpp>
#include <stdair/stdair_service_types.hpp>
#include <stdair/service/ServiceAbstract.hpp>
#include <airsched/AIRSCHEd_Types.hpp>

```

### Classes

- class [AIRSCHEd::AIRSCHEd\\_ServiceContext](#)  
Class holding the context of the AirSched services.

### Namespaces

- namespace [AIRSCHEd](#)

## 24.143 AIRSCHEd\_ServiceContext.hpp

```

00001 #ifndef __AIRSCHEd_SVC_AIRSCHEd_SERVICE_CONTEXT_HPP
00002 #define __AIRSCHEd_SVC_AIRSCHEd_SERVICE_CONTEXT_HPP
00003
00004 // //////////////////////////////////////

```

```

00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // Boost
00010 #include <boost/shared_ptr.hpp>
00011 // StdAir
00012 #include <stdair/stdair_service_types.hpp>
00013 #include <stdair/service/ServiceAbstract.hpp>
00014 // AirSched
00015 #include <airsched/AIRSCHED_Types.hpp>
00016
00017 namespace AIRSCHED {
00018
00022     class AIRSCHED_ServiceContext : public
stdair::ServiceAbstract {
00028         friend class AIRSCHED_Service;
00029         friend class FacAIRSCHEDServiceContext;
00030
00031     private:
00032         // ////////////////////////////////// Getters //////////////////////////////////
00036         stdair::STDAIR_ServicePtr_T getSTDAIR_ServicePtr() const {
00037             return _stdairService;
00038         }
00039
00043         stdair::STDAIR_Service& getSTDAIR_Service() const;
00044
00048         const bool getOwnStdairServiceFlag() const {
00049             return _ownStdairService;
00050         }
00051
00052     private:
00053         // ////////////////////////////////// Setters //////////////////////////////////
00058         void setSTDAIR_Service (stdair::STDAIR_ServicePtr_T ioSTDAIR_ServicePtr,
00059                                 const bool iOwnStdairService) {
00060             _stdairService = ioSTDAIR_ServicePtr;
00061             _ownStdairService = iOwnStdairService;
00062         }
00063
00064     private:
00065         // ////////////////////////////////// Display Methods //////////////////////////////////
00070         const std::string shortDisplay() const;
00071
00075         const std::string display() const;
00076
00080         const std::string describe() const;
00081
00082     private:
00083         AIRSCHED_ServiceContext ();
00089
00093         AIRSCHED_ServiceContext (const AIRSCHED_ServiceContext&);
00094
00098         void init();
00099
00103         ~AIRSCHED_ServiceContext();
00104
00108         void reset();
00109
00110     private:
00112         // ////////////////////////////////// Children //////////////////////////////////
00116         stdair::STDAIR_ServicePtr_T _stdairService;
00117
00121         bool _ownStdairService;
00122     };
00123
00124 }
00125 #endif // __AIRSCHED_SVC_AIRSCHED_SERVICE_CONTEXT_HPP

```

## 24.144 airsched/service/ServiceAbstract.cpp File Reference

```
#include <airsched/service/ServiceAbstract.hpp>
```

## Namespaces

- namespace [AIRSCHED](#)

## 24.145 ServiceAbstract.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // AIRSCHED
00005 #include <airsched/service/ServiceAbstract.hpp>
00006 >
00007 namespace AIRSCHED {
00008
00009 }
```

## 24.146 airsched/service/ServiceAbstract.hpp File Reference

```

#include <iostream>
#include <sstream>
```

## Classes

- class [AIRSCHED::ServiceAbstract](#)

## Namespaces

- namespace [AIRSCHED](#)

## Functions

- template<class charT , class traits >  
std::basic\_ostream< charT,  
traits > & operator<< (std::basic\_ostream< charT, traits > &ioOut, const [AIRSCHED::ServiceAbstract](#) &i-  
Service)
- template<class charT , class traits >  
std::basic\_istream< charT,  
traits > & operator>> (std::basic\_istream< charT, traits > &ioIn, [AIRSCHED::ServiceAbstract](#) &ioService)

## 24.146.1 Function Documentation

**24.146.1.1** template<class charT , class traits > std::basic\_ostream<charT, traits>& operator<< ( std::basic\_ostream< charT, traits > & ioOut, const [AIRSCHED::ServiceAbstract](#) & iService ) [inline]

Piece of code given by Nicolai M. Josuttis, Section 13.12.1 "Implementing Output Operators" (p653) of his book "The C++ Standard Library: A Tutorial and Reference", published by Addison-Wesley.

Definition at line 42 of file [ServiceAbstract.hpp](#).

**24.146.1.2** template<class charT , class traits > std::basic\_istream<charT, traits>& operator>> ( std::basic\_istream< charT, traits > & ioIn, [AIRSCHED::ServiceAbstract](#) & ioService ) [inline]

Piece of code given by Nicolai M. Josuttis, Section 13.12.1 "Implementing Output Operators" (pp655-657) of his book "The C++ Standard Library: A Tutorial and Reference", published by Addison-Wesley.

Definition at line 70 of file [ServiceAbstract.hpp](#).

References [AIRSCHED::ServiceAbstract::fromStream\(\)](#).

**24.147 ServiceAbstract.hpp**

```

00001 #ifndef __AIRSCHED_SERVICEABSTRACT_HPP
00002 #define __AIRSCHED_SERVICEABSTRACT_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iostream>
00009 #include <sstream>
00010
00011 namespace AIRSCHED {
00012
00014     class ServiceAbstract {
00015     public:
00016
00018         virtual ~ServiceAbstract() {}
00019
00022         virtual void toStream (std::ostream& ioOut) const {}
00023
00026         virtual void fromStream (std::istream& ioIn) {}
00027
00028     protected:
00030         ServiceAbstract() {}
00031     };
00032 }
00033
00039 template <class charT, class traits>
00040 inline
00041 std::basic_ostream<charT, traits>&
00042 operator<< (std::basic_ostream<charT, traits>& ioOut,
00043           const AIRSCHED::ServiceAbstract& iService)
00044 {
00049     std::basic_ostringstream<charT,traits> ostr;
00050     ostr.copyfmt (ioOut);
00051     ostr.width (0);
00052
00053     // Fill string stream
00054     iService.toStream (ostr);
00055
00056     // Print string stream
00057     ioOut << ostr.str();
00058
00059     return ioOut;
00060 }
00061
00067 template <class charT, class traits>
00068 inline
00069 std::basic_istream<charT, traits>&
00070 operator>> (std::basic_istream<charT, traits>& ioIn,
00071           AIRSCHED::ServiceAbstract& ioService) {
00072     // Fill Service object with input stream
00073     ioService.fromStream (ioIn);
00074     return ioIn;
00075 }
00076
00077 #endif // __AIRSCHED_SERVICEABSTRACT_HPP

```

**24.148 doc/local/authors.doc File Reference****24.149 doc/local/codingrules.doc File Reference****24.150 doc/local/copyright.doc File Reference****24.151 doc/local/documentation.doc File Reference****24.152 doc/local/features.doc File Reference****24.153 doc/local/help\_wanted.doc File Reference****24.154 doc/local/howto\_release.doc File Reference****24.155 doc/local/index.doc File Reference**

24.156 doc/local/installation.doc File Reference

24.157 doc/local/linking.doc File Reference

24.158 doc/local/test.doc File Reference

24.159 doc/local/users\_guide.doc File Reference

24.160 doc/local/verification.doc File Reference

24.161 doc/tutorial/tutorial.doc File Reference

24.162 test/airsched/AirlineScheduleTestSuite.cpp File Reference

24.163 AirlineScheduleTestSuite.cpp

```

00001
00005 // //////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////
00008 // STL
00009 #include <sstream>
00010 #include <fstream>
00011 #include <string>
00012 // Boost Unit Test Framework (UTF)
00013 #define BOOST_TEST_DYN_LINK
00014 #define BOOST_TEST_MAIN
00015 #define BOOST_TEST_MODULE InventoryTestSuite
00016 #include <boost/test/unit_test.hpp>
00017 // StdAir
00018 #include <stdair/basic/BasLogParams.hpp>
00019 #include <stdair/basic/BasDBParams.hpp>
00020 #include <stdair/basic/BasFileMgr.hpp>
00021 #include <stdair/bom/TravelSolutionStruct.hpp>
00022 #include <stdair/bom/BookingRequestStruct.hpp>
00023 #include <stdair/service/Logger.hpp>
00024 // AirSched
00025 #include <airsched/AIRSCHED_Service.hpp>
00026 #include <airsched/config/airsched-paths.hpp>
00027
00028 namespace boost_utf = boost::unit_test;
00029
00030 // (Boost) Unit Test XML Report
00031 std::ofstream utfReportStream ("AirlineScheduleTestSuite_utfresults.xml");
00032
00036 struct UnitTestConfig {
00037     UnitTestConfig() {
00038         boost_utf::unit_test_log.set_stream (utfReportStream);
00039         boost_utf::unit_test_log.set_format (boost_utf::XML);
00040         boost_utf::unit_test_log.set_threshold_level (boost_utf::log_test_units);
00041         //boost_utf::unit_test_log.set_threshold_level
00042         (boost_utf::log_successful_tests);
00043     }
00044
00046     ~UnitTestConfig() {
00047     }
00048 };
00049
00050
00051 // ////////////////////////////////// Main: Unit Test Suite //////////////////////////////////
00052
00053 // Set the UTF configuration (re-direct the output to a specific file)
00054 BOOST_GLOBAL_FIXTURE (UnitTestConfig);
00055
00056 // Start the test suite
00057 BOOST_AUTO_TEST_SUITE (master_test_suite)
00058
00059
00062 BOOST_AUTO_TEST_CASE (airsched_simple_inventory_sell) {
00063
00064     // Input file name
00065     const stdair::Filename_T lScheduleInputFilename (STDAIR_SAMPLE_DIR
00066                                                         "/schedule03.csv");
00067
00068     // Output log File
00069     const stdair::Filename_T lLogFilename ("AirlineScheduleTestSuite.log");
00070

```



```

00071 // Check that the file path given as input corresponds to an actual file
00072 bool doesExistAndIsReadable =
00073     stdair::BasFileMgr::doesExistAndIsReadable (lScheduleInputFilename);
00074 BOOST_CHECK_MESSAGE (doesExistAndIsReadable == true,
00075     "The '" << lScheduleInputFilename
00076     << "' input file can not be open and read");
00077
00078 // Set the log parameters
00079 std::ofstream logOutputFile;
00080 // Open and clean the log outputfile
00081 logOutputFile.open (lLogFilename.c_str());
00082 logOutputFile.clear();
00083
00084 // Instantiate the AirSched service
00085 const stdair::BasLogParams lLogParams (stdair::LOG::DEBUG, logOutputFile);
00086 AIRSCHED::AIRSCHED_Service airschedService (
    lLogParams);
00087
00088 // Build the BOM tree from parsing input files
00089 airschedService.parseAndLoad (lScheduleInputFilename);
00090
00091 // Create an empty booking request structure
00092 // \todo: fill the booking request structure from the input parameters
00093 const stdair::AirportCode_T lOrigin ("NCE");
00094 const stdair::AirportCode_T lDestination ("BKK");
00095 const stdair::AirportCode_T lPOS ("NCE");
00096 const stdair::Date_T lPreferredDepartureDate(2007, boost::gregorian::Apr, 21)
;
00097 const stdair::Date_T lRequestDate (2007, boost::gregorian::Mar, 21);
00098 const stdair::Duration_T lRequestTime (boost::posix_time::hours(8));
00099 const stdair::DateTime_T lRequestDateTime (lRequestDate, lRequestTime);
00100 const stdair::CabinCode_T lPreferredCabin ("Bus");
00101 const stdair::PartySize_T lPartySize (3);
00102 const stdair::ChannelLabel_T lChannel ("DF");
00103 const stdair::TripType_T lTripType ("RO");
00104 const stdair::DayDuration_T lStayDuration (5);
00105 const stdair::FrequentFlyer_T lFrequentFlyerType ("NONE");
00106 const stdair::Duration_T lPreferredDepartureTime (boost::posix_time::hours(10)
));
00107 const stdair::WTP_T lWTP (2000.0);
00108 const stdair::PriceValue_T lValueOfTime (20.0);
00109 const stdair::BookingRequestStruct lBookingRequest (lOrigin, lDestination,
00110     lPOS,
00111     lPreferredDepartureDate,
00112     lRequestDateTime,
00113     lPreferredCabin,
00114     lPartySize, lChannel,
00115     lTripType, lStayDuration,
00116     lFrequentFlyerType,
00117     lPreferredDepartureTime,
00118     lWTP, lValueOfTime);
00119
00120 //
00121 stdair::TravelSolutionList_T lTravelSolutionList;
00122 airschedService.buildSegmentPathList (lTravelSolutionList, lBookingRequest);
00123 const unsigned int lNbOfTravelSolutions = lTravelSolutionList.size();
00124
00125 // \todo: change the expected number of travel solutions to the actual number
00126 const unsigned int lExpectedNbOfTravelSolutions = 4;
00127
00128 // DEBUG
00129 STDAIR_LOG_DEBUG ("Number of travel solutions for the booking request '"
00130     << lBookingRequest.describe() << "': "
00131     << lNbOfTravelSolutions << ". It is expected to be "
00132     << lExpectedNbOfTravelSolutions << ".");
00133
00134 BOOST_CHECK_EQUAL (lNbOfTravelSolutions, lExpectedNbOfTravelSolutions);
00135
00136 BOOST_CHECK_MESSAGE (lNbOfTravelSolutions == lExpectedNbOfTravelSolutions,
00137     "The number of travel solutions for the booking request '"
00138     << lBookingRequest.describe() << "' is equal to "
00139     << lNbOfTravelSolutions << ", but it should be equal to "
00140     << lExpectedNbOfTravelSolutions);
00141
00142 // Close the Log outputFile
00143 logOutputFile.close();
00144 }
00145
00146 // End the test suite
00147 BOOST_AUTO_TEST_SUITE_END()
00148
00149

```

## 24.164 test/airsched/AirlineScheduleTestSuite.hpp File Reference

```
#include <sstream>
#include <cppunit/extensions/HelperMacros.h>
```

### Classes

- class [AirlineScheduleTestSuite](#)

### Functions

- [CPPUNIT\\_TEST\\_SUITE\\_REGISTRATION](#) ([AirlineScheduleTestSuite](#))

#### 24.164.1 Function Documentation

##### 24.164.1.1 CPPUNIT\_TEST\_SUITE\_REGISTRATION ( AirlineScheduleTestSuite )

## 24.165 AirlineScheduleTestSuite.hpp

```
00001 // STL
00002 #include <sstream>
00003 // CPPUNIT
00004 #include <cppunit/extensions/HelperMacros.h>
00005
00006 class AirlineScheduleTestSuite : public
    CppUnit::TestFixture {
00007     CPPUNIT_TEST_SUITE (AirlineScheduleTestSuite);
00008     // CPPUNIT_TEST (externalMemoryManagement);
00009     CPPUNIT_TEST (scheduleParsing);
00010     CPPUNIT_TEST_SUITE_END ();
00011 public:
00012
00019     void externalMemoryManagement ();
00020     void scheduleParsing ();
00021
00023     AirlineScheduleTestSuite ();
00024
00025 protected:
00026     std::stringstream _describeKey;
00027 };
00028 CPPUNIT_TEST_SUITE_REGISTRATION (
    AirlineScheduleTestSuite);
```

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