

SEvMgr

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1 SEvMgr Documentation

1.1 Getting Started

- [Main features](#)

- [Installation](#)
- [Linking with SEvMgr](#)
- [Users Guide](#)
- [Tutorials](#)
- [Copyright and License](#)
- [Make a Difference](#)
- [Make a new release](#)
- [People](#)

1.2 SEvMgr at SourceForge

- [Project page](#)
- [Download SEvMgr](#)
- [Open a ticket for a bug or feature](#)
- [Mailing lists](#)
- [Forums](#)
 - [Discuss about Development issues](#)
 - [Ask for Help](#)
 - [Discuss SEvMgr](#)

1.3 SEvMgr Development

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

1.4 External Libraries

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

1.5 Support SEvMgr

1.6 About SEvMgr

SEvMgr is a C++ library of discrete event queue management classes and functions, exclusively targeting simulation purposes. [N](#)

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

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

SEvMgr 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 SEvMgr 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 SEvMgr.

2 People

2.1 Project Admins

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- Denis Arnaud <denis_arnaud@users.sourceforge.net> ([N](#))

2.2 Developers

- Anh Quan Nguyen <quannaus@users.sourceforge.net> ([N](#))
- Denis Arnaud <denis_arnaud@users.sourceforge.net> ([N](#))

2.3 Retired Developers

- Mehdi Ayouni <mehdi.ayouni@gmail.com>
- Patrick Grandjean <pgrandjean@users.sourceforge.net> ([N](#))

2.4 Contributors

- Emmanuel Bastien <ebastien@users.sourceforge.net> (N)

2.5 Distribution Maintainers

- **Fedora/RedHat**: Denis Arnaud <denis_arnaud@users.sourceforge.net> (N)
- **Debian**: Emmanuel Bastien <ebastien@users.sourceforge.net> (N)

Note

(N) - **Amadeus** employees.

3 Coding Rules

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

3.1 Default Naming Rules for Variables

Variables names follow Java naming conventions. Examples:

- `lNumberOfPassengers`
- `lSeatAvailability`

3.2 Default Naming Rules for Functions

Function names follow Java naming conventions. Example:

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

3.3 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`

3.4 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`

3.5 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.

4 Copyright and License

4.1 GNU LESSER GENERAL PUBLIC LICENSE

4.1.1 Version 2.1, February 1999

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[This is the first released version of the Lesser GPL. It also counts
as the successor of the GNU Library Public License, version 2, hence
the version number 2.1.]

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For example, if you distribute copies of the library, whether gratis or for a fee, you must give the recipients all the rights that we gave you. You must make sure that they, too, receive or can get the source code. If you link other code with the library, you must provide complete object files to the recipients, so that they can relink them with the library after making changes to the library and recompiling it. And you must show them these terms so they know their rights.

We protect your rights with a two-step method: (1) we copyright the library, and (2) we offer you this license, which gives you legal permission to copy, distribute and/or modify the library.

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Finally, software patents pose a constant threat to the existence of any free program. We wish to make sure that a company cannot effectively restrict the users of a free program by obtaining a restrictive license from a patent holder. Therefore, we insist that any patent license obtained for a version of the library must be consistent with the full freedom of use specified in this license.

Most GNU software, including some libraries, is covered by the ordinary GNU General Public License. This license, the GNU Lesser General Public License, applies to certain designated libraries, and is quite different from the ordinary General Public License. We use this license for certain libraries in order to permit linking those libraries into non-free programs.

When a program is linked with a library, whether statically or using a shared library, the combination of the two is legally speaking a combined work, a derivative of the original library. The ordinary General Public License therefore permits such linking only if the entire combination fits its criteria of freedom. The Lesser General Public License permits more lax criteria for linking other code with the library.

We call this license the "Lesser" General Public License because it does Less to protect the user's freedom than the ordinary General Public License. It also provides other free software developers Less of an advantage over competing non-free programs. These disadvantages are the reason we use the ordinary General Public License for many

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For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, whereas the latter must be combined with the library in order to run.

4.3 TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any software library or other program which contains a notice placed by the copyright holder or other authorized party saying it may be distributed under the terms of this Lesser General Public License (also called "this License"). Each licensee is addressed as "you".

A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

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the Library does.

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- c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.
- d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

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Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

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If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include

the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

- a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)
- b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.
- c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.
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- e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

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- b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

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4.3.2 END OF TERMS AND CONDITIONS

4.4 How to Apply These Terms to Your New Programs

If you develop a new library, and you want it to be of the greatest possible use to the public, we recommend making it free software that everyone can redistribute and change. You can do so by permitting redistribution under these terms (or, alternatively, under the terms of the ordinary General Public License).

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
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU
Lesser General Public License for more details.

You should have received a copy of the GNU Lesser General Public
License along with this library; if not, write to the Free Software
Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA
```

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

5 Documentation Rules

5.1 General Rules

All classes in SEvMgr 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 SEvMgr 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
};

```

5.2 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.

```

```

*
* -----
*
* SEvMgr - C++ Airline Inventory Management Library
*
* Copyright (C) 2009-2010 (\see authors file for a list of contributors)
*
* \see copyright file for license information
*
* -----
*/

```

5.3 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);

```

6 Main features

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

6.1 Booking management

- Booking and cancellation requests

6.2 Revenue Management notification

- Forecast and Optimisation notification requests

6.3 Setting simulation break-points

- Simulation break-points

6.4 Other features

- CSV input file parsing
- Memory handling

7 Make a Difference

Do not ask what SEvMgr can do for you. Ask what you can do for SEvMgr.

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

- Start using SEvMgr
- Tell your friends about SEvMgr 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 SEvMgr discussion forums on SourceForge. If you know the answer to a question, help others to overcome their SEvMgr 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 SEvMgr to new platforms. If you manage to compile SEvMgr on a new platform, then tell us how you did it.
- Send us your code. If you have a good SEvMgr compatible code, which you can release under the LGPLv2.1, and you think it should be included in SEvMgr, then send it to us.
- Become an SEvMgr developer. Send us an e-mail and tell what you can do for SEvMgr.

8 Make a new release

8.1 Introduction

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

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

8.2 Initialisation

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

```
cd ~
mkdir -p dev/sim
cd ~/dev/sim
git clone git://sevmgr.git.sourceforge.net/gitroot/sevmgr/sevmgr sevmgrgit
cd sevmgrgit
git checkout trunk
```

8.3 Branch creation

Create the branch, on your local clone, corresponding to the new release (say, 0.5.0):

```
cd ~/dev/sim/sevmgrgit
git checkout trunk
git checkout -b 0.5.0
```

Update the version in the various build system files, replacing 99.99.99 by the correct version number:

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

Update the version and add a change-log in the ChangeLog and in the RPM specification files:

```
vi ChangeLog
vi sevmgr.spec
```

8.4 Commit and publish the release branch

Commit the new release:

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

8.5 Update the change-log in the trunk as well

Update the change-log in the ChangeLog and RPM specification files:

```
cd ~/dev/sim/sevmgrgit
git checkout trunk
vi ChangeLog
vi sevmgr.spec
```

Commit the change-logs and publish the trunk (main development branch):

```
git commit -m "[Doc] Integrated the change-log of the release 0.5.0."
git push
```

8.6 Create distribution packages

Create the distribution packages using the following command:

```
cd ~/dev/sim/sevmgrgit
git checkout 0.5.0
rm -rf build && mkdir -p build
cd build
cmake -DCMAKE_INSTALL_PREFIX=/home/user/dev/deliveries/sevmgr-0.5.0 \
      -DWITH_STDPAIR_PREFIX=/home/user/dev/deliveries/stdpair-stable \
      -DCMAKE_BUILD_TYPE:String=Debug -DINSTALL_DOC:BOOL=ON ..
make check && make dist
```

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

8.7 Generation the RPM packages

Optionally, generate the RPM package (for instance, for [Fedora/RedHat](#)):

```
cd ~/dev/sim/sevmgrgit
git checkout 0.5.0
rm -rf build && mkdir -p build
cd build
cmake -DCMAKE_INSTALL_PREFIX=/home/user/dev/deliveries/sevmgr-0.5.0 \
      -DWITH_STDPAIR_PREFIX=/home/user/dev/deliveries/stdpair-stable \
      -DCMAKE_BUILD_TYPE:String=Debug -DINSTALL_DOC:BOOL=ON ..
make dist
```

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

```
cp sevmgr.spec ~/dev/packages/SPECS \
  && cp sevmgr-0.5.0.tar.bz2 ~/dev/packages/SOURCES
cd ~/dev/packages/SPECS
rpmbuild -ba sevmgr.spec
rpmlint -i ../SPECS/sevmgr.spec ../SRPMS/sevmgr-0.5.0-1.fc15.src.rpm \
  ../RPMS/noarch/sevmgr-* ../RPMS/i686/sevmgr-*
```

8.8 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 [SEvMgr's Git repository](#).

8.9 Create the binary package, including the documentation

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

```
make package
```

The output binary package will be named, for instance, `sevmgr-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.

8.10 Upload the files to SourceForge

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

8.11 Upload the documentation to SourceForge

In order to update the Web site files, either:

- [synchronise them with rsync and SSH](#):

```
cd ~/dev/sim/sevmgrgit
git checkout 0.5.0
rsync -aiv doc/html/ doc/latex/refman.pdf joe,sevmgr@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](#).

8.12 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](#).

8.13 Send an email on the announcement mailing-list

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

9 Installation

9.1 Table of Contents

- [Fedora/RedHat Linux distributions](#)
- [SEvMgr Requirements](#)
- [Basic Installation](#)
- [Compilers and Options](#)
- [Compiling For Multiple Architectures](#)
- [Installation Names](#)
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- [Particular systems](#)
- [Specifying the System Type](#)
- [Sharing Defaults](#)
- [Defining Variables](#)
- ['cmake' Invocation](#)

9.2 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 sevmgr-devel sevmgr-doc
```

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

9.3 SEvMgr Requirements

SEvMgr 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``)
- **SOCI** - 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 SEvMgr.

9.4 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 `'CMakeLists.txt'` is used to create the `'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.

9.5 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.

9.6 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.

9.7 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=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=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.

9.8 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'`.

9.9 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
```

9.10 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'`.

9.11 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.

9.12 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
```

9.13 '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:

```
export LIBSUFFIX_4_CMAKE="-DLIB_SUFFIX=64"
export INSTALL_BASEDIR=/home/user/dev/deliveries
cmake -DCMAKE_INSTALL_PREFIX=${INSTALL_BASEDIR}/sevmgr-0.5.0 \
  -DWITH_STDAIR_PREFIX=${INSTALL_BASEDIR}/stdair-stable \
  -DWITH_AIRAC_PREFIX=${INSTALL_BASEDIR}/airrac-stable \
  -DWITH_RMOL_PREFIX=${INSTALL_BASEDIR}/rmol-stable \
  -DCMAKE_BUILD_TYPE:STRING=Debug -DINSTALL_DOC:BOOL=ON ${LIBSUFFIX_4_CMAKE} ..
-- 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: 0ee8dcc3e3dd1d1d442c4054fbfa4cacc1182e6a 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 Readline without specifying any version
-- Found Readline: /usr/include
-- Found Readline version: 6.2
-- 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-0.37
-- 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 'sevmgrlib' to CXX
-- Test 'InventoryTestSuite' to be built with 'InventoryTestSuite.cpp'
--
-- =====
-- -----
-- ---      Project Information      ---
-- -----
-- PROJECT_NAME ..... : sevmgr
-- PACKAGE_PRETTY_NAME ..... : SEvMgr
-- PACKAGE ..... : sevmgr
-- PACKAGE_NAME ..... : SEVMGR
-- PACKAGE_BRIEF ..... : C++ Simulation-Oriented Discrete Event Management Library
-- PACKAGE_VERSION ..... : 0.5.0
-- GENERIC_LIB_VERSION ..... : 0.5.0
-- GENERIC_LIB_SOVERSION ..... : 0.5
--
-- -----
-- ---      Build Configuration      ---
-- -----
-- Modules to build ..... : airrac;rmol;sevmgr
-- Libraries to build/install ..... : airraclib;rmolllib;sevmgrlib
-- Binaries to build/install ..... : airrac;rmol;sevmgr_parseInventory;sevmgr
-- Modules to test ..... : sevmgr
-- Binaries to test ..... : InventoryTestSuite.tst
--
-- * Module ..... : sevmgr

```

```

-- + Layers to build ..... : .;basic;bom;factory;command;service
-- + Dependencies on other layers : airaclib;rmollib
-- + Libraries to build/install . : sevmgrlib
-- + Executables to build/install : sevmgr_parseInventory;sevmgr
-- + Tests to perform ..... : InventoryTestSuitetst
--
-- BUILD_SHARED_LIBS ..... : ON
-- CMAKE_BUILD_TYPE ..... : Debug
-- * CMAKE_C_FLAGS ..... :
-- * CMAKE_CXX_FLAGS ..... : -Wall -Werror
-- * BUILD_FLAGS ..... :
-- * COMPILE_FLAGS ..... :
-- CMAKE_MODULE_PATH ..... : /home/dan/dev/sim/sevmgr/sevmgrgithub/config/
-- CMAKE_INSTALL_PREFIX ..... : /home/dan/dev/deliveries/sevmgr-0.5.0
--
-- * 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/dan/dev/deliveries/sevmgr-0.5.0/lib64
-- INSTALL_BIN_DIR ..... : /home/dan/dev/deliveries/sevmgr-0.5.0/bin
-- INSTALL_INCLUDE_DIR ..... : /home/dan/dev/deliveries/sevmgr-0.5.0/include
-- INSTALL_DATA_DIR ..... : /home/dan/dev/deliveries/sevmgr-0.5.0/share
-- INSTALL_SAMPLE_DIR ..... : /home/dan/dev/deliveries/sevmgr-0.5.0/share/sevmgr/samples
-- INSTALL_DOC ..... : ON
--
-- -----
-- --- Packaging Configuration ---
-- -----
-- CPACK_PACKAGE_CONTACT ..... : Denis Arnaud <denis_arnaud - at - users dot sourceforge dot n
-- CPACK_PACKAGE_VENDOR ..... : Denis Arnaud
-- CPACK_PACKAGE_VERSION ..... : 0.5.0
-- CPACK_PACKAGE_DESCRIPTION_FILE . : /home/dan/dev/sim/sevmgr/sevmgrgithub/README
-- CPACK_RESOURCE_FILE_LICENSE .... : /home/dan/dev/sim/sevmgr/sevmgrgithub/COPYING
-- CPACK_GENERATOR ..... : TBZ2
-- CPACK_DEBIAN_PACKAGE_DEPENDS ... :
-- CPACK_SOURCE_GENERATOR ..... : TBZ2;TGZ
-- CPACK_SOURCE_PACKAGE_FILE_NAME . : sevmgr-0.5.0
--
-- -----
-- --- 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;files
--   - Boost required libraries ... : optimized;/usr/lib64/libboost_regex-mt.so;debug;/usr/lib64/l
--
-- * Readline:
--   - READLINE_VERSION ..... : 6.2
--   - READLINE_INCLUDE_DIR ..... : /usr/include
--   - READLINE_LIBRARY ..... : /usr/lib64/libreadline.so
--
-- * 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/dan/dev/deliveries/stdair-0.38.0/bin
-- - STDAIR_EXECUTABLES ..... : stdair
-- - STDAIR_LIBRARY_DIRS ..... : /home/dan/dev/deliveries/stdair-0.38.0/lib64
-- - STDAIR_LIBRARIES ..... : stdairlib;stdairuicllib
-- - STDAIR_INCLUDE_DIRS ..... : /home/dan/dev/deliveries/stdair-0.38.0/include
-- - STDAIR_SAMPLE_DIR ..... : /home/dan/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/dan/dev/sim/sevmgr/sevmgrgithub/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_sevmgr
[ 0%] Built target hdr_cfg_airrac
[ 13%] Built target hdr_cfg_rmol
[ 98%] Built target sevmgrlib
[100%] Built target InventoryTestSuitetst
Scanning dependencies of target check_sevmgrtst
Test project /home/dan/dev/sim/sevmgr/sevmgrgithub/build/test/sevmgr
  Start 1: InventoryTestSuitetst
1/1 Test #1: InventoryTestSuitetst ..... Passed    0.08 sec

100% tests passed, 0 tests failed out of 1

Total Test time (real) = 0.35 sec
[100%] Built target check_sevmgrtst
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/sevmgrgit
rm -rf build && mkdir build
cd build
```

to remove everything.

10 Linking with SEvMgr

10.1 Table of Contents

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

10.2 Introduction

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

10.3 Dependencies

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

10.3.1 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'`).

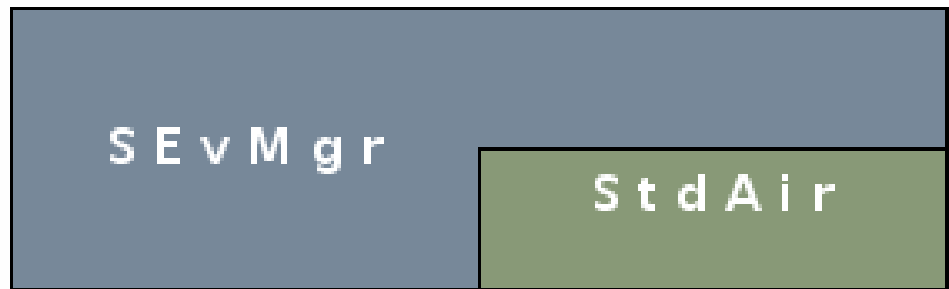


Figure 1: SEvMgr Dependencies

10.4 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 SEvMgr based program `'my_prog.cpp'`, you should use the following command:

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

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

10.5 Using the sevmgr-config script

SEvMgr provides a shell script called `'sevmgr-config'`, which is installed by default in `'$prefix/bin'` (`'/usr/local/bin'`) directory. It can be used to simplify compilation and linking of SEvMgr 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++ `sevmgr-config --cflags` -o my_prog_opt my_prog.cpp `sevmgr-config --libs`
```

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

```
sevmgr-config --help
```

If the `'sevmgr-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
```

10.6 M4 macro for the GNU Autotools

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

- `'SEvMgr_VERSION'` (e.g., defined to 0.23.0)
- `'SEvMgr_CFLAGS'` (e.g., defined to `'-I${prefix}/include'`)
- `'SEvMgr_LIBS'` (e.g., defined to `'-L${prefix}/lib -lsevmgr'`)

10.7 Using SEvMgr with dynamic linking

When using static linking some of the library routines in SEvMgr 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 SEvMgr library file during your program execution. If you install the SEvMgr 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=<SEvMgr installation prefix>/lib:$LD_LIBRARY_PATH
```

11 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.

11.1 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'`.

11.2 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.

11.3 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.

12 Users Guide

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- Display of the schedule BOM tree
- Exploring the Predefined BOM Tree
 - Airline Network BOM Tree
 - Airline Schedule BOM Tree
- Extending the BOM Tree
- The travel solution calculation procedure

12.2 Introduction

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

12.3 Get Started

12.3.1 Get the SEvMgr library

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

```
cd ~
mkdir -p dev/sim
cd ~/dev/sim
git clone git://sevmgr.git.sourceforge.net/gitroot/sevmgr/sevmgr sevmgrgit
cd sevmgrgit
git checkout trunk
```

12.3.2 Build the SEvMgr project

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

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

12.3.3 Build and Run the Tests

After building the `SEvMgr` project, the following commands run the tests:

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

As a result, you should obtain a similar report:

```
[ 0%] Built target hdr_cfg_sevmgr
[ 96%] Built target sevmgrlib
[100%] Built target AirlineScheduleTestSuitetst
Scanning dependencies of target check_sevmgrtst
Test project /home/dan/dev/sim/sevmgr/sevmgrgithub/build/test/sevmgr
  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_sevmgrtst
Scanning dependencies of target check
[100%] Built target check
```

12.3.4 Install the SEvMgr Project (Binaries, Documentation)

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

```
cd ~/dev/sim/sevmgrgit
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/sevmgr-0.5.0
```

To generate the SEvMgr project documentation, the commands are:

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

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

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

12.4 Input file of SEvMgr Project

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

Each line, beyond the header, represents a schedule entry, i.e., the specification of a given flight-period (see `SEVMGR::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.

12.5 The schedule BOM Tree

The schedule-related Business Object Model (BOM) tree is a structure allowing to store all the `SEVMGR::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 SEvMgr 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.

12.5.1 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 [SEVMGR::SEVMGR_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 [SEVMGR::SEVMGR_Service::buildSampleBom\(\)](#) method:

```
void buildSampleBom();
```

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

12.5.2 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::sevmgr.cpp` program:

When the default BOM tree is used (`-b/--builtin` option of the main program [sevmgr.cpp](#)), the schedule BOM tree display (for now, corresponding to [schedule01.csv](#) parsed by [SEVMGR::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, El
apsed, 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, Comm
Space, 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, El
apsed, 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, Comm

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    Space, 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, El
    apsed, 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, Comm
    Space, 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,

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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, El
apsed, 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, Comm
Space, 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, El
apsed, 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, Comm
Space, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,

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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, El
    apsed, 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, Comm
    Space, 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,

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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, El
apsed, 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, Comm
Space, 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, 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, El
apsed, 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, Comm
Space, 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, 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-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:
-----
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, El
      apsed, 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, Comm
      Space, 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-31
      9, 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,

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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, El
apsed, 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, Comm
Space, 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, 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-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,
SQ11 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: SQ11, 2010-Jan-25
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset, El
apsed, Distance, Capacity,
SQ11 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, Comm
Space, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 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,

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*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ11 2010-Jan-25, SIN-BKK 2010-Jan-25, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 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,
SQ11 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,
SQ11 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: SQ11, 2010-Jan-26
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset, El
      apsed, Distance, Capacity,
SQ11 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, Comm
      Space, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 2010-Jan-26, SIN-BKK 2010-Jan-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-Jan-26, SIN-BKK 2010-Jan-26, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 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,
SQ11 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,
SQ11 2010-Jan-26, SIN-BKK 2010-Jan-26, Y, 2, M, 300 (0), 0, 0, 0, 0, 0 (0), 0, 0,

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0, 0, 0, 0,
*****
*****
FlightDate: SQ11, 2010-Jan-27
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset, El
apsed, 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, Comm
Space, 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, 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, El
apsed, 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, Comm
Space, 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, 0, 300,
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,
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, El
      apsed, 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, Comm
      Space, 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,

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*****
FlightDate: SQ11, 2010-Jan-30
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset, El
apsed, 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, Comm
Space, 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, 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, El
apsed, 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,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group, Comm
Space, 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,
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*****
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Buckets:

Flight, Leg, Cabin, Yield, AU/SI, SS, AV,

SegmentCabins:

Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,

SQL1 2010-Jan-31, SIN-BKK 2010-Jan-31, Y, 1, 0, 0, 0, 0, 300, 0,

SQL1 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,

SQL1 2010-Jan-31, SIN-BKK 2010-Jan-31, Y, 1, Y, 300 (0), 0, 0, 0, 0 (0), 0, 0,

0, 0, 0, 0,

SQL1 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: SQL1, 2010-Feb-01

Leg-Dates:

Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset, El

apsed, Distance, Capacity,

SQL1 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, Comm

Space, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,

SQL1 2010-Feb-01, SIN-BKK 2010-Feb-01, 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,

SQL1 2010-Feb-01, SIN-BKK 2010-Feb-01, Y, 1, 0, 0, 0, 0, 300, 0,

SQL1 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,

SQL1 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,

SQL1 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,

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*****
FlightDate: SQ11, 2010-Feb-02
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*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset, El
apsed, 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, Comm
Space, 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,
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, El
apsed, 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, Comm
Space, 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:

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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-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, El
      apsed, 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, Comm
      Space, 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:
-----
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,
*****
*****

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FlightDate: SQ11, 2010-Feb-05
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset, El
apsed, 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, Comm
Space, 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, 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, El
apsed, 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, Comm
Space, 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, 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-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, El
      apsed, 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, Comm
      Space, 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, 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

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*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset, El
apsed, 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, Comm
Space, 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,
*****
*****
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, El
apsed, 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, Comm
Space, 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,

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*****
*****
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, El
apsed, 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, Comm
Space, 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, 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
*****
*****
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*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset, El
apsed, 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, Comm
Space, 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, El
apsed, 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, Comm
Space, 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,
*****
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*****
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,
*****
FlightDate: SQ11, 2010-Feb-13
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset, El
      apsed, 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, Comm
      Space, 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
*****

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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, 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:

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, El
apsed, 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, Comm
Space, 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:

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-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset, El
apsed, 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,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group, Comm
Space, 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, El
apsed, 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, Comm
Space, 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:

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-----
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, El
      apsed, 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, OfferedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group, Comm
      Space, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 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,
SQ11 2010-Feb-19, SIN-BKK 2010-Feb-19, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 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,
SQ11 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,
SQ11 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: SQ11, 2010-Feb-20
*****
*****
Leg-Dates:
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Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset, El
apsed, Distance, Capacity,
SQ11 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, Comm
Space, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 2010-Feb-20, SIN-BKK 2010-Feb-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-Feb-20, SIN-BKK 2010-Feb-20, Y, 1, 0, 0, 0, 0, 300, 0,
SQ11 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,
SQ11 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,
SQ11 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: SQ11, 2010-Feb-21
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset, El
apsed, Distance, Capacity,
SQ11 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, Comm
Space, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ11 2010-Feb-21, SIN-BKK 2010-Feb-21, 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-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, El
      apsed, 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, Comm
      Space, 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, 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, El

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        apsed, 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, Comm
        Space, 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:
-----
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, El
        apsed, 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, Comm
        Space, 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,

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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, El
      apsed, 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, Comm
      Space, 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,
*****
*****
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, El
      apsed, Distance, Capacity,

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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, Comm
Space, 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, 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, El
apsed, 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, Comm
Space, 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, 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,

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SQL1 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,
SQL1 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,
SQL1 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: SQL1, 2010-Feb-28
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset, El
      apsed, Distance, Capacity,
SQL1 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, Comm
      Space, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQL1 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,
SQL1 2010-Feb-28, SIN-BKK 2010-Feb-28, Y, 1, 0, 0, 0, 0, 300, 0,
SQL1 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,
SQL1 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,
SQL1 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: SQL12, 2010-Jan-15
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset, El
      apsed, Distance, Capacity,
SQL12 2010-Jan-15, SIN-HND, 2010-Jan-15, 09:20:00, 2010-Jan-15, 12:00:00, 07:40:00
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, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group, Comm
Space, 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, 5.20
268e-90, 0, 1.31346e-47, 1.05119e-153, 2.78986e+179, 0, 200, 9, 3.66962e-62, 1.08
54e-71, 6.74783e-67, 6.9835e-77, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
SQ12 2010-Jan-15, SIN-HND 2010-Jan-15, Y, 1, 0, 0, 0, 0, 200, 0,
SQ12 2010-Jan-15, SIN-HND 2010-Jan-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,
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,
*****
*****
FlightDate: SQ12, 2010-Jan-16
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset, El
apsed, 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, Comm
Space, 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, 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,
```

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SQL2 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,
SQL2 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,
SQL2 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: SQL2, 2010-Jan-17
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset, El
      apsed, Distance, Capacity,
SQL2 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, Comm
      Space, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQL2 2010-Jan-17, SIN-HND 2010-Jan-17, Y, 200, 200, 0, 0, 0, 0, 0, 0, 0, 0, 200,
      9, 2.39291e-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,
SQL2 2010-Jan-17, SIN-HND 2010-Jan-17, Y, 1, 0, 0, 0, 0, 200, 0,
SQL2 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,
SQL2 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,
SQL2 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: SQL2, 2010-Jan-18
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset, El
      apsed, Distance, Capacity,
SQL2 2010-Jan-18, SIN-HND, 2010-Jan-18, 09:20:00, 2010-Jan-18, 12:00:00, 07:40:00
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, 0, -05:00:00, 6300, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group, Comm
Space, 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, 0, 200,
9, 2.14469e-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-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, 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, El
apsed, 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, Comm
Space, 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, 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,

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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,
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:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset, El
      apsed, Distance, Capacity,
SQ12 2010-Jan-20, SIN-HND, 2010-Jan-20, 09:20:00, 2010-Jan-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, Comm
      Space, 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, 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, El
      apsed, 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:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group, Comm
    Space, 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, 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, El
    apsed, Distance, Capacity,
SQ12 2010-Jan-22, SIN-HND, 2010-Jan-22, 09:20:00, 2010-Jan-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, Comm
    Space, 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, 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,
*****

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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,
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, El
      apsed, Distance, Capacity,
SQ12 2010-Jan-23, SIN-HND, 2010-Jan-23, 09:20:00, 2010-Jan-23, 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, Comm
      Space, 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, El
      apsed, Distance, Capacity,
SQ12 2010-Jan-24, SIN-HND, 2010-Jan-24, 09:20:00, 2010-Jan-24, 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, Comm
    Space, 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, 0, 200,
    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,
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, El
    apsed, 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, Comm
    Space, 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, 0, 200,
    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,
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,
```

FlightDate: SQ12, 2010-Jan-26

Leg-Dates:

```
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset, El
      apsed, Distance, Capacity,
SQ12 2010-Jan-26, SIN-HND, 2010-Jan-26, 09:20:00, 2010-Jan-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, Comm
      Space, 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,
*****
*****
```

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, El
      apsed, 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, Comm
Space, 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, El
apsed, 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, Comm
Space, 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,
SQ12 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,
SQ12 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,
SQ12 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: SQ12, 2010-Jan-29
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset, El
      apsed, Distance, Capacity,
SQ12 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, Comm
      Space, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 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,
SQ12 2010-Jan-29, SIN-HND 2010-Jan-29, Y, 1, 0, 0, 0, 0, 200, 0,
SQ12 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,
SQ12 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,
SQ12 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: SQ12, 2010-Jan-30
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset, El
      apsed, Distance, Capacity,
SQ12 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:
```

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-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group, Comm
    Space, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 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,
SQ12 2010-Jan-30, SIN-HND 2010-Jan-30, Y, 1, 0, 0, 0, 0, 200, 0,
SQ12 2010-Jan-30, SIN-HND 2010-Jan-30, 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-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,
*****
*****
FlightDate: SQ12, 2010-Jan-31
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset, El
    apsed, 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,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group, Comm
    Space, 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, 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:
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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-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,
*****
*****
FlightDate: SQ12, 2010-Feb-01
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset, El
      apsed, 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, Comm
      Space, 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, 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, 0,
      0, 0, 0, 0,
*****
*****
FlightDate: SQ12, 2010-Feb-02
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset, El
      apsed, 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:
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Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group, Comm
    Space, 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, 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, El
    apsed, 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, Comm
    Space, 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, 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
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      (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,
*****
*****
FlightDate: SQ12, 2010-Feb-04
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset, El
apsed, 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,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group, Comm
Space, 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, 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, El
apsed, 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,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group, Comm

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Space, 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, 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, El
apsed, Distance, Capacity,
SQ12 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,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group, Comm
Space, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 2010-Feb-06, SIN-HND 2010-Feb-06, 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-06, SIN-HND 2010-Feb-06, Y, 1, 0, 0, 0, 0, 200, 0,
SQ12 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,
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SQ12 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,
SQ12 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,
*****
*****
FlightDate: SQ12, 2010-Feb-07
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset, El
apsed, Distance, Capacity,
SQ12 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, Comm
Space, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 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,
SQ12 2010-Feb-07, SIN-HND 2010-Feb-07, Y, 1, 0, 0, 0, 0, 200, 0,
SQ12 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,
SQ12 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,
SQ12 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,
*****
*****
FlightDate: SQ12, 2010-Feb-08
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset, El
apsed, Distance, Capacity,
SQ12 2010-Feb-08, SIN-HND, 2010-Feb-08, 09:20:00, 2010-Feb-08, 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, Comm
Space, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
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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:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset, El
    apsed, Distance, Capacity,
SQ12 2010-Feb-09, SIN-HND, 2010-Feb-09, 09:20:00, 2010-Feb-09, 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, Comm
    Space, 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, 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,

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    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, 0,
    0, 0, 0, 0,
*****
*****
FlightDate: SQ12, 2010-Feb-10
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset, El
apsed, 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,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group, Comm
Space, 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, 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-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:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset, El
apsed, 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, Comm
Space, 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,

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          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-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,
*****
*****
FlightDate: SQ12, 2010-Feb-12
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset, El
      apsed, 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, Comm
      Space, 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,
*****
*****
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,

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SQL2 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: SQL2, 2010-Feb-13
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset, El
apsed, Distance, Capacity,
SQL2 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, Comm
Space, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQL2 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,
SQL2 2010-Feb-13, SIN-HND 2010-Feb-13, Y, 1, 0, 0, 0, 0, 200, 0,
SQL2 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,
SQL2 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,
SQL2 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,
*****
*****
FlightDate: SQL2, 2010-Feb-14
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset, El
apsed, Distance, Capacity,
SQL2 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, Comm
Space, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQL2 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,
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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-Feb-14, SIN-HND 2010-Feb-14, Y, 1, 0, 0, 0, 0, 200, 0,
SQ12 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,
SQ12 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,
SQ12 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,
*****
*****
FlightDate: SQ12, 2010-Feb-15
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset, El
      apsed, Distance, Capacity,
SQ12 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, Comm
      Space, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 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,
SQ12 2010-Feb-15, SIN-HND 2010-Feb-15, Y, 1, 0, 0, 0, 0, 200, 0,
SQ12 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,
SQ12 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,
SQ12 2010-Feb-15, SIN-HND 2010-Feb-15, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0, 0,
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0, 0, 0, 0,
*****
*****
FlightDate: SQ12, 2010-Feb-16
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset, El
apsed, Distance, Capacity,
SQ12 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, Comm
Space, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 2010-Feb-16, SIN-HND 2010-Feb-16, 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-16, SIN-HND 2010-Feb-16, Y, 1, 0, 0, 0, 0, 200, 0,
SQ12 2010-Feb-16, SIN-HND 2010-Feb-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-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, El
apsed, 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, Comm
Space, 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,
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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-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,
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FlightDate: SQ12, 2010-Feb-18
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*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group, Comm
      Space, 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, 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,
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Subclasses:
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Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs, GrpBks
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*****
LegCabins:
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Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group, Comm
Space, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
SQ12 2010-Feb-19, SIN-HND 2010-Feb-19, 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,
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SQ12 2010-Feb-19, SIN-HND 2010-Feb-19, Y, 2, 0, 0, 0, 0, 200, 0,
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Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs, GrpBks
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Leg-Dates:
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-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group, Comm
Space, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
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9, 0, 0, 0, 0, 0,
*****
*****
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Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
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*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
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SQ12 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
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      0, 0, 0, 0,
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Leg-Dates:
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LegCabins:
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Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group, Comm
      Space, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
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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,
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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
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LegCabins:
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Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group, Comm
Space, 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,
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*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
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SegmentCabins:
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Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
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*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs, GrpBks
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FlightDate: SQ12, 2010-Feb-23
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Leg-Dates:
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Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset, El
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*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group, Comm
Space, 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, 200,
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,
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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,
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Leg-Dates:
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LegCabins:
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Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group, Comm
      Space, 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, 0, 0, 200,
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Buckets:
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Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
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SegmentCabins:
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Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
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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
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      0, 0, 0, 0,
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*****
LegCabins:
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Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group, Comm
Space, 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, 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,
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*****
LegCabins:
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Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group, Comm
Space, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
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9, 0, 0, 0, 0, 0,
*****
*****
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,
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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
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      , 0, -05:00:00, 6300, 0,
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group, Comm
      Space, 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,
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Space, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
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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,
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,
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SQ12 2010-Feb-28, SIN-HND 2010-Feb-28, Y, 2, M, 200 (0), 0, 0, 0, 0, 0 (0), 0, 0,
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*****

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12.6 Exploring the Predefined BOM Tree

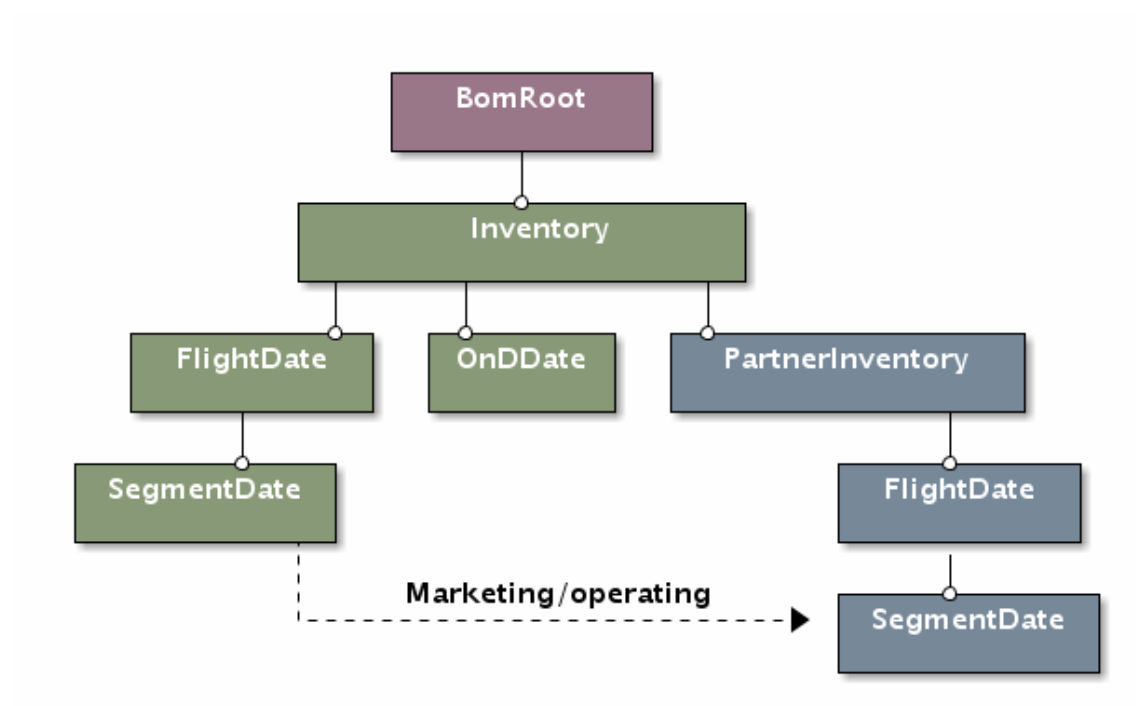


Figure 2: SEvMgr BOM tree

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

12.6.1 Airline Network BOM Tree

- SEVMGR::ReachableUniverse
- SEVMGR::OriginDestinationSet
- SEVMGR::SegmentPathPeriod

12.6.2 Airline Schedule BOM Tree

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

12.7 Extending the BOM Tree

12.8 The travel solution calculation procedure

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

13 Supported Systems

13.1 Table of Contents

- [Introduction](#)
- [.1 SEvMgr 0.1.x.1](#)
 - [Linux Systems](#)
 - * [Fedora Core 4 with ATLAS](#)
 - * [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 SEvMgr External](#)
 - * [SUSE Linux 10.0 with NetLib's BLAS and LAPACK](#)
 - * [SUSE Linux 10.0 with MKL](#)
 - [Windows Systems](#)
 - * [Microsoft Windows XP with Cygwin](#)
 - * [Microsoft Windows XP with Cygwin and ATLAS](#)
 - * [Microsoft Windows XP with Cygwin and ACML](#)
 - * [Microsoft Windows XP with MinGW, MSYS and ACML](#)
 - * [Microsoft Windows XP with MinGW, MSYS and SEvMgr External](#)
 - * [Microsoft Windows XP with MS Visual C++ and Intel MKL](#)
 - [Unix Systems](#)
 - * [SunOS 5.9 with SEvMgr External](#)
- [SEvMgr 3.9.1](#)
- [SEvMgr 3.9.0](#)
- [SEvMgr 3.8.1](#)

13.2 Introduction

This page is intended to provide a list of SEvMgr supported systems, i.e. the systems on which configuration, installation and testing process of the SEvMgr 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 SEvMgr library on a system not mentioned below, please let us know, so we could update this database.

14 SEvMgr Supported Systems (Previous Releases)

14.1 SEvMgr 3.9.1

14.2 SEvMgr 3.9.0

14.3 SEvMgr 3.8.1

15 Tutorials

15.1 Table of Contents

- [Preparing the AirSched Project for Development](#)
- [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](#)

15.2 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.

15.3 Your first networkBuilde

15.3.1 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 AIRSCHED_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):

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

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

15.3.2 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.

15.4 Network building with an input file

15.4.1 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 :

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:

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:

15.4.2 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 :

15.4.3 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.

16 Command-Line Test to Demonstrate How To Use Sevmgr elements

```
*/
// //////////////////////////////////////
// Import section
// //////////////////////////////////////
// STL
#include <sstream>
#include <fstream>
#include <map>
#include <cmath>
// Boost Unit Test Framework (UTF)
#define BOOST_TEST_DYN_LINK
#define BOOST_TEST_MAIN
#define BOOST_TEST_MODULE EventQueueManagementTest
#include <boost/test/unit_test.hpp>
// StdAir
#include <stdair/stdair_basic_types.hpp>
#include <stdair/basic/BasLogParams.hpp>
#include <stdair/basic/BasDBParams.hpp>
#include <stdair/basic/BasFileMgr.hpp>
#include <stdair/basic/ProgressStatusSet.hpp>
#include <stdair/bom/EventStruct.hpp>
#include <stdair/bom/EventQueue.hpp>
#include <stdair/bom/BookingRequestStruct.hpp>
#include <stdair/service/Logger.hpp>
// SEvMgr
```



```

#include <sevmgr/SEVMGR_Service.hpp>
#include <sevmgr/config/sevmgr-paths.hpp>

namespace boost_utf = boost::unit_test;

// (Boost) Unit Test XML Report
std::ofstream utfReportStream ("EventQueueManagementTestSuite_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() {
    }
};

// Specific type definitions
typedef std::pair<stdair::Count_T, stdair::Count_T> NbOfEventsPair_T;
typedef std::map<const stdair::DemandStreamKeyStr_T,
                NbOfEventsPair_T> NbOfEventsByDemandStreamMap_T;

// ////////////////////////////////// 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 (sevmgr_simple_simulation_test) {

    // Input file name
    const stdair::Filename_T lInputFilename (STDAIR_SAMPLE_DIR "/demand01.csv");

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

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

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

    // Initialise the Sevmgr service object
    const stdair::BasLogParams lLogParams (stdair::LOG::DEBUG, logOutputFile);
    SEVMGR::SEVMGR_Service sevmgrService (lLogParams);

    sevmgrService.buildSampleBom();

```

```
sevmgrService.reset();

// DEBUG
STDAIR_LOG_DEBUG ("End of the simulation");

// Close the log file
logOutputFile.close();
}

// End the test suite
BOOST_AUTO_TEST_SUITE_END()

/*!
```

17 Directory Hierarchy

17.1 Directories

This directory hierarchy is sorted roughly, but not completely, alphabetically:

sevmgr	111
basic	109
batches	110
command	110
config	110
factory	110
python	111
service	111
ui	112
cmdline	110
test	111
sevmgr	111

18 Namespace Index

18.1 Namespace List

Here is a list of all namespaces with brief descriptions:

SEVMGR	112
stdair	115
swift (The wrapper namespace)	115

19 Class Index

19.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

```
std::basic_fstream< char >
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_ostreamstream< char >
std::basic_ostreamstream< wchar_t >
std::basic_string< char >
std::basic_string< wchar_t >
std::basic_stringstream< char >
std::basic_stringstream< wchar_t >
```

CmdAbstract	115
SEVMGR::EventQueueManager	116
COMMAND	115
FacServiceAbstract	117
SEVMGR::FacSEVMGRServiceContext	117
SEVMGR::PYEventQueueManager	119
RootException	120
SEVMGR::SEvMgrException	125

ServiceAbstract	120
SEVMGR::SEVMGR_ServiceContext	124
SEVMGR::SEVMGR_Service	121
swift::SKeymap	125
swift::SReadline	128

20 Class Index

20.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

CmdAbstract	115
COMMAND	115
SEVMGR::EventQueueManager (Utility class for Demand and Demand-Stream objects)	116
FacServiceAbstract	117
SEVMGR::FacSEVMGRServiceContext	117
SEVMGR::PYEventQueueManager	119
RootException	120
ServiceAbstract	120
SEVMGR::SEVMGR_Service (Class holding the services related to Travel Demand Generation)	121
SEVMGR::SEVMGR_ServiceContext (Class holding the context of the Sevmgr services)	124
SEVMGR::SEvMgrException	125
swift::SKeymap (The readline keymap wrapper)	125
swift::SReadline (The readline library wrapper)	128

21 File Index

21.1 File List

Here is a list of all files with brief descriptions:

sevmgr/ SEVMGR_Exceptions.hpp	162
sevmgr/ SEVMGR_Service.hpp	163
sevmgr/ SEVMGR_Types.hpp	165
sevmgr/basic/ BasConst.cpp	134
sevmgr/basic/ BasConst_EventQueueManager.hpp	135
sevmgr/basic/ BasConst_SEVMGR_Service.hpp	135
sevmgr/basic/ BasParserTypes.hpp	136
sevmgr/batches/ sevmgr_demo.cpp	139
sevmgr/command/ EventQueueManager.cpp	142
sevmgr/command/ EventQueueManager.hpp	143
sevmgr/config/ sevmgr-paths.hpp	146
sevmgr/config/ sevmgr-paths.hpp.in	148
sevmgr/factory/ FacSEVMGRServiceContext.cpp	149
sevmgr/factory/ FacSEVMGRServiceContext.hpp	150
sevmgr/python/ pysevmgr.cpp	152
sevmgr/service/ SEVMGR_Service.cpp	155
sevmgr/service/ SEVMGR_ServiceContext.cpp	159
sevmgr/service/ SEVMGR_ServiceContext.hpp	161
sevmgr/ui/cmdline/ readline_autocomp.hpp	170
sevmgr/ui/cmdline/ sevmgr.cpp	176
sevmgr/ui/cmdline/ SReadline.hpp (C++ wrapper around libreadline)	189
test/sevmgr/ EventQueueManagementTestSuite.cpp	197

22 Directory Documentation

22.1 sevmgr/basic/ Directory Reference

Files

- file [BasConst.cpp](#)
- file [BasConst_EventQueueManager.hpp](#)
- file [BasConst_SEVMGR_Service.hpp](#)
- file [BasParserTypes.hpp](#)

22.2 sevmgr/batches/ Directory Reference

Files

- file [sevmgr_demo.cpp](#)

22.3 sevmgr/ui/cmdline/ Directory Reference

Files

- file [readline_autocomp.hpp](#)
- file [sevmgr.cpp](#)
- file [SReadline.hpp](#)

C++ wrapper around libreadline.

22.4 sevmgr/command/ Directory Reference

Files

- file [EventQueueManager.cpp](#)
- file [EventQueueManager.hpp](#)

22.5 sevmgr/config/ Directory Reference

Files

- file [sevmgr-paths.hpp](#)
- file [sevmgr-paths.hpp.in](#)

22.6 sevmgr/factory/ Directory Reference

Files

- file [FacSEVMGRServiceContext.cpp](#)
- file [FacSEVMGRServiceContext.hpp](#)

22.7 sevmgr/python/ Directory Reference

Files

- file [pysevmgr.cpp](#)

22.8 sevmgr/service/ Directory Reference

Files

- file [SEVMGR_Service.cpp](#)
- file [SEVMGR_ServiceContext.cpp](#)
- file [SEVMGR_ServiceContext.hpp](#)

22.9 test/sevmgr/ Directory Reference

Files

- file [EventQueueManagementTestSuite.cpp](#)

22.10 sevmgr/ Directory Reference

Directories

- directory [basic](#)
- directory [batches](#)
- directory [command](#)
- directory [config](#)
- directory [factory](#)
- directory [python](#)
- directory [service](#)
- directory [ui](#)

Files

- file [SEVMGR_Exceptions.hpp](#)
- file [SEVMGR_Service.hpp](#)
- file [SEVMGR_Types.hpp](#)

22.11 test/ Directory Reference

Directories

- directory [sevmgr](#)

22.12 sevmgr/ui/ Directory Reference

Directories

- directory [cmdline](#)

23 Namespace Documentation

23.1 SEVMGR Namespace Reference

Classes

- class [EventQueueManager](#)
Utility class for Demand and DemandStream objects.
- class [FacSEVMGRServiceContext](#)
- struct [PYEventQueueManager](#)
- class [SEVMGR_ServiceContext](#)
Class holding the context of the Sevmgr services.
- class [SEvMgrException](#)
- class [SEVMGR_Service](#)
class holding the services related to Travel Demand Generation.

Typedefs

- 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, 1, 2 > [uint1_2_p_t](#)
- typedef boost::spirit::classic::uint_parser< unsigned int, 10, 1, 3 > [uint1_3_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< [uint1_2_p_t](#), unsigned int > [bounded1_2_p_t](#)
- typedef boost::spirit::classic::bounded< [uint1_3_p_t](#), unsigned int > [bounded1_3_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 boost::shared_ptr< [SEVMGR_Service](#) > [SEVMGR_ServicePtr_T](#)

23.1.1 Typedef Documentation

23.1.1.1 typedef char SEVMGR::char_t

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

23.1.1.2 typedef boost::spirit::classic::file_iterator<char_t> SEVMGR::iterator_t

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

23.1.1.3 typedef boost::spirit::classic::scanner<iterator_t> SEVMGR::scanner_t

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

23.1.1.4 typedef boost::spirit::classic::rule<scanner_t> SEVMGR::rule_t

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

23.1.1.5 typedef boost::spirit::classic::int_parser<unsigned int, 10, 1, 1> SEVMGR::int1_p_t

1-digit-integer parser

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

23.1.1.6 typedef boost::spirit::classic::uint_parser<unsigned int, 10, 2, 2> SEVMGR::uint2_p_t

2-digit-integer parser

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

23.1.1.7 typedef boost::spirit::classic::uint_parser<unsigned int, 10, 1, 2> SEVMGR::uint1_2_p_t

Up-to-2-digit-integer parser

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

23.1.1.8 typedef boost::spirit::classic::uint_parser<unsigned int, 10, 1, 3> SEVMGR::uint1_3_p_t

Up-to-3-digit-integer parser

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

23.1.1.9 typedef boost::spirit::classic::uint_parser<unsigned int, 10, 4, 4> SEVMGR::uint4_p_t

4-digit-integer parser

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

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

Up-to-4-digit-integer parser

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

23.1.1.11 `typedef boost::spirit::classic::chset<char_t> SEVMGR::chset_t`

character set

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

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

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

Definition at line 69 of file [BasParserTypes.hpp](#).

23.1.1.13 `typedef boost::spirit::classic::bounded<uint2_p_t, unsigned int>
SEVMGR::bounded2_p_t`

Bounded-number-of-integers parser

Definition at line 72 of file [BasParserTypes.hpp](#).

23.1.1.14 `typedef boost::spirit::classic::bounded<uint1_2_p_t, unsigned int>
SEVMGR::bounded1_2_p_t`

Definition at line 73 of file [BasParserTypes.hpp](#).

23.1.1.15 `typedef boost::spirit::classic::bounded<uint1_3_p_t, unsigned int>
SEVMGR::bounded1_3_p_t`

Definition at line 74 of file [BasParserTypes.hpp](#).

23.1.1.16 `typedef boost::spirit::classic::bounded<uint4_p_t, unsigned int>
SEVMGR::bounded4_p_t`

Definition at line 75 of file [BasParserTypes.hpp](#).

23.1.1.17 `typedef boost::spirit::classic::bounded<uint1_4_p_t, unsigned int>
SEVMGR::bounded1_4_p_t`

Definition at line 76 of file [BasParserTypes.hpp](#).

23.1.1.18 `typedef boost::shared_ptr<SEVMGR_Service>
SEVMGR::SEVMGR_ServicePtr_T`

(Smart) Pointer on the SEvMgr service handler.

Definition at line 15 of file [SEVMGR_Types.hpp](#).

23.2 stdair Namespace Reference

23.3 swift Namespace Reference

The wrapper namespace.

Classes

- class [SKeymap](#)
The readline keymap wrapper.
- class [SReadline](#)
The readline library wrapper.

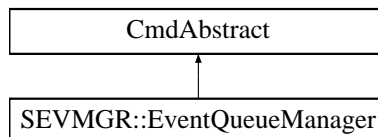
23.3.1 Detailed Description

The wrapper namespace. The namespace is also used for other library elements.

24 Class Documentation

24.1 CmdAbstract Class Reference

Inheritance diagram for CmdAbstract:



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

- `sevmgr/command/EventManager.hpp`

24.2 COMMAND Struct Reference

```
#include <sevmgr/ui/cmdline/readline_autocomp.hpp>
```

Public Attributes

- `char const * name`
- `pt2Func * func`
- `char * doc`

24.2.1 Detailed Description

A structure which contains information on the commands this program can understand.

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

24.2.2 Member Data Documentation

24.2.2.1 char const* **COMMAND::name**

User printable name of the function.

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

Referenced by [com_help\(\)](#), and [find_command\(\)](#).

24.2.2.2 pt2Func* **COMMAND::func**

Function to call to do the job.

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

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

24.2.2.3 char* **COMMAND::doc**

Documentation for this function.

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

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

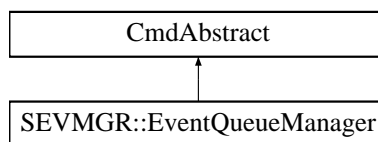
- [sevmgr/ui/cmdline/readline_autocomp.hpp](#)

24.3 SEVMGR::EventQueueManager Class Reference

Utility class for Demand and DemandStream objects.

```
#include <sevmgr/command/EventQueueManager.hpp>
```

Inheritance diagram for SEVMGR::EventQueueManager:



Friends

- class [SEVMGR_Service](#)

24.3.1 Detailed Description

Utility class for Demand and DemandStream objects.

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

24.3.2 Friends And Related Function Documentation

24.3.2.1 friend class SEVMGR_Service [friend]

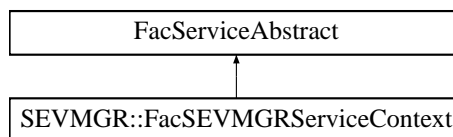
Definition at line 25 of file [EventQueueManager.hpp](#).

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

- [sevmgr/command/EventQueueManager.hpp](#)
- [sevmgr/command/EventQueueManager.cpp](#)

24.4 FacServiceAbstract Class Reference

Inheritance diagram for FacServiceAbstract:



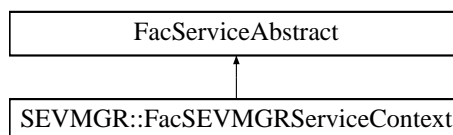
The documentation for this class was generated from the following file:

- [sevmgr/factory/FacSEVMGRServiceContext.hpp](#)

24.5 SEVMGR::FacSEVMGRServiceContext Class Reference

```
#include <sevmgr/factory/FacSEVMGRServiceContext.hpp>
```

Inheritance diagram for SEVMGR::FacSEVMGRServiceContext:



Public Member Functions

- [~FacSEVMGRServiceContext \(\)](#)
- [SEVMGR_ServiceContext & create \(\)](#)

Static Public Member Functions

- static [FacSEVMGRServiceContext](#) & [instance](#) ()

Protected Member Functions

- [FacSEVMGRServiceContext](#) ()

24.5.1 Detailed Description

Factory for Bucket.

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

24.5.2 Constructor & Destructor Documentation

24.5.2.1 SEVMGR::FacSEVMGRServiceContext::~~FacSEVMGRServiceContext ()

Destructor.

The Destruction put the `_instance` to NULL in order to be clean for the next [FacSEVMGRServiceContext::instance\(\)](#).

Definition at line 17 of file [FacSEVMGRServiceContext.cpp](#).

24.5.2.2 SEVMGR::FacSEVMGRServiceContext::FacSEVMGRServiceContext () [inline, protected]

Default Constructor.

This constructor is protected in order to ensure the singleton pattern.

Definition at line 42 of file [FacSEVMGRServiceContext.hpp](#).

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

24.5.3 Member Function Documentation

24.5.3.1 FacSEVMGRServiceContext & SEVMGR::FacSEVMGRServiceContext::instance () [static]

Provide the unique instance.

The singleton is instantiated when first used

Returns

[FacSEVMGRServiceContext](#)&

Definition at line 22 of file [FacSEVMGRServiceContext.cpp](#).

References [FacSEVMGRServiceContext\(\)](#).

24.5.3.2 SEVMGR_ServiceContext & SEVMGR::FacSEVMGRServiceContext::create ()

Create a new [SEVMGR_ServiceContext](#) object.

This new object is added to the list of instantiated objects.

Returns

[SEVMGR_ServiceContext](#)& The newly created object.

Definition at line 34 of file [FacSEVMGRServiceContext.cpp](#).

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

- [sevmgr/factory/FacSEVMGRServiceContext.hpp](#)
- [sevmgr/factory/FacSEVMGRServiceContext.cpp](#)

24.6 SEVMGR::PYEventQueueManager Struct Reference

Public Member Functions

- `std::string` [sevmgr](#) ()
- [PYEventQueueManager](#) ()
- [PYEventQueueManager](#) (const [PYEventQueueManager](#) & *iPYEventQueueManager*)
- [~PYEventQueueManager](#) ()
- `bool` [init](#) (const `std::string` & *iLogFilepath*, const `std::string` & *iDBUser*, const `std::string` & *iDBPasswd*, const `std::string` & *iDBHost*, const `std::string` & *iDBPort*, const `std::string` & *iDBDBName*)

24.6.1 Detailed Description

Definition at line 22 of file [pysevmgr.cpp](#).

24.6.2 Constructor & Destructor Documentation

24.6.2.1 SEVMGR::PYEventQueueManager::PYEventQueueManager () [inline]

Default constructor.

Definition at line 76 of file [pysevmgr.cpp](#).

24.6.2.2 SEVMGR::PYEventQueueManager::PYEventQueueManager (const [PYEventQueueManager](#) & *iPYEventQueueManager*) [inline]

Default copy constructor.

Definition at line 80 of file [pysevmgr.cpp](#).

24.6.2.3 SEVMGR::PYEventQueueManager::~~PYEventQueueManager () [inline]

Default constructor.

Definition at line 86 of file [pysevmgr.cpp](#).

24.6.3 Member Function Documentation

24.6.3.1 std::string SEVMGR::PYEventQueueManager::sevmgr () [inline]

Wrapper around the travel demand generation use case.

Definition at line 25 of file [pysevmgr.cpp](#).

References [SEVMGR::SEVMGR_Service::buildSampleBom\(\)](#).

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

24.6.3.2 bool SEVMGR::PYEventQueueManager::init (const std::string & iLogFilepath, const std::string & iDBUser, const std::string & iDBPasswd, const std::string & iDBHost, const std::string & iDBPort, const std::string & iDBDBName) [inline]

Wrapper around the search use case.

Definition at line 92 of file [pysevmgr.cpp](#).

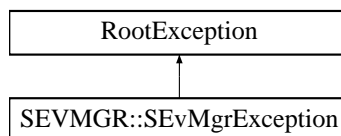
Referenced by [BOOST_PYTHON_MODULE\(\)](#).

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

- [sevmgr/python/pysevmgr.cpp](#)

24.7 RootException Class Reference

Inheritance diagram for RootException:

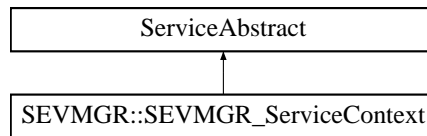


The documentation for this class was generated from the following file:

- [sevmgr/SEVMGR_Exceptions.hpp](#)

24.8 ServiceAbstract Class Reference

Inheritance diagram for ServiceAbstract:



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

- [sevmgr/service/SEVMGR_ServiceContext.hpp](#)

24.9 SEVMGR::SEVMGR_Service Class Reference

class holding the services related to Travel Demand Generation.

```
#include <sevmgr/SEVMGR_Service.hpp>
```

Public Member Functions

- [SEVMGR_Service](#) (const stdair::BasLogParams &, const stdair::BasDBParams &)
Constructor.
- [SEVMGR_Service](#) (const stdair::BasLogParams &)
- [SEVMGR_Service](#) (stdair::STDAIR_ServicePtr_T)
- [~SEVMGR_Service](#) ()
- void [buildSampleBom](#) ()
- stdair::ProgressStatusSet [popEvent](#) (stdair::EventStruct &) const
- bool [isQueueDone](#) () const
- void [reset](#) () const
- std::string [csvDisplay](#) () const

24.9.1 Detailed Description

class holding the services related to Travel Demand Generation.

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

24.9.2 Constructor & Destructor Documentation

24.9.2.1 SEVMGR::SEVMGR_Service::SEVMGR_Service (const stdair::BasLogParams & iLogParams, const stdair::BasDBParams & iDBParams)

Constructor.

The `initSevmgrService()` 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>	stdair::BasLogParams& Parameters for the output log stream.
<i>const</i>	stdair::BasDBParams& Parameters for the database access.

Definition at line 39 of file [SEVMGR_Service.cpp](#).

24.9.2.2 SEVMGR::SEVMGR_Service::SEVMGR_Service (*const* stdair::BasLogParams & *iLogParams*)

Constructor.

The `initSevmgrService()` 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>	stdair::BasLogParams& Parameters for the output log stream.
--------------	---

Definition at line 60 of file [SEVMGR_Service.cpp](#).

24.9.2.3 SEVMGR::SEVMGR_Service::SEVMGR_Service (stdair::STDAIR_ServicePtr_T *ioSTDAIR_Service_ptr*)

Constructor.

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

Moreover, as no reference on any output stream is given, neither any database access parameter 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 [SEVMGR_Service](#) is itself being initialised by another library service such as `DSIM_Service`).

Parameters

<i>stdair::STDAIR_ServicePtr_T</i>	Handler on the STDAIR_Service.
------------------------------------	--------------------------------

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

24.9.2.4 SEVMGR::SEVMGR_Service::~~SEVMGR_Service ()

Destructor.

Definition at line 97 of file [SEVMGR_Service.cpp](#).

24.9.3 Member Function Documentation

24.9.3.1 void SEVMGR::SEVMGR_Service::buildSampleBom ()

Build a sample BOM tree.

Definition at line 171 of file [SEVMGR_Service.cpp](#).

Referenced by [main\(\)](#), and [SEVMGR::PYEventQueueManager::sevmgr\(\)](#).

24.9.3.2 stdair::ProgressStatusSet SEVMGR::SEVMGR_Service::popEvent (stdair::EventStruct & ioEventStruct) const

Pop the next coming (in time) event, and remove it from the event queue.

- The next coming (in time) event corresponds to the event having the earliest date-time stamp. In other words, it is the first/front element of the event queue.
- That (first) event/element is then removed from the event queue
- The progress status is updated for the corresponding demand stream.

Returns

stdair::EventStruct A copy of the event structure, which comes first in time from within the event queue.

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

24.9.3.3 bool SEVMGR::SEVMGR_Service::isQueueDone () const

States whether the event queue has reached the end.

For now, that method states whether the event queue is empty.

Definition at line 233 of file [SEVMGR_Service.cpp](#).

24.9.3.4 void SEVMGR::SEVMGR_Service::reset () const

Reset the context of the demand streams for another demand generation without having to reparse the demand input file.

Definition at line 255 of file [SEVMGR_Service.cpp](#).

24.9.3.5 std::string SEVMGR::SEVMGR_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 191 of file [SEVMGR_Service.cpp](#).

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

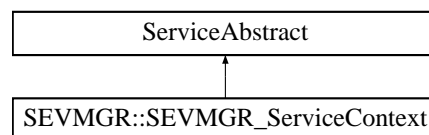
- [sevmgr/SEVMGR_Service.hpp](#)
- [sevmgr/service/SEVMGR_Service.cpp](#)

24.10 SEVMGR::SEVMGR_ServiceContext Class Reference

Class holding the context of the Sevmgr services.

```
#include <sevmgr/service/SEVMGR_ServiceContext.hpp>
```

Inheritance diagram for SEVMGR::SEVMGR_ServiceContext:



Friends

- class [SEVMGR_Service](#)
- class [FacSEVMGRServiceContext](#)

24.10.1 Detailed Description

Class holding the context of the Sevmgr services.

Definition at line 21 of file [SEVMGR_ServiceContext.hpp](#).

24.10.2 Friends And Related Function Documentation

24.10.2.1 friend class SEVMGR_Service [friend]

The [SEVMGR_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 27 of file [SEVMGR_ServiceContext.hpp](#).

24.10.2.2 friend class FacSEVMGRServiceContext [friend]

Definition at line 28 of file [SEVMGR_ServiceContext.hpp](#).

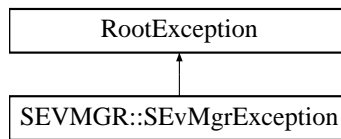
The documentation for this class was generated from the following files:

- [sevmgr/service/SEVMGR_ServiceContext.hpp](#)
- [sevmgr/service/SEVMGR_ServiceContext.cpp](#)

24.11 SEVMGR::SEvMgrException Class Reference

```
#include <sevmgr/SEVMGR_Exceptions.hpp>
```

Inheritance diagram for SEVMGR::SEvMgrException:



Public Member Functions

- [SEvMgrException](#) (const std::string &iWhat)

24.11.1 Detailed Description

Root exception for the Sevmgr component

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

24.11.2 Constructor & Destructor Documentation

24.11.2.1 SEVMGR::SEvMgrException::SEvMgrException (const std::string & *iWhat*)
[inline]

Constructor.

Definition at line 23 of file [SEVMGR_Exceptions.hpp](#).

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

- [sevmgr/SEVMGR_Exceptions.hpp](#)

24.12 swift::SKeymap Class Reference

The readline keymap wrapper.

```
#include <sevmgr/ui/cmdline/SReadline.hpp>
```

Public Member Functions

- [SKeymap](#) (bool PrintableBound=false)

Creates a new keymap.

- [SKeymap](#) (Keymap Pattern)

Creates a new keymap which is a copy of Pattern.

- [~SKeymap](#) ()

Frees the allocated keymap.

- void [Bind](#) (int Key, KeyCallback Callback)

Binds the given key to a function.

- void [Unbind](#) (int Key)

Unbinds the given key.

- [SKeymap](#) (const [SKeymap](#) &rhs)

Copy constructor.

- [SKeymap](#) & [operator=](#) (const [SKeymap](#) &rhs)

operator=

Friends

- class [SReadline](#)

24.12.1 Detailed Description

The readline keymap wrapper.

Attention: It is not thread safe! Supports: key binding, key unbinding

Definition at line 307 of file [SReadline.hpp](#).

24.12.2 Constructor & Destructor Documentation

24.12.2.1 `swift::SKeymap::SKeymap (bool PrintableBound = false) [inline, explicit]`

Creates a new keymap.

Parameters

<i>Printable-Bound</i>	if true - the printable characters are bound if false - the keymap is empty
------------------------	---

Definition at line 319 of file [SReadline.hpp](#).

24.12.2.2 `swift::SKeymap::SKeymap (Keymap Pattern) [inline, explicit]`

Creates a new keymap which is a copy of Pattern.

Parameters

<i>Pattern</i>	A keymap to be copied.
----------------	------------------------

Definition at line 342 of file [SReadline.hpp](#).

24.12.2.3 `swift::SKeymap::~~SKeymap ()` `[inline]`

Frees the allocated keymap.

Definition at line 354 of file [SReadline.hpp](#).

24.12.2.4 `swift::SKeymap::SKeymap (const SKeymap & rhs)` `[inline]`

Copy constructor.

Parameters

<i>rhs</i>	Right hand side object of SKeymap
------------	---

Definition at line 395 of file [SReadline.hpp](#).

24.12.3 Member Function Documentation

24.12.3.1 `void swift::SKeymap::Bind (int Key, KeyCallback Callback)` `[inline]`

Binds the given key to a function.

Parameters

<i>Key</i>	A key to be bound
<i>Callback</i>	A function to be called when the Key is pressed

Definition at line 366 of file [SReadline.hpp](#).

24.12.3.2 `void swift::SKeymap::Unbind (int Key)` `[inline]`

Unbinds the given key.

Parameters

<i>Key</i>	A key to be unbound
------------	---------------------

Definition at line 381 of file [SReadline.hpp](#).

24.12.3.3 `SKeymap& swift::SKeymap::operator= (const SKeymap & rhs)` `[inline]`

operator=

Parameters

<i>rhs</i>	Right hand side object of SKeymap
------------	---

Definition at line 407 of file [SReadline.hpp](#).

24.12.4 Friends And Related Function Documentation

24.12.4.1 friend class SReadline [friend]

Definition at line 415 of file [SReadline.hpp](#).

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

- [sevmgr/ui/cmdline/SReadline.hpp](#)

24.13 swift::SReadline Class Reference

The readline library wrapper.

```
#include <sevmgr/ui/cmdline/SReadline.hpp>
```

Public Member Functions

- [SReadline](#) (const size_t Limit=DefaultHistoryLimit)
Constructs the object, sets the completion function.
- [SReadline](#) (const std::string &historyFileName, const size_t Limit=DefaultHistoryLimit)
Constructs the object, sets the completion function, loads history.
- [~SReadline](#) ()
Saves the session history (if the file name was provided) and destroys the object.
- std::string [GetLine](#) (const std::string &Prompt)
Gets a single line from a user.
- template<typename Container >
std::string [GetLine](#) (const std::string &Prompt, Container &ReadTokens)
Gets a single line from a user.
- template<typename Container >
std::string [GetLine](#) (const std::string &Prompt, Container &ReadTokens, bool &BreakOut)
Gets a single line from a user.
- std::string [GetLine](#) (const std::string &Prompt, bool &BreakOut)
Gets a single line from a user.
- template<typename ContainerType >
void [GetHistory](#) (ContainerType &Container)
Fills the given container with the current history list.
- bool [SaveHistory](#) (std::ostream &OS)
Saves the history to the given file stream.
- bool [SaveHistory](#) (const std::string &FileName)
Saves the history to the given file.
- void [ClearHistory](#) ()
Clears the history. Does not affect the file where the previous session history is saved.
- bool [LoadHistory](#) (std::istream &IS)

Loads a history from a file stream.

- bool [LoadHistory](#) (const std::string &FileName)

Loads a history from the given file.

- template<typename ContainerType >
void [RegisterCompletions](#) (const ContainerType &Container)

Allows to register custom completers.

- void [SetKeymap](#) ([SKeymap](#) &NewKeymap)

Sets the given keymap.

24.13.1 Detailed Description

The readline library wrapper.

Attention: It is not thread safe! Supports: editing, history, custom completers

Definition at line 424 of file [SReadline.hpp](#).

24.13.2 Constructor & Destructor Documentation

24.13.2.1 `swift::SReadline::SReadline (const size_t Limit = DefaultHistoryLimit)
[inline]`

Constructs the object, sets the completion function.

Parameters

<i>Limit</i>	History size
--------------	--------------

Definition at line 431 of file [SReadline.hpp](#).

24.13.2.2 `swift::SReadline::SReadline (const std::string & historyFileName, const size_t Limit =
DefaultHistoryLimit) [inline]`

Constructs the object, sets the completion function, loads history.

Parameters

<i>historyFile- Name</i>	File name to load history from
<i>Limit</i>	History size

Definition at line 446 of file [SReadline.hpp](#).

References [LoadHistory\(\)](#).

24.13.2.3 `swift::SReadline::~~SReadline () [inline]`

Saves the session history (if the file name was provided) and destroys the object.

Definition at line 460 of file [SReadline.hpp](#).

References [SaveHistory\(\)](#).

24.13.3 Member Function Documentation

24.13.3.1 `std::string swift::SReadline::GetLine (const std::string & Prompt)` `[inline]`

Gets a single line from a user.

Parameters

<i>Prompt</i>	A printed prompt
---------------	------------------

Returns

A string which was actually inputed

Definition at line 471 of file [SReadline.hpp](#).

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

24.13.3.2 `template<typename Container > std::string swift::SReadline::GetLine (const std::string & Prompt, Container & ReadTokens)` `[inline]`

Gets a single line from a user.

Parameters

<i>Prompt</i>	A printed prompt
<i>ReadTokens</i>	A user inputed string splitted into tokens. The container is cleared first

Returns

A string which was actually inputed

Definition at line 485 of file [SReadline.hpp](#).

References [GetLine\(\)](#).

24.13.3.3 `template<typename Container > std::string swift::SReadline::GetLine (const std::string & Prompt, Container & ReadTokens, bool & BreakOut)` `[inline]`

Gets a single line from a user.

Parameters

<i>Prompt</i>	A printed prompt
<i>BreakOut</i>	it is set to true if the EOF found
<i>ReadTokens</i>	A user inputed string splitted into tokens. The container is cleared first

Returns

A string which was actually inputed

Definition at line 500 of file [SReadline.hpp](#).

References [GetLine\(\)](#).

24.13.3.4 `std::string swift::SReadline::GetLine (const std::string & Prompt, bool & BreakOut)`
[[inline](#)]

Gets a single line from a user.

Parameters

<i>Prompt</i>	A printed prompt
<i>BreakOut</i>	it is set to true if the EOF found

Returns

A string which was actually inputed

Definition at line 515 of file [SReadline.hpp](#).

24.13.3.5 `template<typename ContainerType > void swift::SReadline::GetHistory (ContainerType & Container)` [[inline](#)]

Fills the given container with the current history list.

Does not clear the given container

Definition at line 550 of file [SReadline.hpp](#).

24.13.3.6 `bool swift::SReadline::SaveHistory (std::ostream & OS)` [[inline](#)]

Saves the history to the given file stream.

Parameters

<i>OS</i>	output file stream
-----------	--------------------

Returns

true if success

Definition at line 562 of file [SReadline.hpp](#).

Referenced by [SaveHistory\(\)](#), and [~SReadline\(\)](#).

24.13.3.7 `bool swift::SReadline::SaveHistory (const std::string & FileName)` [[inline](#)]

Saves the history to the given file.

Parameters

<i>FileName</i>	File name to save the history to
-----------------	----------------------------------

Returns

true if success

Definition at line 579 of file [SReadline.hpp](#).

References [SaveHistory\(\)](#).

24.13.3.8 void swift::SReadline::ClearHistory () [inline]

Clears the history. Does not affect the file where the previous session history is saved.

Definition at line 592 of file [SReadline.hpp](#).

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

24.13.3.9 bool swift::SReadline::LoadHistory (std::istream & *IS*) [inline]

Loads a history from a file stream.

Parameters

<i>IS</i> Input file stream

Returns

true if success

Definition at line 602 of file [SReadline.hpp](#).

References [ClearHistory\(\)](#).

Referenced by [LoadHistory\(\)](#), and [SReadline\(\)](#).

24.13.3.10 bool swift::SReadline::LoadHistory (const std::string & *FileName*) [inline]

Loads a history from the given file.

Parameters

<i>FileName</i> File name to be load from

Returns

true if success

Definition at line 627 of file [SReadline.hpp](#).

References [LoadHistory\(\)](#).

24.13.3.11 template<typename ContainerType > void swift::SReadline::RegisterCompletions (const ContainerType & *Container*) [inline]

Allows to register custom completers.

Supports a special keyword: file. It means to use the standard file name completer.

For example the given container elements could be as follows:

- command1 opt1
- command1 opt2 file
- command2
- command2 opt1

Each container element must describe a single possible command line. The container element must have a conversion to `std::string` operator.

Parameters

<i>Container</i> A container which has all the user possible commands.
--

Definition at line 656 of file [SReadline.hpp](#).

24.13.3.12 void swift::SReadline::SetKeymap (SKeymap & NewKeymap) [inline]

Sets the given keymap.

Parameters

<i>NewKeymap</i> The keymap that should be used from now.

Definition at line 673 of file [SReadline.hpp](#).

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

- sevmgr/ui/cmdline/[SReadline.hpp](#)

25 File Documentation

25.1 [doc/local/authors.doc](#) File Reference

25.2 [doc/local/codingrules.doc](#) File Reference

25.3 [doc/local/copyright.doc](#) File Reference

25.4 [doc/local/documentation.doc](#) File Reference

25.5 [doc/local/features.doc](#) File Reference

25.6 [doc/local/help_wanted.doc](#) File Reference

25.7 [doc/local/howto_release.doc](#) File Reference

25.8 doc/local/index.doc File Reference**25.9 doc/local/installation.doc File Reference****25.10 doc/local/linking.doc File Reference****25.11 doc/local/test.doc File Reference****25.12 doc/local/users_guide.doc File Reference****25.13 doc/local/verification.doc File Reference****25.14 doc/tutorial/tutorial.doc File Reference****25.15 sevmgr/basic/BasConst.cpp File Reference**

```
#include <stdair/basic/BasConst_General.hpp>
#include <sevmgr/basic/BasConst_SEVMGR_Service.hpp>
#include <sevmgr/basic/BasConst_EventQueueManager.hpp>
```

Namespaces

- namespace [SEVMGR](#)

25.16 BasConst.cpp

```
00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // StdAir
00005 #include <stdair/basic/BasConst_General.hpp>
00006 // Sevmgr
00007 #include <sevmgr/basic/BasConst_SEVMGR_Service.hpp>
00008 #include <sevmgr/basic/BasConst_EventQueueManager.hpp>
00009
00010 namespace SEVMGR {
00011
00012     // const std::string DEFAULT_SEVMGR_SERVICE_NAME = "sevmgr";
00013
00014     // extern const std::string DEFAULT_EVENT_QUEUE_KEY;
00015
00016 }
00017
00018 }
```

25.17 sevmgr/basic/BasConst_EventQueueManager.hpp File Reference

```
#include <string>
```

Namespaces

- namespace [SEVMGR](#)

25.18 BasConst_EventQueueManager.hpp

```

00001 #ifndef __SEVMGR_BAS_BASCONST_EVENTQUEUEMANAGER_HPP
00002 #define __SEVMGR_BAS_BASCONST_EVENTQUEUEMANAGER_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009
00010 namespace SEVMGR {
00011
00012     // extern const std::string DEFAULT_EVENT_QUEUE_KEY;
00013
00014 }
00015 #endif // __SEVMGR_BAS_BASCONST_EVENTQUEUEMANAGER_HPP

```

25.19 sevmgr/basic/BasConst_SEVMGR_Service.hpp File Reference

```
#include <string>
```

Namespaces

- namespace [SEVMGR](#)

25.20 BasConst_SEVMGR_Service.hpp

```

00001 #ifndef __SEVMGR_BAS_BASCONST_SEVMGR_SERVICE_HPP
00002 #define __SEVMGR_BAS_BASCONST_SEVMGR_SERVICE_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 #include <string>
00008
00009 namespace SEVMGR {
00010
00011     // extern const std::string DEFAULT_SEVMGR_SERVICE_NAME;
00012
00013 }
00014 #endif // __SEVMGR_BAS_BASCONST_SEVMGR_SERVICE_HPP

```

25.21 sevmgr/basic/BasParserTypes.hpp File Reference

```
#include <string>
```

```
#include <boost/spirit/home/classic/core.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>
```

Namespaces

- namespace [SEVMGR](#)

Typedefs

- typedef char [SEVMGR::char_t](#)
- typedef boost::spirit::classic::file_iterator< char_t > [SEVMGR::iterator_t](#)
- typedef boost::spirit::classic::scanner< iterator_t > [SEVMGR::scanner_t](#)
- typedef boost::spirit::classic::rule< scanner_t > [SEVMGR::rule_t](#)
- typedef boost::spirit::classic::int_parser< unsigned int, 10, 1, 1 > [SEVMGR::int1_p_t](#)
- typedef boost::spirit::classic::uint_parser< unsigned int, 10, 2, 2 > [SEVMGR::uint2_p_t](#)
- typedef boost::spirit::classic::uint_parser< unsigned int, 10, 1, 2 > [SEVMGR::uint1_2_p_t](#)
- typedef boost::spirit::classic::uint_parser< unsigned int, 10, 1, 3 > [SEVMGR::uint1_3_p_t](#)
- typedef boost::spirit::classic::uint_parser< unsigned int, 10, 4, 4 > [SEVMGR::uint4_p_t](#)
- typedef boost::spirit::classic::uint_parser< unsigned int, 10, 1, 4 > [SEVMGR::uint1_4_p_t](#)
- typedef boost::spirit::classic::chset< char_t > [SEVMGR::chset_t](#)
- typedef boost::spirit::classic::impl::loop_traits< chset_t, unsigned int, unsigned int >::type [SEVMGR::repeat_p_t](#)
- typedef boost::spirit::classic::bounded< uint2_p_t, unsigned int > [SEVMGR::bounded2_p_t](#)
- typedef boost::spirit::classic::bounded< uint1_2_p_t, unsigned int > [SEVMGR::bounded1_2_p_t](#)
- typedef boost::spirit::classic::bounded< uint1_3_p_t, unsigned int > [SEVMGR::bounded1_3_p_t](#)
- typedef boost::spirit::classic::bounded< uint4_p_t, unsigned int > [SEVMGR::bounded4_p_t](#)
- typedef boost::spirit::classic::bounded< uint1_4_p_t, unsigned int > [SEVMGR::bounded1_4_p_t](#)

25.22 BasParserTypes.hpp

```
00001 #ifndef __SEVMGR_BAS_BASCOMPARSERTYPES_HPP
00002 #define __SEVMGR_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 SEVMGR {
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 typedef boost::spirit::classic::uint_parser<unsigned int, 10, 2, 2> uint2_p_t;
00047
00048 typedef boost::spirit::classic::uint_parser<unsigned int, 10, 1, 2>
00049 uint1_2_p_t;
00050
00051 typedef boost::spirit::classic::uint_parser<unsigned int, 10, 1, 3>
00052 uint1_3_p_t;
00053
00054 typedef boost::spirit::classic::uint_parser<unsigned int, 10, 4, 4> uint4_p_t;
00055
00056 typedef boost::spirit::classic::uint_parser<unsigned int, 10, 1, 4>
00057 uint1_4_p_t;
00058
00059 typedef boost::spirit::classic::chset<char_t> chset_t;
00060
00061 typedef boost::spirit::classic::impl::loop_traits<chset_t,
00062 unsigned int,
00063 unsigned int>::type repeat_p_t;
00064
00065
00066
00067
00068
00069
00070

```

```

00072     typedef boost::spirit::classic::bounded<uint2_p_t, unsigned int> bounded2_p_t;
00073     typedef boost::spirit::classic::bounded<uint1_2_p_t, unsigned int>
        bounded1_2_p_t;
00074     typedef boost::spirit::classic::bounded<uint1_3_p_t, unsigned int>
        bounded1_3_p_t;
00075     typedef boost::spirit::classic::bounded<uint4_p_t, unsigned int> bounded4_p_t;
00076     typedef boost::spirit::classic::bounded<uint1_4_p_t, unsigned int>
        bounded1_4_p_t;
00077 }
00078 #endif // __SEVMGR_BAS_BASCOMPASERTYPES_HPP

```

25.23 sevmgr/batches/sevmgr_demo.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <fstream>
#include <vector>
#include <list>
#include <string>
#include <boost/program_options.hpp>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/basic/ProgressStatusSet.hpp>
#include <stdair/bom/EventStruct.hpp>
#include <stdair/bom/EventQueue.hpp>
#include <stdair/bom/BomDisplay.hpp>
#include <stdair/service/Logger.hpp>
#include <sevmgr/SEVMGR_Service.hpp>
#include <sevmgr/config/sevmgr-paths.hpp>

```

Functions

- const stdair::Filename_T [K_SEVMGR_DEFAULT_LOG_FILENAME](#) ("sevmgr_demo.log")
- int [readConfiguration](#) (int argc, char *argv[], stdair::Filename_T &ioLogFilename)
- int [main](#) (int argc, char *argv[])

Variables

- const int [K_SEVMGR_EARLY_RETURN_STATUS](#) = 99

25.23.1 Function Documentation

25.23.1.1 `const stdair::Filename_T K_SEVMGR_DEFAULT_LOG_FILENAME ("sevmgr_demo.log"`
`)`

Default name and location for the log file.

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

25.23.1.2 `int readConfiguration (int argc, char * argv[], stdair::Filename_T & ioLogFilename)`

Read and parse the command line options.

Definition at line 35 of file [sevmgr_demo.cpp](#).

References [K_SEVMGR_DEFAULT_LOG_FILENAME\(\)](#), [K_SEVMGR_EARLY_RETURN_STATUS](#), [PACKAGE_NAME](#), [PACKAGE_VERSION](#), and [PREFIXDIR](#).

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

25.23.1.3 `int main (int argc, char * argv[])`

Definition at line 109 of file [sevmgr_demo.cpp](#).

References [SEVMGR::SEVMGR_Service::buildSampleBom\(\)](#), [K_SEVMGR_EARLY_RETURN_STATUS](#), and [readConfiguration\(\)](#).

25.23.2 Variable Documentation

25.23.2.1 `const int K_SEVMGR_EARLY_RETURN_STATUS = 99`

Early return status (so that it can be differentiated from an error).

Definition at line 30 of file [sevmgr_demo.cpp](#).

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

25.24 sevmgr_demo.cpp

```
00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 #include <fstream>
00008 #include <vector>
00009 #include <list>
00010 #include <string>
00011 // /// Boost (Extended STL) ///
00012 // Boost Program Options
00013 #include <boost/program_options.hpp>
00014 // StdAir
00015 #include <stdair/stdair_basic_types.hpp>
00016 #include <stdair/basic/ProgressStatusSet.hpp>
00017 #include <stdair/bom/EventStruct.hpp>
00018 #include <stdair/bom/EventQueue.hpp>
00019 #include <stdair/bom/BomDisplay.hpp>
```

```

00020 #include <stdair/service/Logger.hpp>
00021 // SEvMgr
00022 #include <sevmgr/SEVMGR_Service.hpp>
00023 #include <sevmgr/config/sevmgr-paths.hpp>
00024
00025 // ////////// Constants //////////
00027 const stdair::Filename_T K_SEVMGR_DEFAULT_LOG_FILENAME ("sevmgr_demo.log");
00028
00030 const int K_SEVMGR_EARLY_RETURN_STATUS = 99;
00031
00032
00033 // ////////// Parsing of Options & Configuration //////////
00035 int readConfiguration (int argc, char* argv[],
00036                       stdair::Filename_T& ioLogFilename) {
00037
00038     // Declare a group of options that will be allowed only on command line
00039     boost::program_options::options_description generic ("Generic options");
00040     generic.add_options()
00041         ("prefix", "print installation prefix")
00042         ("version,v", "print version string")
00043         ("help,h", "produce help message");
00044
00045     // Declare a group of options that will be allowed both on command
00046     // line and in config file
00047     boost::program_options::options_description config ("Configuration");
00048     config.add_options()
00049         ("log,l",
00050          boost::program_options::value< std::string >(&ioLogFilename)->default_value(
00051              K_SEVMGR_DEFAULT_LOG_FILENAME),
00052          "Filepath for the logs")
00053         ;
00054
00055     // Hidden options, will be allowed both on command line and
00056     // in config file, but will not be shown to the user.
00057     boost::program_options::options_description hidden ("Hidden options");
00058     hidden.add_options()
00059         ("copyright",
00060          boost::program_options::value< std::vector<std::string> >(),
00061          "Show the copyright (license)");
00062
00063     boost::program_options::options_description cmdline_options;
00064     cmdline_options.add(generic).add(config).add(hidden);
00065
00066     boost::program_options::options_description config_file_options;
00067     config_file_options.add(config).add(hidden);
00068
00069     boost::program_options::options_description visible ("Allowed options");
00070     visible.add(generic).add(config);
00071
00072     boost::program_options::positional_options_description p;
00073     p.add ("copyright", -1);
00074
00075     boost::program_options::variables_map vm;
00076     boost::program_options::store (boost::program_options::command_line_parser (argc, argv).
00077                                   options (cmdline_options).positional(p).run(), vm);
00078
00079     std::ifstream ifs ("sevmgr.cfg");
00080     boost::program_options::store (parse_config_file (ifs, config_file_options),
00081                                   vm);
00082     boost::program_options::notify (vm);
00083

```

```

00084     if (vm.count ("help")) {
00085         std::cout << visible << std::endl;
00086         return K_SEVMGR_EARLY_RETURN_STATUS;
00087     }
00088
00089     if (vm.count ("version")) {
00090         std::cout << PACKAGE_NAME << ", version " << PACKAGE_VERSION << std::endl;
00091         return K_SEVMGR_EARLY_RETURN_STATUS;
00092     }
00093
00094     if (vm.count ("prefix")) {
00095         std::cout << "Installation prefix: " << PREFIXDIR << std::endl;
00096         return K_SEVMGR_EARLY_RETURN_STATUS;
00097     }
00098
00099     if (vm.count ("log")) {
00100         ioLogFilename = vm["log"].as< std::string >();
00101         std::cout << "Log filename is: " << ioLogFilename << std::endl;
00102     }
00103
00104     return 0;
00105 }
00106
00107
00108 // ////////////////////////////////// M A I N //////////////////////////////////
00109 int main (int argc, char* argv[]) {
00110
00111     // Output log File
00112     stdair::Filename_T lLogFilename;
00113
00114     // Call the command-line option parser
00115     const int lOptionParserStatus = readConfiguration (argc, argv, lLogFilename);
00116
00117     if (lOptionParserStatus == K_SEVMGR_EARLY_RETURN_STATUS) {
00118         return 0;
00119     }
00120
00121     // Set the log parameters
00122     std::ofstream logOutputFile;
00123     // Open and clean the log outputfile
00124     logOutputFile.open (lLogFilename.c_str());
00125     logOutputFile.clear();
00126
00127     // Set up the log parameters
00128     const stdair::BasLogParams lLogParams (stdair::LOG::DEBUG, logOutputFile);
00129
00130     SEVMGR::SEVMGR_Service sevmgrService (lLogParams);
00131
00132     // Build a sample BOM tree (empty for now)
00133     sevmgrService.buildSampleBom();
00134
00135     // Close the Log outputFile
00136     logOutputFile.close();
00137
00138     /*
00139     Note: as that program is not intended to be run on a server in
00140     production, it is better not to catch the exceptions. When it
00141     happens (that an exception is throwned), that way we get the
00142     call stack.
00143     */
00144
00145     return 0;

```

```
00149 }
```

25.25 sevmgr/command/EventQueueManager.cpp File Reference

```
#include <cassert>
#include <stdair/basic/ProgressStatusSet.hpp>
#include <stdair/bom/BomManager.hpp>
#include <stdair/bom/EventStruct.hpp>
#include <stdair/bom/EventQueue.hpp>
#include <stdair/service/Logger.hpp>
#include <sevmgr/command/EventQueueManager.hpp>
```

Namespaces

- namespace [SEVMGR](#)

25.26 EventQueueManager.cpp

```
00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 // StdAir
00007 #include <stdair/basic/ProgressStatusSet.hpp>
00008 #include <stdair/bom/BomManager.hpp>
00009 #include <stdair/bom/EventStruct.hpp>
00010 #include <stdair/bom/EventQueue.hpp>
00011 #include <stdair/service/Logger.hpp>
00012 // SEvMgr
00013 #include <sevmgr/command/EventQueueManager.hpp>
00014
00015 namespace SEVMGR {
00016
00017 // //////////////////////////////////////
00018 void EventQueueManager::
00019 buildSampleBom (stdair::EventQueue& ioEventQueue) {
00020 }
00021
00022 // //////////////////////////////////////
00023 void EventQueueManager::reset (stdair::EventQueue& ioEventQueue) {
00024
00028     ioEventQueue.reset();
00029 }
00030
00031 }
```

25.27 sevmgr/command/EventQueueManager.hpp File Reference

```
#include <stdair/stdair_basic_types.hpp>
#include <stdair/command/CmdAbstract.hpp>
#include <sevmgr/SEVMGR_Types.hpp>
```

Classes

- class [SEVMGR::EventQueueManager](#)
Utility class for Demand and DemandStream objects.

Namespaces

- namespace [stdair](#)
- namespace [SEVMGR](#)

25.28 EventQueueManager.hpp

```
00001 #ifndef __SEVMGR_CMD_EVENTQUEUEMANAGER_HPP
00002 #define __SEVMGR_CMD_EVENTQUEUEMANAGER_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // StdAir
00008 #include <stdair/stdair_basic_types.hpp>
00009 #include <stdair/command/CmdAbstract.hpp>
00010 // SEvMgr
00011 #include <sevmgr/SEVMGR_Types.hpp>
00012
00013 // Forward declarations
00014 namespace stdair {
00015     class EventQueue;
00016     struct ProgressStatusSet;
00017 }
00018
00019 namespace SEVMGR {
00020
00024     class EventQueueManager : public stdair::CmdAbstract {
00025         friend class SEVMGR_Service;
00026
00027     private:
00028         // ////////// Business methodes //////////
00032         static void buildSampleBom (stdair::EventQueue&);
00033
00039         static void reset (stdair::EventQueues&);
00040     };
00041
00042 }
00043 #endif // __SEVMGR_CMD_EVENTQUEUEMANAGER_HPP
```

25.29 sevmgr/config/sevmgr-paths.hpp File Reference

Defines

- #define [PACKAGE](#) "sevmgr"
- #define [PACKAGE_NAME](#) "SEVMGR"
- #define [PACKAGE_VERSION](#) "0.2.0"
- #define [PREFIXDIR](#) "/usr"
- #define [EXEC_PREFIX](#) "/usr"
- #define [BINDIR](#) "/usr/bin"
- #define [LIBDIR](#) "/usr/lib64"
- #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/sevmgr-0.2.0"
- #define [MANDIR](#) "/usr/share/man"
- #define [INFODIR](#) "/usr/share/info"
- #define [HTMLDIR](#) "/usr/share/doc/sevmgr-0.2.0/html"
- #define [PDFDIR](#) "/usr/share/doc/sevmgr-0.2.0/html"
- #define [STDAIR_SAMPLE_DIR](#) "/usr/share/stdair/samples"

25.29.1 Define Documentation

25.29.1.1 #define PACKAGE "sevmgr"

Definition at line 4 of file [sevmgr-paths.hpp](#).

25.29.1.2 #define PACKAGE_NAME "SEVMGR"

Definition at line 5 of file [sevmgr-paths.hpp](#).

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

25.29.1.3 #define PACKAGE_VERSION "0.2.0"

Definition at line 6 of file [sevmgr-paths.hpp](#).

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

25.29.1.4 #define PREFIXDIR "/usr"

Definition at line 7 of file [sevmgr-paths.hpp](#).

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

25.29.1.5 #define EXEC_PREFIX "/usr"

Definition at line 8 of file [sevmgr-paths.hpp](#).

25.29.1.6 `#define BINDIR "/usr/bin"`

Definition at line 9 of file [sevmgr-paths.hpp](#).

25.29.1.7 `#define LIBDIR "/usr/lib64"`

Definition at line 10 of file [sevmgr-paths.hpp](#).

25.29.1.8 `#define LIBEXECDIR "/usr/libexec"`

Definition at line 11 of file [sevmgr-paths.hpp](#).

25.29.1.9 `#define SBINDIR "/usr/sbin"`

Definition at line 12 of file [sevmgr-paths.hpp](#).

25.29.1.10 `#define SYSCONFDIR "/usr/etc"`

Definition at line 13 of file [sevmgr-paths.hpp](#).

25.29.1.11 `#define INCLUDEDIR "/usr/include"`

Definition at line 14 of file [sevmgr-paths.hpp](#).

25.29.1.12 `#define DATAROOTDIR "/usr/share"`

Definition at line 15 of file [sevmgr-paths.hpp](#).

25.29.1.13 `#define DATADIR "/usr/share"`

Definition at line 16 of file [sevmgr-paths.hpp](#).

25.29.1.14 `#define DOCDIR "/usr/share/doc/sevmgr-0.2.0"`

Definition at line 17 of file [sevmgr-paths.hpp](#).

25.29.1.15 `#define MANDIR "/usr/share/man"`

Definition at line 18 of file [sevmgr-paths.hpp](#).

25.29.1.16 `#define INFODIR "/usr/share/info"`

Definition at line 19 of file [sevmgr-paths.hpp](#).

25.29.1.17 `#define HTMLDIR "/usr/share/doc/sevmgr-0.2.0/html"`

Definition at line 20 of file [sevmgr-paths.hpp](#).

25.29.1.18 `#define PDFDIR "/usr/share/doc/sevmgr-0.2.0/html"`

Definition at line 21 of file [sevmgr-paths.hpp](#).

25.29.1.19 `#define STDAIR_SAMPLE_DIR "/usr/share/stdair/samples"`

Definition at line 22 of file [sevmgr-paths.hpp](#).

25.30 sevmgr-paths.hpp

```
00001 #ifndef __SEVMGR_PATHS_HPP__
00002 #define __SEVMGR_PATHS_HPP__
00003
00004 #define PACKAGE "sevmgr"
00005 #define PACKAGE_NAME "SEVMGR"
00006 #define PACKAGE_VERSION "0.2.0"
00007 #define PREFIXDIR "/usr"
00008 #define EXEC_PREFIX "/usr"
00009 #define BINDIR "/usr/bin"
00010 #define LIBDIR "/usr/lib64"
00011 #define LIBEXECDIR "/usr/libexec"
00012 #define SBINDIR "/usr/sbin"
00013 #define SYSCONFDIR "/usr/etc"
00014 #define INCLUDEDIR "/usr/include"
00015 #define DATAROOTDIR "/usr/share"
00016 #define DATADIR "/usr/share"
00017 #define DOCDIR "/usr/share/doc/sevmgr-0.2.0"
00018 #define MANDIR "/usr/share/man"
00019 #define INFODIR "/usr/share/info"
00020 #define HTMLDIR "/usr/share/doc/sevmgr-0.2.0/html"
00021 #define PDFDIR "/usr/share/doc/sevmgr-0.2.0/html"
00022 #define STDAIR_SAMPLE_DIR "/usr/share/stdair/samples"
00023
00024 #endif // __SEVMGR_PATHS_HPP__
```

25.31 sevmgr/config/sevmgr-paths.hpp.in File Reference

Defines

- `#define __SEVMGR_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@"

25.31.1 Define Documentation

25.31.1.1 #define `__SEVMGR_PATHS_HPP__`

Definition at line 2 of file [sevmgr-paths.hpp.in](#).

25.31.1.2 #define `PACKAGE` "@PACKAGE@"

Definition at line 4 of file [sevmgr-paths.hpp.in](#).

25.31.1.3 #define `PACKAGE_NAME` "@PACKAGE_NAME@"

Definition at line 5 of file [sevmgr-paths.hpp.in](#).

25.31.1.4 #define `PACKAGE_VERSION` "@PACKAGE_VERSION@"

Definition at line 6 of file [sevmgr-paths.hpp.in](#).

25.31.1.5 #define `PREFIXDIR` "@prefix@"

Definition at line 7 of file [sevmgr-paths.hpp.in](#).

25.31.1.6 #define `EXEC_PREFIX` "@exec_prefix@"

Definition at line 8 of file [sevmgr-paths.hpp.in](#).

25.31.1.7 #define `BINDIR` "@bindir@"

Definition at line 9 of file [sevmgr-paths.hpp.in](#).

25.31.1.8 #define `LIBDIR` "@libdir@"

Definition at line 10 of file [sevmgr-paths.hpp.in](#).

25.31.1.9 #define `LIBEXECDIR` "@libexecdir@"

Definition at line 11 of file [sevmgr-paths.hpp.in](#).

25.31.1.10 #define `SBINDIR` "@sbindir@"

Definition at line 12 of file [sevmgr-paths.hpp.in](#).

25.31.1.11 #define `SYSCONFDIR` "@sysconfdir@"

Definition at line 13 of file [sevmgr-paths.hpp.in](#).

25.31.1.12 `#define INCLUDEDIR "@includedir@"`

Definition at line 14 of file [sevmgr-paths.hpp.in](#).

25.31.1.13 `#define DATAROOTDIR "@datarootdir@"`

Definition at line 15 of file [sevmgr-paths.hpp.in](#).

25.31.1.14 `#define DATADIR "@datadir@"`

Definition at line 16 of file [sevmgr-paths.hpp.in](#).

25.31.1.15 `#define DOCDIR "@docdir@"`

Definition at line 17 of file [sevmgr-paths.hpp.in](#).

25.31.1.16 `#define MANDIR "@mandir@"`

Definition at line 18 of file [sevmgr-paths.hpp.in](#).

25.31.1.17 `#define INFODIR "@infodir@"`

Definition at line 19 of file [sevmgr-paths.hpp.in](#).

25.31.1.18 `#define HTMLDIR "@htmldir@"`

Definition at line 20 of file [sevmgr-paths.hpp.in](#).

25.31.1.19 `#define PDFDIR "@pdfdir@"`

Definition at line 21 of file [sevmgr-paths.hpp.in](#).

25.31.1.20 `#define STDAIR_SAMPLE_DIR "@sampledir@"`

Definition at line 22 of file [sevmgr-paths.hpp.in](#).

25.32 sevmgr-paths.hpp.in

```
00001 #ifndef __SEVMGR_PATHS_HPP__
00002 #define __SEVMGR_PATHS_HPP__
00003
00004 #define PACKAGE "@PACKAGE@"
00005 #define PACKAGE_NAME "@PACKAGE_NAME@"
00006 #define PACKAGE_VERSION "@PACKAGE_VERSION@"
00007 #define PREFIXDIR "@prefix@"
00008 #define EXEC_PREFIX "@exec_prefix@"
00009 #define BINDIR "@bindir@"
00010 #define LIBDIR "@libdir@"
00011 #define LIBEXECDIR "@libexecdir@"
00012 #define SBINDIR "@sbindir@"
00013 #define SYSCONFDIR "@sysconfdir@"
00014 #define INCLUDEDIR "@includedir@"
00015 #define DATAROOTDIR "@datarootdir@"
00016 #define DATADIR "@datadir@"
```

```

00017 #define DOCDIR "@docdir@"
00018 #define MANDIR "@mandir@"
00019 #define INFODIR "@infodir@"
00020 #define HTMLDIR "@htmldir@"
00021 #define PDFDIR "@pdfdir@"
00022 #define STDAIR_SAMPLE_DIR "@sampledir@"
00023
00024 #endif // __SEVMGR_PATHS_HPP__

```

25.33 sevmgr/factory/FacSEVMGRServiceContext.cpp File Reference

```

#include <cassert>
#include <stdair/service/FacSupervisor.hpp>
#include <sevmgr/factory/FacSEVMGRServiceContext.hpp>
#include <sevmgr/service/SEVMGR_ServiceContext.hpp>

```

Namespaces

- namespace [SEVMGR](#)

25.34 FacSEVMGRServiceContext.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 // StdAir
00007 #include <stdair/service/FacSupervisor.hpp>
00008 // Sevmgr
00009 #include <sevmgr/factory/FacSEVMGRServiceContext.hpp>
00010 #include <sevmgr/service/SEVMGR_ServiceContext.hpp>
00011
00012 namespace SEVMGR {
00013
00014     FacSEVMGRServiceContext* FacSEVMGRServiceContext::_instance = NULL;
00015
00016     // //////////////////////////////////////
00017     FacSEVMGRServiceContext::~FacSEVMGRServiceContext () {
00018         _instance = NULL;
00019     }
00020
00021     // //////////////////////////////////////
00022     FacSEVMGRServiceContext& FacSEVMGRServiceContext::instance () {
00023
00024         if (_instance == NULL) {
00025             _instance = new FacSEVMGRServiceContext();
00026             assert (_instance != NULL);
00027
00028             stdair::FacSupervisor::instance().registerServiceFactory (_instance);
00029         }
00030         return *_instance;
00031     }
00032

```

```

00033 // //////////////////////////////////////
00034 SEVMGR_ServiceContext& FacSEVMGRServiceContext::create () {
00035     SEVMGR_ServiceContext* aServiceContext_ptr = NULL;
00036
00037     aServiceContext_ptr = new SEVMGR_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 }

```

25.35 sevmgr/factory/FacSEVMGRServiceContext.hpp File Reference

```

#include <stdair/service/FacServiceAbstract.hpp>
#include <sevmgr/SEVMGR_Types.hpp>

```

Classes

- class [SEVMGR::FacSEVMGRServiceContext](#)

Namespaces

- namespace [SEVMGR](#)

25.36 FacSEVMGRServiceContext.hpp

```

00001 #ifndef __SEVMGR_FAC_FACSEVMGRSERVICECONTEXT_HPP
00002 #define __SEVMGR_FAC_FACSEVMGRSERVICECONTEXT_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // StdAir
00008 #include <stdair/service/FacServiceAbstract.hpp>
00009 // Sevmgr
00010 #include <sevmgr/SEVMGR_Types.hpp>
00011
00012 namespace SEVMGR {
00013
00014     class SEVMGR_ServiceContext;
00015
00016     class FacSEVMGRServiceContext : public stdair::FacServiceAbstract {
00017     public:
00018
00019         static FacSEVMGRServiceContext& instance();
00020
00021         ~FacSEVMGRServiceContext ();
00022
00023         SEVMGR_ServiceContext& create ();
00024
00025     };
00026
00027 }

```

```
00037
00038     protected:
00042         FacSEVMGRServiceContext () {}
00043
00044     private:
00046         static FacSEVMGRServiceContext* _instance;
00047     };
00048
00049 }
00050 #endif // __SEVMGR_FAC_FACSEVMGRSERVICECONTEXT_HPP
```

25.37 sevmgr/python/pysevmgr.cpp File Reference

```
#include <cassert>
#include <stdexcept>
#include <fstream>
#include <sstream>
#include <string>
#include <list>
#include <vector>
#include <boost/python.hpp>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_exceptions.hpp>
#include <stdair/basic/BasFileMgr.hpp>
#include <stdair/basic/BasLogParams.hpp>
#include <stdair/basic/BasDBParams.hpp>
#include <sevmgr/SEVMGR_Service.hpp>
```

Classes

- struct [SEVMGR::PYEventQueueManager](#)

Namespaces

- namespace [SEVMGR](#)

Functions

- [BOOST_PYTHON_MODULE](#) (libpysevmgr)

25.37.1 Function Documentation

25.37.1.1 BOOST_PYTHON_MODULE (libpysevmgr)

Definition at line 152 of file [pysevmgr.cpp](#).

References [SEVMGR::PYEventQueueManager::init\(\)](#), and [SEVMGR::PYEventQueueManager::sevmgr\(\)](#).

25.38 pysevmgr.cpp

```

00001 // STL
00002 #include <cassert>
00003 #include <stdexcept>
00004 #include <fstream>
00005 #include <sstream>
00006 #include <string>
00007 #include <list>
00008 #include <vector>
00009 // Boost String
00010 #include <boost/python.hpp>
00011 // StdAir
00012 #include <stdair/stdair_basic_types.hpp>
00013 #include <stdair/stdair_exceptions.hpp>
00014 #include <stdair/basic/BasFileMgr.hpp>
00015 #include <stdair/basic/BasLogParams.hpp>
00016 #include <stdair/basic/BasDBParams.hpp>
00017 // SEvMgr
00018 #include <sevmgr/SEVMGR_Service.hpp>
00019
00020 namespace SEVMGR {
00021
00022     struct PYEventQueueManager {
00023     public:
00024         std::string sevmgr() {
00025             std::ostringstream oStream;
00026
00027             // Sanity check
00028             if (_logOutputStream == NULL) {
00029                 oStream << "The log filepath is not valid." << std::endl;
00030                 return oStream.str();
00031             }
00032             assert (_logOutputStream != NULL);
00033
00034             try {
00035
00036                 // DEBUG
00037                 *_logOutputStream << "Default service" << std::endl;
00038
00039                 if (_sevmgrService == NULL) {
00040                     oStream << "The Sevmgr service has not been initialised, "
00041                             << "i.e., the init() method has not been called "
00042                             << "correctly on the PYEventQueueManager object. Please "
00043                             << "check that all the parameters are not empty and "
00044                             << "point to actual files.";
00045                     *_logOutputStream << oStream.str();
00046                     return oStream.str();
00047                 }
00048                 assert (_sevmgrService != NULL);
00049
00050                 // Do the sevmgr
00051                 _sevmgrService->buildSampleBom();
00052             }
00053         }
00054     };

```



```

00054         // DEBUG
00055         *_logOutputStream << "Default service returned" << std::endl;
00056
00057         // DEBUG
00058         *_logOutputStream << "Sevmgr output: " << oStream.str() << std::endl;
00059
00060     } catch (const stdair::RootException& eSevmgrError) {
00061         *_logOutputStream << "Sevmgr error: " << eSevmgrError.what()
00062             << std::endl;
00063
00064     } catch (const std::exception& eStdError) {
00065         *_logOutputStream << "Error: " << eStdError.what() << std::endl;
00066
00067     } catch (...) {
00068         *_logOutputStream << "Unknown error" << std::endl;
00069     }
00070
00071     return oStream.str();
00072 }
00073
00074 public:
00075 PYEventQueueManager() : _sevmgrService (NULL), _logOutputStream (NULL) {
00076 }
00077
00078 PYEventQueueManager (const PYEventQueueManager& iPYEventQueueManager)
00079 : _sevmgrService (iPYEventQueueManager._sevmgrService),
00080   _logOutputStream (iPYEventQueueManager._logOutputStream) {
00081 }
00082
00083 ~PYEventQueueManager() {
00084     _sevmgrService = NULL;
00085     _logOutputStream = NULL;
00086 }
00087
00088 bool init (const std::string& iLogFilePath,
00089           const std::string& iDBUser, const std::string& iDBPasswd,
00090           const std::string& iDBHost, const std::string& iDBPort,
00091           const std::string& iBDBName) {
00092     bool isEverythingOK = true;
00093
00094     try {
00095         // Check that the file path given as input corresponds to an actual file
00096         const bool isWriteable = (iLogFilePath.empty() == false);
00097         // stdair::BasFileMgr::isWriteable (iLogFilePath);
00098         if (isWriteable == false) {
00099             isEverythingOK = false;
00100             return isEverythingOK;
00101         }
00102
00103         // Set the log parameters
00104         _logOutputStream = new std::ofstream;
00105         assert (_logOutputStream != NULL);
00106
00107         // Open and clean the log outputfile
00108         _logOutputStream->open (iLogFilePath.c_str());
00109         _logOutputStream->clear();
00110
00111         // DEBUG
00112         *_logOutputStream << "Python wrapper initialisation" << std::endl;
00113         const stdair::BasLogParams lLogParams (stdair::LOG::DEBUG,
00114                                                 *_logOutputStream);
00115     }

```

```

00120
00121         // Initialise the context
00122         stdair::BasDBParams lDBParams (iDBUser, iDBPasswd, iDBHost, iDBPort,
00123                                         iDBDBName);
00124         _sevmgrService = new SEVMGR_Service (lLogParams, lDBParams);
00125
00126         // DEBUG
00127         *_logOutputStream << "Python wrapper initialised" << std::endl;
00128
00129     } catch (const stdair::RootException& eSevmgrError) {
00130         *_logOutputStream << "Sevmgr error: " << eSevmgrError.what()
00131             << std::endl;
00132
00133     } catch (const std::exception& eStdError) {
00134         *_logOutputStream << "Error: " << eStdError.what() << std::endl;
00135
00136     } catch (...) {
00137         *_logOutputStream << "Unknown error" << std::endl;
00138     }
00139
00140     return isEverythingOK;
00141 }
00142
00143 private:
00144     SEVMGR_Service* _sevmgrService;
00145     std::ofstream* _logOutputStream;
00146 };
00147
00148
00149 }
00150
00151 // //////////////////////////////////////
00152 BOOST_PYTHON_MODULE(libpysevmgr) {
00153     boost::python::class_<SEVMGR::PYEventQueueManager> ("PYEventQueueManager")
00154         .def ("sevmgr", &SEVMGR::PYEventQueueManager::sevmgr)
00155         .def ("init", &SEVMGR::PYEventQueueManager::init);
00156 }

```

25.39 sevmgr/service/SEVMGR_Service.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <boost/make_shared.hpp>
#include <stdair/basic/BasChronometer.hpp>
#include <stdair/basic/BasConst_General.hpp>
#include <stdair/bom/BomRoot.hpp>
#include <stdair/bom/BomDisplay.hpp>
#include <stdair/bom/EventStruct.hpp>
#include <stdair/bom/EventQueue.hpp>
#include <stdair/service/Logger.hpp>
#include <stdair/STDAIR_Service.hpp>
#include <sevmgr/basic/BasConst_SEVMGR_Service.hpp>

```

```
#include <sevmgr/factory/FacSEVMGRServiceContext.hpp>
#include <sevmgr/command/EventQueueManager.hpp>
#include <sevmgr/service/SEVMGR_ServiceContext.hpp>
#include <sevmgr/SEVMGR_Service.hpp>
```

Namespaces

- namespace [SEVMGR](#)

25.40 SEVMGR_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/basic/BasConst_General.hpp>
00012 #include <stdair/bom/BomRoot.hpp>
00013 #include <stdair/bom/BomDisplay.hpp>
00014 #include <stdair/bom/EventStruct.hpp>
00015 #include <stdair/bom/EventQueue.hpp>
00016 #include <stdair/service/Logger.hpp>
00017 #include <stdair/STDAIR_Service.hpp>
00018 // Sevmgr
00019 #include <sevmgr/basic/BasConst_SEVMGR_Service.hpp>
00020 #include <sevmgr/factory/FacSEVMGRServiceContext.hpp>
00021 #include <sevmgr/command/EventQueueManager.hpp>
00022 #include <sevmgr/service/SEVMGR_ServiceContext.hpp>
00023 #include <sevmgr/SEVMGR_Service.hpp>
00024
00025 namespace SEVMGR {
00026
00027 // //////////////////////////////////////
00028 SEVMGR_Service::SEVMGR_Service() : _sevmgrServiceContext (NULL) {
00029     assert (false);
00030 }
00031
00032 // //////////////////////////////////////
00033 SEVMGR_Service::SEVMGR_Service (const SEVMGR_Service& iService)
00034 : _sevmgrServiceContext (NULL) {
00035     assert (false);
00036 }
00037
00038 // //////////////////////////////////////
00039 SEVMGR_Service::SEVMGR_Service (const stdair::BasLogParams& iLogParams,
00040                                 const stdair::BasDBParams& iDBParams)
00041 : _sevmgrServiceContext (NULL) {
00042
00043     // Initialise the STDAIR service handler
00044     stdair::STDAIR_ServicePtr_T lSTDAIR_Service_ptr =
00045         initStdAirService (iLogParams, iDBParams);
```

```

00046
00047     // Initialise the service context
00048     initServiceContext();
00049
00050     // Add the StdAir service context to the SEVMGR service context
00051     // \note SEVMGR owns the STDAIR service resources here.
00052     const bool ownStdairService = true;
00053     addStdAirService (lSTDAIR_Service_ptr, ownStdairService);
00054
00055     // Initialise the (remaining of the) context
00056     initSevmgrService();
00057 }
00058
00059 ///////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00060 SEVMGR_Service::SEVMGR_Service (const stdair::BasLogParams& iLogParams)
00061 : _sevmgrServiceContext (NULL) {
00062
00063     // Initialise the STDAIR service handler
00064     stdair::STDAIR_ServicePtr_T lSTDAIR_Service_ptr =
00065         initStdAirService (iLogParams);
00066
00067     // Initialise the service context
00068     initServiceContext();
00069
00070     // Add the StdAir service context to the SEVMGR service context
00071     // \note SEVMGR owns the STDAIR service resources here.
00072     const bool ownStdairService = true;
00073     addStdAirService (lSTDAIR_Service_ptr, ownStdairService);
00074
00075     // Initialise the (remaining of the) context
00076     initSevmgrService();
00077 }
00078
00079 ///////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00080 SEVMGR_Service::
00081 SEVMGR_Service (stdair::STDAIR_ServicePtr_T ioSTDAIR_Service_ptr)
00082 : _sevmgrServiceContext (NULL) {
00083
00084     // Initialise the service context
00085     initServiceContext();
00086
00087     // Add the StdAir service context to the SEVMGR service context
00088     // \note Sevmgr does not own the STDAIR service resources here.
00089     const bool doesNotOwnStdairService = false;
00090     addStdAirService (ioSTDAIR_Service_ptr, doesNotOwnStdairService);
00091
00092     // Initialise the context
00093     initSevmgrService();
00094 }
00095
00096 ///////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00097 SEVMGR_Service::~SEVMGR_Service() {
00098     // Delete/Clean all the objects from memory
00099     finalise();
00100 }
00101
00102 ///////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00103 void SEVMGR_Service::finalise() {
00104     assert (_sevmgrServiceContext != NULL);
00105     // Reset the (Boost.)Smart pointer pointing on the STDAIR_Service object.
00106     _sevmgrServiceContext->reset();
00107 }

```

```

00108
00109 ///////////////////////////////////////////////////////////////////
00110 void SEVMGR_Service::initServiceContext() {
00111     // Initialise the service context
00112     SEVMGR_ServiceContext& lSEVMGR_ServiceContext =
00113         FacSEVMGRServiceContext::instance().create();
00114     _sevmgrServiceContext = &lSEVMGR_ServiceContext;
00115 }
00116
00117 ///////////////////////////////////////////////////////////////////
00118 void SEVMGR_Service::
00119 addStdAirService (stdair::STDAIR_ServicePtr_T ioSTDAIR_Service_ptr,
00120                 const bool iOwnStdairService) {
00121     // Retrieve the Sevmgr service context
00122     assert (_sevmgrServiceContext != NULL);
00123     SEVMGR_ServiceContext& lSEVMGR_ServiceContext =
00124         *_sevmgrServiceContext;
00125
00126     // Store the STDAIR service object within the (SEVMGR) service context
00127     lSEVMGR_ServiceContext.setSTDAIR_Service (ioSTDAIR_Service_ptr,
00128                                             iOwnStdairService);
00129 }
00130
00131 ///////////////////////////////////////////////////////////////////
00132 stdair::STDAIR_ServicePtr_T SEVMGR_Service::
00133 initStdAirService (const stdair::BasLogParams& iLogParams,
00134                  const stdair::BasDBParams& iDBParams) {
00135
00141     stdair::STDAIR_ServicePtr_T lSTDAIR_Service_ptr =
00142         boost::make_shared<stdair::STDAIR_Service> (iLogParams, iDBParams);
00143     assert (lSTDAIR_Service_ptr != NULL);
00144
00145     return lSTDAIR_Service_ptr;
00146 }
00147
00148 ///////////////////////////////////////////////////////////////////
00149 stdair::STDAIR_ServicePtr_T SEVMGR_Service::
00150 initStdAirService (const stdair::BasLogParams& iLogParams) {
00151
00157     stdair::STDAIR_ServicePtr_T lSTDAIR_Service_ptr =
00158         boost::make_shared<stdair::STDAIR_Service> (iLogParams);
00159     assert (lSTDAIR_Service_ptr != NULL);
00160
00161     return lSTDAIR_Service_ptr;
00162 }
00163
00164 ///////////////////////////////////////////////////////////////////
00165 void SEVMGR_Service::initSevmgrService() {
00166     // Do nothing at this stage. A sample BOM tree may be built by
00167     // calling the buildSampleBom() method
00168 }
00169
00170 ///////////////////////////////////////////////////////////////////
00171 void SEVMGR_Service::buildSampleBom() {
00172
00173     // Retrieve the Sevmgr service context
00174     if (_sevmgrServiceContext == NULL) {
00175         throw stdair::NonInitialisedServiceException ("The Sevmgr service has "
00176                                                         "not been initialised");
00177     }
00178     assert (_sevmgrServiceContext != NULL);
00179

```

```

00180     //SEVMGR_ServiceContext& lSEVMGR_ServiceContext = *_sevmgrServiceContext;
00181
00182     // Retrieve the STDAIR service object from the (Sevmgr) service context
00183     //stdair::STDAIR_Service& lSTDAIR_Service =
00184     // lSEVMGR_ServiceContext.getSTDAIR_Service();
00185
00186     // Retrieve the event queue
00187     //stdair::EventQueue& lEventQueue = lSTDAIR_Service.getEventQueue();
00188 }
00189
00190 // //////////////////////////////////////
00191 std::string SEVMGR_Service::csvDisplay() const {
00192
00193     // Retrieve the Sevmgr service context
00194     if (_sevmgrServiceContext == NULL) {
00195         throw stdair::NonInitialisedServiceException ("The Sevmgr service has "
00196                                                     "not been initialised");
00197     }
00198     assert (_sevmgrServiceContext != NULL);
00199
00200     SEVMGR_ServiceContext& lSEVMGR_ServiceContext = *_sevmgrServiceContext;
00201
00202     // Retrieve the STDAIR service object from the (Sevmgr) service context
00203     stdair::STDAIR_Service& lSTDAIR_Service =
00204         lSEVMGR_ServiceContext.getSTDAIR_Service();
00205
00206     // Retrieve the event queue
00207     stdair::EventQueue& lEventQueue = lSTDAIR_Service.getEventQueue();
00208
00209     // Delegate the BOM building to the dedicated service
00210     return stdair::BomDisplay::csvDisplay (lEventQueue);
00211 }
00212
00213 // //////////////////////////////////////
00214 stdair::ProgressStatusSet SEVMGR_Service::
00215 popEvent (stdair::EventStruct& ioEventStruct) const {
00216
00217     // Retrieve the Sevmgr service context
00218     assert (_sevmgrServiceContext != NULL);
00219     SEVMGR_ServiceContext& lSEVMGR_ServiceContext = *_sevmgrServiceContext;
00220
00221     // Retrieve the StdAir service context
00222     stdair::STDAIR_Service& lSTDAIR_Service =
00223         lSEVMGR_ServiceContext.getSTDAIR_Service();
00224
00225     // Retrieve the event queue object instance
00226     stdair::EventQueue& lQueue = lSTDAIR_Service.getEventQueue();
00227
00228     // Extract the next event from the queue
00229     return lQueue.popEvent (ioEventStruct);
00230 }
00231
00232 // //////////////////////////////////////
00233 bool SEVMGR_Service::isQueueDone() const {
00234
00235     // Retrieve the Sevmgr service context
00236     assert (_sevmgrServiceContext != NULL);
00237     SEVMGR_ServiceContext& lSEVMGR_ServiceContext =
00238         *_sevmgrServiceContext;
00239
00240     // Retrieve the StdAir service context
00241     stdair::STDAIR_Service& lSTDAIR_Service =

```

```

00242         lSEVMGR_ServiceContext.getSTDAIR_Service();
00243
00244         // Retrieve the event queue object instance
00245         const stdair::EventQueue& lQueue = lSTDAIR_Service.getEventQueue();
00246
00247         // Calculates whether the event queue has been fully emptied
00248         const bool isQueueDone = lQueue.isQueueDone();
00249
00250         //
00251         return isQueueDone;
00252     }
00253
00254     // //////////////////////////////////////
00255     void SEVMGR_Service::reset() const {
00256
00257         // Retrieve the Sevmgr service context
00258         assert (_sevmgrServiceContext != NULL);
00259         SEVMGR_ServiceContext& lSEVMGR_ServiceContext =
00260             *_sevmgrServiceContext;
00261
00262         // Retrieve the StdAir service context
00263         stdair::STDAIR_Service& lSTDAIR_Service =
00264             lSEVMGR_ServiceContext.getSTDAIR_Service();
00265         // Retrieve the event queue object instance
00266         stdair::EventQueue& lQueue = lSTDAIR_Service.getEventQueue();
00267
00268         // Delegate the call to the dedicated command
00269         EventQueueManager::reset (lQueue);
00270     }
00271 }

```

25.41 sevmgr/service/SEVMGR_ServiceContext.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <stdair/STDAIR_Service.hpp>
#include <stdair/basic/BasConst_General.hpp>
#include <sevmgr/basic/BasConst_EventQueueManager.hpp>
#include <sevmgr/service/SEVMGR_ServiceContext.hpp>

```

Namespaces

- namespace [SEVMGR](#)

25.42 SEVMGR_ServiceContext.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>

```

```

00007 // StdAir
00008 #include <stdair/STDAIR_Service.hpp>
00009 #include <stdair/basic/BasConst_General.hpp>
00010 // SEvMgr
00011 #include <sevmgr/basic/BasConst_EventQueueManager.hpp>
00012 #include <sevmgr/service/SEVMGR_ServiceContext.hpp>
00013
00014 namespace SEVMGR {
00015
00016 // //////////////////////////////////////
00017 SEVMGR_ServiceContext::SEVMGR_ServiceContext() {
00018 }
00019
00020 // //////////////////////////////////////
00021 SEVMGR_ServiceContext::
00022 SEVMGR_ServiceContext (const std::string& iServiceName) {
00023 }
00024
00025 // //////////////////////////////////////
00026 SEVMGR_ServiceContext::~SEVMGR_ServiceContext() {
00027 }
00028
00029 // //////////////////////////////////////
00030 const std::string SEVMGR_ServiceContext::shortDisplay() const {
00031     std::ostringstream oStr;
00032     oStr << "SEVMGR_ServiceContext -- Owns StdAir service: "
00033         << _ownStdairService;
00034     return oStr.str();
00035 }
00036
00037 // //////////////////////////////////////
00038 const std::string SEVMGR_ServiceContext::display() const {
00039     std::ostringstream oStr;
00040     oStr << shortDisplay();
00041     return oStr.str();
00042 }
00043
00044 // //////////////////////////////////////
00045 const std::string SEVMGR_ServiceContext::describe() const {
00046     return shortDisplay();
00047 }
00048
00049 // //////////////////////////////////////
00050 void SEVMGR_ServiceContext::reset() {
00051     if (_ownStdairService == true) {
00052         _stdairService.reset();
00053     }
00054 }
00055
00056 }

```

25.43 sevmgr/service/SEVMGR_ServiceContext.hpp File Reference

```

#include <string>

#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_service_types.hpp>
#include <stdair/service/ServiceAbstract.hpp>

```



```
#include <sevmgr/SEVMGR_Types.hpp>
```

Classes

- class [SEVMGR::SEVMGR_ServiceContext](#)
Class holding the context of the Sevmgr services.

Namespaces

- namespace [SEVMGR](#)

25.44 SEVMGR_ServiceContext.hpp

```
00001 #ifndef __SEVMGR_SVC_SEVMGRSERVICECONTEXT_HPP
00002 #define __SEVMGR_SVC_SEVMGRSERVICECONTEXT_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // StdAir
00010 #include <stdair/stdair_basic_types.hpp>
00011 #include <stdair/stdair_service_types.hpp>
00012 #include <stdair/service/ServiceAbstract.hpp>
00013 // SEvMgr
00014 #include <sevmgr/SEVMGR_Types.hpp>
00015
00016 namespace SEVMGR {
00017
00021 class SEVMGR_ServiceContext : public stdair::ServiceAbstract {
00027     friend class SEVMGR_Service;
00028     friend class FacSEVMGRServiceContext;
00029
00030 private:
00031     // ////////// Getters //////////
00035     stdair::STDAIR_ServicePtr_T getSTDAIR_ServicePtr() const {
00036         return _stdairService;
00037     }
00038
00042     stdair::STDAIR_Service& getSTDAIR_Service() const {
00043         assert (_stdairService != NULL);
00044         return *_stdairService;
00045     }
00046
00050     const bool getOwnStdairServiceFlag() const {
00051         return _ownStdairService;
00052     }
00053
00054
00055 private:
00056     // ////////// Setters //////////
00060     void setSTDAIR_Service (stdair::STDAIR_ServicePtr_T ioSTDAIR_ServicePtr,
00061                             const bool iOwnStdairService) {
00062         _stdairService = ioSTDAIR_ServicePtr;
00063         _ownStdairService = iOwnStdairService;

```

```

00064     }
00065
00066
00067 private:
00068     // /////////// Display Methods ///////////
00072     const std::string shortDisplay() const;
00073
00077     const std::string display() const;
00078
00082     const std::string describe() const;
00083
00084
00085 private:
00087
00090     SEVMGR_ServiceContext ();
00091     SEVMGR_ServiceContext (const std::string& iServiceName);
00095     SEVMGR_ServiceContext (const SEVMGR_ServiceContext&);
00096
00100     ~SEVMGR_ServiceContext ();
00101
00105     void reset ();
00106
00107
00108 private:
00109     // /////////////////////////////////// Children ///////////////////////////////////
00113     stdair::STDAIR_ServicePtr_T _stdairService;
00114
00118     bool _ownStdairService;
00119
00120
00121 private:
00122     // /////////////////////////////////// Attributes ///////////////////////////////////
00123     // No attributes for now
00124 };
00125
00126 }
00127 #endif // __SEVMGR_SVC_SEVMGRSERVICECONTEXT_HPP

```

25.45 sevmgr/SEVMGR_Exceptions.hpp File Reference

```

#include <exception>
#include <stdair/stdair_exceptions.hpp>

```

Classes

- class [SEVMGR::SEvMgrException](#)

Namespaces

- namespace [SEVMGR](#)

25.46 SEVMGR_Exceptions.hpp

```

00001 #ifndef __SEVMGR_SEVMGR_EXCEPTIONS_HPP

```

```

00002 #define __SEVMGR_SEVMGR_EXCEPTIONS_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <exception>
00009 // StdAir
00010 #include <stdair/stdair_exceptions.hpp>
00011
00012 namespace SEVMGR {
00013
00014     // ////////// Exceptions //////////
00018     class SEvMgrException : public stdair::RootException {
00019     public:
00023         SEvMgrException (const std::string& iWhat)
00024             : stdair::RootException (iWhat) {}
00025     };
00026
00027 }
00028 #endif // __SEVMGR_SEVMGR_EXCEPTIONS_HPP
00029

```

25.47 sevmgr/SEVMGR_Service.hpp File Reference

```

#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_service_types.hpp>
#include <stdair/bom/EventTypes.hpp>

```

Classes

- class [SEVMGR::SEVMGR_Service](#)
class holding the services related to Travel Demand Generation.

Namespaces

- namespace [stdair](#)
- namespace [SEVMGR](#)

25.48 SEVMGR_Service.hpp

```

00001 #ifndef __SEVMGR_SEVMGR_SERVICE_HPP
00002 #define __SEVMGR_SEVMGR_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/EventTypes.hpp>
00011

```

```

00012 // Forward declarations
00013 namespace stdair {
00014     class EventQueue;
00015     struct ProgressStatusSet;
00016     struct BasLogParams;
00017     struct BasDBParams;
00018     struct EventStruct;
00019 }
00020
00021 namespace SEVMGR {
00022
00024     class SEVMGR_ServiceContext;
00025
00029     class SEVMGR_Service {
00030     public:
00031         // ////////////////////////////////// Constructors and Destructors //////////////////////////////////
00047         SEVMGR_Service (const stdair::BasLogParams&, const stdair::BasDBParams&);
00048
00060         SEVMGR_Service (const stdair::BasLogParams&);
00061
00077         SEVMGR_Service (stdair::STDAIR_ServicePtr_T);
00078
00082         ~SEVMGR_Service ();
00083
00084     public:
00086         // ////////////////////////////////// Business support methods //////////////////////////////////
00090         void buildSampleBom();
00091
00108         stdair::ProgressStatusSet popEvent (stdair::EventStruct&) const;
00109
00115         bool isQueueDone() const;
00116
00121         void reset() const;
00122
00123     public:
00125         // ////////////////////////////////// Display support methods //////////////////////////////////
00133         std::string csvDisplay() const;
00134
00135     private:
00137         // ////////////////////////////////// Constructors and Destructors //////////////////////////////////
00141         SEVMGR_Service ();
00142
00146         SEVMGR_Service (const SEVMGR_Service&);
00147
00152         void initServiceContext();
00153
00165         stdair::STDAIR_ServicePtr_T initStdAirService (const stdair::BasLogParams&,
00166                                                         const stdair::BasDBParams&);
00167
00177         stdair::STDAIR_ServicePtr_T initStdAirService (const stdair::BasLogParams&);
00178
00187         void addStdAirService (stdair::STDAIR_ServicePtr_T ioSTDAIR_ServicePtr,
00188                                 const bool iOwnStdairService);
00189
00196         void initSevmgrService();
00197
00201         void finalise();
00202
00203

```

```

00204     private:
00205         // ////////// Service Context //////////
00209         SEVMGR_ServiceContext* _sevmgrServiceContext;
00210     };
00211
00212 }
00213 #endif // __SEVMGR_SEVMGR_SERVICE_HPP

```

25.49 sevmgr/SEVMGR_Types.hpp File Reference

```

#include <boost/shared_ptr.hpp>
#include <sevmgr/SEVMGR_Exceptions.hpp>

```

Namespaces

- namespace [SEVMGR](#)

Typedefs

- typedef boost::shared_ptr< SEVMGR_Service > [SEVMGR::SEVMGR_ServicePtr_T](#)

25.50 SEVMGR_Types.hpp

```

00001 #ifndef __SEVMGR_SEVMGR_TYPES_HPP
00002 #define __SEVMGR_SEVMGR_TYPES_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // Boost
00008 #include <boost/shared_ptr.hpp>
00009 // Sevmgr
00010 #include <sevmgr/SEVMGR_Exceptions.hpp>
00011
00012 namespace SEVMGR {
00013
00014     // Forward declarations
00015     class SEVMGR_Service;
00016
00017     // ////////// Type definitions specific to to Sevmgr //////////
00021     typedef boost::shared_ptr<SEVMGR_Service> SEVMGR_ServicePtr_T;
00022
00023 }
00024 #endif // __SEVMGR_SEVMGR_TYPES_HPP
00025

```

25.51 sevmgr/ui/cmdline/readline_autocomp.hpp File Reference

```

#include <string>

```

```
#include <iosfwd>
#include <cstdio>
#include <sys/types.h>
#include <sys/file.h>
#include <sys/stat.h>
#include <sys/errno.h>
#include <readline/readline.h>
#include <readline/history.h>
```

Classes

- struct [COMMAND](#)

Typedefs

- typedef int(* [pt2Func](#))(char *)

Functions

- char * [getwd](#) ()
- char * [xmalloc](#) (size_t)
- int [com_list](#) (char *)
- int [com_view](#) (char *)
- int [com_rename](#) (char *)
- int [com_stat](#) (char *)
- int [com_pwd](#) (char *)
- int [com_delete](#) (char *)
- int [com_help](#) (char *)
- int [com_cd](#) (char *)
- int [com_quit](#) (char *)
- char * [stripwhite](#) (char *iString)
- [COMMAND](#) * [find_command](#) (char *iString)
- char * [dupstr](#) (char *iString)
- int [execute_line](#) (char *line)
- char * [command_generator](#) (char *text, int state)
- char ** [fileman_completion](#) (char *text, int start, int end)
- void [initialize_readline](#) ()
- void [too_dangerous](#) (char *caller)
- int [valid_argument](#) (char *caller, char *arg)

Variables

- [COMMAND](#) [commands](#) []
- [int](#) [done](#)
- [static](#) [char](#) [syscom](#) [1024]

25.51.1 Typedef Documentation

25.51.1.1 `typedef int(* pt2Func)(char *)`

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

25.51.2 Function Documentation

25.51.2.1 `char* getwd ()`

[readline_autocomp.hpp](#) -- A tiny application which demonstrates how to use the GNU Readline library. This application interactively allows users to manipulate files and their modes.

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

25.51.2.2 `char* xmalloc (size_t)`

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

25.51.2.3 `void com_list (char * arg)`

List the file(s) named in arg.

Definition at line 264 of file [readline_autocomp.hpp](#).

25.51.2.4 `int com_view (char * arg)`

Definition at line 274 of file [readline_autocomp.hpp](#).

References [valid_argument\(\)](#).

25.51.2.5 `int com_rename (char * arg)`

Definition at line 284 of file [readline_autocomp.hpp](#).

References [too_dangerous\(\)](#).

25.51.2.6 `int com_stat (char * arg)`

Definition at line 289 of file [readline_autocomp.hpp](#).

References [valid_argument\(\)](#).

25.51.2.7 `int com_pwd (char * ignore)`

Definition at line 367 of file [readline_autocomp.hpp](#).

References [getwd\(\)](#).

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

25.51.2.8 `int com_delete (char * arg)`

Definition at line 315 of file [readline_autocomp.hpp](#).

References [too_dangerous\(\)](#).

25.51.2.9 `int com_help (char * arg)`

Print out help for ARG, or for all of the commands if ARG is not present.

Definition at line 324 of file [readline_autocomp.hpp](#).

References [COMMAND::name](#).

25.51.2.10 `int com_cd (char * arg)`

Definition at line 356 of file [readline_autocomp.hpp](#).

References [com_pwd\(\)](#).

25.51.2.11 `int com_quit (char * arg)`

Definition at line 381 of file [readline_autocomp.hpp](#).

25.51.2.12 `char * stripwhite (char * string)`

Strip whitespace from the start and end of STRING. Return a pointer into STRING.

Definition at line 152 of file [readline_autocomp.hpp](#).

25.51.2.13 `COMMAND * find_command (char * name)`

Look up NAME as the name of a command, and return a pointer to that command. Return a NULL pointer if NAME isn't a command name.

Definition at line 136 of file [readline_autocomp.hpp](#).

References [COMMAND::name](#).

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

25.51.2.14 `char* dupstr (char * iString)`

Duplicate a string

Definition at line 85 of file [readline_autocomp.hpp](#).

References [xmalloc\(\)](#).

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

25.51.2.15 `int execute_line (char * line)`

Execute a command line.

Definition at line 94 of file [readline_autocomp.hpp](#).

References [find_command\(\)](#), and [COMMAND::func](#).

25.51.2.16 char * command_generator (char * *text*, int *state*)

Generator function for command completion. STATE lets us know whether to start from scratch; without any state (i.e. STATE == 0), then we start at the top of the list.

Definition at line 222 of file [readline_autocomp.hpp](#).

References [dupstr\(\)](#).

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

25.51.2.17 char ** fileman_completion (char * *text*, int *start*, int *end*)

Attempt to complete on the contents of TEXT. START and END bound the region of rl_line_buffer that contains the word to complete. TEXT is the word to complete. We can use the entire contents of rl_line_buffer in case we want to do some simple parsing. Return the array of matches, or NULL if there aren't any.

Definition at line 200 of file [readline_autocomp.hpp](#).

References [command_generator\(\)](#).

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

25.51.2.18 void initialize_readline ()

Tell the GNU Readline library how to complete. We want to try to complete on command names if this is the first word in the line, or on filenames if not.

Definition at line 185 of file [readline_autocomp.hpp](#).

References [fileman_completion\(\)](#).

25.51.2.19 void too_dangerous (char * *caller*)

Definition at line 387 of file [readline_autocomp.hpp](#).

Referenced by [com_delete\(\)](#), and [com_rename\(\)](#).

25.51.2.20 int valid_argument (char * *caller*, char * *arg*)

Definition at line 395 of file [readline_autocomp.hpp](#).

Referenced by [com_stat\(\)](#), and [com_view\(\)](#).

25.51.3 Variable Documentation

25.51.3.1 COMMAND commands[]

Initial value:

```
{
```

```

{ "cd", (*com_cd)(), "Change to directory DIR" },
{ "delete", com_delete, "Delete FILE" },
{ "help", com_help, "Display this text" },
{ "?", com_help, "Synonym for 'help'" },
{ "list", com_list, "List files in DIR" },
{ "ls", com_list, "Synonym for 'list'" },
{ "pwd", com_pwd, "Print the current working directory" },
{ "quit", com_quit, "Quit using airinv" },
{ "rename", com_rename, "Rename FILE to NEWNAME" },
{ "stat", com_stat, "Print out statistics on FILE" },
{ "view", com_view, "View the contents of FILE" },
{ (char*) NULL, (pt2Func) NULL, (char*) NULL }
}

```

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

25.51.3.2 int done

When non-zero, this global means the user is done using this program.

Definition at line 80 of file [readline_autocomp.hpp](#).

25.51.3.3 char syscom[1024] [static]

String to pass to system(). This is for the LIST, VIEW and RENAME commands.

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

25.52 readline_autocomp.hpp

```

00001
00006 #ifndef __AIRINV_READLINE_AUTOCOMP_HPP
00007 #define __AIRINV_READLINE_AUTOCOMP_HPP
00008
00009 // STL
00010 #include <string>
00011 #include <iosfwd>
00012 #include <cstdio>
00013 #include <sys/types.h>
00014 #include <sys/file.h>
00015 #include <sys/stat.h>
00016 #include <sys/errno.h>
00017
00018 #include <readline/readline.h>
00019 #include <readline/history.h>
00020
00021 extern char* getwd();
00022 extern char* xmalloc (size_t);
00023
00024 /* The names of functions that actually do the manipulation. */
00025 int com_list (char*);
00026 int com_view (char*);
00027 int com_rename (char*);
00028 int com_stat (char*);
00029 int com_pwd (char*);
00030 int com_delete (char*);
00031 int com_help (char*);
00032 int com_cd (char*);
00033 int com_quit (char*);

```

```

00034
00035 typedef int (*pt2Func) (char*);
00036
00041 typedef struct {
00045     char const* name;
00046
00050     pt2Func *func;
00051
00055     char *doc;
00056 } COMMAND;
00057
00058 COMMAND commands[] = {
00059     { "cd", (*com_cd)(), "Change to directory DIR" },
00060     { "delete", com_delete, "Delete FILE" },
00061     { "help", com_help, "Display this text" },
00062     { "?", com_help, "Synonym for 'help'" },
00063     { "list", com_list, "List files in DIR" },
00064     { "ls", com_list, "Synonym for 'list'" },
00065     { "pwd", com_pwd, "Print the current working directory" },
00066     { "quit", com_quit, "Quit using airinv" },
00067     { "rename", com_rename, "Rename FILE to NEWNAME" },
00068     { "stat", com_stat, "Print out statistics on FILE" },
00069     { "view", com_view, "View the contents of FILE" },
00070     { (char*) NULL, (pt2Func) NULL, (char*) NULL }
00071 };
00072
00073 // Forward declarations
00074 char* stripwhite (char* iString);
00075 COMMAND* find_command (char* iString);
00076
00080 int done;
00081
00085 char* dupstr (char* iString) {
00086     char* r = xmalloc (std::strlen (iString) + 1);
00087     strcpy (r, iString);
00088     return r;
00089 }
00090
00094 int execute_line (char* line) {
00095     register int i;
00096     COMMAND* command;
00097     char* word;
00098
00099     /* Isolate the command word. */
00100     i = 0;
00101     while (line[i] && whitespace (line[i])) {
00102         i++;
00103     }
00104     word = line + i;
00105
00106     while (line[i] && !whitespace (line[i])) {
00107         i++;
00108     }
00109
00110     if (line[i]) {
00111         line[i++] = '\0';
00112     }
00113
00114     command = find_command (word);
00115
00116     if (!command) {
00117         std::cerr << word << ": No such command for airinv." << std::endl;

```

```

00118     return -1;
00119 }
00120
00121 /* Get argument to command, if any. */
00122 while (whitespace (line[i])) {
00123     i++;
00124 }
00125
00126 word = line + i;
00127
00128 /* Call the function. */
00129 return (*(command->func)) (word);
00130 }
00131
00132 COMMAND* find_command (char* name) {
00133     register int i;
00134
00135     for (i = 0; commands[i].name; i++) {
00136         if (strcmp (name, commands[i].name) == 0) {
00137             return (&commands[i]);
00138         }
00139     }
00140
00141     return (COMMAND*) NULL;
00142 }
00143
00144 char* stripwhite (char* string) {
00145     register char *s, *t;
00146
00147     for (s = string; whitespace (*s); s++) {
00148     }
00149
00150     if (*s == 0) {
00151         return s;
00152     }
00153
00154     t = s + strlen (s) - 1;
00155     while (t > s && whitespace (*t)) {
00156         t--;
00157     }
00158     *++t = '\0';
00159
00160     return s;
00161 }
00162
00163 /* ***** */
00164 /*
00165 /*                                     Interface to Readline Completion
00166 /*
00167 /* ***** */
00168
00169 char* command_generator (char* text, int state);
00170 char** fileman_completion (char* text, int start, int end);
00171
00172 void initialize_readline() {
00173     /* Allow conditional parsing of the ~/.inputrc file. */
00174     rl_readline_name = "airinv";
00175
00176     /* Tell the completer that we want a crack first. */
00177     rl_attempted_completion_function = (rl_completion_func_t*) fileman_completion;
00178 }
00179
00180

```

```

00200 char** fileman_completion (char* text, int start, int end) {
00201     char **matches;
00202
00203     matches = (char**) NULL;
00204
00210     if (start == 0) {
00211         matches = completion_matches (text, command_generator);
00212     }
00213
00214     return matches;
00215 }
00216
00222 char* command_generator (char* text, int state) {
00223     static int list_index, len;
00224     char* name;
00225
00231     if (!state) {
00232         list_index = 0;
00233         len = strlen (text);
00234     }
00235
00236     /* Return the next name which partially matches from the command list. */
00237     while (name = commands[list_index].name) {
00238         ++list_index;
00239
00240         if (strncmp (name, text, len) == 0) {
00241             return dupstr (name);
00242         }
00243     }
00244
00245     /* If no names matched, then return NULL. */
00246     return (char*) NULL;
00247 }
00248
00249 /* ***** */
00250 /* ***** */
00251 /*          airinv Commands          */
00252 /* ***** */
00253 /* ***** */
00254
00259 static char syscom[1024];
00260
00264 void com_list (char* arg) {
00265     if (!arg) {
00266         arg = "";
00267     }
00268
00269     std::ostringstream oStr;
00270     oStr << "ls -FClg " << arg;
00271     return system (oStr.c_str());
00272 }
00273
00274 int com_view (char* arg) {
00275     if (!valid_argument ("view", arg)) {
00276         return 1;
00277     }
00278
00279     std::ostringstream oStr;
00280     oStr << "more " << arg;
00281     return system (syscom);
00282 }
00283

```

```

00284 int com_rename (char* arg) {
00285     too_dangerous ("rename");
00286     return 1;
00287 }
00288
00289 int com_stat (char* arg) {
00290     struct stat finfo;
00291
00292     if (!valid_argument ("stat", arg)) {
00293         return 1;
00294     }
00295
00296     if (stat (arg, &finfo) == -1) {
00297         perror (arg);
00298         return 1;
00299     }
00300
00301     std::cout << "Statistics for '" << arg << "':" << std::endl;
00302
00303     const std::string lPluralEnd1 = (finfo.st_nlink == 1) ? "" : "s";
00304     const std::string lPluralEnd2 = (finfo.st_size == 1) ? "" : "s";
00305     std::cout << arg << " has "
00306               << finfo.st_nlink << " link" << lPluralEnd1 << ", and is "
00307               << finfo.st_size << " byte" << lPluralEnd2 << " in length."
00308               << std::endl;
00309     std::cout << " Inode Last Change at: " << ctime (&finfo.st_ctime) << std::endl;
00310
00311     std::cout << " Last access at: " << ctime (&finfo.st_atime) << std::endl;
00312     std::cout << " Last modified at: " << ctime (&finfo.st_mtime) << std::endl;
00313     return 0;
00314 }
00315 int com_delete (char* arg) {
00316     too_dangerous ("delete");
00317     return 1;
00318 }
00319
00324 int com_help (char* arg) {
00325     register int i;
00326     int printed = 0;
00327
00328     for (i = 0; commands[i].name; i++) {
00329         if (!*arg || (strcmp (arg, commands[i].name) == 0)) {
00330             printf ("%s\t\t%s.\n", commands[i].name, commands[i].doc);
00331             printed++;
00332         }
00333     }
00334
00335     if (!printed) {
00336         printf ("No commands match '%s'. Possibilities are:\n", arg);
00337
00338         for (i = 0; commands[i].name; i++) {
00339             /* Print in six columns. */
00340             if (printed == 6) {
00341                 printed = 0;
00342                 printf ("\n");
00343             }
00344
00345             printf ("%s\t\t", commands[i].name);
00346             printed++;
00347         }
00348     }

```

```
00349     if (printed)
00350         printf ("\n");
00351 }
00352 return 0;
00353 }
00354
00355 /* Change to the directory ARG. */
00356 int com_cd (char* arg) {
00357     if (chdir (arg) == -1) {
00358         perror (arg);
00359         return 1;
00360     }
00361
00362     com_pwd ("");
00363     return 0;
00364 }
00365
00366 /* Print out the current working directory. */
00367 int com_pwd (char* ignore) {
00368     char dir[1024], *s;
00369
00370     s = getwd (dir);
00371     if (s == 0) {
00372         printf ("Error getting pwd: %s\n", dir);
00373         return 1;
00374     }
00375
00376     printf ("Current directory is %s\n", dir);
00377     return 0;
00378 }
00379
00380 /* The user wishes to quit using this program. Just set DONE non-zero. */
00381 int com_quit (char* arg) {
00382     done = 1;
00383     return 0;
00384 }
00385
00386 /* Function which tells you that you can't do this. */
00387 void too_dangerous (char* caller) {
00388     fprintf (stderr,
00389             "%s: Too dangerous for me to distribute. Write it yourself.\n",
00390             caller);
00391 }
00392
00393 /* Return non-zero if ARG is a valid argument for CALLER, else print
00394  * an error message and return zero. */
00395 int valid_argument (char* caller, char* arg) {
00396     if (!arg || !*arg) {
00397         fprintf (stderr, "%s: Argument required.\n", caller);
00398         return 0;
00399     }
00400
00401     return 1;
00402 }
00403
00404 #endif // _AIRINV_READLINE_AUTOCOMP_HPP
```

25.53 sevmgr/ui/cmdline/sevmgr.cpp File Reference

25.54 sevmgr.cpp

```

00001
00005 // STL
00006 #include <cassert>
00007 #include <iostream>
00008 #include <sstream>
00009 #include <fstream>
00010 #include <string>
00011 // Boost (Extended STL)
00012 #include <boost/program_options.hpp>
00013 #include <boost/tokenizer.hpp>
00014 #include <boost/regex.hpp>
00015 #include <boost/swap.hpp>
00016 #include <boost/algorithm/string/case_conv.hpp>
00017 // StdAir
00018 #include <stdair/basic/BasLogParams.hpp>
00019 #include <stdair/basic/BasDBParams.hpp>
00020 #include <stdair/service/Logger.hpp>
00021 // SEvMgr
00022 #include <sevmgr/SEVMGR_Service.hpp>
00023 #include <sevmgr/config/sevmgr-paths.hpp>
00024 // GNU Readline Wrapper
00025 #include <sevmgr/ui/cmdline/SReadline.hpp>
00026
00027 // ////////// Constants //////////
00031 const std::string K_SEVMGR_DEFAULT_LOG_FILENAME ("sevmgr.log");
00032
00036 const int K_SEVMGR_EARLY_RETURN_STATUS = 99;
00037
00042 typedef std::vector<std::string> TokenList_T;
00043
00047 struct Command_T {
00048     typedef enum {
00049         NOP = 0,
00050         QUIT,
00051         HELP,
00052         LIST,
00053         DISPLAY,
00054         SELECT,
00055         NEXT,
00056         RUN,
00057         JSON_LIST,
00058         JSON_DISPLAY,
00059         LAST_VALUE
00060     } Type_T;
00061 };
00062
00063 // ////////// Parsing of Options & Configuration //////////
00064 // A helper function to simplify the main part.
00065 template<class T> std::ostream& operator<< (std::ostream& os,
00066                                             const std::vector<T>& v) {
00067     std::copy(v.begin(), v.end(), std::ostream_iterator<T> (std::cout, " "));
00068     return os;
00069 }
00070
00074 int readConfiguration (int argc, char* argv[], std::string& ioLogFilename) {
00075     // Declare a group of options that will be allowed only on command line
00076     boost::program_options::options_description generic ("Generic options");
00077     generic.add_options()
00078         ("prefix", "print installation prefix")
00079         ("version,v", "print version string")

```



```

00080     ("help,h", "produce help message");
00081
00082     // Declare a group of options that will be allowed both on command
00083     // line and in config file
00084
00085     boost::program_options::options_description config ("Configuration");
00086     config.add_options()
00087         ("log,l",
00088          boost::program_options::value< std::string >(&ioLogFilename)->default_value(
00089              K_SEVMGR_DEFAULT_LOG_FILENAME),
00090          "Filename for the logs"
00091         );
00092
00093     // Hidden options, will be allowed both on command line and
00094     // in config file, but will not be shown to the user.
00095     boost::program_options::options_description hidden ("Hidden options");
00096     hidden.add_options()
00097         ("copyright",
00098          boost::program_options::value< std::vector<std::string> >(),
00099          "Show the copyright (license)");
00100
00101     boost::program_options::options_description cmdline_options;
00102     cmdline_options.add(generic).add(config).add(hidden);
00103
00104     boost::program_options::options_description config_file_options;
00105     config_file_options.add(config).add(hidden);
00106     boost::program_options::options_description visible ("Allowed options");
00107     visible.add(generic).add(config);
00108
00109     boost::program_options::positional_options_description p;
00110     p.add ("copyright", -1);
00111
00112     boost::program_options::variables_map vm;
00113     boost::program_options::
00114         store (boost::program_options::command_line_parser (argc, argv).
00115             options (cmdline_options).positional(p).run(), vm);
00116
00117     std::ifstream ifs ("sevmgr.cfg");
00118     boost::program_options::store (parse_config_file (ifs, config_file_options),
00119         vm);
00120     boost::program_options::notify (vm);
00121
00122     if (vm.count ("help")) {
00123         std::cout << visible << std::endl;
00124         return K_SEVMGR_EARLY_RETURN_STATUS;
00125     }
00126
00127     if (vm.count ("version")) {
00128         std::cout << PACKAGE_NAME << ", version " << PACKAGE_VERSION << std::endl;
00129         return K_SEVMGR_EARLY_RETURN_STATUS;
00130     }
00131
00132     if (vm.count ("prefix")) {
00133         std::cout << "Installation prefix: " << PREFIXDIR << std::endl;
00134         return K_SEVMGR_EARLY_RETURN_STATUS;
00135     }
00136
00137     if (vm.count ("log")) {
00138         ioLogFilename = vm["log"].as< std::string >();
00139         std::cout << "Log filename is: " << ioLogFilename << std::endl;
00140     }

```

```

00141     return 0;
00142 }
00143
00144 // //////////////////////////////////////
00145 void initReadline (swift::SReadline& ioInputReader) {
00146
00147     // Prepare the list of my own completers
00148     std::vector<std::string> Completers;
00149
00150     // The following is supported:
00151     // - "identifiers"
00152     // - special identifier %file - means to perform a file name completion
00153     Completers.push_back ("help");
00154     Completers.push_back ("list %airline_code %flight_number");
00155     Completers.push_back ("select %airline_code %flight_number %flight_date");
00156     Completers.push_back ("display");
00157     Completers.push_back ("next");
00158     Completers.push_back ("run");
00159     Completers.push_back ("quit");
00160
00161
00162     // Now register the completers.
00163     // Actually it is possible to re-register another set at any time
00164     ioInputReader.RegisterCompletions (Completers);
00165 }
00166
00167 // //////////////////////////////////////
00168 Command_T::Type_T extractCommand (TokenList_T& ioTokenList) {
00169     Command_T::Type_T oCommandType = Command_T::LAST_VALUE;
00170
00171     // Interpret the user input
00172     if (ioTokenList.empty() == false) {
00173         TokenList_T::iterator itTok = ioTokenList.begin();
00174         std::string lCommand (*itTok);
00175         boost::algorithm::to_lower (lCommand);
00176
00177         if (lCommand == "help") {
00178             oCommandType = Command_T::HELP;
00179
00180         } else if (lCommand == "list") {
00181             oCommandType = Command_T::LIST;
00182
00183         } else if (lCommand == "display") {
00184             oCommandType = Command_T::DISPLAY;
00185
00186         } else if (lCommand == "select") {
00187             oCommandType = Command_T::SELECT;
00188
00189         } else if (lCommand == "next") {
00190             oCommandType = Command_T::NEXT;
00191
00192         } else if (lCommand == "run") {
00193             oCommandType = Command_T::RUN;
00194
00195         } else if (lCommand == "json_list") {
00196             oCommandType = Command_T::JSON_LIST;
00197
00198         } else if (lCommand == "json_display") {
00199             oCommandType = Command_T::JSON_DISPLAY;
00200
00201         } else if (lCommand == "quit") {
00202             oCommandType = Command_T::QUIT;

```

```

00203     }
00204
00205     // Remove the first token (the command), as the corresponding information
00206     // has been extracted in the form of the returned command type enumeration
00207     ioTokenList.erase (itTok);
00208
00209     } else {
00210         oCommandType = Command_T::NOP;
00211     }
00212
00213     return oCommandType;
00214 }
00215
00216 // //////////////////////////////////////
00217 void parseFlightKey (const TokenList_T& iTokenList,
00218                     stdair::AirlineCode_T& ioAirlineCode,
00219                     stdair::FlightNumber_T& ioFlightNumber) {
00220     // Interpret the user input
00221     if (iTokenList.empty() == false) {
00222
00223         // Read the airline code
00224         TokenList_T::const_iterator itTok = iTokenList.begin();
00225         if (itTok->empty() == false) {
00226             ioAirlineCode = *itTok;
00227             boost::algorithm::to_upper (ioAirlineCode);
00228         }
00229
00230         // Read the flight-number
00231         ++itTok;
00232         if (itTok != iTokenList.end()) {
00233
00234             if (itTok->empty() == false) {
00235                 try {
00236
00237                     ioFlightNumber = boost::lexical_cast<stdair::FlightNumber_T> (*itTok);
00238
00239                 } catch (boost::bad_lexical_cast& eCast) {
00240                     std::cerr << "The flight number ('" << *itTok
00241                                 << "') cannot be understood. "
00242                                 << "The default value (all) is kept."
00243                                 << std::endl;
00244                     return;
00245                 }
00246             }
00247
00248         } else {
00249             return;
00250         }
00251     }
00252 }
00253
00254 // //////////////////////////////////////
00255 void parseFlightDateKey (const TokenList_T& iTokenList,
00256                         stdair::AirlineCode_T& ioAirlineCode,
00257                         stdair::FlightNumber_T& ioFlightNumber,
00258                         stdair::Date_T& ioDepartureDate) {
00259     //
00260     const std::string kMonthStr[12] = {"Jan", "Feb", "Mar", "Apr", "May", "Jun",
00261                                         "Jul", "Aug", "Sep", "Oct", "Nov", "Dec"};
00262     //
00263     unsigned short ioDepartureDateYear = ioDepartureDate.year();
00264     unsigned short ioDepartureDateMonth = ioDepartureDate.month();

```

```

00265     std::string ioDepartureDateMonthStr = kMonthStr[ioDepartureDateMonth-1];
00266     unsigned short ioDepartureDateDay = ioDepartureDate.day();
00267
00268     // Interpret the user input
00269     if (iTokenList.empty() == false) {
00270
00271         // Read the airline code
00272         TokenList_T::const_iterator itTok = iTokenList.begin();
00273         if (itTok->empty() == false) {
00274             ioAirlineCode = *itTok;
00275             boost::algorithm::to_upper (ioAirlineCode);
00276         }
00277
00278         // Read the flight-number
00279         ++itTok;
00280         if (itTok != iTokenList.end()) {
00281
00282             if (itTok->empty() == false) {
00283                 try {
00284
00285                     ioFlightNumber = boost::lexical_cast<stdair::FlightNumber_T> (*itTok);
00286
00287                 } catch (boost::bad_lexical_cast& eCast) {
00288                     std::cerr << "The flight number ('" << *itTok
00289                         << "') cannot be understood. "
00290                         << "The default value (all) is kept."
00291                         << std::endl;
00292                     return;
00293                 }
00294             }
00295
00296         } else {
00297             return;
00298         }
00299
00300         // Read the year for the departure date
00301         ++itTok;
00302         if (itTok != iTokenList.end()) {
00303
00304             if (itTok->empty() == false) {
00305                 try {
00306
00307                     ioDepartureDateYear = boost::lexical_cast<unsigned short> (*itTok);
00308                     if (ioDepartureDateYear < 100) {
00309                         ioDepartureDateYear += 2000;
00310                     }
00311
00312                 } catch (boost::bad_lexical_cast& eCast) {
00313                     std::cerr << "The year of the flight departure date ('" << *itTok
00314                         << "') cannot be understood. The default value ("
00315                         << ioDepartureDateYear << ") is kept. " << std::endl;
00316                     return;
00317                 }
00318             }
00319
00320         } else {
00321             return;
00322         }
00323
00324         // Read the month for the departure date
00325         ++itTok;
00326         if (itTok != iTokenList.end()) {

```

```

00327
00328         if (itTok->empty() == false) {
00329             try {
00330
00331                 const boost::regex lMonthRegex ("^(\\d{1,2})$");
00332                 const bool isMonthANumber = regex_match (*itTok, lMonthRegex);
00333
00334                 if (isMonthANumber == true) {
00335                     const unsigned short lMonth =
00336                         boost::lexical_cast<unsigned short> (*itTok);
00337                     if (lMonth > 12) {
00338                         throw boost::bad_lexical_cast();
00339                     }
00340                     ioDepartureDateMonthStr = kMonthStr[lMonth-1];
00341
00342                 } else {
00343                     const std::string lMonthStr (*itTok);
00344                     if (lMonthStr.size() < 3) {
00345                         throw boost::bad_lexical_cast();
00346                     }
00347                     std::string lMonthStr1 (lMonthStr.substr (0, 1));
00348                     boost::algorithm::to_upper (lMonthStr1);
00349                     std::string lMonthStr23 (lMonthStr.substr (1, 2));
00350                     boost::algorithm::to_lower (lMonthStr23);
00351                     ioDepartureDateMonthStr = lMonthStr1 + lMonthStr23;
00352                 }
00353
00354                 } catch (boost::bad_lexical_cast& eCast) {
00355                     std::cerr << "The month of the flight departure date ('" << *itTok
00356                         << "') cannot be understood. The default value ("
00357                         << ioDepartureDateMonthStr << ") is kept. " << std::endl;
00358                     return;
00359                 }
00360             }
00361
00362         } else {
00363             return;
00364         }
00365
00366         // Read the day for the departure date
00367         ++itTok;
00368         if (itTok != iTokenList.end()) {
00369
00370             if (itTok->empty() == false) {
00371                 try {
00372
00373                     ioDepartureDateDay = boost::lexical_cast<unsigned short> (*itTok);
00374
00375                 } catch (boost::bad_lexical_cast& eCast) {
00376                     std::cerr << "The day of the flight departure date ('" << *itTok
00377                         << "') cannot be understood. The default value ("
00378                         << ioDepartureDateDay << ") is kept. " << std::endl;
00379                     return;
00380                 }
00381             }
00382
00383         } else {
00384             return;
00385         }
00386
00387         // Re-compose the departure date
00388         std::ostringstream lDepartureDateStr;

```

```

00389     lDepartureDateStr << ioDepartureDateYear << "-" << ioDepartureDateMonthStr
00390                     << "-" << ioDepartureDateDay;
00391
00392     try {
00393
00394         ioDepartureDate =
00395             boost::gregorian::from_simple_string (lDepartureDateStr.str());
00396
00397     } catch (boost::gregorian::bad_month& eCast) {
00398         std::cerr << "The flight departure date ('" << lDepartureDateStr.str()
00399                 << "') cannot be understood. The default value ("
00400                 << ioDepartureDate << ") is kept. " << std::endl;
00401         return;
00402     }
00403
00404 }
00405 }
00406
00407 // //////////////////////////////////////
00408 void parseBookingClassKey (const TokenList_T& iTokenList,
00409                          stdair::ClassCode_T& ioBookingClass,
00410                          stdair::PartySize_T& ioPartySize,
00411                          stdair::AirportCode_T& ioOrigin,
00412                          stdair::AirportCode_T& ioDestination) {
00413     // Interpret the user input
00414     if (iTokenList.empty() == false) {
00415
00416         // Read the booking class
00417         TokenList_T::const_iterator itTok = iTokenList.begin();
00418         if (itTok->empty() == false) {
00419             ioBookingClass = *itTok;
00420             boost::algorithm::to_upper (ioBookingClass);
00421         }
00422
00423         // Read the party size
00424         ++itTok;
00425         if (itTok != iTokenList.end()) {
00426
00427             if (itTok->empty() == false) {
00428                 try {
00429
00430                     ioPartySize = boost::lexical_cast<stdair::PartySize_T> (*itTok);
00431
00432                 } catch (boost::bad_lexical_cast& eCast) {
00433                     std::cerr << "The party size ('" << *itTok
00434                             << "') cannot be understood. The default value ("
00435                             << ioPartySize << ") is kept." << std::endl;
00436                     return;
00437                 }
00438             }
00439
00440         } else {
00441             return;
00442         }
00443
00444         // Read the origin
00445         ++itTok;
00446         if (itTok != iTokenList.end()) {
00447
00448             if (itTok->empty() == false) {
00449                 ioOrigin = *itTok;
00450                 boost::algorithm::to_upper (ioOrigin);

```

```

00451     }
00452
00453     } else {
00454         return;
00455     }
00456
00457     // Read the destination
00458     ++itTok;
00459     if (itTok != iTokenList.end()) {
00460
00461         if (itTok->empty() == false) {
00462             ioDestination = *itTok;
00463             boost::algorithm::to_upper (ioDestination);
00464         }
00465
00466     } else {
00467         return;
00468     }
00469 }
00470 }
00471
00472 // //////////////////////////////////////
00473 std::string toString (const TokenList_T& iTokenList) {
00474     std::ostringstream oStr;
00475
00476     // Re-create the string with all the tokens, trimmed by read-line
00477     unsigned short idx = 0;
00478     for (TokenList_T::const_iterator itTok = iTokenList.begin();
00479          itTok != iTokenList.end(); ++itTok, ++idx) {
00480         if (idx != 0) {
00481             oStr << " ";
00482         }
00483         oStr << *itTok;
00484     }
00485
00486     return oStr.str();
00487 }
00488
00489 // //////////////////////////////////////
00490 TokenList_T extractTokenList (const TokenList_T& iTokenList,
00491                              const std::string& iRegularExpression) {
00492     TokenList_T oTokenList;
00493
00494     // Re-create the string with all the tokens (which had been trimmed
00495     // by read-line)
00496     const std::string lFullLine = toString (iTokenList);
00497
00498     // See the caller for the regular expression
00499     boost::regex expression (iRegularExpression);
00500
00501     std::string::const_iterator start = lFullLine.begin();
00502     std::string::const_iterator end = lFullLine.end();
00503
00504     boost::match_results<std::string::const_iterator> what;
00505     boost::match_flag_type flags = boost::match_default | boost::format_sed;
00506     regex_search (start, end, what, expression, flags);
00507
00508     // Put the matched strings in the list of tokens to be returned back
00509     // to the caller
00510     const unsigned short lMatchSetSize = what.size();
00511     for (unsigned short matchIdx = 1; matchIdx != lMatchSetSize; ++matchIdx) {
00512         const std::string lMatchedString (std::string (what[matchIdx].first,

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00513                                     what[matchIdx].second));
00514     //if (lMatchedString.empty() == false) {
00515         oTokenList.push_back (lMatchedString);
00516     //}
00517 }
00518
00519 // DEBUG
00520 // std::cout << "After (token list): " << oTokenList << std::endl;
00521
00522 return oTokenList;
00523 }
00524
00525 // //////////////////////////////////////
00526 TokenList_T extractTokenListForFlight (const TokenList_T& iTokenList) {
00533     const std::string lRegex ("^([[:alpha:]]{2,3})?"
00534                               "[[:space:]]*([[:digit:]]{1,4})?$");
00535
00536     //
00537     const TokenList_T& oTokenList = extractTokenList (iTokenList, lRegex);
00538     return oTokenList;
00539 }
00540
00541 // //////////////////////////////////////
00542 TokenList_T extractTokenListForFlightDate (const TokenList_T& iTokenList) {
00553     const std::string lRegex ("^([[:alpha:]]{2,3})?"
00554                               "[[:space:]]*([[:digit:]]{1,4})?"
00555                               "[/ ]*"
00556                               "([[:digit:]]{2,4})?[/-]?[[:space:]]*"
00557                               "([[:alpha:]]{3}|[[:digit:]]{1,2})?[/-]?[[:space:]]*"
00558                               "([[:digit:]]{1,2})?$");
00559
00560     //
00561     const TokenList_T& oTokenList = extractTokenList (iTokenList, lRegex);
00562     return oTokenList;
00563 }
00564
00565 // //////////////////////////////////////
00566 TokenList_T extractTokenListForClass (const TokenList_T& iTokenList) {
00575     const std::string lRegex ("^([[:alpha:]])"
00576                               "[[:space:]]*([[:digit:]]{1,3})?"
00577                               "[[:space:]]*([[:alpha:]]{3})?"
00578                               "[[:space:]]*([[:alpha:]]{3})?$");
00579
00580     //
00581     const TokenList_T& oTokenList = extractTokenList (iTokenList, lRegex);
00582     return oTokenList;
00583 }
00584
00585
00586 // ////////////////////////////////// M A I N //////////////////////////////////
00587 int main (int argc, char* argv[]) {
00588
00589     // Readline history
00590     const unsigned int lHistorySize (100);
00591     const std::string lHistoryFilename ("sevmgr.hist");
00592     const std::string lHistoryBackupFilename ("sevmgr.hist.bak");
00593
00594     // Default parameters for the interactive session
00595     stdair::AirlineCode_T lLastInteractiveAirlineCode;
00596     stdair::FlightNumber_T lLastInteractiveFlightNumber;
00597     stdair::Date_T lLastInteractiveDate;
00598     stdair::AirlineCode_T lInteractiveAirlineCode;

```



```

00599     stdair::FlightNumber_T lInteractiveFlightNumber;
00600     stdair::Date_T lInteractiveDate;
00601     stdair::AirportCode_T lInteractiveOrigin;
00602     stdair::AirportCode_T lInteractiveDestination;
00603     stdair::ClassCode_T lInteractiveBookingClass;
00604
00605     // Parameters for the sale
00606     std::string lSegmentDateKey;
00607
00608     // Output log File
00609     stdair::Filename_T lLogFilename;
00610
00611     // Call the command-line option parser
00612     const int lOptionParserStatus = readConfiguration (argc, argv, lLogFilename);
00613
00614     if (lOptionParserStatus == K_SEVMGR_EARLY_RETURN_STATUS) {
00615         return 0;
00616     }
00617
00618     // Set the log parameters
00619     std::ofstream logOutputFile;
00620     // Open and clean the log outputfile
00621     logOutputFile.open (lLogFilename.c_str());
00622     logOutputFile.clear();
00623
00624     // Initialise the inventory service
00625     const stdair::BasLogParams lLogParams (stdair::LOG::DEBUG, logOutputFile);
00626     SEVMGR::SEVMGR_Service sevmgrService (lLogParams);
00627
00628     // DEBUG
00629     STDAIR_LOG_DEBUG ("Welcome to SEvMgr");
00630
00631     // Build the sample BOM tree for RMOL
00632     sevmgrService.buildSampleBom();
00633
00634     // Update the default parameters for the following interactive session
00635     lInteractiveAirlineCode = "BA";
00636     lInteractiveFlightNumber = 9;
00637     lInteractiveDate = stdair::Date_T (2011, 06, 10);
00638     lInteractiveBookingClass = "Q";
00639     lInteractiveOrigin = "LHR";
00640     lInteractiveDestination = "SYD";
00641
00642     // Save the last state
00643     lLastInteractiveAirlineCode = lInteractiveAirlineCode;
00644     lLastInteractiveFlightNumber = lInteractiveFlightNumber;
00645     lLastInteractiveDate = lInteractiveDate;
00646
00647     // DEBUG
00648     STDAIR_LOG_DEBUG ("=====");
00649     STDAIR_LOG_DEBUG ("=          Beginning of the interactive session          =");
00650     STDAIR_LOG_DEBUG ("=====");
00651     STDAIR_LOG_DEBUG ("Last saved state: " << lLastInteractiveAirlineCode
00652                     << lLastInteractiveFlightNumber << " / "
00653                     << lLastInteractiveDate);
00654
00655     // Initialise the GNU readline wrapper
00656     swift::SReadline lReader (lHistoryFilename, lHistorySize);
00657     initReadline (lReader);
00658
00659     // Now we can ask user for a line
00660     std::string lUserInput;

```

```

00661 bool EndOfInput (false);
00662 Command_T::Type_T lCommandType (Command_T::NOP);
00663
00664 while (lCommandType != Command_T::QUIT && EndOfInput == false) {
00665     // Prompt
00666     std::ostream oPromptStr;
00667     oPromptStr << "sevmgr "
00668                 << lInteractiveAirlineCode << lInteractiveFlightNumber
00669                 << " / " << lInteractiveDate
00670                 << "> ";
00671     // Call read-line, which will fill the list of tokens
00672     TokenList_T lTokenListByReadline;
00673     lUserInput = lReader.GetLine (oPromptStr.str(), lTokenListByReadline,
00674                                 EndOfInput);
00675
00676     // The history can be saved to an arbitrary file at any time
00677     lReader.SaveHistory (lHistoryBackupFilename);
00678
00679     // The end-of-input typically corresponds to a CTRL-D typed by the user
00680     if (EndOfInput) {
00681         std::cout << std::endl;
00682         break;
00683     }
00684
00685     // Interpret the user input
00686     lCommandType = extractCommand (lTokenListByReadline);
00687
00688     switch (lCommandType) {
00689
00690         // ////////////////////////////////// Help //////////////////////////////////
00691     case Command_T::HELP: {
00692         std::cout << std::endl;
00693         std::cout << "Commands: " << std::endl;
00694         std::cout << " help" << "\t\t" << "Display this help" << std::endl;
00695         std::cout << " quit" << "\t\t" << "Quit the application" << std::endl;
00696         std::cout << " list" << "\t\t" << "List events" << std::endl;
00697         std::cout << " select" << "\t\t"
00698                 << "Select an event to become the current one" << std::endl;
00699         std::cout << " display" << "\t"
00700                 << "Display the current event" << std::endl;
00701         std::cout << " next" << "\t\t"
00702                 << "Play the current event and pop the next one from the queue"
00703                 << std::endl;
00704         std::cout << " run" << "\t\t"
00705                 << "Play all the events until the next break-point, if any"
00706                 << std::endl;
00707         std::cout << " \nDebug Commands" << std::endl;
00708         std::cout << " json_list" << "\t"
00709                 << "List events in a JSON format"
00710                 << std::endl;
00711         std::cout << " json_display" << "\t"
00712                 << "Display the current event in a JSON format"
00713                 << std::endl;
00714         std::cout << std::endl;
00715         break;
00716     }
00717
00718     // ////////////////////////////////// Quit //////////////////////////////////
00719 case Command_T::QUIT: {
00720     break;
00721 }
00722

```

```
00723      // ////////////////////////////////// List //////////////////////////////////
00724      case Command_T::LIST: {
00725          //
00726          std::cout << "List" << std::endl;
00727
00728          //
00729          break;
00730      }
00731
00732      // ////////////////////////////////// Select //////////////////////////////////
00733      case Command_T::SELECT: {
00734          //
00735          std::cout << "Select" << std::endl;
00736
00737          //
00738          break;
00739      }
00740
00741      // ////////////////////////////////// Display //////////////////////////////////
00742      case Command_T::DISPLAY: {
00743          //
00744          std::cout << "Display" << std::endl;
00745
00746          //
00747          break;
00748      }
00749
00750      // ////////////////////////////////// Next //////////////////////////////////
00751      case Command_T::NEXT: {
00752          //
00753          std::cout << "Next" << std::endl;
00754
00755          //
00756          break;
00757      }
00758
00759      // ////////////////////////////////// Run //////////////////////////////////
00760      case Command_T::RUN: {
00761          //
00762          std::cout << "Run" << std::endl;
00763
00764          //
00765          break;
00766      }
00767
00768      // ////////////////////////////////// JSon List //////////////////////////////////
00769
00770      case Command_T::JSON_LIST: {
00771          //
00772          std::cout << "JSON List" << std::endl;
00773
00774          //
00775          break;
00776      }
00777
00778      // ////////////////////////////////// JSon Display //////////////////////////////////
00779
00780      case Command_T::JSON_DISPLAY: {
00781          //
00782          std::cout << "JSON Display" << std::endl;
00783
00784          //
```

```

00785         break;
00786     }
00787
00788     // ////////////////////////////////// Default / No value //////////////////////////////////
00789     case Command_T::NOP: {
00790         break;
00791     }
00792
00793     case Command_T::LAST_VALUE:
00794     default: {
00795         // DEBUG
00796         std::ostream oStr;
00797         oStr << "That command is not yet understood: '" << lUserInput
00798             << "' => " << lTokenListByReadline;
00799         STDAIR_LOG_DEBUG (oStr.str());
00800         std::cout << oStr.str() << std::endl;
00801     }
00802 }
00803 }
00804
00805 // DEBUG
00806 STDAIR_LOG_DEBUG ("End of the session. Exiting.");
00807 std::cout << "End of the session. Exiting." << std::endl;
00808
00809 // Close the Log outputFile
00810 logOutputFile.close();
00811
00812 /*
00813     Note: as that program is not intended to be run on a server in
00814     production, it is better not to catch the exceptions. When it
00815     happens (that an exception is throwned), that way we get the
00816     call stack.
00817 */
00818
00819 return 0;
00820 }

```

25.55 sevmgr/ui/cmdline/SReadline.hpp File Reference

C++ wrapper around libreadline.

```

#include <cstdio>
#include <readline/readline.h>
#include <readline/history.h>
#include <readline/keymaps.h>
#include <string>
#include <fstream>
#include <vector>
#include <stdexcept>
#include <map>
#include <boost/algorithm/string/trim.hpp>
#include <boost/tokenizer.hpp>

```

```
#include <boost/function.hpp>
```

Classes

- class [swift::SKeymap](#)
The readline keymap wrapper.
- class [swift::SReadline](#)
The readline library wrapper.

Namespaces

- namespace [swift](#)
The wrapper namespace.

25.55.1 Detailed Description

C++ wrapper around libreadline. Supported: editing, history, custom completers, keymaps. Attention: implementation is not thread safe! It is mainly because the readline library provides pure C interface and has many calls for an "atomic" completion operation

Definition in file [SReadline.hpp](#).

25.56 SReadline.hpp

```
00001
00011 //
00012 // Date:      17 December 2005
00013 //           03 April    2006
00014 //           20 April    2006
00015 //           07 May      2006
00016 //
00017 // Copyright (c) Sergey Satskiy 2005 - 2006
00018 //           <sergesatsky@yahoo.com>
00019 //
00020 // Permission to copy, use, modify, sell and distribute this software
00021 // is granted provided this copyright notice appears in all copies.
00022 // This software is provided "as is" without express or implied
00023 // warranty, and with no claim as to its suitability for any purpose.
00024 //
00025
00026 #ifndef SREADLINE_H
00027 #define SREADLINE_H
00028
00029 #include <cstdio>
00030
00031 #include <readline/readline.h>
00032 #include <readline/history.h>
00033 #include <readline/keymaps.h>
00034
00035 #include <string>
00036 #include <fstream>
00037 #include <vector>
```

```
00038 #include <stdexcept>
00039 #include <map>
00040
00041 #include <boost/algorithm/string/trim.hpp>
00042 #include <boost/tokenizer.hpp>
00043 #include <boost/function.hpp>
00044
00045
00050 namespace {
00054     typedef std::vector<std::string> TokensStorage;
00055
00059     typedef std::vector<TokensStorage> CompletionsStorage;
00060
00064     typedef boost::function<int (int, int)> KeyCallback;
00065
00069     typedef std::map<int, KeyCallback> KeysBind;
00070
00074     const size_t DefaultHistoryLimit (64);
00075
00079     CompletionsStorage Completions;
00080
00084     TokensStorage Tokens;
00085
00089     std::map<Keymap, KeysBind> Keymaps;
00090
00094     bool KeymapWasSetup (false);
00095
00099     Keymap Earlykeymap (0);
00100
00101
00108     char* Generator (const char* text, int State);
00109
00110
00118     char** UserCompletion (const char* text, int start, int end);
00119
00120
00128     int KeyDispatcher (int Count, int Key);
00129
00130
00135     int StartupHook (void);
00136
00137
00145     template <typename Container>
00146     bool AreTokensEqual (const Container& Pattern, const Container& Input) {
00147         if (Input.size() > Pattern.size()) {
00148             return false;
00149         }
00150
00151         typename Container::const_iterator k (Pattern.begin());
00152         typename Container::const_iterator j (Input.begin());
00153         for ( ; j != Input.end(); ++k, ++j) {
00154             const std::string lPattern = *k;
00155             if (lPattern == "%file") {
00156                 continue;
00157             }
00158
00159             const std::string lInput = *j;
00160             if (lPattern != lInput) {
00161                 return false;
00162             }
00163         }
00164         return true;
00165     }
```

```

00165     }
00166
00167     // See description near the prototype
00168     template <typename ContainerType>
00169     void SplitTokens (const std::string& Source, ContainerType& Container) {
00170         typedef boost::tokenizer<boost::char_separator<char> > TokenizerType;
00171
00172         // Set of token separators
00173         boost::char_separator<char> Separators (" \\t\\n");
00174         // Tokens provider
00175         TokenizerType Tokenizer (Source, Separators);
00176
00177         Container.clear();
00178         for (TokenizerType::const_iterator k (Tokenizer.begin());
00179              k != Tokenizer.end(); ++k) {
00180             // Temporary storage for the token, in order to trim that latter
00181             std::string SingleToken (*k);
00182
00183             boost::algorithm::trim (SingleToken);
00184             Container.push_back (SingleToken);
00185         }
00186     }
00187
00188     // See description near the prototype
00189     char** UserCompletion (const char* text, int start, int end) {
00190         // No default completion at all
00191         rl_attempted_completion_over = 1;
00192
00193         if (Completions.empty() == true) {
00194             return NULL;
00195         }
00196
00197         // Memorise all the previous tokens
00198         std::string PreInput (rl_line_buffer, start);
00199         SplitTokens (PreInput, Tokens);
00200
00201         // Detect whether we should call the standard file name completer
00202         // or a custom one
00203         bool FoundPretender (false);
00204
00205         for (CompletionsStorage::const_iterator k (Completions.begin());
00206              k != Completions.end(); ++k) {
00207             const TokensStorage& lTokenStorage = *k;
00208             if (AreTokensEqual (lTokenStorage, Tokens) == false) {
00209                 continue;
00210             }
00211
00212             if (lTokenStorage.size() > Tokens.size()) {
00213                 FoundPretender = true;
00214                 if (lTokenStorage [Tokens.size()] == "%file") {
00215                     // Standard file name completer - called for the "%file" keyword
00216                     return rl_completion_matches (text, rl_filename_completion_function);
00217                 }
00218             }
00219         }
00220
00221         if (FoundPretender) {
00222             return rl_completion_matches (text, Generator);
00223         }
00224         return NULL;
00225     }
00226

```

```

00227 // See description near the prototype
00228 char* Generator (const char* text, int State) {
00229     static int Length;
00230     static CompletionsStorage::const_iterator Iterator;
00231
00232     if ( State == 0 ) {
00233         Iterator = Completions.begin();
00234         Length = strlen (text);
00235     }
00236
00237     for ( ; Iterator != Completions.end(); ++Iterator) {
00238         const TokensStorage& lCompletion = *Iterator;
00239         if (AreTokensEqual (lCompletion, Tokens) == false) {
00240             continue;
00241         }
00242
00243         if (lCompletion.size() > Tokens.size()) {
00244             if (lCompletion [Tokens.size()] == "%file") {
00245                 continue;
00246             }
00247
00248             const char* lCompletionCharStr (lCompletion [Tokens.size()].c_str());
00249             if (strncmp (text, lCompletionCharStr, Length) == 0) {
00250                 // Readline will free the allocated memory
00251                 const size_t lCompletionSize = strlen (lCompletionCharStr) + 1;
00252                 char* NewString (static_cast<char*> (malloc (lCompletionSize)));
00253                 strcpy (NewString, lCompletionCharStr);
00254
00255                 ++Iterator;
00256
00257                 return NewString;
00258             }
00259         }
00260     }
00261
00262     return NULL;
00263 }
00264
00265 // See the description near the prototype
00266 int KeyDispatcher (int Count, int Key ) {
00267     std::map< Keymap, KeysBind >::iterator Set (Keymaps.find (rl_get_keymap()));
00268     if (Set == Keymaps.end()) {
00269         // Most probably it happens because the header was
00270         // included into many compilation units and the
00271         // keymap setting calls were made in different files.
00272         // This is the problem of "global" data.
00273         // The storage of all the registered keymaps is in anonymous
00274         // namespace.
00275         throw std::runtime_error ("Error selecting a keymap.");
00276     }
00277
00278     (Set->second)[Key] (Count, Key);
00279     return 0;
00280 }
00281
00282 // See the description near the prototype
00283 int StartupHook (void) {
00284     if (KeymapWasSetup) {
00285         rl_set_keymap (Earlykeymap);
00286     }
00287     return 0;

```



```

00289     }
00290
00291 } // Anonymous namespace
00292
00293
00299 namespace swift {
00300
00307     class SKeymap {
00308     private:
00309         // Readline keymap
00310         Keymap keymap;
00311
00312     public:
00319         explicit SKeymap (bool PrintableBound = false) : keymap (NULL) {
00320             if (PrintableBound == true) {
00321                 // Printable characters are bound
00322                 keymap = rl_make_keymap();
00323
00324             } else {
00325                 // Empty keymap
00326                 keymap = rl_make_bare_keymap();
00327             }
00328
00329             if (keymap == NULL) {
00330                 throw std::runtime_error ("Cannot allocate keymap.");
00331             }
00332
00333             // Register a new keymap in the global list
00334             Keymaps [keymap] = KeysBind();
00335         }
00336
00342         explicit SKeymap (Keymap Pattern) : keymap (rl_copy_keymap (Pattern)) {
00343             if ( keymap == NULL ) {
00344                 throw std::runtime_error( "Cannot allocate keymap." );
00345             }
00346
00347             // Register a new keymap in the global list
00348             Keymaps [keymap] = KeysBind();
00349         }
00350
00354         ~SKeymap() {
00355             // Deregister the keymap
00356             Keymaps.erase (keymap);
00357             rl_discard_keymap (keymap);
00358         }
00359
00366         void Bind (int Key, KeyCallback Callback) {
00367             Keymaps [keymap][Key] = Callback;
00368
00369             if (rl_bind_key_in_map (Key, KeyDispatcher, keymap) != 0) {
00370                 // Remove from the map just bound key
00371                 Keymaps [keymap].erase (Key);
00372                 throw std::runtime_error ("Invalid key.");
00373             }
00374         }
00375
00381         void Unbind (int Key) {
00382             rl_unbind_key_in_map (Key, keymap);
00383             Keymaps [keymap].erase (Key);
00384         }
00385
00386         // void Bind (const std::string& Sequence, boost::function<int (int, int)>);

```

```

00387     // void Unbind (std::string& Sequence);
00388
00389 public:
00395     SKeymap (const SKeymap& rhs) {
00396         if (this == &rhs) {
00397             return;
00398         }
00399         keymap = rl_copy_keymap (rhs.keymap);
00400     }
00401
00407     SKeymap& operator= (const SKeymap& rhs) {
00408         if (this == &rhs) {
00409             return *this;
00410         }
00411         keymap = rl_copy_keymap (rhs.keymap);
00412         return *this;
00413     }
00414
00415     friend class SReadline;
00416 };
00417
00424 class SReadline {
00425 public:
00431     SReadline (const size_t Limit = DefaultHistoryLimit)
00432         : HistoryLimit (Limit), HistoryFileName (""),
00433           OriginalCompletion (rl_attempted_completion_function) {
00434         rl_startup_hook = StartupHook;
00435         rl_attempted_completion_function = UserCompletion;
00436         using_history();
00437     }
00438
00446     SReadline (const std::string& historyFileName,
00447               const size_t Limit = DefaultHistoryLimit)
00448         : HistoryLimit (Limit), HistoryFileName (historyFileName),
00449           OriginalCompletion (rl_attempted_completion_function) {
00450         rl_startup_hook = StartupHook;
00451         rl_attempted_completion_function = UserCompletion;
00452         using_history();
00453         LoadHistory (HistoryFileName);
00454     }
00455
00460     ~SReadline() {
00461         rl_attempted_completion_function = OriginalCompletion;
00462         SaveHistory (HistoryFileName);
00463     }
00464
00471     std::string GetLine (const std::string& Prompt) {
00472         bool Unused;
00473         return GetLine (Prompt, Unused);
00474     }
00475
00484     template <typename Container>
00485     std::string GetLine (const std::string& Prompt, Container& ReadTokens) {
00486         bool Unused;
00487         return GetLine (Prompt, ReadTokens, Unused);
00488     }
00489
00499     template <typename Container>
00500     std::string GetLine (const std::string& Prompt, Container& ReadTokens,
00501                         bool& BreakOut) {
00502         std::string Input (GetLine (Prompt, BreakOut));
00503         SplitTokens (Input, ReadTokens);

```

```

00504     return Input;
00505 }
00506
00507
00515 std::string GetLine (const std::string& Prompt, bool& BreakOut) {
00516     BreakOut = true;
00517
00518     char* ReadLine (getline (Prompt.c_str()));
00519     if (ReadLine == NULL) {
00520         return std::string();
00521     }
00522
00523     // It's OK
00524     BreakOut = false;
00525     std::string Input (ReadLine);
00526     free (ReadLine); ReadLine = NULL;
00527
00528     boost::algorithm::trim (Input);
00529     if (Input.empty() == false) {
00530         if (history_length == 0
00531             || Input != history_list()[ history_length - 1 ]->line) {
00532             add_history (Input.c_str());
00533
00534             if (history_length >= static_cast<int> (HistoryLimit)) {
00535                 stifle_history (HistoryLimit);
00536             }
00537         }
00538     }
00539
00540     return Input;
00541 }
00542
00543
00549 template <typename ContainerType>
00550 void GetHistory (ContainerType& Container) {
00551     for (int k (0); k < history_length; ++k) {
00552         Container.push_back (history_list()[k]->line);
00553     }
00554 }
00555
00562 bool SaveHistory (std::ostream& OS) {
00563     if (!OS) {
00564         return false;
00565     }
00566
00567     for (int k (0); k < history_length; ++k) {
00568         OS << history_list()[ k ]->line << std::endl;
00569     }
00570     return true;
00571 }
00572
00579 bool SaveHistory (const std::string& FileName) {
00580     if (FileName.empty() == true) {
00581         return false;
00582     }
00583
00584     std::ofstream OS (FileName.c_str());
00585     return SaveHistory (OS);
00586 }
00587
00592 void ClearHistory() {
00593     clear_history();

```

```

00594     }
00595
00602     bool LoadHistory (std::istream& IS) {
00603         if (!IS) {
00604             return false;
00605         }
00606
00607         ClearHistory();
00608         std::string OneLine;
00609
00610         while (!getline (IS, OneLine).eof()) {
00611             boost::algorithm::trim( OneLine );
00612             if ((history_length == 0)
00613                 || OneLine != history_list()[history_length - 1]->line) {
00614                 add_history (OneLine.c_str());
00615             }
00616         }
00617         stiffl_history (HistoryLimit);
00618         return true;
00619     }
00620
00627     bool LoadHistory (const std::string& FileName) {
00628         if (FileName.empty() == true) {
00629             return false;
00630         }
00631
00632         std::ifstream IS (FileName.c_str());
00633         return LoadHistory (IS);
00634     }
00635
00655     template <typename ContainerType>
00656     void RegisterCompletions (const ContainerType& Container) {
00657         Completions.clear();
00658         for (typename ContainerType::const_iterator k (Container.begin());
00659             k != Container.end(); ++k) {
00660             std::vector<std::string> OneLine;
00661             const std::string& kStr = static_cast<std::string> (*k);
00662
00663             SplitTokens (kStr, OneLine);
00664             Completions.push_back (OneLine);
00665         }
00666     }
00667
00673     void SetKeymap (SKeymap& NewKeymap) {
00674         rl_set_keymap (NewKeymap.keymap);
00675         KeymapWasSetup = true;
00676         Earlykeymap = NewKeymap.keymap;
00677     }
00678
00679
00680     private:
00681         // ////////////////////////////////// Attributes //////////////////////////////////
00682         const size_t HistoryLimit;
00683
00684         const std::string HistoryFileName;
00685
00686         rl_completion_func_t* OriginalCompletion;
00687     };
00688 }; // namespace swift
00689
00700 #endif

```

00701

25.57 test/sevmgr/EventQueueManagementTestSuite.cpp File Reference

25.58 EventQueueManagementTestSuite.cpp

```

00001
00005 // //////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////
00008 // STL
00009 #include <sstream>
00010 #include <fstream>
00011 #include <map>
00012 #include <cmath>
00013 // Boost Unit Test Framework (UTF)
00014 #define BOOST_TEST_DYN_LINK
00015 #define BOOST_TEST_MAIN
00016 #define BOOST_TEST_MODULE EventQueueManagementTest
00017 #include <boost/test/unit_test.hpp>
00018 // StdAir
00019 #include <stdair/stdair_basic_types.hpp>
00020 #include <stdair/basic/BasLogParams.hpp>
00021 #include <stdair/basic/BasDBParams.hpp>
00022 #include <stdair/basic/BasFileMgr.hpp>
00023 #include <stdair/basic/ProgressStatusSet.hpp>
00024 #include <stdair/bom/EventStruct.hpp>
00025 #include <stdair/bom/EventQueue.hpp>
00026 #include <stdair/bom/BookingRequestStruct.hpp>
00027 #include <stdair/service/Logger.hpp>
00028 // SEvMgr
00029 #include <sevmgr/SEVMGR_Service.hpp>
00030 #include <sevmgr/config/sevmgr-paths.hpp>
00031
00032 namespace boost_utf = boost::unit_test;
00033
00034 // (Boost) Unit Test XML Report
00035 std::ofstream utfReportStream ("EventQueueManagementTestSuite_utfresults.xml");
00036
00040 struct UnitTestConfig {
00042     UnitTestConfig() {
00043         boost_utf::unit_test_log.set_stream (utfReportStream);
00044         boost_utf::unit_test_log.set_format (boost_utf::XML);
00045         boost_utf::unit_test_log.set_threshold_level (boost_utf::log_test_units);
00046         //boost_utf::unit_test_log.set_threshold_level (boost_utf::log_successful_tes
00047     ts);
00047     }
00048
00050     ~UnitTestConfig() {
00051     }
00052 };
00053
00054 // Specific type definitions
00055 typedef std::pair<stdair::Count_T, stdair::Count_T> NbOfEventsPair_T;
00056 typedef std::map<const stdair::DemandStreamKeyStr_T,
00057                 NbOfEventsPair_T> NbOfEventsByDemandStreamMap_T;
00058
00059
00060 // ////////////////////////////////// Main: Unit Test Suite //////////////////////////////////
00061

```

```
00062 // Set the UTF configuration (re-direct the output to a specific file)
00063 BOOST_GLOBAL_FIXTURE (UnitTestFixture);
00064
00065 // Start the test suite
00066 BOOST_AUTO_TEST_SUITE (master_test_suite)
00067
00068
00071 BOOST_AUTO_TEST_CASE (sevmgr_simple_simulation_test) {
00072
00073     // Input file name
00074     const stdair::Filename_T lInputFilename (STDAIR_SAMPLE_DIR "/demand01.csv");
00075
00076     // Check that the file path given as input corresponds to an actual file
00077     const bool doesExistAndIsReadable =
00078         stdair::BasFileMgr::doesExistAndIsReadable (lInputFilename);
00079     BOOST_CHECK_MESSAGE (doesExistAndIsReadable == true,
00080         "The '" << lInputFilename
00081         << "' input file can not be open and read");
00082
00083     // Output log File
00084     const stdair::Filename_T lLogFilename ("EventQueueManagementTestSuite.log");
00085
00086     // Set the log parameters
00087     std::ofstream logOutputFile;
00088     // open and clean the log outputfile
00089     logOutputFile.open (lLogFilename.c_str());
00090     logOutputFile.clear();
00091
00092     // Initialise the Sevmgr service object
00093     const stdair::BasLogParams lLogParams (stdair::LOG::DEBUG, logOutputFile);
00094     SEVMGR::SEVMGR_Service sevmgrService (lLogParams);
00095
00096     sevmgrService.buildSampleBom();
00097
00098     sevmgrService.reset();
00099
00100
00101
00102
00103     // DEBUG
00104     STDAIR_LOG_DEBUG ("End of the simulation");
00105
00106     // Close the log file
00107     logOutputFile.close();
00108 }
00109
00110 // End the test suite
00111 BOOST_AUTO_TEST_SUITE_END()
00112
00113
```

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