



SQL Anywhere® 10 Context-Sensitive Help

Published: October 2006

Copyright and trademarks

Copyright © 2006 iAnywhere Solutions, Inc. Portions copyright © 2006 Sybase, Inc. All rights reserved.

iAnywhere Solutions, Inc. is a subsidiary of Sybase, Inc.

iAnywhere grants you permission to use this document for your own informational, educational, and other non-commercial purposes; provided that (1) you include this and all other copyright and proprietary notices in the document in all copies; (2) you do not attempt to "pass-off" the document as your own; and (3) you do not modify the document. You may not publish or distribute the document or any portion thereof without the express prior written consent of iAnywhere.

This document is not a commitment on the part of iAnywhere to do or refrain from any activity, and iAnywhere may change the content of this document at its sole discretion without notice. Except as otherwise provided in a written agreement between you and iAnywhere, this document is provided "as is", and iAnywhere assumes no liability for its use or any inaccuracies it may contain.

iAnywhere®, Sybase®, and the marks listed at <http://www.iAnywhere.com/trademarks> are trademarks of Sybase, Inc. or its subsidiaries. ® indicates registration in the United States of America.

Java and all Java-based marks are trademarks or registered trademarks of Sun Microsystems, Inc. in the U.S. and other countries.

All other company and product names mentioned may be trademarks of the respective companies with which they are associated.

Contents

About This Manual	vii
SQL Anywhere documentation	viii
Documentation conventions	xi
Finding out more and providing feedback	xv
Connect Dialog Help	1
Connect dialog: Identification tab (SQL Anywhere)	2
Connect dialog: Identification tab (MobiLink and QAnywhere)	4
Connect dialog: Identification tab (UltraLite)	6
Connect dialog: Database tab (SQL Anywhere)	7
Connect dialog: Advanced tab (SQL Anywhere)	10
Connect dialog: Advanced tab (MobiLink and QAnywhere)	11
Connect dialog: Advanced tab (UltraLite)	12
ODBC Configuration Dialog Help	13
SQL Anywhere ODBC driver	14
SQL Anywhere Help	25
Introduction to property sheets	26
Introduction to dialog boxes	104
Debugger help	132
Index Consultant	134
UltraLite projects	135
UltraLite statements	136
Publications	137
Articles	138
Subscriptions	139
Connect dialog tools	140
Indexes folder	141
Table edit undo	142

Database search	143
MobiLink Admin Mode Help	145
Introduction	146
MobiLink property sheets	147
MobiLink Model Mode Help	161
MobiLink Model mode wizards	162
QAnywhere Help	187
QAnywhere plug-in property sheets	188
QAnywhere dialog boxes	199
SQL Anywhere UltraLite Help	207
Introduction to property sheets	208
Introduction to dialog boxes	217
Interactive SQL Help	221
About Interactive SQL	222
Introduction to Interactive SQL dialogs	224
MobiLink Monitor Help	239
Introducing the MobiLink Monitor	240
Connect to MobiLink Server dialog	242
Edit Watch dialog	245
Go To dialog	246
New Watch dialog	247
Export to Database dialog	248
Options dialog: General tab	249
Options dialog: Table tab	251
Options dialog: Graph tab	252

Options dialog: Chart Layout tab	254
Options dialog: Chart Colors tab	255
Options dialog: Overview tab	256
Sample property sheet: Sample tab	257
Sample property sheet: Range tab	258
Session property sheet: General tab	259
Session property sheet: Statistics tab	260
Synchronization property sheet: General tab	261
Synchronization property sheet: Upload tab	262
Synchronization property sheet: Download tab	263
Synchronization property sheet: Synchronization tab	264
Watch Manager dialog	265
Query Editor Help	267
Introducing the Query Editor	268
Tables tab	270
Joins tab	272
Columns tab	274
INTO tab	275
WHERE tab	276
GROUP BY tab	277
HAVING tab	279
ORDER BY tab	280
Expression Editor	281
Results pane	283
SQL pane	284
SQL Anywhere Console Utility Help	285
Using the SQL Anywhere Console utility	286
Console options	287
Connection Viewer	288
Message Viewer	289
Property Viewer	290
Check For Updates	291

SQL Language Links	293
SQL syntax help	294
Index	303

About This Manual

Subject

This manual provides context-sensitive help for the Connect dialog, the Query Editor, the MobiLink Monitor, the SQL Anywhere Console utility, the Index Consultant, and Interactive SQL.

It also contains context-sensitive help for all the property sheets and dialog boxes that are available for the SQL Anywhere, MobiLink, UltraLite, and QAnywhere plug-ins for Sybase Central.

Audience

This manual is for all users of SQL Anywhere.

SQL Anywhere documentation

This book is part of the SQL Anywhere documentation set. This section describes the books in the documentation set and how you can use them.

The SQL Anywhere documentation

The complete SQL Anywhere documentation is available in two forms: an online form that combines all books, and as separate PDF files for each book. Both forms of the documentation contain identical information and consist of the following books:

- ◆ **SQL Anywhere 10 - Introduction** This book introduces SQL Anywhere 10—a comprehensive package that provides data management and data exchange, enabling the rapid development of database-powered applications for server, desktop, mobile, and remote office environments.
- ◆ **SQL Anywhere 10 - Changes and Upgrading** This book describes new features in SQL Anywhere 10 and in previous versions of the software.
- ◆ **SQL Anywhere Server - Database Administration** This book covers material related to running, managing, and configuring SQL Anywhere databases. It describes database connections, the database server, database files, security, backup procedures, security, and replication with Replication Server, as well as administration utilities and options.
- ◆ **SQL Anywhere Server - SQL Usage** This book describes how to design and create databases; how to import, export, and modify data; how to retrieve data; and how to build stored procedures and triggers.
- ◆ **SQL Anywhere Server - SQL Reference** This book provides a complete reference for the SQL language used by SQL Anywhere. It also describes the SQL Anywhere system views and procedures.
- ◆ **SQL Anywhere Server - Programming** This book describes how to build and deploy database applications using the C, C++, and Java programming languages, as well as Visual Studio .NET. Users of tools such as Visual Basic and PowerBuilder can use the programming interfaces provided by those tools.
- ◆ **SQL Anywhere 10 - Error Messages** This book provides a complete listing of SQL Anywhere error messages together with diagnostic information.
- ◆ **MobiLink - Getting Started** This manual introduces MobiLink, a session-based relational-database synchronization system. MobiLink technology allows two-way replication and is well suited to mobile computing environments.
- ◆ **MobiLink - Server Administration** This manual describes how to set up and administer MobiLink applications.
- ◆ **MobiLink - Client Administration** This manual describes how to set up, configure, and synchronize MobiLink clients. MobiLink clients can be SQL Anywhere or UltraLite databases.
- ◆ **MobiLink - Server-Initiated Synchronization** This manual describes MobiLink server-initiated synchronization, a feature of MobiLink that allows you to initiate synchronization or other remote actions from the consolidated database.

- ◆ **QAnywhere** This manual describes QAnywhere, which defines a messaging platform for mobile and wireless clients as well as traditional desktop and laptop clients.
- ◆ **SQL Remote** This book describes the SQL Remote data replication system for mobile computing, which enables sharing of data between a SQL Anywhere consolidated database and many SQL Anywhere remote databases using an indirect link such as email or file transfer.
- ◆ **SQL Anywhere 10 - Context-Sensitive Help** This manual provides context-sensitive help for the Connect dialog, the Query Editor, the MobiLink Monitor, the SQL Anywhere Console utility, the Index Consultant, and Interactive SQL.
- ◆ **UltraLite - Database Management and Reference** This manual introduces the UltraLite database system for small devices.
- ◆ **UltraLite - AppForge Programming** This manual describes UltraLite for AppForge. With UltraLite for AppForge you can develop and deploy database applications to handheld, mobile, or embedded devices, running Palm OS, Symbian OS, or Windows CE.
- ◆ **UltraLite - .NET Programming** This manual describes UltraLite.NET. With UltraLite.NET you can develop and deploy database applications to computers, or handheld, mobile, or embedded devices.
- ◆ **UltraLite - M-Business Anywhere Programming** This manual describes UltraLite for M-Business Anywhere. With UltraLite for M-Business Anywhere you can develop and deploy web-based database applications to handheld, mobile, or embedded devices, running Palm OS, Windows CE, or Windows XP.
- ◆ **UltraLite - C and C++ Programming** This manual describes UltraLite C and C++ programming interfaces. With UltraLite you can develop and deploy database applications to handheld, mobile, or embedded devices.

Documentation formats

SQL Anywhere provides documentation in the following formats:

- ◆ **Online documentation** The online documentation contains the complete SQL Anywhere documentation, including the books and the context-sensitive help for SQL Anywhere tools. The online documentation is updated with each maintenance release of the product, and is the most complete and up-to-date source of documentation.

To access the online documentation on Windows operating systems, choose Start ► Programs ► SQL Anywhere 10 ► Online Books. You can navigate the online documentation using the HTML Help table of contents, index, and search facility in the left pane, as well as using the links and menus in the right pane.

To access the online documentation on Unix operating systems, see the HTML documentation under your SQL Anywhere installation or on your installation CD.

- ◆ **PDF files** The complete set of SQL Anywhere books is provided as a set of Adobe Portable Document Format (pdf) files, viewable with Adobe Reader.

On Windows, the PDF books are accessible from the online books via the PDF link at the top of each page, or from the Windows Start menu (Start ► Programs ► SQL Anywhere 10 ► Online Books - PDF Format).

On Unix, the PDF books are accessible on your installation CD.

Documentation conventions

This section lists the typographic and graphical conventions used in this documentation.

Syntax conventions

The following conventions are used in the SQL syntax descriptions:

- ◆ **Keywords** All SQL keywords appear in uppercase, like the words ALTER TABLE in the following example:

```
ALTER TABLE [ owner.]table-name
```

- ◆ **Placeholders** Items that must be replaced with appropriate identifiers or expressions are shown like the words *owner* and *table-name* in the following example:

```
ALTER TABLE [ owner.]table-name
```

- ◆ **Repeating items** Lists of repeating items are shown with an element of the list followed by an ellipsis (three dots), like *column-constraint* in the following example:

```
ADD column-definition [ column-constraint, ... ]
```

One or more list elements are allowed. In this example, if more than one is specified, they must be separated by commas.

- ◆ **Optional portions** Optional portions of a statement are enclosed by square brackets.

```
RELEASE SAVEPOINT [ savepoint-name ]
```

These square brackets indicate that the *savepoint-name* is optional. The square brackets should not be typed.

- ◆ **Options** When none or only one of a list of items can be chosen, vertical bars separate the items and the list is enclosed in square brackets.

```
[ ASC | DESC ]
```

For example, you can choose one of ASC, DESC, or neither. The square brackets should not be typed.

- ◆ **Alternatives** When precisely one of the options must be chosen, the alternatives are enclosed in curly braces and a bar is used to separate the options.

```
[ QUOTES { ON | OFF } ]
```

If the QUOTES option is used, one of ON or OFF must be provided. The brackets and braces should not be typed.

File name conventions

The documentation generally adopts Windows conventions when describing operating-system dependent tasks and features such as paths and file names. In most cases, there is a simple transformation to the syntax used on other operating systems.

- ◆ **Directories and path names** The documentation typically lists directory paths using Windows conventions, including colons for drives and backslashes as a directory separator. For example,

```
MobiLink\redirector
```

On Unix, Linux, and Mac OS X, you should use forward slashes instead. For example,

```
MobiLink/redirector
```

- ◆ **Executable files** The documentation shows executable file names using Windows conventions, with the suffix *.exe*. On Unix, Linux, and Mac OS X, executable file names have no suffix. On NetWare, executable file names use the suffix *.nlm*.

For example, on Windows, the network database server is *dbsrv10.exe*. On Unix, Linux, and Mac OS X, it is *dbsrv10*. On NetWare, it is *dbsrv10.nlm*.

- ◆ **install-dir** The installation process allows you to choose where to install SQL Anywhere, and the documentation refers to this location using the convention *install-dir*.

After installation is complete, the environment variable `SQLANY10` specifies the location of the installation directory containing the SQL Anywhere components (*install-dir*). `SQLANYSH10` specifies the location of the directory containing components shared by SQL Anywhere with other Sybase applications.

For more information on the default location of *install-dir*, by operating system, see “[File Locations and Installation Settings](#)” [*SQL Anywhere Server - Database Administration*].

- ◆ **samples-dir** The installation process allows you to choose where to install the samples that are included with SQL Anywhere, and the documentation refers to this location using the convention *samples-dir*.

After installation is complete, the environment variable `SQLANYXSAMP10` specifies the location of the directory containing the samples (*samples-dir*). From the Windows Start menu, choosing Programs ► SQL Anywhere 10 ► Sample Applications and Projects opens a Windows Explorer window in this directory.

For more information on the default location of *samples-dir*, by operating system, see “[The samples directory](#)” [*SQL Anywhere Server - Database Administration*].

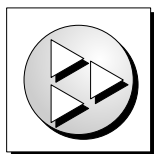
- ◆ **Environment variables** The documentation refers to setting environment variables. On Windows, environment variables are referred to using the syntax *%envvar%*. On Unix, Linux, and Mac OS X, environment variables are referred to using the syntax *\$envvar* or *\${envvar}*.

Unix, Linux, and Mac OS X environment variables are stored in shell and login startup files, such as *.cshrc* or *.tcshrc*.

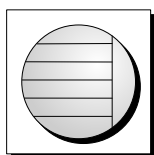
Graphic icons

The following icons are used in this documentation.

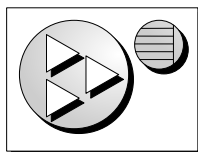
- ◆ A client application.



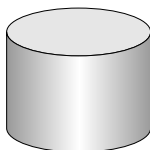
- ◆ A database server, such as SQL Anywhere.



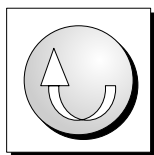
- ◆ An UltraLite application.



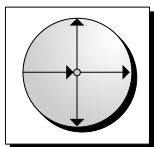
- ◆ A database. In some high-level diagrams, the icon may be used to represent both the database and the database server that manages it.



- ◆ Replication or synchronization middleware. These assist in sharing data among databases. Examples are the MobiLink server and the SQL Remote Message Agent.



- ◆ A Sybase Replication Server



- ◆ A programming interface.



Finding out more and providing feedback

Finding out more

Additional information and resources, including a code exchange, are available at the iAnywhere Developer Network at <http://www.ianywhere.com/developer/>.

If you have questions or need help, you can post messages to the iAnywhere Solutions newsgroups listed below.

When you write to one of these newsgroups, always provide detailed information about your problem, including the build number of your version of SQL Anywhere. You can find this information by entering **dbeng10 -v** at a command prompt.

The newsgroups are located on the *forums.sybase.com* news server. The newsgroups include the following:

- ◆ [sybase.public.sqlanywhere.general](#)
- ◆ [sybase.public.sqlanywhere.linux](#)
- ◆ [sybase.public.sqlanywhere.mobilink](#)
- ◆ [sybase.public.sqlanywhere.product_futures_discussion](#)
- ◆ [sybase.public.sqlanywhere.replication](#)
- ◆ [sybase.public.sqlanywhere.ultralite](#)
- ◆ [ianywhere.public.sqlanywhere.qanywhere](#)

Newsgroup disclaimer

iAnywhere Solutions has no obligation to provide solutions, information, or ideas on its newsgroups, nor is iAnywhere Solutions obliged to provide anything other than a systems operator to monitor the service and ensure its operation and availability.

iAnywhere Solutions Technical Advisors as well as other staff assist on the newsgroup service when they have time available. They offer their help on a volunteer basis and may not be available on a regular basis to provide solutions and information. Their ability to help is based on their workload.

Feedback

We would like to receive your opinions, suggestions, and feedback on this documentation.

You can email comments and suggestions to the SQL Anywhere documentation team at iasdoc@ianywhere.com. Although we do not reply to emails sent to that address, we read all suggestions with interest.

In addition, you can provide feedback on the documentation and the software through the newsgroups listed above.

CHAPTER 1

Connect Dialog Help

Contents

Connect dialog: Identification tab (SQL Anywhere)	2
Connect dialog: Identification tab (MobiLink and QAnywhere)	4
Connect dialog: Identification tab (UltraLite)	6
Connect dialog: Database tab (SQL Anywhere)	7
Connect dialog: Advanced tab (SQL Anywhere)	10
Connect dialog: Advanced tab (MobiLink and QAnywhere)	11
Connect dialog: Advanced tab (UltraLite)	12

About this chapter

This chapter describes the Connect dialog used by Sybase Central, Interactive SQL, and the SQL Anywhere Console utility (dbconsole).

The settings in this dialog are preserved for the current Sybase Central, Interactive SQL, or SQL Anywhere Console session only. You can preserve connection settings in Sybase Central using Connection Profiles.

Connect dialog: Identification tab (SQL Anywhere)

The Identification tab of the Connect dialog has the following components:

Supply user ID and password Select this option to specify a user ID and password for the connection.

- ◆ **User ID** Type a user ID for the connection. The default user ID for SQL Anywhere databases is **DBA**. The user ID you supply must have permissions on a database to connect.

☞ For more information about the userid connection parameter, see [“Userid connection parameter \[UID\]” \[SQL Anywhere Server - Database Administration\]](#).

- ◆ **Password** Type a password for the connection. The default password for SQL Anywhere databases is **sql** when you connect with the default user, **DBA**. The password must be the correct password for the user ID you supply. Passwords are case sensitive.

☞ For more information about the password connection parameter, see [“Password connection parameter \[PWD\]” \[SQL Anywhere Server - Database Administration\]](#).

Use integrated login Select this option to connect to the database using an integrated login on Windows.

If you select this option, your database user ID and password do not need to be specified: instead, your Windows user ID and password are supplied to the SQL Anywhere integrated login mechanism.

To use integrated logins, you must have been granted integrated login permission on the database and the database server must be set up to accept integrated logins.

☞ For more information about integrated logins, see [“Using integrated logins” \[SQL Anywhere Server - Database Administration\]](#) and [“Integrated connection parameter \[INT\]” \[SQL Anywhere Server - Database Administration\]](#).

None Select this option if you are not using an ODBC data source for the connection.

ODBC Data Source name Select this option to choose a data source (a stored set of connection parameters) for connecting to your database. This field is equivalent to the DSN connection parameter, which references a data source in the registry. You can view a list of data sources by clicking Browse.

You can also select a recently used [ODBC data source \[SQL Anywhere 10 - Introduction\]](#) from the dropdown list.

☞ For information about the DSN connection parameter, see [“DataSourceName connection parameter \[DSN\]” \[SQL Anywhere Server - Database Administration\]](#).

- ◆ **Open the ODBC Data Source Administrator button** Click the Open the ODBC Data Source Administrator button to open the ODBC Administrator dialog where you can select an ODBC data source from the list of available data sources. If you want to select a data source, select it from the list and then click OK.

You may also choose to create a new data source or configure an existing data source to use for the connection.

☞ For information about using the ODBC Administrator dialog, see [“Working with ODBC data sources” \[SQL Anywhere Server - Database Administration\]](#).

Tip

ODBC data sources allow you to store connection information. If you have connection information stored in an ODBC data source, do not repeat this information in the Connect dialog. For example, if the ODBC data source already contains a user ID, then do not supply the user ID in the User ID field of the Connect dialog.

Note

Any information you enter in the Connect dialog, such as the user ID or database name, takes precedence over the parameters stored in an ODBC data source or an ODBC data source file.

ODBC Data Source file Select this option to choose a data source file for the connection. You can search for the file by clicking Browse. The ODBC data source file is often used for Unix systems.

You can also select a recently used ODBC Data Source File from the dropdown list.

File data sources hold the same information as ODBC data sources stored in the registry.

☞ For more information about file DSN connection parameter, see [“FileDataSourceName connection parameter \[FILEDSN\]” \[SQL Anywhere Server - Database Administration\]](#).

Tools The following utilities are available from the Tools button:

◆ **Test connection** This tool is only available when you are connecting to a SQL Anywhere database. Tests whether the information provided results in a proper connection.

Click Show Details to see debugging information about how the connection parameters are used to find the database server.

◆ **Setup Windows CE proxy port** This tool is only available if you have ActiveSync installed and are connecting to a SQL Anywhere or UltraLite database. Helps you setup a TCP/IP port redirector for connecting to Windows CE databases (if Windows CE services are installed).

☞ For more information about ODBC data sources, see [“Working with ODBC data sources” \[SQL Anywhere Server - Database Administration\]](#).

See also

- ◆ [“Simple connection examples” \[SQL Anywhere Server - Database Administration\]](#)
- ◆ [“Troubleshooting connections” \[SQL Anywhere Server - Database Administration\]](#)
- ◆ [“Troubleshooting server startup” \[SQL Anywhere Server - Database Administration\]](#)
- ◆ [“Troubleshooting network communications” \[SQL Anywhere Server - Database Administration\]](#)

Connect dialog: Identification tab (MobiLink and QAnywhere)

The Identification tab of the Connect dialog for connecting to the MobiLink and QAnywhere plug-ins in Sybase Central has the following components:

User ID Type a user ID for the database connection. The user ID you supply must have permissions on a database to connect.


 For more information about the userid connection parameter, see “[Userid connection parameter \[UID\]](#)” [*SQL Anywhere Server - Database Administration*].

Password Type a password for the connection. This must be the correct password for the user ID you supply. Passwords are case sensitive.

 For more information about the password connection parameter, see “[Password connection parameter \[PWD\]](#)” [*SQL Anywhere Server - Database Administration*].

ODBC Data Source name Select this option to choose a data source (a stored set of connection parameters) for connecting to your database. This field is equivalent to the DSN connection parameter, which references a data source in the registry. You can view a list of data sources by clicking Browse.

You can also select a recently used [ODBC data source \[SQL Anywhere 10 - Introduction\]](#) from the dropdown list.

 For information about the DSN connection parameter, see “[DataSourceName connection parameter \[DSN\]](#)” [*SQL Anywhere Server - Database Administration*].

♦ **Open the ODBC Data Source Administrator button** Click the Open the ODBC Data Source Administrator button to open the ODBC Administrator dialog where you can select an ODBC data source from the list of available data sources. If you want to select a data source, select it from the list and then click OK.

You may also choose to create a new data source or configure an existing data source to use for the connection.

 For information about using the ODBC Administrator dialog, see “[Working with ODBC data sources](#)” [*SQL Anywhere Server - Database Administration*].

Tip

ODBC data sources allow you to store connection information. If you have connection information stored in an ODBC data source, do not repeat this information in the Connect dialog. For example, if the ODBC data source already contains a user ID, then do not supply the user ID in the User ID field of the Connect dialog.


Note

Any information you enter in the Connect dialog, such as the user ID or database name, takes precedence over the parameters stored in an ODBC data source or an ODBC data source file.

ODBC Data Source file Select this option to choose a data source file for the connection. You can search for the file by clicking Browse. The ODBC data source file is often used for Unix systems.

You can also select a recently used ODBC data source file from the dropdown list.

File data sources hold the same information as ODBC data sources stored in the registry.


 For more information about file DSN connection parameter, see [“FileDataSourceName connection parameter \[FILEDSN\]” \[SQL Anywhere Server - Database Administration\]](#).

Tools The following utilities are available from the Tools button:

◆ **Test connection** This tool is only available when you are connecting to a SQL Anywhere database. Tests whether the information provided results in a proper connection.

Click Show Details to see debugging information about how the connection parameters are used to find the database server.

◆ **Setup Windows CE proxy port** This tool is only available if you have ActiveSync installed and are connecting to a SQL Anywhere or UltraLite database. Helps you setup a TCP/IP port redirector for connecting to Windows CE databases (if Windows CE services are installed).

 For more information about ODBC data sources, see [“Working with ODBC data sources” \[SQL Anywhere Server - Database Administration\]](#).

Connection type dropdown list Choose Generic ODBC Database from the list when connecting to a database other than SQL Anywhere or UltraLite (for example, SQL Server, DB2, or Oracle).

Connect dialog: Identification tab (UltraLite)

The Identification tab of the Connect dialog for connecting to an UltraLite database has the following components:

User ID Type a user ID for the database connection. The user ID you supply must have permissions on a database to connect.

☞ For more information about the user ID connection parameter, see “[UID connection parameter](#)” [*UltraLite - Database Management and Reference*].

Password Type a password for the connection. This must be the correct password for the user ID you supply. Passwords are case sensitive.

☞ For more information about the password connection parameter, see “[PWD connection parameter](#)” [*UltraLite - Database Management and Reference*].

Database file Specify the database file. Type the full path and name of the database file, for example, **C:\myuldb.db**.

You can also select a recently-used database file from the dropdown list or click Browse to search for the database file.

☞ For more information about database file connection parameters, see “[DBF connection parameter](#)” [*UltraLite - Database Management and Reference*], “[CE_FILE connection parameter](#)” [*UltraLite - Database Management and Reference*], “[PALM_FILE connection parameter](#)” [*UltraLite - Database Management and Reference*], “[NT_FILE connection parameter](#)” [*UltraLite - Database Management and Reference*] and “[SYMBIAN_FILE connection parameter](#)” [*UltraLite - Database Management and Reference*].

◆ **Encryption key** If the database file is encrypted, you must supply a key to UltraLite every time UltraLite starts the database.

☞ For more information about encryption keys, see “[DBKEY connection parameter](#)” [*UltraLite - Database Management and Reference*].

The Encryption key field is enabled only after you fill in the Database File field.


Tools The Tools button is not available for the UltraLite plug-in.

Connect dialog: Database tab (SQL Anywhere)

The Database tab of the Connect dialog has the following components:


Server name Type the name of the SQL Anywhere personal server or network server. For example, **demo**. You need to supply a server name if you want to connect to a network server. You can omit the server name if you want to connect to the default personal server.

You can select a recently-used server name from the dropdown list or click Find to search for a server. When you click Find, a dialog appears listing running local personal servers and network servers. To choose a server from this dialog, select a server from the list and then click OK. The server name appears on the Database tab in the Server Name field.

 For more information about the server name, see [“Naming the server and the databases” \[SQL Anywhere Server - Database Administration\]](#).

The server name connection parameter is a synonym for the EngineName (ENG) connection parameter. For more information about the engine name connection parameter, see [“EngineName connection parameter \[ENG\]” \[SQL Anywhere Server - Database Administration\]](#).

Start line The start line is a command to start a personal database server or a network server on your computer. Enter a start line only if you want to connect to a local database server that is not currently running and if you want to set your own start parameters. You must enter the full path of the server, for example to start the personal database server enter, **c:\Program Files\SQL Anywhere 10\win32\dbeng10.exe**. Alternatively, you can select a recently used start line from the dropdown list.

 For more information about the start line connection parameter, see [“StartLine connection parameter \[START\]” \[SQL Anywhere Server - Database Administration\]](#).

You can also include options in the Start Line field. The start line and options are used when you want to:

- ◆ Employ any advanced server features.
- ◆ Control protocol options.
- ◆ Provide diagnostic or troubleshooting messages.
- ◆ Set permissions.
- ◆ Set database parameters (including encryption).


For more information about options you can specify in the Start Line field, see [“Some common options” \[SQL Anywhere Server - Database Administration\]](#) and [“The SQL Anywhere database server” \[SQL Anywhere Server - Database Administration\]](#).

Search network for database servers Select this option if you want to connect to a server that is running on a computer other than your local computer. You should clear this option if you want to connect to a database server on your local computer. Selecting this option adds the LINKS=ALL connection parameter to the connection string.

Database name Each database running on a server is identified by a database name. Type the name of the database you are connecting to.

You need a database name only if there is more than one database running on the server. If the database is not already running on the server, you should specify the database file instead.

You can also select a recently-used database name from the dropdown list or click Browse to locate the database file.

 For more information about the database name, see [“Naming the server and the databases” \[SQL Anywhere Server - Database Administration\]](#) and [“DatabaseName connection parameter \[DBN\]” \[SQL Anywhere Server - Database Administration\]](#).

Database file Specify the database file when the database you want to connect to is not currently running on a server. It is recommended that you type the full path and name of the database file, for example, **C:\sample.db**. Otherwise, the path of the file is relative to the working directory of the server.


You can also select a recently-used database file from the dropdown list or click Browse to search for the database file.

Note

If you specify both the database name and database file when trying to connect to a database that is already running, the database file is ignored.

 For more information about the database file connection parameter, see [“DatabaseFile connection parameter \[DBF\]” \[SQL Anywhere Server - Database Administration\]](#).

◆ **Encryption key** If the database file is encrypted, you must supply a key to the database server every time the database server starts the database.

 For more information about encryption keys, see [“DatabaseKey connection parameter \[DBKEY\]” \[SQL Anywhere Server - Database Administration\]](#).


The Encryption key field is enabled only after you fill in the Database File field. You can also supply encryption options in the Start Line field.

Start database automatically Select this option to start the database specified in the Database File field before you connect to it.

You should clear the Start Database Automatically option if you want to ensure that you connect only to a running database.

 For more information about the autostart connection parameter, see [“AutoStart connection parameter \[ASTART\]” \[SQL Anywhere Server - Database Administration\]](#).

Stop database after last disconnect Select this option to automatically shut down the database after the last user disconnects.

 For more information about the autostop connection parameter, see [“AutoStop connection parameter \[ASTOP\]” \[SQL Anywhere Server - Database Administration\]](#).

See also

- ◆ [“Simple connection examples”](#) [*SQL Anywhere Server - Database Administration*]
- ◆ [“Troubleshooting connections”](#) [*SQL Anywhere Server - Database Administration*]
- ◆ [“Troubleshooting server startup”](#) [*SQL Anywhere Server - Database Administration*]
- ◆ [“Troubleshooting network communications”](#) [*SQL Anywhere Server - Database Administration*]

Connect dialog: Advanced tab (SQL Anywhere)

The Advanced tab of the Connect dialog has the following components:


Connection name This field only appears when you open the Connect dialog from Interactive SQL and are connecting to a SQL Anywhere database. Type a name to identify the connection. If specified, the name appears in the title bar in Interactive SQL.

Enter connection parameters, one per line, in the form "name=value" Enter additional connection parameters in this field, entering one connection parameter per line. The following connection parameters log debugging information regarding connections:

```
DEBUG=YES  
LOG=connection.log
```

When you enter the connection parameters one per line, a semicolon is not required between the parameters.

Parameters set in this field are superseded by parameters set throughout the rest of this dialog. For example, if you enter the user ID DBA on the Identification tab, and set the connection parameter "uid=bsmith" in this field, a connection with the user ID DBA is attempted.

 For more information about connection parameters, see [“Connection parameters” \[SQL Anywhere Server - Database Administration\]](#) and [“How connection parameters work” \[SQL Anywhere Server - Database Administration\]](#).

See also

- ◆ [“Simple connection examples” \[SQL Anywhere Server - Database Administration\]](#)
- ◆ [“Troubleshooting connections” \[SQL Anywhere Server - Database Administration\]](#)
- ◆ [“Troubleshooting server startup” \[SQL Anywhere Server - Database Administration\]](#)
- ◆ [“Troubleshooting network communications” \[SQL Anywhere Server - Database Administration\]](#)


Connect dialog: Advanced tab (MobiLink and QAnywhere)

Enter connection parameters, one per line, in the form "name=value" Type any additional connection parameters in this field, entering one connection parameter per line. The following connection parameters log debugging information regarding connections:

```
DEBUG=YES  
LOG=connection.log
```

When you enter the connection parameters one per line, a semicolon is not required between the parameters.

Parameters set in this field take precedence over parameters set throughout the rest of this dialog. For example, if you enter the user ID DBA on the Identification tab, and set the connection parameter "uid=bsmith" in this field, a connection with the user ID bsmith is attempted.

 For more information about connection parameters, see [“Connection parameters” \[SQL Anywhere Server - Database Administration\]](#) and [“How connection parameters work” \[SQL Anywhere Server - Database Administration\]](#).

See also

- ◆ [“Simple connection examples” \[SQL Anywhere Server - Database Administration\]](#)
- ◆ [“Troubleshooting connections” \[SQL Anywhere Server - Database Administration\]](#)
- ◆ [“Troubleshooting server startup” \[SQL Anywhere Server - Database Administration\]](#)
- ◆ [“Troubleshooting network communications” \[SQL Anywhere Server - Database Administration\]](#)

Connection type dropdown list Choose Generic ODBC Database from the list when connecting to a database other than SQL Anywhere or UltraLite (for example, SQL Server, DB2 or Oracle).


Connect dialog: Advanced tab (UltraLite)

The Advanced tab of the Connect dialog has the following components:

Enter connection parameters, one per line, in the form "name=value" Enter additional connection parameters in this field, entering one connection parameter per line. When you enter the connection parameters one per line, a semicolon is not required between the parameters. The following example sets the database name:

```
DBN=the test version
```

Parameters set in this field take precedence over parameters set throughout the rest of this dialog. For example, if you enter the user ID DBA on the Identification tab, and set the connection parameter "UID=bsmith" in this field, a connection with the user ID bsmith is attempted.

 For more information about connection parameters, see [“Supplying UltraLite connection parameters” \[UltraLite - Database Management and Reference\]](#) and [“Connecting to an UltraLite Database” \[UltraLite - Database Management and Reference\]](#).

See also

- ◆ [“Storing parameters with the ULSQLCONNECT environment variable” \[UltraLite - Database Management and Reference\]](#)
- ◆ [“Assembling parameters into connection strings” \[UltraLite - Database Management and Reference\]](#)
- ◆ [“Connection parameter tips” \[SQL Anywhere Server - Database Administration\]](#)

CHAPTER 2

ODBC Configuration Dialog Help

Contents

SQL Anywhere ODBC driver	14
--------------------------------	----

About this chapter

This chapter provides a description of the ODBC Configuration and TLS Encryption Options dialogs that are provided with SQL Anywhere.

SQL Anywhere ODBC driver

The following sections provide information about the dialogs related to SQL Anywhere ODBC driver configuration and TLS Encryption Options.

Using the ODBC Configuration dialog

You connect to an ODBC database using an ODBC data source. The ODBC Configuration dialog allows you to save a set of SQL Anywhere connection parameters as an ODBC data source. Once you have a data source, your connection string can simply name the data source to use.

`DSN=my data source`

For SQL Anywhere, the use of ODBC data sources goes beyond Windows applications using the ODBC interface:

- ◆ SQL Anywhere client applications on Unix can use ODBC data sources, as well as those on Windows operating systems.
- ◆ SQL Anywhere client applications using the OLE DB, ADO.NET, or embedded SQL interfaces can use ODBC data sources, as well as ODBC applications.
- ◆ Interactive SQL and Sybase Central can use ODBC data sources.

ODBC Configuration dialog: ODBC tab

This tab appears only when you are creating or modifying ODBC data sources.

The ODBC tab of the ODBC Configuration dialog has the following components:

Data source name Type a name to identify this ODBC data source. You can use any descriptive name for the data source (spaces are allowed) but it is recommended that you keep the name short, as you may need to enter it in connection strings.

 For more information, see [“DataSourceName connection parameter \[DSN\]” \[SQL Anywhere Server - Database Administration\]](#).

Description You can provide a description of the data source. This description may help you or your end users to identify this data source from among their list of available data sources. This is an optional field.

Isolation level Type a numerical value to specify the initial isolation level for this data source:

- ◆ **0** This is also called the read uncommitted isolation level. This is the default isolation level. It provides the maximum level of concurrency, but dirty reads, non-repeatable reads, and phantom rows may be observed in result sets.
- ◆ **1** This is also called the read committed level. This provides less concurrency than level 0, but eliminates some of the inconsistencies in result sets at level 0. Non-repeatable rows and phantom rows may occur, but dirty reads are prevented.

- ◆ **2** This is also called the repeatable read level. Phantom rows may occur. Dirty reads and non-repeatable rows are prevented.
- ◆ **3** This is also called the serializable level. This provides the least concurrency, and is the strictest isolation level. Dirty reads, non-repeatable reads, and phantom rows are prevented.
- ◆ **snapshot** This isolation level uses a snapshot of committed data from the time when the first row is read, inserted, updated, or deleted by the transaction.
- ◆ **statement-snapshot** This isolation level uses a snapshot of committed data from the time when the first row is read by the statement. Each statement within the transaction sees a snapshot of data from a different time.
- ◆ **readonly-statement-snapshot** For read-only statements, this isolation level uses a snapshot of committed data from the time when the first row is read. Each statement within the transaction sees a snapshot of data from a different time. For INSERT, UPDATE, and DELETE statements, use the isolation level specified by the `updatable_statement_isolation` option (can be one of 0 (the default), 1, 2, or 3).

☞ For more information, see “Choosing isolation levels” [[SQL Anywhere Server - SQL Usage](#)].

Microsoft applications (Keys in SQLStatistics) Select this option if you want the `SQLStatistics` function to return foreign keys. The ODBC specification states that `SQLStatistics` should not return primary and foreign keys; however, some Microsoft applications (such as Visual Basic and Access) assume that primary and foreign keys are returned by `SQLStatistics`.

Delphi applications Select this option if you use the Borland Delphi application development tool to create applications that produce your data source.

When this option is selected, one bookmark value is assigned to each row instead of the two that are otherwise assigned (one for fetching forward and a different one for fetching backward).

Delphi cannot handle multiple bookmark values for a row. If the option is cleared, scrollable cursor performance can suffer since scrolling must always take place from the beginning of the cursor to the row requested in order to get the correct bookmark value.

Suppress fetch warnings Select this option if you want to suppress warning messages that are returned from the database server on a fetch.

Versions 8.0 and later of the database server return a wider range of fetch warnings than earlier versions of the software. For applications that are deployed with an earlier version of the software, you can select this option to ensure that fetch warnings are handled properly.

Prevent driver not capable errors The SQL Anywhere ODBC driver returns a `Driver not capable` error because it does not support qualifiers. Some ODBC applications do not handle this error properly. Select this option to prevent this error code from being returned, allowing these applications to work.

Delay AutoCommit until statement close Select this option to delay the commit operation until a statement closes.

Describe Cursor Behavior Choose how often you want a cursor to be redescrbed when a procedure is executed. The default setting is `If Required`.

- ◆ **Never** Select this option if you know that your cursors do not have to be redescrbed. Redescrbing cursors is expensive and can decrease performance.
- ◆ **If required** When you select this option, the ODBC driver determines whether a cursor must be redescrbed. The presence of a RESULT clause in your procedure prevents ODBC applications from redescrbing the result set after a cursor is opened. This is the default.
- ◆ **Always** The cursor is redescrbed each time it is opened. If you use Transact-SQL procedures or procedures that return multiple result sets, you must redescrbe the cursor each time it is opened.

Translator The translator converts characters between ANSI and OEM code pages. Most databases do not require a translator because the ODBC Driver Manager automatically performs a conversion between the client's character set and the database's character set. If your database uses an ANSI code page (the default) do not select a translator.

If you require a translator, click Select and choose the translator from the list of installed translators.

- ◆ **Select Translator** Click Select Translator to choose the ODBC translator you require from a list of installed translators.

Test Connection Tests whether the information provided results in a proper connection. In order for the test to work, a user ID and password must be specified on the Login tab.

ODBC Configuration dialog: Login tab

The Login tab of the ODBC Configuration dialog Login tab has the following components:

Use integrated login Select this option to connect using an integrated login.

If you select this option, the user ID and password do not need to be specified: instead, your operating system user ID and password are supplied to the SQL Anywhere integrated login mechanism.

To use integrated logins, users must have been granted integrated login permission and the database you are connecting to must also be set up to accept integrated logins. Only users with DBA access may administer integrated login permissions.

 For more information, see [“Using integrated logins” \[SQL Anywhere Server - Database Administration\]](#).

Supply user ID and password Select this option if you want to specify the user ID and password for the connection.

- ◆ **User ID** Type a user ID for the connection. The user ID you supply must have permissions on a database in order to connect.
- ◆ **Password** Type a password for the connection. The password must be the correct password for the user ID you supply. The password is case sensitive.
 - ◆ **Encrypt password** Select this option if you want the password to be stored in encrypted form in the profile.

This option only appears when creating ODBC data sources. It does not appear when you access this dialog using the dbmlsync utility.

☞ For more information, see [“EncryptedPassword connection parameter \[ENP\]” \[SQL Anywhere Server - Database Administration\]](#).

It is recommended that you do not include the password in the data source as it is a significant security risk.

Data source name This option only appears when you open this dialog using the dbmlsync utility. Select this option to choose a data source (a stored set of connection parameters) for connecting to your database. This field is equivalent to the DSN connection parameter, which references a data source in the registry. You can view a list of data sources by clicking Browse.

Data source file This option only appears when you open this dialog using the dbmlsync utility. Select this option to choose a data source file for the connection. You can search for the file by clicking Browse. The ODBC data source file is often used for Unix systems. You can click Browse to locate an ODBC data source.

ODBC Configuration dialog: Database tab

The Database tab of the ODBC Configuration dialog has the following components:

Server name Type the name of the SQL Anywhere personal server or network server. For example, **demo**. You need to supply a server name if you want to connect to a network server.

Do not enter a Server Name if you want to connect to the default local personal server or if you want to start a database server from a database file on your local computer. If you do not have a default personal server and you omit the server name, the connection fails.

☞ For more information about the server name, see [“Naming the server and the databases” \[SQL Anywhere Server - Database Administration\]](#).

☞ For more information, see [“EngineName connection parameter \[ENG\]” \[SQL Anywhere Server - Database Administration\]](#).

Start line The start line is a command to start a personal database server or a network server on your computer. Enter a start line only if you want to connect to a local database server that is not currently running and if you want to set your own start parameters. You must enter the full path of the server, for example to start the personal database server enter, **c:\Program Files\SQL Anywhere 10\win32\dbeng10.exe**.


You can also include options in the Start Line field. The start line and options are used when you want to:

- ◆ Employ any advanced server features.
- ◆ Control protocol options.
- ◆ Provide diagnostic or troubleshooting messages.
- ◆ Set permissions.
- ◆ Set database parameters (including encryption).

For more information about options you can specify in the Start Line field, see [“Some common options” \[SQL Anywhere Server - Database Administration\]](#) and [“The SQL Anywhere database server” \[SQL Anywhere Server - Database Administration\]](#).

For more information, see [“StartLine connection parameter \[START\]” \[SQL Anywhere Server - Database Administration\]](#).


Database name Each database running on a server is identified by a database name. Type the name of the database you are connecting to.

 For more information about the database name, see [“Naming the server and the databases” \[SQL Anywhere Server - Database Administration\]](#) and [“DatabaseName connection parameter \[DBN\]” \[SQL Anywhere Server - Database Administration\]](#).

Database file Specify the database file when the database you want to connect to is not currently running on a server. It is recommended that you type the full path and name of the database file, for example, **C:\sample.db**. Otherwise, the path of the file is relative to the working directory of the server. This option is only necessary for starting a database that is not already running. You can click Browse to select the database file from the file directory.

 For more information, see [“DatabaseFile connection parameter \[DBF\]” \[SQL Anywhere Server - Database Administration\]](#).

Encryption key If the database file is encrypted, you must supply a key to the database server every time the database server starts the database.

 For more information about encryption keys, see [“DatabaseKey connection parameter \[DBKEY\]” \[SQL Anywhere Server - Database Administration\]](#).

Start database automatically Select this option to start the database specified in the Database File field before you connect to it.

You should clear the Start Database Automatically option if you want to ensure that you connect only to a running database.

Stop database after last disconnect Select this option to automatically shut down the database after the last user disconnects.

 For more information, see [“AutoStop connection parameter \[ASTOP\]” \[SQL Anywhere Server - Database Administration\]](#).

ODBC Configuration dialog: Network tab

The Network tab of the ODBC Configuration dialog has the following components:

TCP/IP If you want to use ECC_TLS (formerly Certicom) or RSA_TLS strong encryption for network packets, you must select the TCP/IP protocol to access the network database server. In the adjacent field, you may enter communication parameters that establish and tune the connection from your client application to a database.

For example, to look on the computer server1 on port 4436 for a database server, you would enter **HOST=server1;PORT=4436**.

Contact your network administrator if you are unsure which protocol to use.


SPX You can select the SPX protocol to connect to databases on Novell NetWare networks. NetWare also supports the TCP/IP protocol. In the adjacent field, you may type communication parameters that establish and tune the connection from your client application to a database.

For example, you could enter the following communication parameters for an SPX connection **HOST=0:0:0:0:1/4:236:121:215;PORT=2369**.

Contact your network administrator if you are unsure which protocol to use.

Shared memory The shared memory protocol is used for communication between a client and server running under the same operating system on the same computer.

Contact your network administrator if you are unsure which protocol to use.

 For more information, see [“CommLinks connection parameter \[LINKS\]” \[SQL Anywhere Server - Database Administration\]](#), and [“Network protocol options” \[SQL Anywhere Server - Database Administration\]](#).

Liveness timeout A liveness packet is sent across a client/server to confirm that a connection is intact. If the client runs for the liveness timeout period without detecting a liveness packet, the communication is severed. This parameter only works with network server and TCP/IP or IPX communication protocols.

The default liveness timeout is 120 seconds.

 For more information, see [“LivenessTimeout connection parameter \[LTO\]” \[SQL Anywhere Server - Database Administration\]](#).

Idle timeout Set the amount of client idle time before the connection is terminated. If a client runs for the idle timeout period without submitting a request, the connection is severed.

The default client idle time is 240 minutes.

 For more information, see [“Idle connection parameter” \[SQL Anywhere Server - Database Administration\]](#).

Buffer size Set the maximum size of communication packets, in bytes. You should set the buffer size to be smaller than that allowed by your network because the network software may add information to each buffer before sending it over the network.

The default buffer size is 1460 bytes.

 For more information, see [“CommBufferSize connection parameter \[CBSIZE\]” \[SQL Anywhere Server - Database Administration\]](#).

Compress network packets Select this option to turn on compression for the connection. Using compression for a connection can significantly improve SQL Anywhere performance under some circumstances.

 For more information, see “Compress connection parameter [COMP]” [*SQL Anywhere Server - Database Administration*].

Select the method for encryption of network packets Allows the encryption of packets transmitted from the client computer over the network.

Separately licensed component required


ECC encryption and FIPS-approved encryption require a separate license. All strong encryption technologies are subject to export regulations.

See “Separately licensed components” [*SQL Anywhere 10 - Introduction*].

- ◆ **None** Communication packets transmitted from the client are not encrypted. This is the default setting.
- ◆ **Simple** Communication packets transmitted from the client are encrypted with Simple encryption. Simple encryption is supported on all platforms, as well as on previous versions of SQL Anywhere. Simple encryption is not as strong as ECC_TLS or RSA_TLS encryption.
- ◆ **TLS** Select this option to use ECC_TLS (formerly Certicom) or RSA_TLS encryption. ECC_TLS and RSA_TLS encryption protect the confidentiality and integrity of network packets as they pass between the client and the server. They are only available over the TCP/IP protocol.

In the adjacent field you must supply a trusted certificate value. You can also click Edit to supply this value.

- ◆ **Edit** Click Edit to supply encryption values for trusted certificates, certificate company, certificate unit, and certificate name in the “[TLS Encryption Options dialog](#)” on page 21.

 For more information, see “Encryption connection parameter [ENC]” [*SQL Anywhere Server - Database Administration*] and “FIPS-approved encryption technology” [*SQL Anywhere Server - Database Administration*].

See also

- ◆ “[TLS Encryption Options dialog](#)” on page 21

ODBC Configuration dialog: Advanced tab

The Advanced tab of the ODBC Configuration dialog has the following components:

Connection name Type a name to identify the connection. This field is optional.

Character set Type a character set name. By default, the client's ANSI character set is used, for example cp1252 for English systems. You can also supply an OEM character set instead of an ANSI character set.

Allow multiple record fetching Select this option to retrieve multiple records at one time, instead of individually, for improved performance.

Display debugging information in a log file Select this option to record diagnostic information on communications links in the log file.

◆ **Log file** Type the name of the log file where you want to save the debugging information.

Additional connection parameters Type any additional connection parameters in this field in a semicolon separated list. For example,

```
DEBUG=YES;LOG=connection.log
```

Parameters set in this field are superseded by parameters set throughout the rest of this dialog. For example, if you enter the user ID DBA on the Identification tab, and set the connection parameter "UID=bsmith" in this field, a connection with the user ID DBA is attempted.

☞ For more information about connection parameters, see [“Connection parameters” \[SQL Anywhere Server - Database Administration\]](#) and [“How connection parameters work” \[SQL Anywhere Server - Database Administration\]](#).

TLS Encryption Options dialog

This dialog displays fields for the client's Certicom encryption settings.

The TLS Encryption Options dialog has the following components:

Trusted certificates Type the name of the certificate file the client uses to authenticate the server. You can also click Browse to select the trusted certificate from the file directory. This is a required field.

Certificate company Type the name of the certificate authority or organization that issued the certificate. The server's and the client's values must match. This is an optional field.

Certificate unit Type the certificate unit. This is also called the organizational unit. The server's and the client's values must match. This is an optional field.

Certificate name Type the certificate's common name. The server's and the client's values must match. This is an optional field.

TLS type Select the transport layer security type, either RSA or ECC.

FIPS compliant Select whether FIPS-approved RSA encryption is required.

ODBC Configuration dialog: DBMLSync tab

This tab provides options for the dbmlsync SQL Anywhere client synchronization utility.

The DBMLSync tab of the ODBC Configuration dialog has the following components:

Publication Type the name of the publication that is to be synchronized.

If there is only one publication in your database, you do not need to enter anything in this field.

ML password Type the MobiLink password for user authentication. If you have not entered a password, you must enter one here. If you are being prompted for a password, this is likely the only field you need to complete. The password is case sensitive.

Change password Select this option to change the MobiLink password when synchronization occurs. Unless you are changing the MobiLink password, leave the checkbox blank.

- ◆ **New** When changing the MobiLink password, type the new password. Unless you are changing the MobiLink password, leave this field blank.
- ◆ **Verify** When changing the MobiLink password, type the new password again for verification. Unless you are changing the MobiLink password, leave this field blank.

Extended option Supply extended options to customize synchronization. You can supply schedule specifications and other extended options. For a list of available extended options, click the Extended Option Help button. This field is optional.

Site script Type the name of the script to be executed after synchronization. This field is optional. You can click Browse to locate the site script.

Retry on remote progress If the consolidated and client databases have different information about the last synchronization, you can select this option to retry the upload operation.

By default, uploads continue from the offset recorded by the consolidated database. If you select Retry on Remote Progress, the upload continues from the offset recorded in the client database as long as the offset recorded in the consolidated database is ahead of that at the client database.

If, in addition, you select Remote is Ahead, the upload is retried starting from the offset recorded in the client database even if the offset recorded in the client database is ahead of that recorded in the consolidated database. *This option should be used with care.* If the offset mismatch is the result of a restore of the consolidated database, changes that happened in the client database in the gap between the two recorded offsets are lost. The Remote is Ahead option may be useful when the client database transaction log has been truncated after the last successful synchronization.

- ◆ **Remote is behind** Select Remote is Behind to retry the upload from the consolidated database's offset as long as the consolidated database's offset is ahead of that at the client database. This option is only enabled when you select Retry on Remote Progress. This is the default setting.
- ◆ **Remote is ahead** Select Remote is Ahead to retry the upload from the offset recorded in the client database even if the client's offset is ahead of that recorded at the consolidated database. This option is only enabled when you select Retry on Remote Progress. *This option should be used with care.*

This option may be useful when you do not want to upload changes between the last successful synchronization and the recreation.

Verbose operation Select this option to record debugging and other diagnostic information in a log file. This field is optional.

Drop conflicting connections Synchronization requires access to all rows on the tables to be synchronized. Select this option to force connections with locks on these tables to be dropped. This field is optional.

Cmdline help Each of the options on the DBMLSync tab has an equivalent command line option. Click Cmdline Help to view a list of options and their description.

Extended option help Click Extended Option Help to view a list of the names, default values, and descriptions of available extended options. You can also supply these options in the Extended Option field to customize synchronization.

CHAPTER 3

SQL Anywhere Help

Contents

Introduction to property sheets	26
Introduction to dialog boxes	104
Debugger help	132
Index Consultant	134
UltraLite projects	135
UltraLite statements	136
Publications	137
Articles	138
Subscriptions	139
Connect dialog tools	140
Indexes folder	141
Table edit undo	142
Database search	143

About this chapter

This chapter provides descriptions of all the property sheets and dialogs you can access from the SQL Anywhere plug-in for Sybase Central.

Introduction to property sheets

The SQL Anywhere plug-in provides a number of property sheets that let you configure object properties.

The following sections contain detailed descriptions of each property sheet in the SQL Anywhere plug-in. Each one becomes available on the File menu when you select an object, and is also available in a popup menu when you right-click an object.

Article property sheet: General tab

The General tab of the Article property sheet has the following components:

Name Shows the name of the table and owner used for the article.

Type Shows the type of the object.

Publication Shows the publication the article belongs to. The name of the publication's owner appears in parentheses.

See also

- ◆ [“Table property sheet: General tab” on page 93](#)
- ◆ [“Publication design” \[SQL Remote\]](#)
- ◆ [“CREATE PUBLICATION statement \[MobiLink\] \[SQL Remote\]” \[SQL Anywhere Server - SQL Reference\]](#)

Article property sheet: Columns tab

The Columns tab of the Article property sheet has the following components:

All columns Select this option to include all the columns of the table in the article.

Selected columns Select this option if you want the article to contain only some of the columns from the table. Selecting this option enables the checkboxes beside the column names in the Selected Columns list. The list includes all the columns of the table the article is based on.

When you choose this option, you must include at least one column in the article. To include a column in the article, select the checkbox beside the column name so that a checkmark appears. You can click Select All to include all the columns in the list in the article.

- ◆ **Select All** Select this option to include all the columns of the table in the article.
- ◆ **Clear All** Select this option clear all the checkboxes in the Selected Columns list.

See also

- ◆ [“Publication design” \[SQL Remote\]](#)
- ◆ [“CREATE PUBLICATION statement \[MobiLink\] \[SQL Remote\]” \[SQL Anywhere Server - SQL Reference\]](#)

Article property sheet: WHERE Clause tab

Articles defined for MobiLink and SQL Remote publications can use a WHERE clause to define a subset of rows of a table to be included in an article. UltraLite applications can use row subsets by supplying a WHERE clause, with one exception: articles in UltraLite publications governing HotSync synchronization cannot use a WHERE clause.

The WHERE Clause tab only appears if the publication that contains the articles has a type of log scan.

The WHERE Clause tab of the Article property sheet has the following components:

This article has the following WHERE clause You can edit the WHERE clause in the window to restrict the table rows that are included in the article.

For example, to include only the rows that contain a salary of more than \$50000, type:

```
WHERE Salary > 50000
```

See also

- ◆ [“CREATE PUBLICATION statement \[MobiLink\] \[SQL Remote\]” \[SQL Anywhere Server - SQL Reference\]](#)
- ◆ [“Publication design” \[SQL Remote\]](#)
- ◆ [“The WHERE clause: specifying rows” \[SQL Anywhere Server - SQL Usage\]](#)

Article property sheet: SUBSCRIBE BY Restriction tab

This tab only applies to SQL Remote.

The SUBSCRIBE BY Restriction tab of the Article property sheet has the following components:

None Configures the article to avoid using SUBSCRIBE BY columns or clauses to partition rows.

Column Configures the article to partition rows from the table based on a column (SUBSCRIBE BY columns). Once you select this option, you must choose a column from the dropdown list.

Expression Sets the article to partition rows from the table based on an expression entered in the field below.

See also

- ◆ [“Publication design” \[SQL Remote\]](#)
- ◆ [“CREATE PUBLICATION statement \[MobiLink\] \[SQL Remote\]” \[SQL Anywhere Server - SQL Reference\]](#)

Check Constraint property sheet: General tab

The General tab of the Check Constraint property sheet has the following components:

Name Shows the name of the selected check constraint. You can edit the check constraint name in this field.

Type Shows the type of object.

Table Shows the table the check constraint belongs to.

Column Shows the column the check constraint applies to. This information appears only for column check constraints, not for table constraints.

See also

- ◆ “Choosing constraints” [[SQL Anywhere Server - SQL Usage](#)]
- ◆ “Using CHECK constraints on tables” [[SQL Anywhere Server - SQL Usage](#)]
- ◆ “Using CHECK constraints on columns” [[SQL Anywhere Server - SQL Usage](#)]

Check Constraint property sheet: Definition tab

The Definition tab of the Check Constraint property sheet has the following components:

This check constraint has the following definition Provides a place for you to type the check constraint. A column check constraint is used to ensure that no inappropriate values are entered into any column of the specified type, while a table check constraint ensures that no row in a table violates the constraint.

Column check constraint example

You can enforce a particular formatting requirement. For example, if a table has a column for phone numbers you may want to ensure that users enter them all in the same manner. For North American phone numbers, you could use a constraint such as:

```
ALTER TABLE Customers
ALTER Phone
CHECK ( Phone LIKE '(____) ____-____' );
```

Once this CHECK condition is in place, if you attempt to set a Phone value to 9835, for example, the change is not allowed.

Table check constraint example

For example, you can add a constraint on the Employees table to ensure that the TerminationDate is always later than, or equal to, the StartDate:

```
ALTER TABLE Employees
ADD CONSTRAINT valid_term_date
CHECK(TerminationDate >= StartDate);
```

See also

- ◆ “Choosing constraints” [[SQL Anywhere Server - SQL Usage](#)]
- ◆ “Using CHECK constraints on columns” [[SQL Anywhere Server - SQL Usage](#)]
- ◆ “Using CHECK constraints on tables” [[SQL Anywhere Server - SQL Usage](#)]

Column property sheet: General tab

This Column property sheet displays information about columns that belong to a table. If you want to obtain information about columns that belong to a view, see [“Column property sheet \(View\): General tab” on page 31](#).

The General tab of the Column property sheet has the following components:

Name Shows the name of the column. You can edit the column name in this field.

Type Shows the object's type.

Table Shows the name of the table the column belongs to, as well as the table's owner.

Comment Provides a place for you to type a text description of the column. For example, you could use this area to describe the column's purpose in the system.

See also

- ◆ [“Working with tables” \[SQL Anywhere Server - SQL Usage\]](#)

Column property sheet: Data Type tab


The Data Type tab of the Column property sheet has the following components:

Built-in type This option enables you to choose a built-in data type for the column from the dropdown list. Integers, character strings, and dates are examples of built-in data types. For some of these types, you can specify size and/or scale:

- ◆ **Size** Specifies the length of string columns, or the total number of digits to the left and right of the decimal point in the result of any decimal arithmetic for numeric columns. For numeric columns, the size is also called the precision value.

For more information about the precision value, see [“precision option \[database\]” \[SQL Anywhere Server - Database Administration\]](#).

- ◆ **Scale** Specifies the minimum number of digits after the decimal point when an arithmetic result is truncated to the maximum precision value.

 For more information about data types, see [“SQL Data Types” \[SQL Anywhere Server - SQL Reference\]](#).

Domain Select this option to choose a domain from the dropdown list. A domain is a named combination of built-in data types, default value, check condition, and nullability.

Java class Select this option to choose a Java class for the column from the dropdown list. This option is only shown for version 8.0.x databases.

Compress values Select this option to compress column values. Note that if a column is compressed, database server activities such as indexing, data comparisons, and statistics generation may be slightly slower if they involve the compressed column because the values must be compressed when written, and decompressed when read.

☞ For more information about compressing columns, see “Choosing whether to compress columns” [[SQL Anywhere Server - SQL Usage](#)].

Maintain BLOB indexes for large values Select this option to maintain BLOB indexes for large values. Only character, binary, and bit types support this option.

☞ For more information, see “CREATE TABLE statement” [[SQL Anywhere Server - SQL Reference](#)].

See also

- ◆ “Choosing data types for columns” [[SQL Anywhere Server - SQL Usage](#)]
- ◆ “Using domains” [[SQL Anywhere Server - SQL Usage](#)]
- ◆ “Ensuring Data Integrity” [[SQL Anywhere Server - SQL Usage](#)]
- ◆ “Using Java in the Database” [[SQL Anywhere Server - Programming](#)]
- ◆ “Working with tables” [[SQL Anywhere Server - SQL Usage](#)]

Column property sheet: Value tab

The Value tab of the Column property sheet has the following components:

No default or computed value Select this option if the column has no default or computed value.

Default value Select this option if the column has a default value. If the column is based on a domain, this setting inherits the domain's default value (if any), but the value can be overridden for the column. Choosing the Default Value option enables the User-defined and System-defined options.


- ◆ **User-defined** Type a custom value (string, number, or other expression) for the default value. If you have based the column on a domain, you can retain the domain's default value (if any) or override it for the column.
 - ◆ **Literal string** Specify whether or not the default value for the column should be treated as a literal string. This option is selected by default for character columns and domains with a character base type. When you select this option, the default text does not need to be enclosed in single quotes, and you do not need to escape embedded single quotes or backslashes in the string.

When you clear this option, the automatic quoting and escaping behavior is turned off and the specified default value text is passed as is to the server.
- ◆ **System-defined** Select a pre-defined value (for example, current date) for the default value. You must select a value from the dropdown list. If you have based the column on a domain, you can retain the domain's default value (if any) or override it for the column.
- ◆ **Partition size** When you select global autoincrement for the system-defined value, you can also supply a partition size.

Global autoincrement assigns each new row a value of one greater than the previous highest value in the column. The partition size restricts the maximum value that global autoincrement can use. You can enter any positive integer for the partition size. Generally, you should select a value so that the supply of numbers is rarely, if ever, exhausted.

For more information, see “[The AUTOINCREMENT default](#)” [[SQL Anywhere Server - SQL Usage](#)] and “[CREATE TABLE statement](#)” [[SQL Anywhere Server - SQL Reference](#)].

Computed value Select this option to define a computed value for the column. A computed column derives its values from calculations of values in other columns. Type an expression in the text box to describe the relationship between the other columns and the value that appears in the computed column.

 For more information about computed values, see “[ALTER TABLE statement](#)” [[SQL Anywhere Server - SQL Reference](#)] and “[Subqueries in expressions](#)” [[SQL Anywhere Server - SQL Reference](#)].

See also

- ◆ “[UltraLite SQL Function Reference SQL Functions](#)” [[SQL Anywhere Server - SQL Reference](#)]
- ◆ “[Using column defaults](#)” [[SQL Anywhere Server - SQL Usage](#)]
- ◆ “[Working with computed columns](#)” [[SQL Anywhere Server - SQL Usage](#)]

Column property sheet: Constraints tab

The Constraints tab of the Column property sheet has the following components:

Values can be null Select this option if values in the column can be NULL. If the column is based on a domain, you can retain the domain's nullability or override it for the column.

Values cannot be null Select this option to allow duplicate values, but not allow NULL values in this column.

Values cannot be null and must be unique Select this option if values in the column cannot be NULL and must be unique.

See also

- ◆ “[Choosing constraints](#)” [[SQL Anywhere Server - SQL Usage](#)]
- ◆ “[Ensuring Data Integrity](#)” [[SQL Anywhere Server - SQL Usage](#)]

Column property sheet (View): General tab

This Column property sheet displays information about columns that belong to a view. If you want to obtain information about columns that belong to a table, see “[Column property sheet: General tab](#)” on page 29.

The General tab of the Column property sheet has the following components:

Name Shows the name of the selected column.

Type Shows the type of object.

View Shows the name of the view the column belongs to, with the name of the view's owner in parenthesis.

Data type Shows the data type of the selected column.

Allows null Shows whether the selected column allows NULL values.

Comment Provides a place for you to type a text description of the column.

See also

- ◆ [“SQL Data Types” \[SQL Anywhere Server - SQL Reference\]](#)
- ◆ [“Choosing constraints” \[SQL Anywhere Server - SQL Usage\]](#)

Connected User property sheet: General tab

The General tab of the Connected User property sheet has the following components:

Connection ID Shows the connection ID for the user.

When a user connects to a database, the database server assigns the connection a unique connection ID. For each new connection to the database server, the server increments the connection ID value by 1.

Type Shows the type of object.

User Shows the database user ID.

Connection name Shows the connection name for the database the user is connected to. Naming your connections makes it easy to distinguish between multiple connections to the same database, or multiple connections to the same or different database server.

Communication link Shows the type of communications link used by the user's connection. If the connection is between a SQL Anywhere client and network database server, the link type represents the network protocol being used.

Node address Shows the communications port ID used by the user's connection.

Last request type Shows the type of the last request.

Last request time Shows the time at which the last request for the connection started.

Blocked on connection Shows whether the connection is blocked. If the current connection is not blocked, this field is blank. If it is blocked, the connection number on which the connection is blocked because of a locking conflict is shown.

See also

- ◆ [“Managing connected users” \[SQL Anywhere Server - Database Administration\]](#)
- ◆ [“Connection-level properties” \[SQL Anywhere Server - Database Administration\]](#)

Connected User property sheet: Extended Information tab

The Extended Information tab of the Connected User property sheet has the following components:

Connected user properties list Lists the name and value of the properties for the connected user. Click Refresh to update the values. You can also press F5 to refresh the values.

◆ **Refresh** Click Refresh to update the values in the Connected user properties list.

Description Describes the selected property.

See also

- ◆ “Managing connected users” [[SQL Anywhere Server - Database Administration](#)]
- ◆ “Connection-level properties” [[SQL Anywhere Server - Database Administration](#)]

Consolidated User property sheet: General tab

The General tab of the Consolidated User property sheet has the following components:

Name Shows the name of the consolidated user.

Type Shows the type of object.

Allowed to connect Select this option to allow the consolidated user to connect to the database. If the consolidated user is not allowed to connect, the password (if one was supplied) is removed from the account. If you later change the consolidated user to allow them to connect, you must supply a new password. Clearing this option disables the Password and Confirm Password options.

Users are almost always allowed to connect to the database.

- ◆ **Password** Type the password for the consolidated user. For added security, the characters appear as asterisks. Passwords are case sensitive.
- ◆ **Confirm password** Confirm the password that you typed in the Password text box by entering it again. The contents of the two fields must match exactly. Passwords are case sensitive.

Comment Provides a place for you to type a text description of the consolidated user. For example, you could use this area to describe the consolidated user's purpose in the system.

See also

- ◆ “GRANT CONSOLIDATE statement [SQL Remote]” [[SQL Anywhere Server - SQL Reference](#)]
- ◆ “Granting and revoking remote permissions” [[SQL Anywhere Server - Database Administration](#)]
- ◆ “Managing User IDs and Permissions” [[SQL Anywhere Server - Database Administration](#)]

Consolidated User property sheet: Authorities tab

The Authorities tab of the Consolidated User property sheet has the following components:

DBA Select this option to grant DBA authority to the consolidated user; a user with DBA authority can fully administer the database.

Resource Select this option to grant resource authority to the consolidated user; a user with resource authority can create database objects.

Remote DBA Select this option to grant Remote DBA authority to the consolidated user. The MobiLink client utility, dbmlsync, requires Remote DBA authority. The SQL Remote Message Agent should also be run using a user ID with Remote DBA authority to ensure that actions can be performed without creating security loopholes.

Backup Select this option to grant backup authority to the consolidated user.

Validate Select this option to grant validate authority to the consolidated user; a user with validate authority can perform the operations executed by the different VALIDATE statements, such as database, table, index, and checksum validation.

See also

- ◆ [“DBA authority overview” \[SQL Anywhere Server - Database Administration\]](#)
- ◆ [“RESOURCE authority overview” \[SQL Anywhere Server - Database Administration\]](#)
- ◆ [“GRANT REMOTE DBA statement \[MobiLink\] \[SQL Remote\]” \[SQL Anywhere Server - SQL Reference\]](#)
- ◆ [“BACKUP authority overview” \[SQL Anywhere Server - Database Administration\]](#)
- ◆ [“VALIDATE authority overview” \[SQL Anywhere Server - Database Administration\]](#)

Consolidated User property sheet: Permissions tab

The Permissions tab of the Consolidated User property sheet has the following components:

Permissions list Shows all tables the consolidated user has permissions on, as well as the user who owns each table. You can click the fields beside each user to grant or revoke permissions; double-clicking (so that a checkmark and two + signs appear) gives the user grant options for the permission.

Show Select the type of object appears in the Permissions list:

- ◆ **Tables** Displays all tables the consolidated user has permissions on.
- ◆ **Views** Displays all views the consolidated user has permissions on.
- ◆ **Procedures & functions** Displays all procedures and functions the consolidated user has permissions on. You can only grant Execute permissions for procedures and functions.

See also


- ◆ [“Managing User IDs and Permissions” \[SQL Anywhere Server - Database Administration\]](#)
- ◆ [“Granting permissions on tables” \[SQL Anywhere Server - Database Administration\]](#)
- ◆ [“Granting permissions on views” \[SQL Anywhere Server - Database Administration\]](#)
- ◆ [“Granting permissions on procedures” \[SQL Anywhere Server - Database Administration\]](#)

Consolidated User property sheet: SQL Remote tab

The SQL Remote tab of the Consolidated User property sheet has the following components:

Message type Lets you select a message type for communicating with the publisher.

Address Provides a place for you to type the remote address of the consolidated user. The address is a string, according to the specified message type, to which the replication messages should be sent for the user.

 For information about what address to use with a specific message type, see [“Using message types” \[SQL Remote\]](#).

- ◆ **Send then close** Sets the replication frequency so that the publisher's agent runs once, sends all pending messages to the consolidated user, and then shuts down. The means that the agent must be restarted each time the publisher wants to send messages.

In most replication setups, this option is not used for sending publications from the consolidated publisher to the consolidated user.

- ◆ **Send every** Sets the replication frequency so that the publisher's agent runs continuously, sending messages to the consolidated user at the given periodic interval.
- ◆ **Send daily at** Sets the replication frequency so that the publisher's agent runs continuously, sending messages to the consolidated user each day at the specified time.

See also

- ◆ [“GRANT REMOTE statement \[SQL Remote\]” \[SQL Anywhere Server - SQL Reference\]](#)
- ◆ [“GRANT CONSOLIDATE statement \[SQL Remote\]” \[SQL Anywhere Server - SQL Reference\]](#)

Database property sheet: General tab

Database properties listed on this tab cannot be changed without rebuilding the database.

☞ For information about rebuilding a database, see [“Rebuilding databases” \[SQL Anywhere Server - SQL Usage\]](#).

The General tab of the Database property sheet has the following components:

Name Shows the name of the database.

Type Shows the type of object.

ID Shows a unique number assigned by the database server to each database that is started on it. The number makes it possible to distinguish between databases running on the same server.

Capability ID Shows the capability bits enabled for the database.

Java location Shows the location of the *java.exe* file for the external Java VM used by the database.

☞ For more information about Java VMs, see [“Choosing a Java VM” \[SQL Anywhere Server - Programming\]](#).

Java main user ID Shows which database user ID should be used for the main Java connection.

Java JDK version Shows the version of the JDK supported by the database at the time of installation. If Java is not supported in the database, None appears. This only applies to 9.0.2 and earlier databases.

Page size Shows the page size of the database in bytes.

Database file Shows the root database file for the database.

Log file Shows the name and location of the transaction log file for the database.

Mirror log file Shows the name and location of the transaction log mirror file for the database.

User Shows the user ID of the user connected to the database.

Connection ID Shows the connection ID for the database's connection from Sybase Central.

Connection name Shows the connection name for the user connected to this database. Naming your connections makes it easy to distinguish between multiple connections to the same database, or multiple connections to the same or different database server.

Communication link Shows the type of communications link used by the user's connection. If the connection is between a SQL Anywhere client and network database server, the link type represents the network protocol being used.


Total connections Shows the total number of current connections to the database from all users, including the Sybase Central connection.

See also

- ◆ “Database-level properties” [[SQL Anywhere Server - Database Administration](#)]
- ◆ “Working with databases” [[SQL Anywhere Server - SQL Usage](#)]


Database property sheet: Settings tab

Database properties listed on this tab cannot be changed without rebuilding the database.

 For information about rebuilding a database, see “[Rebuilding databases](#)” [[SQL Anywhere Server - SQL Usage](#)].

The Settings tab of the Database property sheet has the following components:

Encryption type Shows whether or not the database is encrypted, and the type of encryption, which is either Simple, AES, or AES_FIPS. If encryption is not supported in the database, None appears.

 For information about the types of encryption supported by SQL Anywhere, see “[Encrypting a database](#)” [[SQL Anywhere Server - Database Administration](#)].

Encryption scope Shows the level of encryption specified. The possible values are None, Table, or Database. If the setting is Table, you can mark specific tables for encryption. If the setting is Database then the entire database is encrypted.

Case sensitive Shows whether or not the database is case sensitive. This property applies to the data in the database, but not to table names, column names, and other identifiers.

Ignore trailing blanks Shows whether the database ignores trailing blanks in comparisons.

CHAR collation sequence The collation that is used for CHAR data.

 For more information about collations used in SQL Anywhere, see “[Collations in a SQL Anywhere database](#)” [[SQL Anywhere Server - Database Administration](#)].

CHAR character set encoding The character set that is used for CHAR data.

NCHAR collation sequence The collation used for NCHAR data. This value is either UCA or UTF8BIN.

NCHAR character set encoding The character set that is used for NCHAR data. This is always UTF-8.

Checkpoint urgency Shows the time that has elapsed since the last checkpoint, as a percentage of the checkpoint time setting of the database. Click Refresh or press F5 to update the Checkpoint urgency value.

Recovery urgency Shows an estimate of the amount of time required to recover the database. Click Refresh or press F5 to update the Recovery urgency value.

◆ **Refresh** Click Refresh to update the checkpoint urgency and recovery urgency values.

Collect information for deadlocks that occur on this database Select this option to record information about deadlocks that occur in this database. To view the collected deadlock information, select the database in the tree view in the left pane, and then select the Deadlocks tab in the right pane.

◆ **Include SQL statement information for deadlocked connections** Select this option to record the SQL statement information for deadlocks that occur on this database. This option is only available if Collect Information for Deadlocks That Occur on This Database is selected.

Clear deadlock information now Click Clear Deadlock Information Now to clear the deadlock information right away.

See also

- ◆ [“Working with databases” \[SQL Anywhere Server - SQL Usage\]](#)
- ◆ [“Database-level properties” \[SQL Anywhere Server - Database Administration\]](#)

Database property sheet: Extended Information tab

The Extended Information tab of the Database property sheet has the following components:

Database properties list Lists the name and value of the properties for the database. Click Refresh to update the values. You can also press F5 to refresh the values.

◆ **Refresh** Click Refresh to update the values in the Database Properties list.

Description Describes the selected property.

See also

- ◆ [“Working with databases” \[SQL Anywhere Server - SQL Usage\]](#)
- ◆ [“Database-level properties” \[SQL Anywhere Server - Database Administration\]](#)

Database property sheet: SQL Remote tab

The SQL Remote tab of the Database property sheet has the following components:

This database has a publisher Select this option to supply the name of the database's publisher. Selecting this option enables the Publisher field below.

- ◆ **Publisher** Shows the name of the publisher for the database. You can click Change to select a publisher in the Set Publisher dialog.

This remote database has a corresponding consolidated database Select this option if the database is acting as a remote database.

- ◆ **Consolidated user** Click Change to select the consolidated user from the list of available candidates in the Set Consolidated User dialog.
- ◆ **Message type** Select the message type for communicating with the publisher from the dropdown list.

For information about the message types supported by SQL Remote, see [“Using message types” \[SQL Remote\]](#).

- ◆ **Address** Provides a place for you to type the remote address of the consolidated user. The address is a string, according to the specified message type, to which the replication messages should be sent for the user.

Send frequency Select one of the following options for the send frequency:

- ◆ **Send then close** Sets the replication frequency so that the Message Agent runs once, sends all pending messages, and then shuts down. The Message Agent must be restarted each time the publisher wants to send messages. This option is only useful when you are running the Message Agent at a remote site.

In most replication setups, this option is not used for sending publications from the consolidated publisher to the remote group.

- ◆ **Send every** Select this option to set the replication frequency so that the Message Agent runs continuously, sending messages to this consolidated user at the given periodic interval. This option is useful at both consolidated and remote sites.
- ◆ **Send daily at** Select this option to set the replication frequency so that the Message Agent runs continuously, sending messages each day at the given time.

Subscribers Shows the number of remote users subscribing to publications in the database.

Subscriptions Shows the number of subscriptions to publications in the database.

Started subscriptions Shows the number of subscriptions in the database that have been started.

See also

- ◆ [“Publications and subscriptions” \[SQL Remote\]](#)
- ◆ [Set Publisher dialog](#)
- ◆ [Set Consolidated User dialog](#)

Database property sheet: Profiling Settings tab

The Profiling Settings tab of the Database property sheet has the following components:

Capture and view profiling information in this database for Select this option if you want SQL Anywhere to monitor the execution times of stored procedures, functions, events, and triggers. You can use database profiling information to determine which procedures can be fine-tuned to increase performance within your database. Profiling information appears on the Profile tab in Sybase Central.

Selecting this option activates the following options:

- ◆ **All connections** Select this option to enable profiling on all connections.
- ◆ **Connections with the following user ID** Select this option and choose a user ID from the dropdown list to specify a particular user ID to capture profiling information for.
- ◆ **Clear Now** Select this option to delete all the collected profiling data for the database and turn off profiling for the database. This button is only enabled when profiling is turned on for the database.

View profiling information from the following profiling log file Select this option to view profiling information from a log file. Specify the name and location of the profiling log file (a file with an extension of *.plg*) or click Browse and navigate to the file. This option is only enabled when profiling is turned off for the database.

Use the profiling information in the following profiling log file as a baseline for comparison Select this option to specify a second profiling log file to use as a baseline for comparison to profiling information being collected, or to the profiling log file selected in the previous option. This option is only enabled if Capture and View Profiling Information in This Database For or View Profiling Information From the Following Profiling Log File is selected.

Save the profiling information currently in the database to the following profiling log file Select this option to save the current profiling information in the database to a profiling log file. Specify the file name and location, with an extension of *.plg* or click Browse and navigate to the file.

Reset Now Deletes all the collected profiling data for the database. If profiling is turned on, the database immediately starts collecting new profiling information about procedures, functions, events, and triggers.

See also

- ◆ [“Procedure profiling using system procedures” \[SQL Anywhere Server - SQL Usage\]](#)

Dbospace property sheet: General tab

The General tab of the Dbospace property sheet has the following components:

Name Shows the name of the dbospace.

Type Shows the type of object.

File Shows the name of the database file that the dbospace points to. For new spaces, you can supply a new file name. You can also click Browse to locate the file.

Pre-allocate Space Now Displays the Pre-allocate Space for Dbospace dialog, which lets you pre-allocate storage in the dbospace by adding pages to it. Adding pages may improve performance for bulk-loading operations.

See also

- ◆ [“Pre-allocating space for database files”](#) [*SQL Anywhere Server - Database Administration*]
- ◆ [Pre-allocate Space for Dbspace dialog](#)

Directory Access Server property sheet: General tab

A directory access server is a remote server that gives you access to the local file structure of the computer running the database server. You use proxy tables to access any subdirectories on the computer.

The General tab of the Directory Access Server property sheet has the following components:

Name Shows the name of the directory access server.

Type Shows the type of object.

Root directory Shows the path for the root directory of this directory access server. When you create proxy tables for this directory access server, they are relative to this root directory.

Subdirectories Shows the number of levels of subdirectories that are accessible to this directory access server.

File modification Shows whether file modification is enabled for this directory access server.

See also

- ◆ [“Using directory access servers”](#) [*SQL Anywhere Server - SQL Usage*]
- ◆ [“Creating directory access servers”](#) [*SQL Anywhere Server - SQL Usage*]
- ◆ [“Deleting directory access servers”](#) [*SQL Anywhere Server - SQL Usage*]
- ◆ [“Basic concepts to access remote data”](#) [*SQL Anywhere Server - SQL Usage*]
- ◆ [“Working with remote servers”](#) [*SQL Anywhere Server - SQL Usage*]

Domain property sheet: General tab

The General tab of the Domain property sheet has the following components:

Name Shows the name of the domain.

Type Shows the type of object.

Creator Shows the database user who created and owns the domain.

Base type Shows the pre-defined data type of the domain. If the data type has a format, it is listed after the type's name.

Allows null Shows whether columns based on the domain allow NULLs.

Default value Shows the default value of the domain. If the domain does not have a default value, nothing appears. Columns based on the domain inherit the default value, but you can subsequently override it.

See also

- ◆ [“Domains”](#) [*SQL Anywhere Server - SQL Reference*]

Domain property sheet: Check Constraint tab

The Check Constraint tab of the Domain property sheet has the following components:

This domain has the following check constraint Lets you view the check constraint that applies to the domain. This is defined when the domain is created.

For example, to check whether an employee's start date falls in a particular range, type:

```
CHECK ( StartDate BETWEEN '1983/06/27'
        AND CURRENT DATE )
```

☞ For more information about check constraints, see [“Using CHECK constraints on columns” \[SQL Anywhere Server - SQL Usage\]](#).

See also

- ◆ [“Using domains” \[SQL Anywhere Server - SQL Usage\]](#)
- ◆ [“Choosing constraints” \[SQL Anywhere Server - SQL Usage\]](#)

Event property sheet: General tab

The General tab of the Event property sheet has the following components:

Name Shows the name of the event.

Type Shows the type of object.

Creator Shows the database user who created and owns the event.

Enabled Select this option to execute the event when the scheduled time or trigger condition occurs.

You must enable the event to trigger it manually from Sybase Central.

Location Shows which of the following locations the event executes at:

- ◆ **All databases** Executes the event at all remote locations
- ◆ **Consolidated database** For databases involved in SQL Remote replication, this executes the event at the consolidated database only, and not at any of the remote locations.
- ◆ **Remote database** For databases involved in SQL Remote replication, this executes the event at a remote database only, and not at the consolidated database.

Next scheduled time Shows the date and time of the next scheduled event, if the event is scheduled.

Comment Provides a place for you to type a text description of the event. For example, you could use this area to describe the event's purpose in the system.

See also

- ◆ [“CREATE EVENT statement” \[SQL Anywhere Server - SQL Reference\]](#)
- ◆ [“Automating Tasks Using Schedules and Events” \[SQL Anywhere Server - Database Administration\]](#)
- ◆ [“Trigger Event dialog” on page 125](#)

Event property sheet: Conditions tab

The Conditions tab of the Event property sheet has the following components:

The event is triggered when the following system event occurs Executes the event when a circumstance or condition is met.

- ◆ **System event** Select a system event that must occur to trigger the event.

For more information about system events, see [“Understanding system events” \[SQL Anywhere Server - Database Administration\]](#).

- ◆ **And the following trigger conditions are true** Set trigger conditions that must be satisfied, in addition to the system event, which trigger the event.

For more information about trigger conditions, see [“Defining trigger conditions for events” \[SQL Anywhere Server - Database Administration\]](#).

- ◆ **New** Displays the Create Trigger Condition dialog, which lets you create a new trigger condition for the event.
- ◆ **Edit** Displays the Edit Trigger Condition dialog, which lets you change an existing trigger condition.
- ◆ **Delete** Removes the trigger condition from the list so that the event no longer executes based on that trigger condition.

See also

- ◆ [“CREATE EVENT statement” \[SQL Anywhere Server - SQL Reference\]](#)
- ◆ [“Automating Tasks Using Schedules and Events” \[SQL Anywhere Server - Database Administration\]](#)

External Login property sheet: General tab

The General tab of the External Login property sheet has the following components:

Name Shows the name of the remote server and database user if the external login is for a remote server. Shows the name of the directory access server and database if the external login is for a directory access server.

Type Shows the type of object.

Remote server Shows the name of the remote server to which the external login applies. This is only shown if the external login applies to a remote server.

Directory access server Shows the name of the directory access server the external login is used to communicate with. This field only appears if the external login applies to a directory access server.

User Shows the name of the database user the external login is for.

Login name Shows the login name on the remote server. This only applies to external logins to remote servers.

See also

- ◆ “Working with external logins” [*SQL Anywhere Server - SQL Usage*]
- ◆ “CREATE EXTERNLOGIN statement” [*SQL Anywhere Server - SQL Reference*]
- ◆ “Using directory access servers” [*SQL Anywhere Server - SQL Usage*]

Foreign Key property sheet: General tab

The General tab of the Foreign Key property sheet has the following components:

Name Shows the name of the foreign key. You can edit the name of the foreign key in this field.

Type Shows the type of object.

Unique Shows whether or not the foreign key is unique.

Foreign table Shows the name and owner of the table to which the foreign key applies.

Foreign index Shows the name of the index used to enforce the foreign key.

Primary constraint Shows the name of the primary key or unique constraint that the foreign key references.

Primary constraint type Shows the type of constraint the foreign key references. This can only be a primary key or a unique constraint.

Primary table Shows the table containing the primary key or unique constraint in this foreign key relationship.

Primary index Shows the name of the index used to maintain the primary key or unique constraint.

Allows null Determines whether the foreign key columns allow NULL values. To use this option, the foreign key columns must all have Allow Nulls set to Yes.

Match type Shows the match type selected for the foreign key. The match type determines what is considered a match when using a multi-column foreign key where Null values are allowed. This is only applicable if the foreign key allows Null.

Update action Uses one of the following settings to define the behavior of the table when a user tries to update values in the foreign key.

- ◆ **Not permitted** Prevents updates of the associated primary table's primary key value if there are no corresponding foreign keys.
- ◆ **Cascade** Updates the foreign key to match a new value for the associated primary key.
- ◆ **Set to null** Sets all the foreign key values that correspond to the updated primary key of the associated primary table to NULL.

To use this option, the foreign key columns must all have Allow Nulls set to Yes.

- ◆ **Set Default** Sets foreign key values that match the updated or deleted primary key value to values specified in the DEFAULT clause of each foreign key column. To use this option, the foreign key columns must all have default values.


Delete action Uses one of the following settings to define the behavior of the table when a user tries to delete data.

- ◆ **Not permitted** Prevents deletion of the associated primary table's primary key value if there are no corresponding foreign keys in the table.
- ◆ **Cascade** Deletes the rows from the table that match the deleted primary key of the associated primary table.
- ◆ **Set values to NULL** Sets all the foreign key values in the table that correspond to the deleted primary key of the associated primary table to NULL.

To use this option, the foreign key columns must all have Allow Nulls set to Yes.

- ◆ **Set Default** Sets foreign key values that match the updated or deleted primary key value to values specified in the DEFAULT clause of each foreign key column. To use this option, the foreign key columns must all have default values.

Check on commit Forces the database to wait for a COMMIT before checking the integrity of the foreign key, overriding the setting of the wait_for_commit database option.

 For more information on this option, see [“wait_for_commit option \[database\]” \[SQL Anywhere Server - Database Administration\]](#).

Change Opens the Change Settings dialog where you can change the settings for this primary key.

Comment Provides a place for you to type a text description of the foreign key. For example, you could use this area to describe the foreign key's purpose in the system.

See also

- ◆ [“Managing foreign keys” \[SQL Anywhere Server - SQL Usage\]](#)
- ◆ [“Ensuring Data Integrity” \[SQL Anywhere Server - SQL Usage\]](#)
- ◆ [“Set Clustered Index dialog” on page 122](#)
- ◆ [“Change Settings dialog” on page 105](#)

Foreign Key property sheet: Columns tab

The Columns tab of the Foreign Key property sheet has the following components:

Columns list Shows the column in the foreign and primary tables.

- ◆ **Details** Displays the Details dialog, which shows a summary of the properties of the selected column foreign or primary column.

See also

- ◆ [“Managing foreign keys” \[SQL Anywhere Server - SQL Usage\]](#)

Function property sheet: General tab

In most cases, the term procedure refers to both user-defined procedures *and* user-defined functions.

The General tab of the Function property sheet has the following components:

Name Shows the name of the function.

Type Shows the type of object.

Owner Shows the name of the database user who owns the function.

Dialect Shows the SQL dialect in which the code was last saved. The dialect is either Watcom-SQL or Transact-SQL.

Comment Provides a place for you to type a description of the function. For example, you could use this area to describe the function's purpose in the system.

See also

- ◆ [“Function types” \[SQL Anywhere Server - SQL Reference\]](#)
- ◆ [“CREATE FUNCTION statement” \[SQL Anywhere Server - SQL Reference\]](#)

Function property sheet: Parameters tab

The Parameters tab of the Function property sheet has the following components:

Parameters list Displays the name, ID, data type, parameter type, and mode of the function's parameters. The mode has one of the following values:

- ◆ **In** The parameter is an expression that provides a value to the function.
- ◆ **Out** The parameter is a variable that could be given a value by the function.
- ◆ **In/out** The parameter is a variable that provides a value to the function, and could be given a new value by the function.

See also

- ◆ [“Declaring parameters for procedures” \[SQL Anywhere Server - SQL Usage\]](#)
- ◆ [“Using Procedures, Triggers, and Batches” \[SQL Anywhere Server - SQL Usage\]](#)
- ◆ [“CREATE FUNCTION statement” \[SQL Anywhere Server - SQL Reference\]](#)

Function property sheet: Permissions tab

The Permissions tab of the Function property sheet has the following components:

Users list Lists the users who have permissions on the function. If you want to add users to the list, click Grant. To remove permissions from a user, select the user and click Revoke. You can select multiple users by holding Shift while you click.

Click the Execute field beside each user to grant or revoke permissions.

- ◆ **Grant** Displays the Grant Permissions dialog, which lets you grant permissions for the function to other users or groups.
- ◆ **Revoke** Revokes permissions for the function from the user or group and removes them from the Users list.

See also

- ◆ [“Granting permissions on procedures” \[SQL Anywhere Server - Database Administration\]](#)
- ◆ [Grant Permissions dialog](#)

Group property sheet: General tab

The General tab of the Group property sheet has the following components:

Name Shows the name of the group.

Type Shows the type of object.

Allowed to connect Select this option to allow the group to connect to the database. If the group is not allowed to connect, the password (if one was supplied) is removed from the account. If you later change the group to allow them to connect, you must supply a new password. Clearing this option disables the Password and Confirm Password options.

Users are almost always allowed to connect. For a group, however, turning this option off prevents anyone from connecting to the database using the group account itself.

- ◆ **Password** Type the password for the group. For added security, the characters appear as asterisks. Passwords are case sensitive.
- ◆ **Confirm password** Confirm the password that you typed in the Password text box by entering it again. The contents of the two fields must match exactly. Passwords are case sensitive.

Comment Provides a place for you to type a text description of the group. For example, you could use this area to describe the group's purpose in the system.

See also

- ◆ [“Creating groups” \[SQL Anywhere Server - Database Administration\]](#)
- ◆ [“Managing User IDs and Permissions” \[SQL Anywhere Server - Database Administration\]](#)

Group property sheet: Authorities tab

The Authorities tab of the Group property sheet has the following components:

DBA Grants DBA authority to the group; a group with DBA authority can fully administer the database.

Resource Grants resource authority to the group; a group with resource authority can create database objects.

Remote DBA Grants Remote DBA authority to the group. The MobiLink client utility, dbmlsync, requires Remote DBA authority. A user ID with this type of authority should run the SQL Remote Message Agent to ensure that actions can be performed without creating security loopholes.

Backup Select this option to grant backup authority to the group.

Validate Select this option to grant validate authority to the group; a group with validate authority can perform the operations executed by the different VALIDATE statements, such as database, table, index, and checksum validation.

See also

- ◆ [“Permissions of groups” \[SQL Anywhere Server - Database Administration\]](#)
- ◆ [“DBA authority overview” \[SQL Anywhere Server - Database Administration\]](#)
- ◆ [“RESOURCE authority overview” \[SQL Anywhere Server - Database Administration\]](#)
- ◆ [“GRANT REMOTE DBA statement \[MobiLink\] \[SQL Remote\]” \[SQL Anywhere Server - SQL Reference\]](#)
- ◆ [“BACKUP authority overview” \[SQL Anywhere Server - Database Administration\]](#)
- ◆ [“VALIDATE authority overview” \[SQL Anywhere Server - Database Administration\]](#)

Group property sheet: Permissions tab

The Permissions tab of the Group property sheet has the following components:

Permissions list Shows all the tables the group has permissions on, as well as the user who owns each table. You can click the fields beside each group to grant or revoke permissions; double-clicking (so that a checkmark and two + signs appear) gives the group grant options for the permission.

Show Select what type of object appears in the Permissions list:

- ◆ **Tables** All tables the group has permissions on.
- ◆ **Views** All views that the group has permissions on.
- ◆ **Procedures & functions** All procedures and functions the group has permissions on. You can only grant Execute permissions for procedures and functions.

See also

- ◆ [“Creating groups” \[SQL Anywhere Server - Database Administration\]](#)

Index property sheet: General tab

The General tab of the Index property sheet has the following components:

Name Shows the name of the index. You can edit the name of the index in this field.

Type Shows the type of object. The object type can be foreign key index, primary key index, unique constraint index, or index.

Unique Shows whether values in the index must be unique. The unique value is set when you create a new index.


Table Shows the name and owner of the table with which the index is associated. This only appears if the index is on a table.

Materialized view Shows the name and owner of the materialized view with which the index is associated. This only appears if the index is on a materialized view.

Dbospace Shows the database file, or dbospace, where the index is located. This only applies to indexes on base tables and materialized views.

Clustered Shows whether this index is a clustered index. Clustered indexes are supported for SQL Anywhere databases that are version 8.0.2 and higher.

Clustered indexes in SQL Anywhere store the table rows in approximately the same order as they appear in the corresponding index. Using a clustered index can lead to performance benefits by reducing the number of times each page needs to be read into memory. Only one index on a table can be a clustered index.

 For more information about clustered indexes, see [“CREATE INDEX statement” \[SQL Anywhere Server - SQL Reference\]](#).

◆ **Set Clustered Index Now** Opens the Set Clustered Index dialog where you can specify that this index is a clustered index.

Index type Shows the store type of index the table has. The possible values are compressed B-tree or hash B-tree.

Comment Provides a place for you to type a text description of the index. For example, you could use this area to describe the index's purpose in the system.

See also

- ◆ [“Indexes” \[SQL Anywhere Server - SQL Usage\]](#)
- ◆ [“CREATE INDEX statement” \[SQL Anywhere Server - SQL Reference\]](#)

Index property sheet: Columns tab

The Columns tab of the Index property sheet has the following components:

Columns list Shows all the columns in the index, as well as their order, either ascending or descending. You set the order when you create a new index.

The columns are sorted by their sequence, which is a unique number starting at 0. The order of the numbers determines the relative position of the columns in the index.

◆ **Details** Displays the Column Details dialog, which shows a summary of the properties of the selected column.

See also

- ◆ [“Indexes” \[SQL Anywhere Server - SQL Usage\]](#)
- ◆ [“Working with indexes” \[SQL Anywhere Server - SQL Usage\]](#)
- ◆ [“CREATE INDEX statement” \[SQL Anywhere Server - SQL Reference\]](#)

JAR File property sheet: General tab

The General tab of the JAR File property sheet has the following components:

Name Shows the name of the JAR file.

Type Shows the type of object.


Creator Shows the database user who created and owns the JAR file.

Date created Shows the date the JAR file was created.

Date modified Shows the date the JAR file was last modified.

Comment Provides a place for you to type a text description of the JAR file. For example, you could use this area to describe the JAR file's purpose in the system.

Update Now Displays the Update JAR File dialog, which lets you update the JAR file.

 For more information about updating a Java Class, see [“Updating classes and JAR files” \[SQL Anywhere Server - Programming\]](#).

See also

- ◆ [“Installing a JAR” \[SQL Anywhere Server - Programming\]](#)

Java Class property sheet: General tab

The General tab of the Java Class property sheet has the following components:

Name Shows the name of the Java class.

Type Shows the type of object.

Creator Shows the database user who created and owns the Java class.

JAR file Shows the name of the JAR file containing the Java class. Java classes do not have to be contained in a JAR file.

Date created Shows the date the Java class was created.

Date modified Shows the date the Java class was last modified.

Comment Provides a place for you to type a text description of the Java class. For example, you could use this area to describe the Java Class's purpose in the system.

Update Now Displays the Update Java Class dialog, which lets you update the Java class.

☞ For more information about updating Java classes, see “Updating classes and JAR files” [[SQL Anywhere Server - Programming](#)].

See also

- ◆ “Installing Java classes into a database” [[SQL Anywhere Server - Programming](#)]

Login Mapping property sheet: General tab

The General tab of the Login Mapping property sheet has the following components:

Name Shows the name of the integrated login.

Type Shows the type of object.

Database user Shows the database user the integrated login is for.

Comment Provides a place for you to type a text description of the integrated login. For example, you could use this area to describe the integrated login's purpose in the system.

See also

- ◆ “Using integrated logins” [[SQL Anywhere Server - Database Administration](#)]
- ◆ “GRANT statement” [[SQL Anywhere Server - SQL Reference](#)]

Maintenance Plan Report property sheet: General tab

The General tab of the Maintenance Plan Report property sheet has the following components:

Name Shows the name of the maintenance plan.

Type Shows the type of report.

Start time Shows the date and time that the maintenance plan started running.

Finish time Shows the date and time that the maintenance plan finished running.

Duration Shows the amount of time that the maintenance plan ran for.

Successful Shows whether or not the maintenance plan ran successfully.

Details Shows the text of the entire maintenance plan.

See also

- ◆ “Creating a maintenance plan” [[SQL Anywhere Server - Database Administration](#)]

Message Type property sheet: General tab

The General tab of the Message Type property sheet has the following components:

Name Shows the name of the message type.

Type Shows the type of object.

Publisher address Provides a place for you to type the address of the publisher. Each remote database sends a replication message back to the consolidated database at the address.

Comment Provides a place for you to type a text description of the message type. For example, you could use this area to describe the message type's purpose in the system.

See also

- ◆ [“Using message types” \[SQL Remote\]](#)

Message Type property sheet: SQL Remote Users tab

The SQL Remote Users tab of the Message Type property sheet has the following components:

Remote Users list Lists all the remote users that are currently using the message type by name, address, and comment.

Properties Displays the property sheet for the remote user selected in the Remote Users list.

See also

- ◆ [“Using message types” \[SQL Remote\]](#)

MobiLink User property sheet: General tab

The General tab of the MobiLink User property sheet has the following components:

Name Shows the name of the MobiLink user.

Type Shows the type of object.

See also


- ◆ [“About MobiLink users” \[MobiLink - Client Administration\]](#)

MobiLink User property sheet: Connection tab

The Connection tab of the MobiLink User property sheet has the following components:

Protocol Choose the communication protocol to use for synchronization. TCP/IP is used by default.

The settings you can specify on the Connection tab depend on the communication protocol you are using. Any additional parameters, such as `buffer_size`, can be set in the Advanced field.

 For a complete list of parameters supported by each of the protocols, see [“CREATE SYNCHRONIZATION USER statement \[MobiLink\]” \[SQL Anywhere Server - SQL Reference\]](#) or [“CommunicationType \(ctp\) extended option” \[MobiLink - Client Administration\]](#).

- ◆ **TCP/IP** Select this option to use the TCP/IP protocol for synchronization. For versions 8.0.x and 9.0.x, choosing TCP/IP and then Enable Certicom security is equivalent to choosing TLS.
- ◆ **TLS** Select this option to use TLS (transport-layer security) for synchronization. TLS supports both elliptic-curve (formerly Certicom) and RSA encryption. This option is only available for version 10 and later.
- ◆ **HTTP** Select this option to use the HTTP protocol for synchronization.
- ◆ **HTTPS** Select this option to use the HTTPS protocol for synchronization. HTTPS supports both elliptic-curve (formerly Certicom) and RSA encryption.
- ◆ **HTTPS FIPS** Select this option to use the HTTPS protocol for synchronization with FIPS-approved algorithms for encryption. This option is only available for version 8.0.x and 9.0.x. For version 10, this is equivalent to selecting the HTTPS protocol and then selecting the FIPS-approved option for Security.
- ◆ **ActiveSync** Select this option to use ActiveSync to exchange data with the MobiLink provider for ActiveSync, which resides on the desktop computer. The ActiveSync parameters describe the communications between the MobiLink provider for ActiveSync and the MobiLink server. This option is only available for versions 8.0.x and 9.0.x.

For more information, see [“ActiveSync provider installation utility \[mlasinst\]” \[MobiLink - Client Administration\]](#).

Host The IP number or host name of the computer on which the MobiLink server is running. The default value is localhost. You can use **localhost** if the MobiLink server is running on the same computer as the client.

For Windows CE, the default value is the value of *ipaddr* in the registry folder *Comm\Tcpip\Hosts\ppp_peer*. This allows a Windows CE device to connect to a MobiLink server executing on the desktop computer where the Windows CE device's cradle is connected.

For the Palm Computing Platform, the default value of localhost refers to the device. It is recommended that you specify an explicit host name or IP address.

- ◆ **Port** The MobiLink server communicates over a specific port. The default port number is **2439** for TCP/IP, **80** for HTTP, and **443** for HTTPS. If you choose a different value, you must configure your MobiLink server to listen on the port you specify.

Proxy host Type the host name or IP address of the proxy server. The default value is **localhost**. This option is only available for HTTP and HTTPS synchronization.

- ◆ **Proxy port** Type the port number of the proxy server. The default value is **80** for HTTP and **443** for HTTPS. This option is only available for HTTP and HTTPS synchronization.

URL suffix Type the suffix to add to the URL on the first line of each HTTP request. The default value is **MobiLink**. This option is only available for HTTP and HTTPS synchronization.

When synchronizing through a proxy server, the suffix may be necessary in order to find the MobiLink server.

- ◆ **HTTP Version** Type the value specifying the version of HTTP to use for synchronization. You have a choice of 1.0 or 1.1. The default value is **1.1**.

Automatic connection The following options allow MobiLink clients running on Pocket PC 2002 or Windows desktop computers to connect through dial-up network connections.

When used with scheduling, your remote device can synchronize unattended. When used without scheduling, you can run dbmlsync without manually dialing a connection.

☞ For more information about scheduling, see “[Scheduling synchronization](#)” [*MobiLink - Client Administration*].

- ◆ **Network name** Specify the network name so that you can use the MobiLink auto-dial feature. This allows you to connect from a Pocket PC 2002 or Windows desktop computer without manually dialing. The name should be the network name that you have specified in the dropdown list in Settings ► Connections ► Connections (Pocket PC) or Network & Dialup Connections (Windows).
- ◆ **Network connect timeout** When you specify a network name, you can optionally specify a timeout after which the dial-up fails. This feature applies only to Pocket PC 2002. (On Windows, you can control this feature by configuring the connection profile.) The default is **120** seconds.
- ◆ **Leave open** When you supply a network name, you can optionally specify whether the connection should be left open (1) or closed (0) after synchronization finishes. By default, the connection is closed.

Security These options allow you to use a cipher suite to encrypt all communication through this connection. You can provide information about the certificate used to authenticate the server in the fields below for both the elliptic-curve and RSA ciphers.

Enable Certicom security Select this option to encrypt all communication through this connection. You can use the elliptic-curve or RSA cipher. By default, elliptic curves are used. This option is only available for versions 8.0.x and 9.0.x. Choosing this option with the TCP/IP protocol is equivalent to choosing the TLS protocol in version 10.

Separately licensed component required

ECC encryption and FIPS-approved encryption require a separate license. All strong encryption technologies are subject to export regulations.

See “[Separately licensed components](#)” [*SQL Anywhere 10 - Introduction*].

☞ For more information about security, see “[Transport-Layer Security](#)” [*SQL Anywhere Server - Database Administration*].

- ◆ **Elliptic curves** Uses the elliptic-curve cipher to encrypt connections. You can use this cipher to encrypt TLS over TCP/IP and HTTPS connections with version 10 databases, and TCP/IP connections with version 8.0.x and 9.0.x databases. This was formerly called Certicom encryption.
- ◆ **RSA** Uses the RSA cipher to encrypt communications. You can use this cipher to encrypt TLS over TCP/IP and HTTPS connections with version 10 databases, and TCP/IP connections with version 8 and 9 databases. This cipher is selected automatically with version 8.0.x and 9.0.x databases when you choose HTTPS.

- ◆ **FIPS-approved** Uses the FIPS-approved RSA cipher to encrypt communications. You can use this cipher to encrypt TLS over TCP/IP and HTTPS connections with version 10 databases, and TCP/IP connections with version 9.0.x databases. This cipher is selected automatically with version 9 databases when you choose HTTPS FIPS. This cipher is not supported for version 8.0.x databases.
- ◆ **Certificate company** Type the name of the certificate authority or organization that issued the certificate. The server's and the client's values must match.
- ◆ **Certificate unit** Type the certificate unit. This is also called the organizational unit. The server's and the client's values must match.
- ◆ **Certificate name** Type the certificate's common name. The server's and the client's values must match.
- ◆ **Trusted certificates** Type the name of the certificate file the client uses to authenticate the server.

Advanced Type any additional connection parameters in this field, entering them in the form *parameter=value*, with multiple parameters separated by semicolons. For example, to set the maximum body size for a fixed content length message, and to instruct the client to attempt to use the same TCP/IP connection for all HTTP requests in a synchronization, you would enter the following in the Advanced field:

```
buffer_size=58000;persistent=TRUE
```

☞ For a complete list of connection parameters you can enter in this field, see “[CREATE SYNCHRONIZATION USER statement \[MobiLink\]](#)” [*SQL Anywhere Server - SQL Reference*].

Note

You can set connection parameters for synchronization in several ways.

☞ For information about how dbmlsync resolves conflicting options, see “[Priority order for extended options and connection parameters](#)” [*MobiLink - Client Administration*].

If a field is blank on the Connection tab of the MobiLink User property sheet, the MobiLink user may be inheriting the connection parameter setting from the synchronization subscription. You should only supply connection parameters on the Connection tab of the MobiLink User property sheet if you want to override the publication's settings.

See also

- ◆ “[CREATE SYNCHRONIZATION USER statement \[MobiLink\]](#)” [*SQL Anywhere Server - SQL Reference*]
- ◆ “[MobiLink SQL Anywhere Client Extended Options](#)” [*MobiLink - Client Administration*]
- ◆ “[-eu option](#)” [*MobiLink - Client Administration*]
- ◆ “[CommunicationAddress \(adr\) extended option](#)” [*MobiLink - Client Administration*]

MobiLink User property sheet: Extended Options tab

The Extended Options tab of the MobiLink User property sheet has the following components:

This MobiLink user has the following extended options Lists the extended options and the values set for the MobiLink user. Click the Value field beside the option name to set the value for the MobiLink user.

The table below lists all the available extended options for synchronization.

☞ For more information about these options, see [“MobiLink SQL Anywhere Client Extended Options”](#) [*MobiLink - Client Administration*].

Extended option	Default	Description
“ConflictRetries (cr) extended option” [<i>MobiLink - Client Administration</i>]	-1 (continue indefinitely)	Specifies the number of retries if the download fails because of conflicts.
“ContinueDownload (cd) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Specifies restartable downloads.
“DisablePolling (p) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Disables automatic logscan polling.
“DownloadBufferSize (dbs) extended option” [<i>MobiLink - Client Administration</i>]	32 K on Windows CE, 1 M on all other operating systems.	Specifies the size of the download buffer. By default, units of bytes are used. You can use the suffix k or m to specify units of kilobytes or megabytes, respectively.
“DownloadOnly (ds) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Specifies that synchronization should be download-only.
“DownloadReadSize (drs) extended option” [<i>MobiLink - Client Administration</i>]	32 K	For restartable downloads, specifies the maximum amount of data that may need to be resent after a communications failure.
“ErrorLogSendLimit (el) extended option” [<i>MobiLink - Client Administration</i>]	32 K	Specifies how much of the remote log file dbmsync should send to the MobiLink server when synchronization occurs. By default, units of bytes are used. You can use the suffix k or m to specify units of kilobytes or megabytes, respectively. If you don't want to send any dbmsync output log messages, a zero value should be set for this extended option.
“FireTriggers (ft) extended option” [<i>MobiLink - Client Administration</i>]	ON	Specifies that triggers should be fired on the remote database when the download is applied.


Extended option	Default	Description
“HoverRescanThreshold (hrt) extended option” [<i>MobiLink - Client Administration</i>]	1 M	When you are using scheduling, this limits the amount of discarded memory that is allowed to accumulate before a rescan is performed. By default, units of bytes are used. You can use the suffix k or m to specify units of kilobytes or megabytes, respectively.
“IgnoreHookErrors (eh) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Specifies that errors that occur in hook functions should be ignored.
“IgnoreScheduling (isc) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Specifies that scheduling settings should be ignored.
“Increment (inc) extended option” [<i>MobiLink - Client Administration</i>]	(infinite)	Controls the size of incremental uploads. By default, units of bytes are used. You can use the suffix k or m to specify units of kilobytes or megabytes, respectively.
“LockTables (lt) extended option” [<i>MobiLink - Client Administration</i>]	ON	Specifies that articles (tables or parts of tables in the publications being synchronized) should be locked before synchronizing.
“Memory (mem) extended option” [<i>MobiLink - Client Administration</i>]	1 M	Specifies a cache size. By default, units of bytes are used. You can use the suffix k or m to specify units of kilobytes or megabytes, respectively.
“MirrorLogDirectory (mld) extended option” [<i>MobiLink - Client Administration</i>]	(none)	Specifies the location of old mirror log files so that they can be deleted.
“MobiLinkPwd (mp) extended option” [<i>MobiLink - Client Administration</i>]	NULL	Specifies the MobiLink password. Passwords are case sensitive.
“NewMobiLinkPwd (mn) extended option” [<i>MobiLink - Client Administration</i>]	NULL	Specifies a new MobiLink password. Passwords are case sensitive.
“NoSyncOnStartup (nss) extended option” [<i>MobiLink - Client Administration</i>]	NULL	Specifies the path containing offline transaction logs.
“OfflineDirectory (dir) extended option” [<i>MobiLink - Client Administration</i>]	(none)	Specifies the path containing offline transaction logs.

Extended option	Default	Description
“PollingPeriod (pp) extended option” [<i>MobiLink - Client Administration</i>]	1 minute	Specifies the logscan polling period. By default, units of minutes are used. You can use the suffix s, m, h, or d to specify units of seconds, minutes, hours, or days, respectively.
“Schedule (sch) extended option” [<i>MobiLink - Client Administration</i>]	No schedule	Specifies a schedule for synchronization.
“ScriptVersion (sv) extended option” [<i>MobiLink - Client Administration</i>]	DEFAULT	Specifies a script version.
“SendColumnNames (scn) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Specifies that column names should be sent in the upload.
“SendDownloadACK (sa) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Specifies that a download acknowledgment should be sent from the client to the server.
“SendTriggers (st) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Specifies that trigger actions should be sent on upload.
“TableOrder (tor) extended option” [<i>MobiLink - Client Administration</i>]	(none)	Specifies the order of tables in the upload stream.
“TableOrderChecking (toc) extended option” [<i>MobiLink - Client Administration</i>]	ON	Specifies whether dbmlsync should check that no table is uploaded before another table on which it has a foreign key. Use this option when you specify TableOrder.
“UploadOnly (uo) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Specifies that synchronization should only include an upload.
“Verbose (v) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Specifies full verbosity. This option is identical to dbmlsync -v+.
“VerboseHooks (vs) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Specifies that messages related to hook scripts should be logged. This option is identical to dbmlsync -vs.
“VerboseMin (vm) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Specifies that a small amount of information should be logged. This option is identical to dbmlsync -v.

Extended option	Default	Description
“VerboseOptions (vo) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Specifies that information should be logged about the command line options (including extended options) that you have specified. This option is identical to dbmlsync -vo.
“VerboseRowCounts (vn) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Specifies that the number of rows that are uploaded and downloaded should be logged. This option is identical to dbmlsync -vn.
“VerboseRowValues (vr) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Specifies that the values of rows that are uploaded and downloaded should be logged. This option is identical to dbmlsync -vr.
“VerboseUpload (vu) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Specifies that information about the upload stream should be logged. This option is identical to dbmlsync -vu.

Note

You can set connection parameters for synchronization in several ways.

 For information about how dbmlsync resolves conflicting options, see “[Priority order for extended options and connection parameters](#)” [*MobiLink - Client Administration*].

Parameter property sheet: General tab

The General tab of the Parameter property sheet has the following components:

Name Shows the name of the selected parameter.

Type Shows the type of object.

Procedure Shows the name of the procedure the parameter belongs to, with the name of the procedure's owner in parenthesis.

Data type Shows the data type of the parameter.

 For a list of valid data types, see “[SQL Data Types](#)” [*SQL Anywhere Server - SQL Reference*].

Parameter type Shows the type of parameter. The parameter has one of the following types:

- ◆ **Variable** A normal procedure parameter.
- ◆ **Result** A column in a result set returned by the procedure.

- ◆ **SQLSTATE** The special SQLSTATE output parameter. This parameter is an OUT parameter that outputs the SQLSTATE value when the procedure ends.

☞ For more information about the SQLSTATE parameter, see “[CREATE PROCEDURE statement](#)” [*SQL Anywhere Server - SQL Reference*].

- ◆ **SQLCODE** The special SQLCODE output parameter. This parameter is an OUT parameter that outputs the SQLCODE value when the procedure ends.

☞ For more information about the SQLCODE parameter, see “[CREATE PROCEDURE statement](#)” [*SQL Anywhere Server - SQL Reference*].

- ◆ **Return** The return value. This parameter type only applies to functions.

Mode Shows the mode of the parameter. The mode has one of the following values:

- ◆ **In** The parameter is an expression that provides a value to the function.
- ◆ **Out** The parameter is a variable that could be given a value by the function.
- ◆ **In/out** The parameter is a variable that provides a value to the function, and could be given a new value by the function.

See also

- ◆ “[CREATE PROCEDURE statement](#)” [*SQL Anywhere Server - SQL Reference*]

Primary Key property sheet: General tab

The General tab of the Primary Key property sheet has the following components:

Name Shows the name of the primary key. You can edit the primary key name in this field.

Type Shows the type of object.

Table Shows the name and owner of the table to which the primary key applies.

Index Shows the name of the index used to enforce the primary key constraint.

Comment Provides a place for you to type a description of the primary key.

See also

- ◆ “[CREATE TABLE statement](#)” [*SQL Anywhere Server - SQL Reference*]
- ◆ “[Managing primary keys \(Sybase Central\)](#)” [*SQL Anywhere Server - SQL Usage*]

Primary Key property sheet: Columns tab

The Columns tab of the Primary Key property sheet has the following components:

Name Shows the name of the column.

ID Shows the ID of each column.

Data type Shows the data type of the selected columns.

Comment Shows comments, if any, associated with the selected columns.

Details Displays the Column Details dialog, which shows a summary of the properties for the selected column.

Procedure property sheet: General tab

The General tab of the Procedure property sheet has the following components:

Name Shows the name of the procedure.

Type Shows the type of object.

Owner Shows the name of the database user who owns the procedure.

Dialect Shows the SQL dialect in which the code was last saved. The dialect is either Watcom-SQL or Transact-SQL.

Comment Provides a place for you to type a description of the procedure. For example, you could use this area to describe the procedure's purpose in the system.

See also

- ◆ [“CREATE PROCEDURE statement” \[SQL Anywhere Server - SQL Reference\]](#)

Procedure property sheet: Parameters tab

The Parameters tab of the Procedure property sheet has the following components:

Parameters list Displays the name, ID, data type, parameter type, and mode of the procedure's parameters. The mode has one of the following values:

- ◆ **In** The parameter is an expression that provides a value to the procedure.
- ◆ **Out** The parameter is a variable that could be given a value by the procedure.
- ◆ **In/out** The parameter is a variable that provides a value to the procedure, and could be given a new value by the procedure.

See also

- ◆ [“Declaring parameters for procedures” \[SQL Anywhere Server - SQL Usage\]](#)
- ◆ [“Using Procedures, Triggers, and Batches” \[SQL Anywhere Server - SQL Usage\]](#)
- ◆ [“CREATE PROCEDURE statement” \[SQL Anywhere Server - SQL Reference\]](#)

Procedure property sheet: Permissions tab

The Permissions tab of the Procedure property sheet has the following components:

Users list Lists the users who have permissions on the procedure. If you want to add users to the list, click Grant. To remove permissions from a user, select the user and then click Revoke. You can select multiple users by holding Shift while you click.

Click the Execute field beside each user to grant or revoke permissions.

- ◆ **Grant** Displays the Grant Permission dialog, which lets you grant permissions for the procedure to other users or groups.
- ◆ **Revoke** Revokes permissions for the procedure from the user or group and removes them from the Users list.

See also

- ◆ “Granting permissions on procedures” [[SQL Anywhere Server - Database Administration](#)]
- ◆ “CREATE PROCEDURE statement” [[SQL Anywhere Server - SQL Reference](#)]

Proxy Table property sheet: General tab

The General tab of the Proxy Table property sheet has the following components:

Name Shows the name of the proxy table. You cannot change the name of the proxy table.

Type Shows the type of object.

Owner Shows the name of the database user who owns the proxy table.

Remote location Shows the name of the remote server that contains the remote table, the remote database, the remote database user who owns the remote tables, and the name of the remote table the proxy table is based on. This only applies if the proxy table is for a remote server.

Directory access server Shows the name of the directory access server that the proxy table is based on. This only applies if the proxy table is for a directory access server.

Subdirectory Shows a subdirectory of the directory access server's root directory. When you execute a query against the proxy table, only files and directories within this subdirectory appear.

Comment Provides a place for you to type a text description of the proxy table. For example, you could use this area to describe the proxy table's purpose in the system.

See also

- ◆ “Working with proxy tables” [[SQL Anywhere Server - SQL Usage](#)]
- ◆ “CREATE EXISTING TABLE statement” [[SQL Anywhere Server - SQL Reference](#)]

Proxy Table property sheet: Columns tab

The Columns tab of the Proxy Table property sheet has the following components:

Columns list Lists all the columns in the proxy table, as well as their type and comments. You can double-click a column to open the Column Details dialog.

Details Displays the Column Details dialog, which shows a summary of the properties for the selected column.

See also

- ◆ [“Working with proxy tables” \[SQL Anywhere Server - SQL Usage\]](#)

Proxy Table property sheet: Permissions tab

The Permissions tab of the Proxy Table property sheet has the following components:

Users list Lists the users who have permissions on the proxy table. If you want to add users to the list, click Grant. To remove permissions from a user, select the user and click Revoke. You can select multiple users by holding Shift while you click.

To grant or revoke permissions, click the fields beside each user. Double-clicking (so that a check mark and two + signs appear) gives the user grant options.

- ◆ **Grant** Displays the Grant Permission dialog, which lets you grant permissions for the proxy table to other users or groups.
- ◆ **Revoke** Revokes permissions for the proxy table from the user or group and removes them from the Users list.

Select You must select a user from the Users list to enable this option. Shows whether the Select permissions for the user apply to all columns or a subset of columns. Click Change to open the Column Permissions dialog where you can grant Select permissions for a subset of columns.

Update You must select a user from the Users list to enable this option. Shows whether the user's Update permissions apply to all columns or a subset of columns. Click Change to open the Column Permissions dialog where you can grant Update permissions for a subset of columns.

References You must select a user from the Users list to enable this option. Shows whether the Reference permissions for the user apply to all columns or a subset of columns. Click Change to open the Column Permissions dialog where you can grant Reference permissions for a subset of columns.

See also

- ◆ [“Working with proxy tables” \[SQL Anywhere Server - SQL Usage\]](#)

Proxy Table property sheet: Miscellaneous tab

The Miscellaneous tab of the Proxy Table property sheet has the following components:

Maximum table width Shows the number of bytes required for each row in the proxy table. The number is calculated from the length of the string columns, the precision of numeric columns, and the number of bytes of storage for all other data types. If the proxy table includes long binary or long VARCHAR columns, their arbitrary widths are not included, so the row width can only be approximated.

Number of rows Shows the approximate number of rows in the table. This option is not available for proxy tables.

◆ **Calculate** Determines an accurate row count for the table. This button is not enabled for proxy tables.

See also

◆ [“Working with proxy tables” \[SQL Anywhere Server - SQL Usage\]](#)

Publication property sheet: General tab

The General tab of the Publication property has the following components:

Name Shows the name of the publication. You can change the publication's name in this field.

Type Shows the type of object.

Owner Shows the name of the database user who owns the publication.

Synchronization type Shows the type of publication. The type can be one of the following:

◆ **Log scan** Standard publication that is compatible with MobiLink and SQL Remote.

◆ **Scripted upload** Publication that uses stored procedures to define the upload. This type of publication is compatible only with MobiLink.

◆ **Download only** Publication that only downloads data to remote databases, and never uploads data. Download-only publications do not use a transaction log on the client. This type of publication is compatible only with MobiLink.

Comment Provides a place for you to type a text description of the publication. For example, you could use this area to describe the publication's purpose in the system.

See also

◆ [“CREATE PUBLICATION statement \[MobiLink\] \[SQL Remote\]” \[SQL Anywhere Server - SQL Reference\]](#)

Publication property sheet: Tables tab

The Tables tab lets you select tables and add them to the list of articles that are included in the client database.

The Tables tab of the Publication property sheet has the following components:

Available Tables list Lists all the base tables in the database you are currently connected to. To add a table to the Selected Tables list, select the table in the Available Tables list, then click Add.

Selected Tables list Lists all the tables that are included in the publication for the client database. If you want to remove a table from the Selected Tables list, select the table, then click Remove.

- ◆ **Add** Adds the table selected in the Available Tables list to the Selected Tables list so the table is included in the publication.
- ◆ **Remove** Removes the selected table from the Selected Tables list so the table is not included in the publication.

Publication property sheet: Columns tab

The Columns tab lets you select columns from tables and add them to the list of articles that are included in the client database.

The Columns tab of the Publication property sheet has the following components:

Available columns list Lists the tables and their columns selected on the Tables tab. Expand a table in the list to display its columns. To add columns to the Selected Columns list, select the columns in the Available Columns list, and then click Add.

Selected columns list Lists all the columns that are included in the publication. If you want to remove columns from the Selected Columns list, select the columns, and then click Remove.

- ◆ **Add** Adds the columns selected in the Available Columns list to the Selected Columns list so it is included in the publication.
- ◆ **Remove** Removes the columns from the Selected Columns list so they are not included in the publication.

Publication property sheet: WHERE Clauses tab

Articles defined for MobiLink and SQL Remote publications can use a **WHERE** clause to define a subset of rows of a table to be included in an article. UltraLite applications can use row subsets by supplying a **WHERE** clause, with one exception: articles in UltraLite publications governing HotSync synchronization cannot use a **WHERE** clause.

The WHERE Clauses tab lets you supply a **WHERE** clause to restrict the rows that are included in the client database.

The WHERE Clauses tab is only shown if the publication that contains the articles has a type of log scan.

The WHERE Clauses tab of the Publication property sheet has the following components:

Articles list Select an article from the list of articles included in the publication.

The selected article has the following WHERE clause In the text box, type the **WHERE** clause for the table to restrict the rows that are included in the article.

The following example creates a single-article publication that includes all sales order information for sales rep number 856.

```
CREATE PUBLICATION pub_orders_samuel_singer
( TABLE SalesOrders
  WHERE SalesRepresentative = 856 )
```


☞ For more information, see [“Publishing only some rows using a WHERE clause” \[SQL Remote\]](#).

See also

- ◆ [“The WHERE clause: specifying rows” \[SQL Anywhere Server - SQL Usage\]](#)
- ◆ [“Publishing only some rows using a WHERE clause” \[SQL Remote\]](#)

Publication property sheet: SUBSCRIBE BY Restrictions tab

This tab only applies to SQL Remote publications and is only shown if the publication has a synchronization type of log scan.

The SUBSCRIBE BY Restrictions tab lets you define a subset of rows of a table for inclusion in the article.

The SUBSCRIBE BY Restrictions tab of the Publication property sheet has the following components:

Articles list Select an article from the list of articles included in the publication.

This article has the following SUBSCRIBE BY restriction You can choose one of the following options for the SUBSCRIBE BY restriction for the article:

- ◆ **None** Select this option if the article does not have a SUBSCRIBE BY restriction.
- ◆ **Column** Sets the article to partition rows from the table based on a column (SUBSCRIBE BY columns). Once you select this option, you must select a column from the dropdown list.
- ◆ **Expression** Sets the article to partition rows from the table based on an expression entered in the field below.

See also

- ◆ [“Publishing only some rows using a subscription expression” \[SQL Remote\]](#)

Publication property sheet: Upload Procedure tab

This property sheet only applies to scripted upload publications.

The Upload Procedure tab of the Publication property sheet has the following components:

Articles list Select an article from the list of articles included in the publication.

Upload procedure lists You can associate up to three procedures with one article: one for inserts, one for updates, and one for deletes. Click the INSERT, UPDATE, and DELETE tabs to specify these procedures for the selected article.

Upload rows using this procedure Select this option and then select a procedure from the dropdown list to specify a procedure to use to upload the selected rows. The selected procedure appears in the text box below, where it can be edited. Clear this option if you do not want to define a procedure.

- ◆ **Create New Procedure Now** Click the Create New Procedure Now icon to create a new procedure for upload scripts. The Create Procedure wizard appears.

- ◆ **Save Procedure Now** Click the Save Procedure Now icon to save changes that you have made to the selected procedure.
- ◆ **Revert Procedure Now** Click the Revert Procedure Now icon to abandon changes you have made to the selected procedure since it was last saved.


Publication property sheet: Connection tab

This tab only applies to MobiLink.

The Connection tab of the Publication property sheet has the following components:

Protocol Choose the communication protocol to use for synchronization. TCP/IP is used by default.

The settings you can specify on the Connection tab depend on the communication protocol you are using. Any additional parameters, such as `buffer_size`, can be set in the Advanced field.

 For a complete list of parameters supported by each of the protocols, see [“CREATE SYNCHRONIZATION USER statement \[MobiLink\]” \[SQL Anywhere Server - SQL Reference\]](#) or [“CommunicationType \(ctp\) extended option” \[MobiLink - Client Administration\]](#).

- ◆ **TCP/IP** Select this option to use the TCP/IP protocol for synchronization. For versions 8.0.x and 9.0.x, choosing TCP/IP and then Enable Certicom security is equivalent to choosing TLS.
- ◆ **TLS** Select this option to use TLS (transport-layer security) for synchronization. TLS supports both elliptic-curve (formerly Certicom) and RSA encryption. This option is only available for version 10 and later.
- ◆ **HTTP** Select this option to use the HTTP protocol for synchronization.
- ◆ **HTTPS** Select this option to use the HTTPS protocol for synchronization. HTTPS supports both elliptic-curve (formerly Certicom) and RSA encryption.
- ◆ **HTTPS FIPS** Select this option to use the HTTPS protocol for synchronization with FIPS-approved algorithms for encryption. This option is only available for version 8.0.x and 9.0.x. For version 10, this is equivalent to selecting the HTTPS protocol and then selecting the FIPS-approved option for Security.
- ◆ **ActiveSync** Select this option to use ActiveSync to exchange data with the MobiLink provider for ActiveSync, which resides on the desktop computer. The ActiveSync parameters describe the communications between the MobiLink provider for ActiveSync and the MobiLink server. This option is only available for versions 8.0.x and 9.0.x.

For more information, see [“ActiveSync provider installation utility \[mlasinst\]” \[MobiLink - Client Administration\]](#).

Host The IP number or host name of the computer on which the MobiLink server is running. The default value is `localhost`. You can use `localhost` if the MobiLink server is running on the same computer as the client.

For Windows CE, the default value is the value of *ipaddr* in the registry folder *Comm\Tcpip\Hosts\ppp_peer*. This allows a Windows CE device to connect to a MobiLink server executing on the desktop computer where the Windows CE device's cradle is connected.

For the Palm Computing Platform, the default value of localhost refers to the device. It is recommended that you specify an explicit host name or IP address.

- ◆ **Port** The MobiLink server communicates over a specific port. The default port number is **2439** for TCP/IP, **80** for HTTP, and **443** for HTTPS. If you choose a different value, you must configure your MobiLink server to listen on the port you specify.

Proxy host Type the host name or IP address of the proxy server. The default value is **localhost**. This option is only available for HTTP and HTTPS synchronization.

- ◆ **Proxy port** Type the port number of the proxy server. The default value is **80** for HTTP and **443** for HTTPS. This option is only available for HTTP and HTTPS synchronization.

URL suffix Type the suffix to add to the URL on the first line of each HTTP request. The default value is **MobiLink**. This option is only available for HTTP and HTTPS synchronization.

When synchronizing through a proxy server, the suffix may be necessary in order to find the MobiLink server.

- ◆ **HTTP Version** Type the value specifying the version of HTTP to use for synchronization. You have a choice of 1.0 or 1.1. The default value is **1.1**.

Automatic connection The following options allow MobiLink clients running on Pocket PC 2002 or Windows desktop computers to connect through dial-up network connections.

When used with scheduling, your remote device can synchronize unattended. When used without scheduling, you can run dbmlsync without manually dialing a connection.

☞ For more information about scheduling, see [“Scheduling synchronization” \[MobiLink - Client Administration\]](#).

- ◆ **Network name** Specify the network name so that you can use the MobiLink auto-dial feature. This allows you to connect from a Pocket PC 2002 or Windows desktop computer without manually dialing. The name should be the network name that you have specified in the dropdown list in Settings ► Connections ► Connections (Pocket PC) or Network & Dialup Connections (Windows).
- ◆ **Network connect timeout** When you specify a network name, you can optionally specify a timeout after which the dial-up fails. This feature applies only to Pocket PC 2002. (On Windows, you can control this feature by configuring the connection profile.) The default is **120** seconds.
- ◆ **Leave open** When you supply a network name, you can optionally specify whether the connection should be left open (1) or closed (0) after synchronization finishes. By default, the connection is closed.

Security These options allow you to use a cipher suite to encrypt all communication through this connection. You can provide information about the certificate used to authenticate the server in the fields below for both the elliptic-curve and RSA ciphers.

Enable Certicom security Select this option to encrypt all communication through this connection. You can use the elliptic-curve or RSA cipher. By default, elliptic curves are used. This option is only available for versions 8.0.x and 9.0.x. Choosing this option with the TCP/IP protocol is equivalent to choosing the TLS protocol in version 10.

Separately licensed component required

ECC encryption and FIPS-approved encryption require a separate license. All strong encryption technologies are subject to export regulations.

See “[Separately licensed components](#)” [*SQL Anywhere 10 - Introduction*].

☞ For more information about security, see “[Transport-Layer Security](#)” [*SQL Anywhere Server - Database Administration*].

- ◆ **Elliptic curves** Uses the elliptic-curve cipher to encrypt connections. You can use this cipher to encrypt TLS over TCP/IP and HTTPS connections with version 10 databases, and TCP/IP connections with version 8 and 9 databases. This was formerly called Certicom encryption.
- ◆ **RSA** Uses the RSA cipher to encrypt communications. You can use this cipher to encrypt TLS over TCP/IP and HTTPS connections with version 10 databases, and TCP/IP connections with version 8 and 9 databases. This cipher is selected automatically with version 8 and 9 databases when you choose HTTPS.
- ◆ **FIPS-approved** Uses the FIPS-approved RSA cipher to encrypt communications. You can use this cipher to encrypt TLS over TCP/IP and HTTPS connections with version 10 databases, and TCP/IP connections with version 9 databases. This cipher is selected automatically with version 9 databases when you choose HTTPS FIPS. This cipher is not supported for version 8 databases.
 - ◆ **Certificate company** Type the name of the certificate authority or organization that issued the certificate. The server's and the client's values must match.
 - ◆ **Certificate unit** Type the certificate unit. This is also called the organizational unit. The server's and the client's values must match.
 - ◆ **Certificate name** Type the certificate's common name. The server's and the client's values must match.
 - ◆ **Trusted certificates** Type the name of the certificate file the client uses to authenticate the server.

Advanced Type any additional connection parameters in this field, entering them in the form *parameter=value*, with multiple parameters separated by semicolons. For example, to set the maximum body size for a fixed content length message, and to instruct the client to attempt to use the same TCP/IP connection for all HTTP requests in a synchronization, you would enter the following in the Advanced field:

```
buffer_size=58000;persistent=TRUE
```

☞ For a complete list of connection parameters you can enter in this field, see “[CREATE SYNCHRONIZATION USER statement \[MobiLink\]](#)” [*SQL Anywhere Server - SQL Reference*].

Note

You can set connection parameters for synchronization in several ways.

☞ For information about how dbmlsync resolves conflicting options, see [“Priority order for extended options and connection parameters”](#) [*MobiLink - Client Administration*].

If a field is blank on the Connection tab of the MobiLink User property sheet, the MobiLink user may be inheriting the connection parameter setting from the synchronization subscription. You should only supply connection parameters on the Connection tab of the MobiLink User property sheet if you want to override the publication's settings.

See also

- ◆ [“CREATE SYNCHRONIZATION USER statement \[MobiLink\]”](#) [*SQL Anywhere Server - SQL Reference*]
- ◆ [“CREATE PUBLICATION statement \[MobiLink\] \[SQL Remote\]”](#) [*SQL Anywhere Server - SQL Reference*]
- ◆ [“ALTER PUBLICATION statement \[MobiLink\] \[SQL Remote\]”](#) [*SQL Anywhere Server - SQL Reference*]
- ◆ [“-x option”](#) [*MobiLink - Client Administration*]
- ◆ [“CommunicationAddress \(adr\) extended option”](#) [*MobiLink - Client Administration*]

Publication property sheet: Extended Options tab

This tab only applies to MobiLink.

The Extended Options tab of the Publication property sheet has the following components:

This publication has the following MobiLink extended options Lists the extended options and values set for the publication. Click the Value field beside the option name to set the value for the publication.

The table below lists all the available extended options for synchronization.

☞ For more information about these options, see [“MobiLink SQL Anywhere Client Extended Options”](#) [*MobiLink - Client Administration*].

Extended option	Default	Description
“ConflictRetries (cr) extended option” [<i>MobiLink - Client Administration</i>]	-1 (continue indefinitely)	Specifies the number of retries if the download fails because of conflicts.
“ContinueDownload (cd) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Specifies restartable downloads.
“DisablePolling (p) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Disables automatic logscan polling.
“DownloadBufferSize (dbs) extended option” [<i>MobiLink - Client Administration</i>]	32 K on Windows CE, 1 M on all other operating systems.	Specifies the size of the download buffer. By default, units of bytes are used. You can use the suffix k or m to specify units of kilobytes or megabytes, respectively.


Extended option	Default	Description
“DownloadOnly (ds) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Specifies that synchronization should be download-only.
“DownloadReadSize (drs) extended option” [<i>MobiLink - Client Administration</i>]	32 K	For restartable downloads, specifies the maximum amount of data that may need to be resent after a communications failure.
“ErrorLogSendLimit (el) extended option” [<i>MobiLink - Client Administration</i>]	32 K	Specifies how much of the remote log file dbmlsync should send to the server when synchronization occurs. By default, units of bytes are used. You can use the suffix k or m to specify units of kilobytes or megabytes, respectively. If you don't want to send any dbmlsync output log messages, a zero value should be set for this extended option.
“FireTriggers (ft) extended option” [<i>MobiLink - Client Administration</i>]	ON	Specifies that triggers should be fired on the remote database when the download is applied.
“HoverRescanThreshold (hrt) extended option” [<i>MobiLink - Client Administration</i>]	1 M	When you are using scheduling, this limits the amount of discarded memory that is allowed to accumulate before a rescan is performed. By default, units of bytes are used. You can use the suffix k or m to specify units of kilobytes or megabytes, respectively.
“IgnoreHookErrors (eh) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Specifies that errors that occur in hook functions should be ignored.
“IgnoreScheduling (isc) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Specifies that scheduling settings should be ignored.
“Increment (inc) extended option” [<i>MobiLink - Client Administration</i>]	(infinite)	Controls the size of incremental uploads. By default, units of bytes are used. You can use the suffix k or m to specify units of kilobytes or megabytes, respectively.
“LockTables (lt) extended option” [<i>MobiLink - Client Administration</i>]	ON	Specifies that articles (tables or parts of tables in the publications being synchronized) should be locked before synchronizing.

Extended option	Default	Description
“Memory (mem) extended option” [<i>MobiLink - Client Administration</i>]	1 M	Specifies a cache size. By default, units of bytes are used. You can use the suffix k or m to specify units of kilobytes or megabytes, respectively.
“MirrorLogDirectory (mld) extended option” [<i>MobiLink - Client Administration</i>]	(none)	Specifies the location of old mirror log files so that they can be deleted.
“MobiLinkPwd (mp) extended option” [<i>MobiLink - Client Administration</i>]	NULL	Specifies the MobiLink password. Passwords are case sensitive.
“NewMobiLinkPwd (mn) extended option” [<i>MobiLink - Client Administration</i>]	NULL	Specifies a new MobiLink password. Passwords are case sensitive.
“NoSyncOnStartup (nss) extended option” [<i>MobiLink - Client Administration</i>]	NULL	Specifies the path containing offline transaction logs.
“PollingPeriod (pp) extended option” [<i>MobiLink - Client Administration</i>]	1 minute	Specifies the logscan polling period. By default, units of minutes are used. You can use the suffix s, m, h, or d to specify units of seconds, minutes, hours, or days, respectively.
“Schedule (sch) extended option” [<i>MobiLink - Client Administration</i>]	No schedule	Specifies a schedule for synchronization.
“ScriptVersion (sv) extended option” [<i>MobiLink - Client Administration</i>]	DEFAULT	Specifies a script version.
“SendColumnNames (scn) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Specifies that column names should be sent in the upload.
“SendDownloadACK (sa) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Specifies that a download acknowledgment should be sent from the client to the server.
“SendTriggers (st) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Specifies that trigger actions should be sent on upload.
“TableOrder (tor) extended option” [<i>MobiLink - Client Administration</i>]	(none)	Specifies the order of tables in the upload stream.

Extended option	Default	Description
“UploadOnly (uo) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Specifies that synchronization should only include an upload.
“Verbose (v) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Specifies full verbosity. This option is identical to dbmlsync -v+.
“VerboseHooks (vs) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Specifies that messages related to hook scripts should be logged. This option is identical to dbmlsync -vs.
“VerboseMin (vm) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Specifies that a small amount of information should be logged. This option is identical to dbmlsync -v.
“VerboseOptions (vo) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Specifies that information should be logged about the command line options (including extended options) that you have specified. This option is identical to dbmlsync -vo.
“VerboseRowCounts (vn) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Specifies that the number of rows that are uploaded and downloaded should be logged. This option is identical to dbmlsync -vn.
“VerboseRowValues (vr) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Specifies that the values of rows that are uploaded and downloaded should be logged. This option is identical to dbmlsync -vr.
“VerboseUpload (vu) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Specifies that information about the upload stream should be logged. This option is identical to dbmlsync -vu.

Note

You can set connection parameters for synchronization in several ways.

 For information about how dbmlsync resolves conflicting options, see “[Priority order for extended options and connection parameters](#)” [*MobiLink - Client Administration*].

Publisher property sheet: General tab

The General tab of the Publisher property sheet has the following components:

Name Shows the name of the publisher.

Type Shows the type of object.

Allowed to connect Select this option to allow the publisher to connect to the database. If the publisher is not allowed to connect, the password (if one was supplied) is removed from the account. If you later change the publisher to allow them to connect, you must supply a new password. Clearing this option disables the Password and Confirm Password options.

Users are almost always allowed to connect.

- ◆ **Password** Type the password for the publisher. For added security, the characters appear as asterisks. Passwords are case sensitive.
- ◆ **Confirm password** Confirm the password that you typed in the Password text box by entering it again. The contents of the two fields must match exactly. Passwords are case sensitive.

Comment Provides a place for you to type a text description of the publisher. For example, you could use this area to describe the publisher's purpose in the system.

See also

- ◆ “Granting and revoking remote permissions” [[SQL Anywhere Server - Database Administration](#)]
- ◆ “Managing User IDs and Permissions” [[SQL Anywhere Server - Database Administration](#)]

Publisher property sheet: Authorities tab

The Authorities tab of the Publisher property sheet has the following components:

DBA Select this option to grant DBA authority to the publisher; a user with DBA authority can fully administer the database.

Resource Select this option to grant resource authority to the publisher; a user with resource authority can create database objects.

Remote DBA Select this option to grant Remote DBA authority to the publisher. The MobiLink client utility, dbmsync, requires Remote DBA authority. The SQL Remote Message Agent should also be run using a user ID with this type of authority to ensure that actions can be performed without creating security loopholes.

Backup Select this option to grant backup authority to the publisher.

Validate Select this option to grant validate authority to the publisher; a user with validate authority can perform the operations executed by the different VALIDATE statements, such as database, table, index, and checksum validation.

See also

- ◆ “Granting and revoking remote permissions” [[SQL Anywhere Server - Database Administration](#)]
- ◆ “Managing User IDs and Permissions” [[SQL Anywhere Server - Database Administration](#)]
- ◆ “DBA authority overview” [[SQL Anywhere Server - Database Administration](#)]
- ◆ “RESOURCE authority overview” [[SQL Anywhere Server - Database Administration](#)]

- ◆ [“GRANT REMOTE DBA statement \[MobiLink\] \[SQL Remote\]” \[SQL Anywhere Server - SQL Reference\]](#)
- ◆ [“BACKUP authority overview” \[SQL Anywhere Server - Database Administration\]](#)
- ◆ [“VALIDATE authority overview” \[SQL Anywhere Server - Database Administration\]](#)

Publisher property sheet: Permissions tab

The Permissions tab of the Publisher property sheet has the following components:

Permissions list Shows all tables the publisher has permissions on, as well as the user who owns each table. You can click the fields beside each user to grant or revoke permissions; double-clicking (so that a checkmark and two + signs appear) gives the user grant options for the permission.

Show Select what type of object appears in the Permissions list:

- ◆ **Tables** All tables the publisher has permissions on.
- ◆ **Views** All views the publisher has permissions on.
- ◆ **Procedures & functions** Displays all procedures and functions the publisher has permissions on. You can only grant Execute permissions for procedures and functions.

See also

- ◆ [“Granting and revoking remote permissions” \[SQL Anywhere Server - Database Administration\]](#)

Remote Procedure property sheet: General tab

The General tab of the Remote Procedure property sheet has the following components:

Name Shows the name of the remote procedure.

Type Shows the type of object.

Owner Shows the name of the database user who owns the remote procedure.

Dialect Shows the SQL dialect in which the code was last saved. The dialect is either Watcom-SQL or Transact-SQL.

Remote server Shows the name of the remote database containing the procedure.

Comment Provides a place for you to type a description of the remote procedure. For example, you could use this area to describe the remote procedure's purpose in the system.

Remote Procedure property sheet: Parameters tab

The Parameters tab of the Remote Procedure property sheet has the following components:

Parameters list Displays the name, data type, parameter type, and mode of the remote procedure's parameters. The mode has one of the following values:

- ◆ **In** The parameter is an expression that provides a value to the procedure.
- ◆ **Out** The parameter is a variable that could be given a value by the procedure.
- ◆ **In/out** The parameter is a variable that provides a value to the procedure, and could be given a new value by the remote procedure.

See also

- ◆ [“Using Procedures, Triggers, and Batches” \[SQL Anywhere Server - SQL Usage\]](#)
- ◆ [“CREATE PROCEDURE statement” \[SQL Anywhere Server - SQL Reference\]](#)
- ◆ [“Declaring parameters for procedures” \[SQL Anywhere Server - SQL Usage\]](#)

Remote Procedure property sheet: Permissions tab

The Permissions tab of the Remote Procedure property sheet has the following components:

Users list Lists the users who have permissions on the remote procedure. If you want to add users to the list, click Grant. To remove permissions from a user, select the user and click Revoke. You can select multiple users by holding Shift while you click.

Click the Execute field beside each user to grant or revoke permissions.

- ◆ **Grant** Displays the Grant Permission dialog, which lets you grant permissions for the remote procedure to other users or groups.
- ◆ **Revoke** Revokes permissions for the remote procedure from the user or group and removes them from the Users list.

See also

- ◆ [“Granting permissions on procedures” \[SQL Anywhere Server - Database Administration\]](#)

Remote Server property sheet: General tab

The General tab of the Remote Server property sheet has the following components:

Name Shows the name of the remote server.

Type Shows the type of object.

Read-only Shows whether or not the remote server is read-only.

Server type Shows the class or software platform of the database server. You can choose a different software platform from the dropdown list to change the server type.

The server type that you choose restricts the types of connection you can choose from. For example, if you choose Generic Server from the Server Type dropdown list, you can only connect using ODBC.

Connection type Lets you choose between the ODBC and JDBC connection protocols.

- ◆ **Open database connectivity (ODBC)** Select this option to use the ODBC connection protocol. You can use ODBC with any of the servers listed in the Server Type dropdown list.
- ◆ **Java database connectivity (JDBC)** Select this option to use the JDBC connection protocol. You can use JDBC with the following server types: Sybase SQL Anywhere and Sybase Adaptive Server Enterprise. If your database is not Java-enabled, the Java Database Connectivity (JDBC) option is not enabled.

For more information about ODBC and JDBC connection protocols, see “[JDBC overview](#)” [[SQL Anywhere Server - Programming](#)], and “[Creating remote servers using Sybase Central](#)” [[SQL Anywhere Server - SQL Usage](#)].

Connection information Lets you specify startup connection parameters, such as the name and address of the server.

For ODBC data sources, type the name of the data source. For JDBC access, type a computer name or IP address and a port number in the form *hostname:portnumber*.

Test Connection Click this button to test whether the information provided in the remote server definition results in a proper connection.

See also

- ◆ “[CREATE SERVER statement](#)” [[SQL Anywhere Server - SQL Reference](#)]
- ◆ “[Working with remote servers](#)” [[SQL Anywhere Server - SQL Usage](#)]

Remote User property sheet: General tab

The General tab of the Remote User property sheet has the following components:

Name Shows the name of the remote user.

Type Shows the type of object.

Allowed to connect Select this option to allow the remote user to connect to the database. If the remote user is not allowed to connect, the password (if one was supplied) is removed from the account. If you later change the remote user to allow them to connect, you must supply a new password. Clearing this option disables the Password and Confirm Password options.

Users are almost always allowed to connect.

- ◆ **Password** Type the password for the remote user. For added security, the characters appear as asterisks. Passwords are case sensitive.
- ◆ **Confirm password** Confirm the password that you typed in the Password text box by entering it again. The contents of the two fields must match exactly. Passwords are case sensitive.

Comment Provides a place for you to type a text description of the remote user. For example, you could use this area to describe the remote user's purpose in the system.

See also

- ◆ “Granting and revoking remote permissions” [[SQL Anywhere Server - Database Administration](#)]
- ◆ “Managing User IDs and Permissions” [[SQL Anywhere Server - Database Administration](#)]

Remote User property sheet: Authorities tab

The Authorities tab of the Remote User property sheet has the following components:

DBA Select this option to grant DBA authority to the remote user; a user with DBA authority can fully administer the database.

Resource Select this option to grant resource authority to the remote user; a user with resource authority can create database objects.

Remote DBA Select this option to grant Remote DBA authority to the remote user. The MobiLink client utility, dbmlsync, requires Remote DBA authority. The SQL Remote Message Agent should also be run using a user ID with this type of authority to ensure that actions can be performed without creating security loopholes.

Backup Select this option to grant backup authority to the remote user.

Validate Select this option to grant validate authority to the remote user; a user with validate authority can perform the operations executed by the different VALIDATE statements, such as database, table, index, and checksum validation.

See also

- ◆ “Granting and revoking remote permissions” [[SQL Anywhere Server - Database Administration](#)]
- ◆ “Managing User IDs and Permissions” [[SQL Anywhere Server - Database Administration](#)]
- ◆ “DBA authority overview” [[SQL Anywhere Server - Database Administration](#)]
- ◆ “RESOURCE authority overview” [[SQL Anywhere Server - Database Administration](#)]
- ◆ “GRANT REMOTE DBA statement [MobiLink] [SQL Remote]” [[SQL Anywhere Server - SQL Reference](#)]
- ◆ “BACKUP authority overview” [[SQL Anywhere Server - Database Administration](#)]
- ◆ “VALIDATE authority overview” [[SQL Anywhere Server - Database Administration](#)]

Remote User property sheet: Permissions tab

The Permissions tab of the Remote User property sheet has the following components:

Permissions list Shows all tables the remote user has permissions on, as well as the user who owns each table. You can click the fields for each table to grant or revoke permissions; double-clicking (so that a checkmark and two + signs appear) gives the user grant options for the permission.

Show Select what type of object appears in the Permissions list:

- ◆ **Tables** All tables the remote user has permissions on.
- ◆ **Views** All views the remote user has permissions on.

- ◆ **Procedures & functions** All procedures and functions the remote user has permissions on. You can only grant Execute permissions for procedures and functions.

See also


- ◆ “Granting and revoking remote permissions” [[SQL Anywhere Server - Database Administration](#)]

Remote User property sheet: SQL Remote tab

The SQL Remote tab of the Remote User property sheet has the following components:

Message type Lets you select a message type for communicating with the publisher.

Address Provides a place for you to type the remote address of the remote user. The address is a string, according to the specified message type, to which the replication messages should be sent for the user.

 For information about what address to use with a specific message type, see “Using message types” [[SQL Remote](#)].

- ◆ **Send then close** Sets the replication frequency so that the publisher's agent runs once, sends all pending messages to the remote group, and then shuts down. This means that the agent must be restarted each time the publisher wants to send messages.

In most replication setups, this option is not used for sending publications from the consolidated publisher to the remote group.

- ◆ **Send every** Sets the replication frequency so that the publisher's agent runs continuously, sending messages to the remote group at the specified periodic interval.
- ◆ **Send daily at** Sets the replication frequency so that the publisher's agent runs continuously, sending messages to the remote group each day at the specified time.

See also

- ◆ “Granting and revoking remote permissions” [[SQL Anywhere Server - Database Administration](#)]
- ◆ “CREATE SUBSCRIPTION statement [SQL Remote]” [[SQL Anywhere Server - SQL Reference](#)]

Schedule property sheet: General tab

The General tab of the Schedule property sheet has the following components:

Name Shows the name of the selected event schedule.

Type Shows the type of object.

Event Shows the name of the event the schedule is for.

Start time Select one of the following options to specify when the event occurs.

- ◆ **At** Select this option to specify a specific scheduled time for each day the event is scheduled. If a Start Date is specified, the Start Time refers to that date. If you do not specify a Start Date, the Start Time is on the current day (unless that time has passed) and each subsequent day.
- ◆ **Between** A range of time during which the selected event is to occur. For example, the event may be scheduled to occur between 11 A.M. and 12 P.M. If you specify a Start Date, the scheduled times do not occur until that date.

Start date The date on which the scheduled event starts occurring. The current date is the default. You can type the date in the text box or select the month, day, and year from the lists.

See also

- ◆ [“CREATE EVENT statement” \[SQL Anywhere Server - SQL Reference\]](#)
- ◆ [“Automating Tasks Using Schedules and Events” \[SQL Anywhere Server - Database Administration\]](#)

Schedule property sheet: Recurrence tab

All the settings on this tab are optional.

The Recurrence tab of the Create Schedule dialog has the following components:

Repeat every Select the interval between successive scheduled events.

Trigger on the following Select the day of the week and/or month on which the selected event occurs. You must select this option to enable the Days of the Week and Days of the Month options below.

- ◆ **Days of the week** Select the day(s) of the week on which the selected event occurs by selecting the checkbox beside the desired day.
- ◆ **Days of the month** Select the day(s) of the month on which the selected event occurs by selecting the checkbox beside the desired day.

See also

- ◆ [“CREATE EVENT statement” \[SQL Anywhere Server - SQL Reference\]](#)
- ◆ [“Automating Tasks Using Schedules and Events” \[SQL Anywhere Server - Database Administration\]](#)

Server property sheet: General tab

The General tab of the Server property sheet has the following components:

Name Shows the name of the database server.

Type Shows the type of object.

Product Shows the database server's product type; for example, the product could be SQL Anywhere or Adaptive Server Anywhere.

Version Shows the version number of the database server.

Computer Shows the name of the computer on which the database server is running.

Operating system Shows the operating system that the database server is currently running on.

Operating system version Shows the operating system version that the database server is currently running on.

See also

- ◆ “Server-level properties” [[SQL Anywhere Server - Database Administration](#)]

Server property sheet: Extended Information tab

The Extended Information tab of the Server property sheet has the following components:

Database server properties list An extended list of server properties and their values. Click Refresh to update the values. You can also press F5 to refresh the database server property values.

Refresh Click Refresh to update the values in the Server Properties list.


Description When you select a property from the list, a description of the property appears in the Description window.

See also

- ◆ “Server-level properties” [[SQL Anywhere Server - Database Administration](#)]

Server property sheet: Options tab

The database server options on this tab correspond to options that can be reset while the database server is running.

 For more information, see “sa_server_option system procedure” [[SQL Anywhere Server - SQL Reference](#)].

The Options tab of the Server property sheet has the following components:

Current time Displays the current time. Click Refresh to update the Current Time. You can also press F5 to update the current time.

Quitting time Lets you specify a time when the database server is to shut down. Use the same format as the current time, which is as follows:

`YYYY-MM-DD HH:NN:SS`

Disable new connections Select this option to prevent other users from connecting to the database. The may be useful for some maintenance operations.

Remember the last statement executed on each connection Select this option to remember the last statement executed on each connection.

See also

- ◆ “Server-level properties” [[SQL Anywhere Server - Database Administration](#)]

Server property sheet: Request Logging tab

The Request Logging tab of the Server property sheet has the following components:

Enable request logging Select this option to record requests that the server processes to the log file. This option is primarily for troubleshooting purposes. Note that for SQL Anywhere 10.0.0 databases, the new database tracing feature provides a more complete log of database requests. Selecting Enable Request Logging enables the options below.

 For more information, see [“Tracing session data” \[SQL Anywhere Server - SQL Usage\]](#).

- ◆ **All connections to this server** Records requests from all connections to the current database server to the log file.
- ◆ **All connections to the following database** Records requests from all connections to the specified database to the log file.
- ◆ **The following connection** Records only requests from the specified connection to the log file.
- ◆ **Log all requests** Records all requests that the database server processes to the log file.
- ◆ **Log only the following requests** Select this option to specify the types of requests you want logged:
 - ◆ **SQL** Log SQL statement requests.
 - ◆ **Procedures and functions** Log procedure and function calls.
 - ◆ **Query plans** Log query plans.
 - ◆ **Include host variables** Include host variables in the log.
 - ◆ **Triggers** Log trigger calls.
 - ◆ **Connections blocked from proceeding** Log any connections that are blocked from proceeding.

For a list of the SQL statements that are logged when you log only SQL requests, see [“sa_server_option system procedure” \[SQL Anywhere Server - SQL Reference\]](#).

- ◆ **Log file name** When you select Enable Request Logging, you must provide a log file name. You can also click Browse to locate the file.
 - ◆ **Overwrite the request log file if it already exists** Select this option to overwrite an existing request log file.
 - ◆ **Maximum log file size** The maximum size, in kilobytes, of the request log file.
 - ◆ **Maximum number of log files** The maximum number of log files to retain. Each file has an extension with a number appended to it.

See also

- ◆ [“Server-level properties” \[SQL Anywhere Server - Database Administration\]](#)
- ◆ [“-zr server option” \[SQL Anywhere Server - Database Administration\]](#)
- ◆ [“-zl server option” \[SQL Anywhere Server - Database Administration\]](#)

- ◆ [“Request logging” \[SQL Anywhere Server - SQL Usage\]](#)

Service property sheet: General tab


The General tab of the Service property sheet has the following components:

Name Shows the name of the service. A service runs a database server or other application with a set of options.

Type Shows the type of object.

Service type Shows the type of service: Network, Standalone, DBRemote, or MobiLink.

Status Shows whether service is started or stopped.

 For more information about the service status, see [“Starting and stopping services” \[SQL Anywhere Server - Database Administration\]](#).

Startup type You can select one of the following startup options for the service. The startup option is applied the next time you start Windows:

- ◆ **Automatic** Select this option to start the service automatically whenever the operating system starts.
- ◆ **Manual** Select this option to start the service manually. Only a user with Administrator permissions can start the service if it requires manual startup.

For information about Administrator permissions, see your Windows documentation.

- ◆ **Disabled** Select this option to disable the service so it does not start.

See also

- ◆ [“CREATE SERVICE statement” \[SQL Anywhere Server - SQL Reference\]](#)
- ◆ [“Managing Windows services” \[SQL Anywhere Server - Database Administration\]](#)
- ◆ [“Understanding Windows services” \[SQL Anywhere Server - Database Administration\]](#)

Service property sheet: Configuration tab

The Configuration tab of the Service property sheet has the following components:

File name Provides a place for you to type the path of the executable file. For example, **c:\Program Files\SQL Anywhere 10\win32\dbeng10.exe**.

You can also click Browse to search for a file.

Parameters Type additional parameters (file names and options) for the executable file in the text box. You can use the same options for a service that you use for the executable.

For example to start a SQL Remote Message Agent service, connecting to the SQL Anywhere sample database as user DBA, enter the following:

```
-c "UID=DBA;PWD=sql;DBN=demo"
```

See also

- ◆ [“The Service utility” \[SQL Anywhere Server - Database Administration\]](#)
- ◆ [“The SQL Anywhere database server” \[SQL Anywhere Server - Database Administration\]](#)

Service property sheet: Account tab

The Account tab of the Service property sheet has the following components:

Local system account Select this option to run the service under your system's local account.

- ◆ **Allow service to interact with desktop** This option is only available when you select Local System Account. Select this option if you want to display the Server Messages window by clicking an icon on your desktop.

Other account Select this option to run the service under an account other than the local account. You can choose a user ID from the dropdown list or type a user ID. Selecting this option enables the Password and Confirm Password fields.

- ◆ **Password** When you select Other Account, you must supply the appropriate password for the user ID. You must confirm the password in the Confirm Password text box.
- ◆ **Confirm password** Confirm the password that you typed in the Password text box by entering it again. The contents of the two fields must match exactly. Passwords are case sensitive.

See also

- ◆ [“Managing Windows services” \[SQL Anywhere Server - Database Administration\]](#)
- ◆ [“The Service utility” \[SQL Anywhere Server - Database Administration\]](#)

Service property sheet: Dependencies tab

The Dependencies tab of the Service property sheet has the following components:

The service belongs to a service group Select this option if you want to assign the service to be a member of a service group.

- ◆ **Service group** Lets you specify which service group the service belongs to. To change which service group the service belongs to, click Change. The Set Service Group dialog appears, which lets you specify a service group for the service.

Services list Lists all the services and service groups that must be started before the service. The list also shows the type of service or service group.

To add services or service groups to this list, click Add Services or Add Service Groups, respectively. If you want to remove a service or service group from the Services list, select the service or service group, and then click Remove. You can select multiple services or service groups by holding Shift while you click.

- ◆ **Add Services** Displays the [Add Service Dependencies dialog](#), which lets you view all services and select the ones you want to add to the Services list.

- ◆ **Add Service Groups** Displays the [Add Service Group Dependencies dialog](#), which lets you select the service groups that you want to add to the Services list.
- ◆ **Remove** Removes the service or service group from the Services list. The group or service is no longer required to start before the service.

See also

- ◆ [“Service dependencies” \[SQL Anywhere Server - Database Administration\]](#)
- ◆ [“Managing Windows services” \[SQL Anywhere Server - Database Administration\]](#)
- ◆ [“Running more than one service” \[SQL Anywhere Server - Database Administration\]](#)

Service property sheet: Polling tab

Settings on this tab apply to all services, not just the currently selected service.

The Polling tab of the Service property sheet has the following components:

Enable polling Select this option if you want Sybase Central to poll the services for changes to their states (started or stopped).

- ◆ **Poll every** When you select Enable Polling, you must specify how often Sybase Central polls the service to check for status changes. The default interval is 10 seconds. The polling time you set in the window remains in effect for subsequent sessions until you change it explicitly.

See also

- ◆ [“Setting the service polling frequency” \[SQL Anywhere Server - Database Administration\]](#)
- ◆ [“Managing Windows services” \[SQL Anywhere Server - Database Administration\]](#)

SQL Remote Subscription property sheet: General tab

The General tab of the SQL Remote Subscription property sheet has the following components:

Name Shows the publication name with owner and the SQL remote user who subscribed to the publication.

Type Shows the type of object.

Publication Shows the publication the SQL Remote user is subscribed to.

Subscriber Shows the SQL Remote user who is subscribed to the publication.

Subscription value Shows the subscription value for the SQL Remote subscription. The subscription value is a string that is compared to the subscription expression of the publication. The subscriber receives all rows for which the subscription expression matches the subscription value.

SQL Remote Subscription property sheet: Advanced tab

The Advanced tab of the SQL Remote Subscription property sheet has the following components:

Start subscription Click Start Now to manually start subscriptions. However, it is recommended that you let the Extraction utility start subscriptions automatically.

Stop subscription Click Stop Now to stop a subscription that has been started.

Synchronize subscription Click Synchronize Now to synchronize subscriptions manually. However, it is recommended that you let the Extraction utility (dbxtract) synchronize subscriptions automatically.

See also

- ◆ [“START SUBSCRIPTION statement \[SQL Remote\]” \[SQL Anywhere Server - SQL Reference\]](#)
- ◆ [“STOP SUBSCRIPTION statement \[SQL Remote\]” \[SQL Anywhere Server - SQL Reference\]](#)
- ◆ [“Extraction utility” \[SQL Remote\]](#)

Statistic property sheet: General tab

The General tab of the Statistic property sheet has the following components:

Name Shows the name of the statistic.

Type Shows the type of object.

Description Provides a brief explanation of the statistic.

Graph this statistic in the Performance Monitor Select this option to add the statistic to the Performance Monitor. Clear this option to remove the statistic from the Performance Monitor.

See also

- ◆ [“Monitoring and Improving Performance” \[SQL Anywhere Server - SQL Usage\]](#)

Synchronization Subscription property sheet: General tab

The General tab of the Synchronization Subscription property sheet has the following components:

Name Shows the publication name with owner, and the MobiLink user who is subscribed to the publication.

Type Shows the type of object.

Publication Shows the publication the MobiLink user is subscribed to.

Subscriber Shows the MobiLink user who is subscribed to the publication.

Last download time Shows the time of the last download.

Last upload time Shows the time of the last upload.

Generation number Shows the generation number for the synchronization subscription.

Generation numbers provide a mechanism for forcing remote databases to upload data before applying any more download files. A separate generation number is automatically maintained for each synchronization subscription on the database.

☞ For more information about generation numbers, see “[MobiLink generation numbers](#)” [*MobiLink - Server Administration*].

See also

- ◆ “[CREATE SYNCHRONIZATION SUBSCRIPTION statement \[MobiLink\]](#)” [*SQL Anywhere Server - SQL Reference*]
- ◆ “[Publications and subscriptions](#)” [*SQL Remote*]

Synchronization Subscription property sheet: Connection tab

The Connection tab of the Synchronization Subscription property sheet has the following components:

Protocol Choose the communication protocol to use for synchronization. TCP/IP is used by default.

The settings you can specify on the Connection tab depend on the communication protocol you are using. Any additional parameters, such as `buffer_size`, can be set in the Advanced field.

☞ For a complete list of parameters supported by each of the protocols, see “[CREATE SYNCHRONIZATION USER statement \[MobiLink\]](#)” [*SQL Anywhere Server - SQL Reference*] or “[CommunicationType \(ctp\) extended option](#)” [*MobiLink - Client Administration*].

- ◆ **TCP/IP** Select this option to use the TCP/IP protocol for synchronization. For versions 8.0.x and 9.0.x, choosing TCP/IP and then Enable Certicom security is equivalent to choosing TLS.
- ◆ **TLS** Select this option to use TLS (transport-layer security) for synchronization. TLS supports both elliptic-curve (formerly Certicom) and RSA encryption. This option is only available for version 10 and later.
- ◆ **HTTP** Select this option to use the HTTP protocol for synchronization.
- ◆ **HTTPS** Select this option to use the HTTPS protocol for synchronization. HTTPS supports both elliptic-curve (formerly Certicom) and RSA encryption.
- ◆ **HTTPS FIPS** Select this option to use the HTTPS protocol for synchronization with FIPS-approved algorithms for encryption. This option is only available for version 8.0.x and 9.0.x. For version 10, this is equivalent to selecting the HTTPS protocol and then selecting the FIPS-approved option for Security.
- ◆ **ActiveSync** Select this option to use ActiveSync to exchange data with the MobiLink provider for ActiveSync, which resides on the desktop computer. The ActiveSync parameters describe the communications between the MobiLink provider for ActiveSync and the MobiLink server. This option is only available for versions 8.0.x and 9.0.x.

For more information, see “[ActiveSync provider installation utility \[mlasinst\]](#)” [*MobiLink - Client Administration*].

Host The IP number or host name of the computer on which the MobiLink server is running. The default value is `localhost`. You can use `localhost` if the MobiLink server is running on the same computer as the client.

For Windows CE, the default value is the value of *ipaddr* in the registry folder *Comm\Tcpip\Hosts\ppp_peer*. This allows a Windows CE device to connect to a MobiLink server executing on the desktop computer where the Windows CE device's cradle is connected.

For the Palm Computing Platform, the default value of localhost refers to the device. It is recommended that you specify an explicit host name or IP address.

- ◆ **Port** The MobiLink server communicates over a specific port. The default port number is **2439** for TCP/IP, **80** for HTTP, and **443** for HTTPS. If you choose a different value, you must configure your MobiLink server to listen on the port you specify.

Proxy host Type the host name or IP address of the proxy server. The default value is **localhost**. This option is only available for HTTP and HTTPS synchronization.

- ◆ **Proxy port** Type the port number of the proxy server. The default value is **80** for HTTP and **443** for HTTPS. This option is only available for HTTP and HTTPS synchronization.

URL suffix Type the suffix to add to the URL on the first line of each HTTP request. The default value is **MobiLink**. This option is only available for HTTP and HTTPS synchronization.

When synchronizing through a proxy server, the suffix may be necessary in order to find the MobiLink server.

- ◆ **HTTP Version** Type the value specifying the version of HTTP to use for synchronization. You have a choice of 1.0 or 1.1. The default value is **1.1**.

Automatic connection The following options allow MobiLink clients running on Pocket PC 2002 or Windows desktop computers to connect through dial-up network connections.

When used with scheduling, your remote device can synchronize unattended. When used without scheduling, you can run dbmlsync without manually dialing a connection.

☞ For more information about scheduling, see [“Scheduling synchronization” \[MobiLink - Client Administration\]](#).

- ◆ **Network name** Specify the network name so that you can use the MobiLink auto-dial feature. This allows you to connect from a Pocket PC 2002 or Windows desktop computer without manually dialing. The name should be the network name that you have specified in the dropdown list in Settings ► Connections ► Connections (Pocket PC) or Network & Dialup Connections (Windows).
- ◆ **Network connect timeout** When you specify a network name, you can optionally specify a timeout after which the dial-up fails. This feature applies only to Pocket PC 2002. (On Windows, you can control this feature by configuring the connection profile.) The default is **120** seconds.
- ◆ **Leave open** When you supply a network name, you can optionally specify whether the connection should be left open (1) or closed (0) after synchronization finishes. By default, the connection is closed.

Security These options allow you to use a cipher suite to encrypt all communication through this connection. You can provide information about the certificate used to authenticate the server in the fields below for both the elliptic-curve and RSA ciphers.

Enable Certicom security Select this option to encrypt all communication through this connection. You can use the elliptic-curve or RSA cipher. By default, elliptic curves are used. This option is only available for versions 8.0.x and 9.0.x. Choosing this option with the TCP/IP protocol is equivalent to choosing the TLS protocol in version 10.

Separately licensed component required

ECC encryption and FIPS-approved encryption require a separate license. All strong encryption technologies are subject to export regulations.

See “[Separately licensed components](#)” [*SQL Anywhere 10 - Introduction*].

☞ For more information about security, see “[Transport-Layer Security](#)” [*SQL Anywhere Server - Database Administration*].

- ◆ **Elliptic curves** Uses the elliptic-curve cipher to encrypt communications. You can use this cipher to encrypt TLS over TCP/IP and HTTPS connections with version 10 databases, and TCP/IP connections with version 8 and 9 databases. This was formerly called Certicom encryption.
- ◆ **RSA** Uses the RSA cipher to encrypt communications. You can use this cipher to encrypt TLS over TCP/IP and HTTPS connections with version 10 databases, and TCP/IP connections with version 8 and 9 databases. This cipher is selected automatically with version 8 and 9 databases when you choose HTTPS.
- ◆ **FIPS-approved** Uses the FIPS-approved RSA cipher to encrypt communications. You can use this cipher to encrypt TLS over TCP/IP and HTTPS connections with version 10 databases, and TCP/IP connections with version 9 databases. This cipher is selected automatically with version 9 databases when you choose HTTPS FIPS. This cipher is not supported for version 8 databases.
 - ◆ **Certificate company** Type the name of the certificate authority or organization that issued the certificate. The server's and the client's values must match.
 - ◆ **Certificate unit** Type the certificate unit. This is also called the organizational unit. The server's and the client's values must match.
 - ◆ **Certificate name** Type the certificate's common name. The server's and the client's values must match.
 - ◆ **Trusted certificates** Type the name of the certificate file the client uses to authenticate the server.

Advanced Type any additional connection parameters in this field, entering them in the form *parameter=value*, with multiple parameters separated by semicolons. For example, to set the maximum body size for a fixed content length message, and to instruct the client to attempt to use the same TCP/IP connection for all HTTP requests in a synchronization, you would enter the following in the Advanced field:

```
buffer_size=58000;persistent=TRUE
```

☞ For a complete list of connection parameters you can enter in this field, see “[CREATE SYNCHRONIZATION USER statement \[MobiLink\]](#)” [*SQL Anywhere Server - SQL Reference*].

Note

You can set connection parameters for synchronization in several ways.

☞ For information about how dbmlsync resolves conflicting options, see [“Priority order for extended options and connection parameters” \[MobiLink - Client Administration\]](#).

See also

- ◆ [“CREATE SYNCHRONIZATION USER statement \[MobiLink\]” \[SQL Anywhere Server - SQL Reference\]](#)
- ◆ [“-x option” \[MobiLink - Client Administration\]](#)
- ◆ [“CommunicationAddress \(adr\) extended option” \[MobiLink - Client Administration\]](#)

Synchronization Subscription property sheet: Extended Options tab

The Extended Options tab of the Synchronization Subscription property sheet has the following components:

Extended options list Lists the extended options and the values set for the MobiLink user. Click the Value field beside the option name to set the value for the MobiLink user.

The table below lists all the available extended options for synchronization.

☞ For more information about these options, see [“MobiLink SQL Anywhere Client Extended Options” \[MobiLink - Client Administration\]](#).

Extended option	Default	Description
“ConflictRetries (cr) extended option” [MobiLink - Client Administration]	-1 (continue indefinitely)	Specifies the number of retries if the download fails because of conflicts.
“ContinueDownload (cd) extended option” [MobiLink - Client Administration]	OFF	Specifies restartable downloads.
“DisablePolling (p) extended option” [MobiLink - Client Administration]	OFF	Disables automatic logscan polling.
“DownloadBufferSize (dbs) extended option” [MobiLink - Client Administration]	32 K on Windows CE, 1 M on all other operating systems.	Specifies the size of the download buffer. By default, units of bytes are used. You can use the suffix k or m to specify units of kilobytes or megabytes, respectively.
“DownloadOnly (ds) extended option” [MobiLink - Client Administration]	OFF	Specifies that synchronization should be download-only.
“DownloadReadSize (drs) extended option” [MobiLink - Client Administration]	32 K	For restartable downloads, specifies the maximum amount of data that may need to be resent after a communications failure.

Extended option	Default	Description
“ErrorLogSendLimit (el) extended option” [<i>MobiLink - Client Administration</i>]	32 K	Specifies how much of the remote log file dbmsync should send to the server when synchronization occurs. By default, units of bytes are used. You can use the suffix k or m to specify units of kilobytes or megabytes, respectively. If you don't want to send any dbmsync output log messages, a zero value should be set for this extended option.
“FireTriggers (ft) extended option” [<i>MobiLink - Client Administration</i>]	ON	Specifies that triggers should be fired on the remote database when the download is applied.
“HoverRescanThreshold (hrt) extended option” [<i>MobiLink - Client Administration</i>]	1 M	When you are using scheduling, this limits the amount of discarded memory that is allowed to accumulate before a rescan is performed. By default, units of bytes are used. You can use the suffix k or m to specify units of kilobytes or megabytes, respectively.
“IgnoreHookErrors (eh) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Specifies that errors that occur in hook functions should be ignored.
“IgnoreScheduling (isc) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Specifies that scheduling settings should be ignored.
“Increment (inc) extended option” [<i>MobiLink - Client Administration</i>]	(infinite)	Controls the size of incremental uploads. By default, units of bytes are used. You can use the suffix k or m to specify units of kilobytes or megabytes, respectively.
“LockTables (lt) extended option” [<i>MobiLink - Client Administration</i>]	ON	Specifies that articles (tables or parts of tables in the publications being synchronized) should be locked before synchronizing.
“Memory (mem) extended option” [<i>MobiLink - Client Administration</i>]	1 M	Specifies a cache size. By default, units of bytes are used. You can use the suffix k or m to specify units of kilobytes or megabytes, respectively.
“MirrorLogDirectory (mld) extended option” [<i>MobiLink - Client Administration</i>]	(none)	Specifies the location of old mirror log files so that they can be deleted.

Extended option	Default	Description
“MobiLinkPwd (mp) extended option” [<i>MobiLink - Client Administration</i>]	NULL	Specifies the MobiLink password. Passwords are case sensitive.
“NewMobiLinkPwd (mn) extended option” [<i>MobiLink - Client Administration</i>]	NULL	Specifies a new MobiLink password. Passwords are case sensitive.
“NoSyncOnStartup (nss) extended option” [<i>MobiLink - Client Administration</i>]	NULL	Specifies the path containing offline transaction logs.
“OfflineDirectory (dir) extended option” [<i>MobiLink - Client Administration</i>]	(none)	Specifies the path containing offline transaction logs.
“PollingPeriod (pp) extended option” [<i>MobiLink - Client Administration</i>]	1 minute	Specifies the logscan polling period. By default, units of minutes are used. You can use the suffix s, m, h, or d to specify units of seconds, minutes, hours, or days, respectively.
“Schedule (sch) extended option” [<i>MobiLink - Client Administration</i>]	No schedule	Specifies a schedule for synchronization.
“ScriptVersion (sv) extended option” [<i>MobiLink - Client Administration</i>]	DEFAULT	Specifies a script version.
“SendColumnNames (scn) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Specifies that column names should be sent in the upload.
“SendDownloadACK (sa) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Specifies that a download acknowledgement should be sent from the client to the server.
“SendTriggers (st) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Specifies that trigger actions should be sent on upload.
“TableOrder (tor) extended option” [<i>MobiLink - Client Administration</i>]	(none)	Specifies the order of tables in the upload stream.
“TableOrderChecking (toc) extended option” [<i>MobiLink - Client Administration</i>]	ON	Specifies whether dbmlsync should check that no table is uploaded before another table on which it has a foreign key. Use this option when you specify TableOrder.

Extended option	Default	Description
“UploadOnly (uo) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Specifies that synchronization should only include an upload.
“Verbose (v) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Specifies full verbosity. This option is identical to dbmlsync -v+.
“VerboseHooks (vs) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Specifies that messages related to hook scripts should be logged. This option is identical to dbmlsync -vs.
“VerboseMin (vm) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Specifies that a small amount of information should be logged. This option is identical to dbmlsync -v.
“VerboseOptions (vo) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Specifies that information should be logged about the command line options (including extended options) that you have specified. This option is identical to dbmlsync -vo.
“VerboseRowCounts (vn) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Specifies that the number of rows that are uploaded and downloaded should be logged. This option is identical to dbmlsync -vn.
“VerboseRowValues (vr) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Specifies that the values of rows that are uploaded and downloaded should be logged. This option is identical to dbmlsync -vr.
“VerboseUpload (vu) extended option” [<i>MobiLink - Client Administration</i>]	OFF	Specifies that information about the upload stream should be logged. This option is identical to dbmlsync -vu.

Note

You can set connection parameters for synchronization in several ways.

☞ For information about how dbmlsync resolves conflicting options, see “[Priority order for extended options and connection parameters](#)” [*MobiLink - Client Administration*].

System Trigger property sheet: General tab

The General tab of the System Trigger property sheet has the following components:

Name Shows the name of the foreign key constraint to which the system trigger applies.

Type Shows the type of object.

Foreign table Shows the table containing the foreign key.

Primary table Shows the table containing the primary key or unique constraint in the foreign key relationship.

Event Shows which kind of event, Update Columns or Delete, causes the system trigger to execute.

Timing Shows whether the trigger executes before or after the event.

Action Shows which of the available referential integrity actions is used for updates and deletes of the primary key:

- ◆ **Set null** Sets all foreign keys that reference the modified primary key to NULL.
- ◆ **Set default** Sets all foreign keys that reference the modified primary key to the default value for that column (as specified in the table definition).
- ◆ **Cascade** When used with ON UPDATE, this action updates all foreign keys that reference the updated primary key to the new value. When used with ON DELETE, this action deletes all rows containing foreign keys that reference the deleted primary key.

See also

- ◆ [“Referential integrity actions” \[SQL Anywhere Server - SQL Usage\]](#)

Table property sheet: General tab

The General tab of the Table property sheet has the following components:

Name Shows the name of the table. You can change the name of the table in this field.

Type Shows the type of object.

Owner Shows the database user who owns the table.

DbSPACE Shows the database file (or dbSPACE) where the table is located. This only applies to base tables.

Commit action This option only appears when the table was created as a global temporary table. Shows whether the rows of the table are deleted or preserved when a COMMIT is executed. If there is no commit action, it shows None (non-transactional).

Shared This control only appears when the table was created as a global temporary table. Shows whether the table is shared across all connections.

Comment Provides a place for you to type a text description of the table. For example, you could use this area to describe the table's purpose in the system.

See also

- ◆ [“Working with tables” \[SQL Anywhere Server - SQL Usage\]](#)

- ◆ [“CREATE TABLE statement” \[SQL Anywhere Server - SQL Reference\]](#)

Table property sheet: Columns tab

The Columns tab of the Table property sheet has the following components:

Columns list Lists all the columns of the table, as well as their ID, data type, and comments.

Details Displays the Column Details dialog, which shows a summary of the properties for the column.

See also

- ◆ [“Managing primary keys \(Sybase Central\)” \[SQL Anywhere Server - SQL Usage\]](#)
- ◆ [“Working with tables” \[SQL Anywhere Server - SQL Usage\]](#)

Table property sheet: Permissions tab

The Permissions tab of the Table property sheet has the following components:

Permissions list Lists the users who have permissions on the table. If you want to add users to the list, click Grant. To remove a user from the list, select the user, then click revoke. You can select multiple users by holding Shift while you click.

To grant or revoke permissions, click the fields beside each user. Double-clicking (so that a check mark and two + signs appear) gives the user grant options.

- ◆ **Grant** Displays the Grant Permission dialog, which lets you grant permissions on the table to other users.

- ◆ **Revoke** Revokes permissions from the users and removes them from the Permissions list.

Select Shows whether the Select permissions for the user applies to all columns or a subset of columns. Click Change to grant Select permissions for a subset of columns.

Update Shows whether the Update permissions for the user applies to all columns or a subset of columns. Click Change to grant Update permissions for a subset of columns.

References Shows whether the Reference permissions for the user applies to all columns or a subset of columns. Click Change to grant Reference permissions for a subset of columns.

- ◆ **Change** Click Change to grant Select, Update, or Reference permissions for a subset of columns.

See also

- ◆ [“Table and views permissions overview” \[SQL Anywhere Server - Database Administration\]](#)
- ◆ [“Working with tables” \[SQL Anywhere Server - SQL Usage\]](#)

Table property sheet: Miscellaneous tab

The Miscellaneous tab of the Table property sheet has the following components:

Maximum table width Shows the number of bytes required for each row in the table. The number is calculated from the length of the string columns, the precision of numeric columns, and the number of bytes of storage for all other data types. If the table includes LONG BINARY, or LONG VARCHAR columns, their arbitrary widths are not included, so the row width can only be approximated.

Number of rows Shows the approximate number of rows in the table. To update this value, click Calculate.

◆ **Calculate** Calculates the number of rows in the table.

Free space Specifies the amount of free space you want to reserve for each table page. The free space is used if rows increase in size when the data is updated. If there is no free space in a table page, every increase in the size of a row on that page requires the row to be split across multiple table pages, causing row fragmentation and possible performance degradation.

◆ **Default** Choose this option to reserve the default amount of free space in each page. By default, 200 bytes are reserved in each page. This only applies to base tables.

◆ **Percentage** Choose this option to specify an integer between 0 and 100. The former specifies that no free space is to be left on each page—each page is to be fully packed. A high value causes each row to be inserted into a page by itself.

☞ For more information, see [“ALTER TABLE statement” \[SQL Anywhere Server - SQL Reference\]](#).

Table is replicating data Select this option to include the table as part of a replication primary site. This only applies to base tables.

Table data is encrypted Select this option to encrypt this table's data, when the database is created with table encryption scope. This only applies to base tables.

☞ For more information about replication primary sites, see [“Primary site components” \[SQL Anywhere Server - Database Administration\]](#).

See also

◆ [“Working with tables” \[SQL Anywhere Server - SQL Usage\]](#)

Table property sheet: Check Constraint tab

This tab only appears for databases created with version 8.0.x of SQL Anywhere.

The Check Constraint tab of the Table property sheet has the following components:

Check constraint Lets you define conditions on a column or set of columns to make up the check constraint of the table. The check constraint restricts the values that can be entered in the column(s).

For example, to check that an employee's start date falls in a particular range, type:

```
CHECK ( StartDate BETWEEN '1983/06/27'
        AND CURRENT DATE )
```

☞ For more information, see “Using CHECK constraints on columns” [[SQL Anywhere Server - SQL Usage](#)].

Trigger property sheet: General tab

The General tab of the Trigger property sheet has the following components:

Name Shows the name of the trigger.

Type Shows the type of object.

Table Shows the table the trigger is associated with.

Dialect Shows the SQL dialect in which the code was last saved, either Watcom-SQL or Transact-SQL.

Events Shows which kind of event, Insert, Delete, Update, or Update Columns, causes the trigger to execute.

Timing Shows whether the trigger executes before or after the event. Row-level triggers can also have SQL Remote conflict timing, which executes before UPDATE or UPDATE OF column-list events.

Level Shows whether the trigger is a row-level trigger or a statement-level trigger.

Order Shows a number that determines the order in which these triggers fire, for triggers in the table that execute for the same kind of event with the same timing.

Comment Provides a place for you to type a text description of the trigger. For example, you could use this area to describe the trigger's purpose in the system.

See also

- ◆ “Procedure and trigger overview” [[SQL Anywhere Server - SQL Usage](#)]
- ◆ “Using Procedures, Triggers, and Batches” [[SQL Anywhere Server - SQL Usage](#)]

UltraLite Project property sheet: General tab

This property sheet is only available if you are connected to a version 9.0.2 or earlier database.

The General tab of the UltraLite Project property sheet has the following components:

Name Shows the name of the UltraLite project.

Type Shows the type of object.

UltraLite Statement property sheet: General tab

This property sheet is only available if you are connected to a version 9.0.2 or earlier database.

The General tab of the UltraLite Statement property sheet has the following components:

Name Shows the name of the UltraLite statement.

Type Shows the type of object.

Project Shows the name of the UltraLite project this UltraLite statement belongs to.

Code segment You only need to provide a segment name if you are developing a multi-segment application for the Palm Computing Platform and you want to override the UltraLite default assignment.

When building applications for the Palm Computing Platform, you must supply a code segment name to indicate where the UltraLite statement is stored. You can select a segment name from the dropdown list or supply a new segment name. If you leave the field blank, the UltraLite statement is saved in the default segment, ULSEGDEF.

The code segment name is a string and must be 8 characters or less in length, must start with a letter, and cannot contain spaces. You can use alphanumeric characters and underscores in the code segment name.

 For more information about code segments, see [“Creating and Configuring UltraLite Databases” \[UltraLite - Database Management and Reference\]](#).

UltraLite Statement property sheet: SQL Statement

This property sheet is only available if you are connected to a version 9.0.2 or earlier database.

The SQL Statement tab of the UltraLite Statement property sheet has the following components:

This UltraLite statement contains the following SQL statement Shows the UltraLite statement. You can edit the SQL statement in this window.

Unique Constraint property sheet: General tab

The General tab of the Unique Constraint property sheet has the following components:

Name Shows the name of the unique constraint. You can change the name of the unique constraint in this field.

Type Shows the type of object.

Table Shows the name and owner of the table to which the unique constraint applies.

Index Shows the name of the index used to enforce the unique constraint.

Comment Provides a place for you to type a description of the unique constraint.

See also

- ◆ [“CREATE TABLE statement” \[SQL Anywhere Server - SQL Reference\]](#)

Unique Constraint property sheet: Columns tab

The Columns tab of the Unique Constraint property sheet has the following components:

Name Show the name of the column.

ID Shows the ID of each column.

Data type Shows the data type of the selected columns.

Comment Shows comments, if any, associated with the selected columns.

Details Displays the Column Details dialog, which shows a summary of the properties for the selected column.

See also

- ◆ [“CREATE TABLE statement” \[SQL Anywhere Server - SQL Reference\]](#)

User property sheet: General tab

The General tab of the User property sheet has the following components:

Name Shows the name of the user.

Type Shows the type of object.

Allowed to connect Select this option to allow the user to connect to the database. If the user is not allowed to connect, the password (if one was supplied) is removed from the account. If you later change the user to allow them to connect, you must supply a new password. Clearing this option disables the Password and Confirm Password options.

Users are almost always allowed to connect.

- ◆ **Password** Type the password for the user. For added security, the characters appear as asterisks. Passwords are case sensitive.
- ◆ **Confirm password** Confirm the password that you typed in the Password text box by entering it again. The contents of the two fields must match exactly. Passwords are case sensitive.

Comment Provides a place for you to type a text description of the user. For example, you could use this area to describe the remote user's purpose in the system.

See also

- ◆ [“GRANT statement” \[SQL Anywhere Server - SQL Reference\]](#)
- ◆ [“Granting and revoking remote permissions” \[SQL Anywhere Server - Database Administration\]](#)
- ◆ [“Managing User IDs and Permissions” \[SQL Anywhere Server - Database Administration\]](#)

User property sheet: Authorities tab

The Authorities tab of the User property sheet has the following components:

DBA Select this option to grant DBA authority to the user; a user with DBA authority can fully administer the database.

Resource Select this option to grant resource authority to the user; a user with resource authority can create database objects.

Remote DBA Select this option to grant Remote DBA authority to the user. The MobiLink client utility, dbmlsync, requires Remote DBA authority. The SQL Remote Message Agent should also be run using a user ID with this type of authority to ensure that actions can be performed without creating security loopholes.

Backup Select this option to grant backup authority to the user.

Validate Select this option to grant validate authority to the user; a user with validate authority can perform the operations executed by the different VALIDATE statements, such as database, table, index, and checksum validation.

See also

- ◆ [“Managing User IDs and Permissions” \[SQL Anywhere Server - Database Administration\]](#)
- ◆ [“GRANT statement” \[SQL Anywhere Server - SQL Reference\]](#)
- ◆ [“DBA authority overview” \[SQL Anywhere Server - Database Administration\]](#)
- ◆ [“RESOURCE authority overview” \[SQL Anywhere Server - Database Administration\]](#)
- ◆ [“GRANT REMOTE DBA statement \[MobiLink\] \[SQL Remote\]” \[SQL Anywhere Server - SQL Reference\]](#)
- ◆ [“BACKUP authority overview” \[SQL Anywhere Server - Database Administration\]](#)
- ◆ [“VALIDATE authority overview” \[SQL Anywhere Server - Database Administration\]](#)

User property sheet: Permissions tab

The Permissions tab of the User property sheet has the following components:

Permissions list Shows all tables the user has permissions on, as well as the user who owns each table. You can click the fields for each table to grant or revoke permissions; double-clicking (so that a checkmark and two + signs appear) gives the user grant options for the permission.

Show Select what type of object appears in the Permissions list:

- ◆ **Tables** All tables the user has permissions on.
- ◆ **Views** All views the user has permissions on.
- ◆ **Procedures & functions** All procedures and functions the user has permissions on. You can only grant Execute permissions for procedures and functions.

See also

- ◆ [“Granting and revoking remote permissions” \[SQL Anywhere Server - Database Administration\]](#)

View property sheet: General tab

The General tab of the View property sheet has the following components:

Name Shows the name of the view.

Type Shows the type of object.

Owner Shows the database user who owns the object.

DbSPACE Shows the database file (or dbSPACE) where the materialized view is located. This only applies to materialized views.

Status Shows the status of the object. Values include the following:

- ◆ **1 (valid)** The object is available for use by the database server. This status is synonymous with ENABLED. That is, if you ENABLE an object, the status changes to VALID.
- ◆ **2 (invalid)** An attempt to recompile the object after an internal operation has failed, for example, after a schema-altering modification to an object on which it depends. The database server continues to try to recompile the object whenever it is referenced in a statement.
- ◆ **4 (disabled)** The object has been explicitly disabled by the user, for example using an ALTER TABLE ... DISABLE VIEW DEPENDENCIES statement.

Recompile and Enable Now Click to recompile and enable the view, making it available for use by the database.

Disable Now Click to disable the view. The database server keeps the definition of the view in the database, but makes the view unusable.

Used in optimization Select this option to indicate whether the materialized view can be used during query optimization. This applies to materialized views only.

Last refresh time Shows the date and time of the last refresh. This applies to materialized views only.

Known stale time Shows the time at which the materialized view became known as stale. This value corresponds to the time at which a change was detected in one of the underlying base tables. This applies to materialized views only.

Comment Provides a place for you to type a description of the view. For example, you could use this area to describe the view's purpose in the system.

See also

- ◆ [“CREATE VIEW statement” \[SQL Anywhere Server - SQL Reference\]](#)
- ◆ [“Creating views” \[SQL Anywhere Server - SQL Usage\]](#)
- ◆ [“Working with views” \[SQL Anywhere Server - SQL Usage\]](#)

View property sheet: Columns tab

The Columns tab of the View property sheet has the following components:

Columns list Lists the columns included in the view.

See also

- ◆ [“Working with views” \[SQL Anywhere Server - SQL Usage\]](#)

View property sheet: Permissions tab

The Permissions tab of the View property sheet has the following components:

Permissions list Lists the users who have permissions on the view. If you want to add users to the list, click Grant. To remove a user from the list, select the user, and then click revoke. You can select multiple users by holding Shift while you click.

To grant or revoke permissions for a specific user, click the fields beside each user. Double-clicking (so that a check mark and two + signs appear) gives the user grant options.

- ◆ **Grant** Displays the Grant Permission dialog, which lets you grant permissions on the table to other users.
- ◆ **Revoke** Revokes permissions from the users and removes them from the Permissions list.

See also

- ◆ [“Granting permissions on views”](#) [*SQL Anywhere Server - Database Administration*]
- ◆ [“Working with views”](#) [*SQL Anywhere Server - SQL Usage*]

View property sheet: Miscellaneous tab

This tab only applies to materialized views.

The Miscellaneous tab of the View property sheet has the following components:

Maximum view width The number of bytes required for each row in the view.

Number of rows Shows the approximate number of rows in the view. To update this value, click Calculate.

- ◆ **Calculate** Calculates the number of rows in the view.

Free space Specifies the amount of free space you want to reserve for each view page. The free space is used if rows increase in size when the data is updated. If there is no free space in a view page, every increase in the size of a row on that page requires the row to be split across multiple view pages, causing row fragmentation and possible performance degradation.

☞ For more information, see [“ALTER VIEW statement”](#) [*SQL Anywhere Server - SQL Reference*].

- ◆ **Default** Choose this option to reserve 200 bytes in each page.
- ◆ **Percentage** Choose this option to specify an integer between 0 and 100. The former specifies that no free space is to be left on each page—each page is to be fully packed. A high value causes each row to be inserted into a page by itself.

View data is encrypted When the database is created with table encryption scope, you can select this option to encrypt this materialized view's data.

See also

- ◆ [“Working with views”](#) [*SQL Anywhere Server - SQL Usage*]

Web Service property sheet: General tab

The General tab of the Web Service property sheet has the following components:

Name Shows the name of the selected web service.

Type Shows the type of object.

Service type Shows whether the selected web service is a RAW, XML, HTML, SOAP, or DISH web service. You can change the service type by selecting a different type from the dropdown list.

Format This field applies only to SOAP and DISH services.

Generates output formats compatible with various types of SOAP clients, such as .NET or Java JAX-RPC. If a SOAP service's format is not specified, the format is inherited from the service's DISH service declaration. If the DISH service does not declare a format, it defaults to DNET, which is compatible with .NET clients. A SOAP service that does not declare a format can be used with different types of SOAP clients by defining multiple DISH services, each with a different format type.

Data type This field only applies to SOAP services. The possible values are:

- ◆ **OFF** No data typing of inputs and outputs. This is the default.
- ◆ **ON** Supports data typing for input parameters and result set responses.
- ◆ **IN** Supports data typing of input parameters only.
- ◆ **OUT** Provides data type information for result set responses of all SOAP service formats.

Service name prefix This field applies only to DISH services. Only SOAP services whose names begin with this prefix are handled by the DISH service.

Authorization required Indicates whether users must authenticate in order to use this web service.

Select this option to indicate that authorization is required. When authorization is required, all users connecting to this service must provide a user name and password. If a checkmark appears beside the User field, you must authenticate as the specified user in order to use this web service. However, if a checkmark does not appear beside the User field and authentication is required, then you can authenticate with any database user in order to use this web service.

If authorization is not required, you must select a user from the dropdown list below. All requests are run using the account and permissions of the user specified in the User field.

User Shows which user's account is used to execute service requests. If the service does not require authorization, you must select a user from the dropdown list. All requests are run using the account and permissions of this user.

Security required Shows whether unsecure connections are accepted. Select this option to indicate that the web service requires security. If the web service requires security, then only HTTPS connections are accepted. If this option is cleared, then both HTTP and HTTPS connections are accepted.

URL path Specifies whether URI paths are accepted, and if so, how they are processed.

☞ For more information about URLs and URIs, see “Understanding how URLs are interpreted” [[SQL Anywhere Server - Programming](#)] and “Creating web service client functions and procedures” [[SQL Anywhere Server - Programming](#)].

- ◆ **Off** Select this option if the remainder of the URI path is not permitted. If the service name ends with a forward slash (/), select Off. For example, if Off is selected and you have the URL path `http://<host-name>/<service-name>/aaa/bbb/ccc`, only `http://<host-name>/<service-name>` is permitted. The remainder of the URI path, `/<aaa>/<bbb>/<ccc>` is not permitted.
- ◆ **On** Select this option if the remainder of the URI path is permitted and is set as a single parameter. For example, in the URL path `http://<host-name>/<service-name>/aaa/bbb/ccc`, the remainder of the URI path is `/aaa/bbb/ccc`. It is treated as a single parameter.
- ◆ **Elements** Select this option if the remainder of the URL path is permitted and is set as multiple parameters. For example, in the URL path `http://<host-name>/<service-name>/aaa/bbb/ccc`, each element of the path is treated as a separate parameter. For example, `url1=aaa`, `url2=bbb`, `url3=ccc`, and so on.

Comment Provides a place for you to type a description of the web service. For example, you could use this area to describe the web service's purpose in the system.

See also

- ◆ “SQL Anywhere Web Services” [[SQL Anywhere Server - Programming](#)]
- ◆ “CREATE SERVICE statement” [[SQL Anywhere Server - SQL Reference](#)]

Web Service property sheet: SQL Statement tab

The SQL Statement tab of the Web Service property sheet has the following components:

This web service has the following SQL statement Shows the SQL statement for the web service (if one has been specified). Selecting this option enables the text box below where you can enter the SQL statement for the web service.

The statement is the command, usually a stored procedure, that is called when someone access the service. If you define a statement, this is the only statement that can be run through this service. Services without statements are a serious security risk as they permit web clients to execute arbitrary commands. When creating such services, you must enable authorization, which forces all clients to provide a valid user name and password. Even so, only services that define statements should be run in a production system.

The SQL statement is required for SOAP services. It is optional for RAW, XML, and HTML services, and is not applicable to DISH services.

See also

- ◆ “Creating web services” [[SQL Anywhere Server - Programming](#)]
- ◆ “CREATE SERVICE statement” [[SQL Anywhere Server - SQL Reference](#)]


Introduction to dialog boxes

You can find most of the configurable settings in the SQL Anywhere plug-in in dialog boxes, which can be accessed either through the File menu or the Tools menu. If you have different plug-ins installed in Sybase Central, each plug-in may provide different menu items.

The File menu contains commands related to the objects that appear in the main Sybase Central window. These menu items change depending on which object you select. For example, if you select a table, the File menu shows commands and options related to tables. Likewise, if you select a column, the File menu changes to show column options. You can also access all these menu items in popup menus when you right-click an object.

The Tools menu contains commands related to connecting, disconnecting, plug-ins, and Sybase Central options. These menu items always remain visible, regardless of the objects you select in the main window.

You can also configure settings in SQL Anywhere using property sheets. These property sheets appear on the File menu (or the popup menu) when you select an object that has configurable properties.

 For descriptions of these property sheets, see [“Introduction to property sheets” on page 26](#).

Add Service Dependencies dialog

The Add Service Dependencies dialog has the following components:

Choose one or more services from the list of candidates Lists all the services on your system. Select a service from this list and then click OK to add it to the list of services and service groups on the Dependencies tab of the Service property sheet.

You can select multiple services by holding Shift while you click. Double-clicking a service adds the selected service to the list on the Dependencies tab and closes the dialog.

See also

- ◆ [“Service dependencies” \[SQL Anywhere Server - Database Administration\]](#)
- ◆ [“Running more than one service” \[SQL Anywhere Server - Database Administration\]](#)

Add Service Group Dependencies dialog

The Add Service Group Dependencies dialog has the following components:

Choose one or more service groups from the list of candidates Lists all the service groups on your system. Select a service group from this list and then click OK to add it to the list of services and service groups on the Dependencies tab of the Service property sheet.

You can select multiple service groups by holding Shift while you click. Double-clicking adds the selected service group to the list on the Dependencies tab and closes the dialog.

See also

- ◆ “Service groups overview” [[SQL Anywhere Server - Database Administration](#)]
- ◆ “Running more than one service” [[SQL Anywhere Server - Database Administration](#)]

Add Tracing Level dialog

The Add Tracing Level dialog has the following components:

Scope Choose an option from the dropdown list to specify the scope of the tracing. An additional dropdown list may appear, depending on the scope you choose. For example, if you choose Origin, an Origin dropdown list appears where you choose either External or Internal.

Tracing type Choose an option from the dropdown list to specify the type of tracing. The tracing types available vary depending on the Scope chosen.

Condition Choose an option from the dropdown list to specify a condition. The conditions available vary depending on the Tracing Type chosen.

Value (milliseconds) Type a value in milliseconds for the selected condition. This option is only available if a condition is selected.

See also

- ◆ “Changing tracing configuration settings” [[SQL Anywhere Server - SQL Usage](#)]
- ◆ “Advanced application profiling using diagnostic tracing” [[SQL Anywhere Server - SQL Usage](#)]

Change Settings dialog

This dialog allows you to change the foreign key settings for check on commit, whether NULL values are allowed, and update and delete behavior.

The Change Settings dialog has the following components:

Allow null values Determines whether the foreign key columns allow NULL values. To use this option, the foreign key columns must all have Allow Nulls set to Yes.

◆ **Simple** Select this option to have a match occur for a row in the referencing table if at least one column in the key is NULL, or all the column values match the corresponding column values present in a row of the referenced table. This option is only available if Allow Null Values is selected.

◆ **Full** Select this option to have a match occur for a row in the referencing table if all column values in the key are NULL, or if all of the column values match the values present in a row of the referenced table. This option is only available if Allow Null Values is selected.

Update action Uses one of the following settings to define the behavior of the table when a user tries to update data:

◆ **Not permitted** Prevents updates of the associated primary table's primary key value if there are no corresponding foreign keys.

- ◆ **Cascade values** Updates the foreign key to match a new value for the associated primary key.
- ◆ **Set values to null** Sets all the foreign key values that correspond to the updated primary key of the associated primary table to NULL.
- ◆ **Set values to default** Sets foreign key values that match the updated or deleted primary key value to values specified in the DEFAULT clause of each foreign key column. To use this option, the foreign key columns must all have default values.

Delete action Uses one of the following settings to define the behavior of the table when a user tries to delete data:

- ◆ **Not permitted** Prevents deletion of the associated primary table's primary key value if there are no corresponding foreign keys in the table.
- ◆ **Cascade values** Deletes the rows from the table that match the deleted primary key of the associated primary table.
- ◆ **Set values to null** Sets all the foreign key values in the table that correspond to the deleted primary key of the associated primary table to NULL. To use this option, the foreign key columns must all have Allow Nulls set to Yes.
- ◆ **Set values to default** Sets foreign key values that match the updated or deleted primary key value to values specified in the DEFAULT clause of each foreign key column. To use this option, the foreign key columns must all have default values.

Check only on a commit Forces the database to wait for a COMMIT before checking the integrity of the foreign key, overriding the setting of the wait_for_commit database option.

See also

- ◆ [“Foreign Key property sheet: General tab” on page 43](#)
- ◆ [“Managing foreign keys” \[SQL Anywhere Server - SQL Usage\]](#)
- ◆ [“Ensuring Data Integrity” \[SQL Anywhere Server - SQL Usage\]](#)
- ◆ [“wait_for_commit option \[database\]” \[SQL Anywhere Server - Database Administration\]](#)

Change Tracing Level dialog

The Change Tracing Level dialog has the following components:

Level list Shows a list of the tracing levels for the database. The scope, name, level, condition, and value are displayed for each level.

Enabled Place a checkmark in the checkbox beside a level to enable it. If a checkmark is removed, the level is not enabled.

- ◆ **New** Displays the Add Tracing Level dialog, which lets you create a new tracing level.
- ◆ **Delete** Removes the selected tracing level. This is only available if a level is selected.

- ◆ **Refresh** Refreshes the list of tracing levels. This is only available if the Enabled option is changed for one or more levels.

See also

- ◆ [“Changing tracing settings while a tracing session is in progress” \[SQL Anywhere Server - SQL Usage\]](#)
- ◆ [“Advanced application profiling using diagnostic tracing” \[SQL Anywhere Server - SQL Usage\]](#)

Change User to Consolidated User dialog

The Change User to Consolidated User dialog has the following components:

User Shows the name of the selected user.

Message type Select a message type for communicating with the publisher.

Address Type the destination for replication messages. Publishers and consolidated users each have their own address. The address must be valid for the Message Type you select. For example, if you select the FTP message type, a valid address is a host (such as ftp.mycompany.com) or an IP address (such as 192.138.151.66).

Send frequency Select one of the following values to specify how often the Message Agent should run.

- ◆ **Send then close** Select this option to set the replication frequency so that the Message Agent runs once, sends all pending messages to this consolidated user, and then shuts down. The Message Agent must be restarted each time the publisher wants to send messages. This option is only useful when you are running the message agent at a remote site.
- ◆ **Send every** Select this option to set the replication frequency so that the Message Agent runs continuously, sending messages to this consolidated user at the given periodic interval. This option is useful at both consolidated and remote sites.
- ◆ **Send daily at** Select this option to set the replication frequency so that the Message Agent runs continuously, sending messages to this consolidated user each day at the given time. This option is particularly useful at remote sites.

See also

- ◆ [“GRANT CONSOLIDATE statement \[SQL Remote\]” \[SQL Anywhere Server - SQL Reference\]](#)
- ◆ [“Working with message types” \[SQL Remote\]](#)
- ◆ [“Granting and revoking remote permissions” \[SQL Anywhere Server - Database Administration\]](#)
- ◆ [“Managing SQL Remote permissions” \[SQL Remote\]](#)

Change User to Remote User dialog

The Change User to Remote User dialog has the following components:

User Shows the name of the selected user.

Message type Select a message type for communicating with the publisher.

Address Type the destination for replication messages. Publishers and remote users each have their own address. The address must be valid for the Message Type you select. For example, if you select the FTP message type, a valid address is a host (such as ftp.mycompany.com) or an IP address (such as 192.138.151.66).

Send frequency Select one of the following values to specify how often the Message Agent should run.

- ◆ **Send then close** Select this option to set the replication frequency so that the publisher's agent runs once, sends all pending messages to this remote user, and then shuts down. The agent must be restarted each time the publisher wants to send messages. This option is only useful when you are running the message agent at a remote site.
- ◆ **Send every** Select this option to set the replication frequency so that the publisher's agent runs continuously, sending messages to this remote user at the given periodic interval. This option is useful at both consolidated and remote sites.
- ◆ **Send daily at** Select this option to set the replication frequency so that the publisher's agent runs continuously, sending messages to this remote user each day at the given time. This option is particularly useful at remote sites.

See also

- ◆ [“GRANT REMOTE statement \[SQL Remote\]” \[SQL Anywhere Server - SQL Reference\]](#)
- ◆ [“Working with message types” \[SQL Remote\]](#)
- ◆ [“Granting and revoking remote permissions” \[SQL Anywhere Server - Database Administration\]](#)
- ◆ [“Managing SQL Remote permissions” \[SQL Remote\]](#)

Column Permissions dialog

The Column Permissions dialog has the following components:

This user has the following column permissions Lists columns and type of permissions the selected user has on each column in the table. You can click in the fields beside each column to grant or revoke permissions; double-clicking (so that a checkmark and two + signs appear) gives the user grant options for the permission.

Details Displays the Column Details dialog for the selected column. The Column Details dialog shows the name, type, primary key, unique constraints, whether NULLs are allowed, and comment for the selected column.

See also

- ◆ [“Granting permissions on tables” \[SQL Anywhere Server - Database Administration\]](#)

Connection Details dialog

The Connection Details dialog has the following components:

Connection ID Shows the connection ID for the selected blocked connection.

Connection name Shows the name of the connection.

User Shows the user ID for the connection.

Communication link Shows the type of communication link.

Node address Shows the node address for the client in a client/server connection.

Application information Shows the application information.

Connect time Shows the start time of the connection.

Disconnect time Shows the time the connection was disconnected.

See also

- ◆ “Deadlock” [[SQL Anywhere Server - SQL Usage](#)]
- ◆ “sa_conn_info system procedure” [[SQL Anywhere Server - SQL Reference](#)]

Consolidated User Options dialog

Note

When you change options settings, some of the settings take effect immediately, while for others to take effect you must restart the database.

The Consolidated User Options dialog has the following components:

Consolidated user Displays the name of the selected consolidated user.

Show Provides a list of option types. For example, if you choose Database Options, only database-related options appear in the Options list.

Options list Shows the option settings and default values based on the type of options selected in the Show list. Once you select an option, you can use the buttons at the side of the dialog.

- ◆ **New** This button is not enabled when you are setting consolidated user options. You must open the Database Options dialog to add new options.
- ◆ **Remove Now** This button is not enabled when you are setting consolidated user options. You must open the Database Options dialog to remove options.
- ◆ **Set Temporary Now** To change an option setting for the consolidated user temporarily, select an option from the Options list, type the desired setting in the Value field, then click Set Temporary Now.

Temporary values only last for the current Sybase Central session.

- ◆ **Set Permanent Now** To change a setting for the consolidated user permanently, select an option from the Options list, type the desired setting in the Value field, then click Set Permanent Now.

Permanent values last between sessions until they are explicitly changed again.

Value Select an option in the Options list and type the desired setting in the Value field. You can make the setting temporary or permanent by clicking Set Temporary Now and Set Permanent Now respectively. An option value cannot be set for an individual user ID unless there is already a PUBLIC group setting for that option.

 For information about specific options, see “[Alphabetical list of options](#)” [*SQL Anywhere Server - Database Administration*].

See also

- ◆ “[SET OPTION statement](#)” [*SQL Anywhere Server - SQL Reference*]
- ◆ “[Working with databases](#)” [*SQL Anywhere Server - SQL Usage*]
- ◆ “[Managing User IDs and Permissions](#)” [*SQL Anywhere Server - Database Administration*]

Create Trigger Condition dialog

The Create Trigger Condition dialog has the following components:

Condition Select a preset trigger condition from the list. When this condition and the value (specified below) are satisfied, the selected event is triggered.

Operator Select an operator from the list. The comparison operator compares the condition and value in the trigger condition.

Value Enter a value for the condition. When this value and the condition (specified above) are satisfied, the selected event is triggered.

See also

- ◆ “[Defining trigger conditions for events](#)” [*SQL Anywhere Server - Database Administration*]

Database Options dialog

Any options you set in this dialog are set for the PUBLIC group. Changing the value of an option for the PUBLIC group sets the value of the option for all users who have not set their own value. An option value cannot be set for an individual user ID unless there is already a PUBLIC group setting for that option.

Note

When you change options, some of the settings take effect immediately, while for others to take effect, you must restart the database.

The Database Options dialog has the following components:

Database Displays the name of the selected database.

Show Provides a list of option types. For example, if you choose Database Options, only database-related options appear in the Options list.

Options list Shows the option settings and default values based on the type of options selected in the Show list. Once you select an option, you can use the buttons at the side of the dialog.

- ◆ **New** Displays the Create Public Option dialog. In this dialog, you can define new options and set their values.
- ◆ **Remove Now** Removes the selected option from the list.
- ◆ **Set Temporary Now** To change an option setting for the database temporarily, select an option from the Options list, type the desired setting in the Value field, then click Set Temporary Now.

Temporary values only last for the current Sybase Central session.

- ◆ **Set Permanent Now** To change an option setting for the database permanently, select an option from the Options list, type the desired setting in the Value field, then click Set Permanent Now.

Permanent values last between sessions until they are explicitly changed again.

Value Select an option in the Options list and type the desired setting in the Value field. You can make the setting temporary or permanent by clicking Set Temporary Now and Set Permanent Now respectively.

 For information about specific options, see [“Alphabetical list of options” \[SQL Anywhere Server - Database Administration\]](#).

See also

- ◆ [“SET OPTION statement” \[SQL Anywhere Server - SQL Reference\]](#)
- ◆ [“Working with databases” \[SQL Anywhere Server - SQL Usage\]](#)
- ◆ [“Managing User IDs and Permissions” \[SQL Anywhere Server - Database Administration\]](#)

Edit Trigger Condition dialog

The Edit Trigger Condition dialog has the following components:

Condition Select a preset trigger condition from the list. When this condition and the value (specified below) are satisfied, the selected event is triggered.

Operator Select an operator from the list. The comparison operator compares the condition and value in the trigger condition.

Value Enter a value for the condition. When this value and the condition (specified above) are satisfied, the selected event is triggered.

See also

- ◆ [“Defining trigger conditions for events” \[SQL Anywhere Server - Database Administration\]](#)

Filter Objects by Owner dialog

The Filter Objects by Owner dialog has the following components:

Database Displays the name of the selected database.

Select the users and groups whose objects you want to view Lists the names and comments for all the users and groups connected to the database. Select the checkbox beside a user or group if you want their objects to appear.

The user SYS owns system tables.

Select All Click Select All to view objects belonging to all users in the Users list.

Clear All Click Clear All to clear all the checkboxes in the Users list.

Restore Defaults Click Restore Defaults to return the list of users on this tab to their default values (selected or cleared).

See also

- ◆ [“Working with databases” \[SQL Anywhere Server - SQL Usage\]](#)
- ◆ [“Displaying system objects in a database” \[SQL Anywhere Server - SQL Usage\]](#)

Grant Permissions dialog

The Grant Permissions dialog has the following components:

Choose one or more users or groups from the list of candidates Lists the users or groups you can grant permissions to. Select a user and then click OK to grant permissions on the selected table, procedure, function, or view to the user or group. Double-clicking a user or group grants them permission on the selected database object and closes the dialog.

You can grant permissions to multiple users by holding the Shift key while you click the users' or groups' names.

See also

- ◆ [“Granting permissions on tables” \[SQL Anywhere Server - Database Administration\]](#)
- ◆ [“GRANT statement” \[SQL Anywhere Server - SQL Reference\]](#)

Graphical Plan dialog

The Graphical Plan dialog has the following components:

Recorded graphical plan Shows a graphical representation of the selected query plan that was considered by the optimizer. Click an object inside the graphical plan to see the details.

Details Shows detailed information for the selected object.

See also

- ◆ [“Graphical plans” \[SQL Anywhere Server - SQL Usage\]](#)

Group Options dialog

Note

When you change options, some of the settings take effect immediately, while for others you must restart the database before they take effect.

The Group Options dialog has the following components:

Group Displays the name of the selected group.

Show Provides a list of option types. For example, if you choose Database Options, only database-related options appear in the Options list.

Options list Shows the option settings and their default values based on the type of options selected in the Show list. Once you select an option, you can use the buttons at the side of the dialog.

- ◆ **New** This button is not enabled when you are setting group options. You must open the Database Options dialog to add new options to the Options list.
- ◆ **Remove Now** This button is not enabled when you are setting group options. You must open the Database Options dialog to remove options from the Options list.
- ◆ **Set Temporary Now** To change an option setting for a group temporarily, select an option from the Options list, type the desired setting in the Value field, then click Set Temporary Now.

Temporary values only last for the current Sybase Central session.

- ◆ **Set Permanent Now** To change an option setting for a group permanently, select an option from the Options list, type the desired setting in the Value field, then click Set Permanent Now.

Permanent values last between sessions until they are explicitly changed again.

Value Select an option in the Options list and type the desired setting in the Value field. You can make the setting temporary or permanent by clicking Set Temporary Now and Set Permanent Now respectively. An option value cannot be set for a group unless there is already a PUBLIC group setting for that option.

 For information about specific options, see [“Alphabetical list of options” \[SQL Anywhere Server - Database Administration\]](#).

See also

- ◆ [“SET OPTION statement” \[SQL Anywhere Server - SQL Reference\]](#)
- ◆ [“Working with databases” \[SQL Anywhere Server - SQL Usage\]](#)
- ◆ [“Managing User IDs and Permissions” \[SQL Anywhere Server - Database Administration\]](#)

New Members dialog

The New Members dialog has the following components:

Choose one or more users and groups from the list of candidates Lists the names and comments for all the users and groups in the database that can be added to the selected group.

New Memberships dialog

The New Memberships dialog has the following components:

Choose one or more groups from the list of candidates Lists the names and comments for all the groups in the database to which the selected user or group can be added.

Open Analysis and Connect to Tracing Database dialog

The Open Analysis and Connect to Tracing Database dialogs have the following components:

In an analysis file Select this option to indicate that the profiling information is contained in an analysis file.

◆ **Analysis file name** Select an analysis file from the dropdown list, or click Browse and navigate to the desired file. This option is only available if In an Analysis File is selected.

◆ **Description** Displays the description associated with the selected analysis file. This option only appears if In an Analysis File is selected.

◆ **User name** The user name required to log in to the database being profiled.

◆ **Password** The password required to log in to the database being profiled.

In a tracing database Select this option to indicate that the profiling information is contained in a tracing database.

See also

◆ [“Application profiling” \[SQL Anywhere Server - SQL Usage\]](#)

Options dialog: Check for Updates tab

This tab allows you to configure whether SQL Anywhere should check for software updates and how often it should do so. Checking for updates is done on application startup.

You can also check for updates any time from the Start menu by choosing Programs ► SQL Anywhere 10 ► Check For Updates and from the Sybase Central, Interactive SQL, and Console utility Help menus.

The Check For Updates tab of the Options dialog in Sybase Central has the following components:

When to check for updates Choose one of the following options to specify how often SQL Anywhere should check for updates:

◆ **On application startup** Select this option if you want SQL Anywhere to check for updates each time Sybase Central is started.

- ◆ **Daily** Select this option if you want SQL Anywhere to check for updates the first time Sybase Central is started each day.
- ◆ **Weekly** Select this option if you want SQL Anywhere to check for updates the first time Sybase Central is started each week.
- ◆ **Monthly** Select this option if you want SQL Anywhere to check for updates the first time Sybase Central is started each month.
- ◆ **Never** Select this option if you do not want SQL Anywhere to check for updates. This is the default setting.

What to check for Choose any combination of the following options to specify what types of updates SQL Anywhere should check for. By default, all of the following options are selected:

- ◆ **Express Bug Fix** Select this option if you want SQL Anywhere to check for Express Bug Fixes.

An express bug fix is a subset of the software with one or more bug fixes. The bug fixes are listed in the release notes for the update. Bug fix updates may only be applied to installed software with the same version number. Some testing has been performed on the software, but the software has not undergone full testing. You should not distribute these files with your application unless you have verified the suitability of the software yourself.

- ◆ **Maintenance Release** Select this option if you want SQL Anywhere to check for maintenance releases of the software.

A maintenance release is a complete set of software that upgrades installed software from an older version with the same major version number (version number format is *major.minor.patch.build*). Bug fixes and other changes are listed in the release notes for the upgrade.

- ◆ **Other Information** Select this option to check for other information, such as new product releases or upcoming events.

Options dialog: Logging tab

The Logging tab of the Options dialog has the following components:

Enable logging Select this option to enable logging for a database.

- ◆ **Add date and time to output** Select this option to include the date and time of each SQL statement occurrence in the log window or file.

Wrap text Specify the length of each line in the Server Messages and Executed SQL pane or log file. Each line wraps automatically to the next line after the number of characters that you specify. By default, there are 80 characters per line.

Save Click Save to save the logging information to a file.

Clear Clears the contents of the selected tab in the Server Messages and Executed SQL pane.

Plug-in Preferences dialog: General tab

The General tab of the Plug-in Preferences dialog has the following components:

Settings The preferences on the General tab govern how SQL Anywhere responds when you perform specific tasks in Sybase Central:

- ◆ **Warn when connecting with user ID without DBA authority** Select this preference if you want to be warned when you are connecting with a user ID that does not have DBA authority. You must log in with DBA authority to enable all plug-in functionality.
- ◆ **Warn when including a column with an approximate data type in an index** Select this preference if you want to be warned when a column with an approximate data type is included in an index. It is recommended that you do not use approximate data types such as FLOAT and DOUBLE for primary keys or for columns with unique constraints. Approximate numeric data types are subject to rounding errors after arithmetic operations.
- ◆ **Inform when a breakpoint is hit while debugging** Select this preference if you want to be notified when a breakpoint is hit when you are working in Debug mode.
- ◆ **Inform when a statement is canceled while debugging** Select this option if you want to be notified when a statement is canceled when you are working in Debug mode.
- ◆ **Confirm adding user to group via clipboard and drag-and-drop operations** Sybase Central allows you to use drag-and-drop operations and copy and paste operations to add users and groups.

Select this preference if you want Sybase Central to prompt you before a user or group is added by dragging and dropping or by copying and pasting.

- ◆ **Confirm granting of permissions via clipboard and drag-and-drop operations** Sybase Central allows you to use drag-and-drop operations and copy and paste operations to grant permissions on tables, views, procedures, and functions to users or groups.

Select this preference if you want Sybase Central to prompt you before permissions are granted to a user or group by dragging or copying and pasting them to a table, view, procedure, or function.

- ◆ **Confirm creation of SQL Remote subscriptions via clipboard and drag-and-drop operations** Sybase Central allows you to use drag-and-drop operations and copy and paste operations to create SQL Remote subscriptions for remote users and consolidated users.

Select this preference if you want Sybase Central to prompt you before you subscribe a remote user or consolidated user to a publication by dragging or copying and pasting the user to a publication.

- ◆ **Confirm creation of MobiLink synchronization subscriptions via clipboard and drag-and-drop operations** Sybase Central allows you to use drag-and-drop operations and copy and paste operations to create synchronization subscriptions for MobiLink users.

Select this preference if you want Sybase Central to prompt you before you subscribe a MobiLink user to a publication by dragging or copying and pasting the MobiLink user to a publication.

- ◆ **Confirm deletions when editing table data** Select this preference if you want SQL Anywhere to prompt you before table data is deleted on the Data tab in Sybase Central.

- ◆ **Confirm updates when editing table data** Select this preference if you want SQL Anywhere to prompt you before table data is updated on the Data tab in Sybase Central.
- ◆ **Confirm implicit updates when editing table data** Select this preference if you want SQL Anywhere to prompt you before implicit updates are made in Sybase Central. Implicit updates are made when you are editing a row on the Data tab and then click anywhere else in Sybase Central outside the row you are currently editing.
- ◆ **Confirm cancellations when editing table data** Select this preference if you want Sybase Central to prompt you when you cancel changes to table data on the Data tab in Sybase Central.
- ◆ **Show an information dialog when a maintenance plan is started** Select this preference if you want Sybase Central to show an information dialog when you start a maintenance plan by selecting it and choosing Run Now from the menu.
- ◆ **Show a warning dialog when modifying or deleting an event associated with a maintenance plan** Select this preference if you want Sybase Central to show a warning dialog when you modify or delete an event associated with a maintenance plan.

Restore Defaults Click Restore Defaults to return the preferences on this tab to their default values (selected or cleared). By default, all the preferences on this tab are selected.

Plug-in Preferences dialog: Utilities tab

The Utilities tab of the Plug-in Preferences dialog has the following components:

Settings The preferences on the Utilities tab govern whether wizard introduction pages appear and whether wizard message windows close when the wizard is finished:

- ◆ **Show Create Database wizard introduction page** Select this preference if you want the Create Database wizard introduction page to appear when you open the wizard.
- ◆ **Show Upgrade Database wizard introduction page** Select this preference if you want the Upgrade Database wizard introduction page to appear when you open the wizard.
- ◆ **Show Backup Database wizard introduction page** Select this preference if you want the Backup Database wizard introduction page to appear when you open the wizard.
- ◆ **Show Restore Database wizard introduction page** Select this preference if you want the Restore Database wizard introduction page to appear when you open the wizard.
- ◆ **Show Create Backup Images wizard introduction page** Select this preference if you want the Create Image Backup wizard introduction page to appear when you open the wizard.
- ◆ **Show Unload Database wizard introduction page** Select this preference if you want the Unload Database wizard introduction page to appear when you open the wizard.
- ◆ **Show Extract Database wizard introduction page** Select this preference if you want the Extract Database wizard introduction page to appear when you open the wizard.
- ◆ **Show Validate Database wizard introduction page** Select this preference if you want the Validate Database wizard introduction page to appear when you open the wizard.

- ◆ **Show Compress Database wizard introduction page** Select this preference if you want the Compress Database wizard introduction page to appear when you open the wizard.
- ◆ **Show Uncompress Database wizard introduction page** Select this preference if you want the Uncompress Database wizard introduction page to appear when you open the wizard.
- ◆ **Show Create Write File wizard introduction page** Select this preference if you want the Create Write File wizard introduction page to appear when you open the wizard.
- ◆ **Show Translate Log File wizard introduction page** Select this preference if you want the Translate Log File wizard introduction page to appear when you open the wizard.
- ◆ **Show Change Log File Settings wizard introduction page** Select this preference if you want the Change Log File Settings wizard introduction page to appear when you open the wizard.
- ◆ **Show Erase Database wizard introduction page** Select this preference if you want the Erase Database wizard introduction page to appear when you open the wizard.
- ◆ **Show Migrate Database wizard introduction page** Select this preference if you want the Migrate Database wizard introduction page to appear when you open the wizard.
- ◆ **Show Index Consultant introduction page** Select this preference if you want the Index Consultant introduction page to appear when you open the Index Consultant.
- ◆ **Close wizard messages window when completed** Select this preference if you want the wizard messages window to close after it is finished. By default, this preference is not selected.
- ◆ **Show Application Profiling wizard introduction page** Select this preference if you want the Application Profiling wizard introduction page to appear when you open the wizard.
- ◆ **Show Application Profiling wizard** Select this preference if you want the Application Profiling wizard to appear.
- ◆ **Show Tracing wizard introduction page** Select this preference if you want the Tracing wizard introduction page to appear when you open the wizard.
- ◆ **Warn when upgrading a database created by version 9.0.2 or earlier software** Select this preference if you want to be warned when upgrading a database that was created using software that was version 9.0.2 or earlier. To create a version 10 database, you must use the Unload Database wizard.
- ◆ **Warn when unloading a database created by version 9.0.2 or earlier software** Select this preference if you want to be warned when unloading a database that was created using software that was version 9.0.2 or earlier. The 9.0.2 database must be stopped before it can be unloaded.

Restore Defaults Click Restore Defaults to return the preferences on this tab to their default values (selected or cleared). By default, all preferences on this tab except Close Wizard Messages Window When Completed are selected.

Plug-in Preferences dialog: Table Data tab

The Table tab of the Plug-in Preferences dialog has the following components:

Which font do you want to use to show table data? Select one of the following options to specify the font that is used for table data on the Data tab when viewing table data in Sybase Central:

- ◆ **System** Select this option to use the computer's normal text font. This is the default setting.
- ◆ **Editor** Select this option to use the same font as the Code Editor.

☞ For more information about the Code Editor, see [“Format tab” on page 233](#).

- ◆ **Custom** Select this option to specify the font, font style, and point size you want to use. Click Browse to select the desired settings in the Font dialog.

Pre-allocate Space for Dbspace dialog

The Pre-allocate Space for Dbspace dialog has the following components:

How much space would you like to pre-allocate for the dbspace? Enter the amount of space you want to pre-allocate to the dbspace. Pre-allocating disk space for the dbspace extends the size of the corresponding database file by the amount of space you specify.

You cannot change the *page size* of a database because the page size is fixed when the database is created.

See also

- ◆ [“ALTER DBSPACE statement” \[SQL Anywhere Server - SQL Reference\]](#)
- ◆ [“Pre-allocating space for database files” \[SQL Anywhere Server - Database Administration\]](#)

Publisher Options dialog

Note

When you change options settings, some of the settings take effect immediately, while for others to take effect you must restart the database.

The Publisher Options dialog has the following components:

Publisher Displays the name of the publisher.

Show Provides a list of option types. For example, if you choose Database Options, only database-related options appear in the Options list.

Options list Shows the option settings and default values based on the type of options selected in the Show list. Once you select an option, you can use the buttons at the side of the dialog:

- ◆ **New** This button is not enabled when you are setting publisher options. You must open the Database Options dialog to add new options.
- ◆ **Remove Now** This button is not enabled when you are setting publisher options. You must open the Database Options dialog to remove options.

- ◆ **Set Temporary Now** To change an option setting for the publisher temporarily, select an option from the Options list, type the desired setting in the Value field, then click Set Temporary Now.

Temporary values only last for the current Sybase Central session.

- ◆ **Set Permanent Now** To change a setting for the publisher permanently, select an option from the Options list, type the desired setting in the Value field, then click Set Temporary Now.

Permanent values last between sessions until they are explicitly changed again.

Value Select an option in the Options list and type the desired setting in the Value field. You can make the setting temporary or permanent by clicking Set Temporary Now and Set Permanent Now respectively. An option value cannot be set for an individual user ID unless there is already a PUBLIC group setting for that option.

 For information about specific options, see [“Alphabetical list of options” \[SQL Anywhere Server - Database Administration\]](#).

See also

- ◆ [“SET OPTION statement” \[SQL Anywhere Server - SQL Reference\]](#)
- ◆ [“Working with databases” \[SQL Anywhere Server - SQL Usage\]](#)
- ◆ [“Managing User IDs and Permissions” \[SQL Anywhere Server - Database Administration\]](#)

Query Rewrite Optimization History dialog

The Query Rewrite Optimization History dialog has the following components:

History Shows detailed information about each type of rewrite optimization that was applied to the SQL statement, and the resulting changes to the SQL text.

See also

- ◆ [“Query Optimization and Execution” \[SQL Anywhere Server - SQL Usage\]](#)

Recommendation dialog

The Recommendation dialog has the following components:

Description Shows a description of the application profiling recommendation.

Details (or SQL Script) Provides more details related to the selected recommendation.

◆ **Up arrow** Click the up arrow to view the content for the previous recommendation.

◆ **Down arrow** Click the down arrow to view the content for the next recommendation.

Save Allows you to save the selected recommendation to file.

Delete Deletes the selected recommendation.

See also

- ◆ [“Application profiling” \[SQL Anywhere Server - SQL Usage\]](#)
- ◆ [“Analyzing diagnostic tracing information” \[SQL Anywhere Server - SQL Usage\]](#)

Remote User Options dialog**Note**

When you change options settings, some of the settings take effect immediately, while for others to take effect you must restart the database.

The Remote User Options dialog has the following components:

Remote User Displays the name of the selected remote user.

Show Provides a list of option types. For example, if you choose Database Options, only database-related options appear in the Options list.

Options list Shows the option settings and default values based on the type of options selected in the Show list. Once you select an option, you can use the buttons at the side of the dialog.

- ◆ **New** This button is not enabled when you are setting remote user options. You must open the Database Options dialog to add new options.
- ◆ **Remove Now** This button is not enabled when you are setting remote user options. You must open the Database Options dialog to remove options.
- ◆ **Set Temporary Now** To change an option setting for the consolidated user temporarily, select an option from the Options list, type the desired setting in the Value field, then click Set Temporary Now.

Temporary values only last for the current Sybase Central session.

- ◆ **Set Permanent Now** To change a setting for the consolidated user permanently, select an option from the Options list, type the desired setting in the Value field, then click Set Temporary Now.

Permanent values last between sessions until they are explicitly changed again.

Value Select an option in the Options list and type the desired setting in the Value field. You can make the setting temporary or permanent by clicking Set Temporary Now and Set Permanent Now respectively. An option value cannot be set for an individual user ID unless there is already a PUBLIC group setting for that option.

 For information about specific options, see [“Alphabetical list of options” \[SQL Anywhere Server - Database Administration\]](#).

See also

- ◆ [“SET OPTION statement” \[SQL Anywhere Server - SQL Reference\]](#)
- ◆ [“Working with databases” \[SQL Anywhere Server - SQL Usage\]](#)
- ◆ [“Managing User IDs and Permissions” \[SQL Anywhere Server - Database Administration\]](#)

Set Consolidated User dialog

The Set Consolidated User dialog has the following components:

Choose the new consolidated user from the list of candidates Lists the users from which you can select the consolidated user for the database. Select a user and then click OK to grant CONSOLIDATED permissions to the selected user. Double-clicking a user grants that user CONSOLIDATE permissions and closes the dialog.

You can only select one consolidated user for the database. The name of the consolidated user appears on the SQL Remote tab of the Database property sheet.

See also

- ◆ [“GRANT CONSOLIDATE statement \[SQL Remote\]” \[SQL Anywhere Server - SQL Reference\]](#)
- ◆ [“Managing SQL Remote permissions” \[SQL Remote\]](#)

Set Clustered Index dialog

Clustered indexes are supported for SQL Anywhere databases that are version 8.0.2 and higher.

The Set Clustered Index dialog has the following components:

Table Shows the name of the table for which you are specifying a clustered index.

Specify an index on this table to be clustered Select this option to enable the list of indexes below where you specify which index is to be clustered.

Indexes list Shows all the indexes for the table. Select an index from the list and then click OK to specify a clustered index. Note that only one index on a table can be a clustered index.

See also

- ◆ [“CREATE INDEX statement” \[SQL Anywhere Server - SQL Reference\]](#)
- ◆ [“Using clustered indexes” \[SQL Anywhere Server - SQL Usage\]](#)

Set Publisher dialog

The Set Publisher dialog has the following components:

Choose the new publisher from the list of candidates Lists the users you can select the publisher from. Select a user and then click OK to grant PUBLISH permissions to the selected user. Double-clicking a user grants that user PUBLISH permissions and closes the dialog.

You can only select one publisher for the database.

See also

- ◆ [“GRANT PUBLISH statement \[SQL Remote\]” \[SQL Anywhere Server - SQL Reference\]](#)
- ◆ [“Managing SQL Remote permissions” \[SQL Remote\]](#)

Set Service Group dialog

The Set Service Group dialog has the following components:

New service group Select this option to create a new service group to assign the selected service to:

- ◆ **Service group name** Type the name of the new service group when you select New Service Group above.

Existing service group Select this option if you want to assign the selected service to be a member of an existing service group.

- ◆ **Service groups list** Lists all the existing service groups. The list is enabled when you select the Existing Service Group option. To assign the selected service to a service group, select an existing service group from the list and click OK. Double-clicking a service group assigns the service to that service group and closes the dialog.

See also

- ◆ [“Running more than one service” \[SQL Anywhere Server - Database Administration\]](#)

SQL Statement Details dialog

The SQL Statement Details dialog has a SQL Statement Details pane and a Query Information pane. Note that the fields displayed vary with the SQL statement selected, so you may not see all the fields that are described below.

SQL statement details The following information is provided for the SQL statement:

- ◆ **Request ID** Shows the request ID.
- ◆ **SQL statement** Shows the full text of the selected SQL statement. Note that the text displayed for the statement may not match the original text. If this statement was captured after it was parsed by the database server (either because it is part of a compiled database object, such as a stored procedure or trigger), or because it was only selected for inclusion in the trace because it satisfied a sampling or cost condition, it may appear different than it was originally written. In particular, queries over views may appear drastically different, since the view definitions are often flattened into the queries (expanded inline).
- ◆ **Host/internal variables** Shows host variables, internal variables, and their values for the selected SQL statement.
- ◆ **Start time** Shows the statement start time.
- ◆ **Duration** Shows the duration of the statement, which is the time the database server spent actually processing the request.
- ◆ **Cursor close time** Shows the cursor close time.
- ◆ **Connection ID** Shows the connection ID for the selected statement.
- ◆ **User** Shows the user ID for the selected statement.

- ◆ **SQL error code** Shows the numerical SQL error code associated with the error.
- ◆ **Procedure/Trigger** Shows the stored procedure or trigger related to the selected statement.
- ◆ **Procedure/Trigger line number** Shows the line number of the applicable procedure or trigger.

Query information The following query information is provided for the SQL statement:

- ◆ **Isolation level** Shows the isolation level for the selected statement.
- ◆ **Forward fetches** Shows the number of forward fetches for the selected statement.
- ◆ **Reverse fetches** Shows the number of reverse fetches for the statement.
- ◆ **Absolute fetches** Shows the number of absolute fetches for the statement.
- ◆ **First fetch time** Shows the first fetch time for the selected database.
- ◆ **Used optimizer bypass** Shows whether or not the optimizer bypass was used.
- ◆ **Actual text plan** Shows the actual text plan.
- ◆ **Plan at execution time** Shows the plan at execution time. Click an object to display the details for that object. Click Advanced Details to display more detailed information.

See also

- ◆ [“Analyzing diagnostic tracing information” \[SQL Anywhere Server - SQL Usage\]](#)
- ◆ [“Text plans” \[SQL Anywhere Server - SQL Usage\]](#)

SQL Viewer Options dialog

The SQL Viewer Options dialog has the following components:

Enable logging Select this option to enable logging for a database.

- ◆ **Add date and time to output** Select this option to include the date and time of each SQL statement occurrence in the Log Viewer or file.

Wrap text Specify the length of each line in the Server Messages and Executed SQL pane or log file. Each line wraps automatically to the next line after the number of characters that you specify. By default, there are 80 characters per line.

Save Click Save to save the logging information to a file.

Clear Clears the contents of the selected tab in the Server Messages and Executed SQL pane.

Start Database dialog


The Start Database dialog has the following components:

Server Shows the name of the selected database server on which the database will be started.

Database file Type the full path and name of the SQL Anywhere database file on the server computer. For example, type something like C:\databases\mydatabase.db.

You can also click Browse to locate the file.

Encryption key Enter the encryption key to start the database. You must supply the encryption key to start a database that is strongly encrypted. This field is only applicable for strongly encrypted databases.

 For more information, see “[Encrypting a database](#)” [*SQL Anywhere Server - Database Administration*] and “[Initialization utility \(dbinit\)](#)” [*SQL Anywhere Server - Database Administration*].

Database name Type a name for the database you are connecting to. You can use a database name to provide a more meaningful name than the file name for users of client applications. Since more than one database can run on a database server at one time, supplying a database name lets you distinguish between databases running on the same database server. The name you supply identifies the database until it is stopped.

The database name is optional. If you don't supply a database name, the default database name is the root of the database file name (the file name without the .db extension). For example, if you have a database called *sample.db*, the default database name is *sample*.

Stop database after last disconnect Select this option to stop the database when the last connection to it closes.

This option is different from the `-ga` server option, which automatically stops the database server itself.

See also

- ◆ “[Running the Database Server](#)” [*SQL Anywhere Server - Database Administration*]
- ◆ “[Working with databases](#)” [*SQL Anywhere Server - SQL Usage*]

Trigger Event dialog

The Trigger Event dialog has the following components:

Event Displays the name and owner of the event.

Parameters Type any event parameters in this field in the form **name=value,name=value...**

If the event does not require any parameters, click OK to trigger the event.

This dialog allows you to explicitly supply parameters in order to simulate a context for the event handler. You can use this dialog to test trigger conditions such as disk space restrictions (when a disk fills beyond a specified percentage) or other trigger conditions that are required to trigger an event handler.

For example, you can have an event that takes different actions depending which user ID is connected to the database: calling the event parameter (*'User'*) in the event handler does this. To simulate triggering this event for the user P_Chin, type the following in the Parameters text box:

```
"User"='P_Chin'
```

The word *User* must be contained in double quotes because it is a reserved word in SQL.

See also

- ◆ [“TRIGGER EVENT statement” \[SQL Anywhere Server - SQL Reference\]](#)
- ◆ [“EVENT_CONDITION function \[System\]” \[SQL Anywhere Server - SQL Reference\]](#)
- ◆ [“CREATE EVENT statement” \[SQL Anywhere Server - SQL Reference\]](#)
- ◆ [“Automating Tasks Using Schedules and Events” \[SQL Anywhere Server - Database Administration\]](#)

Unload Data dialog

The Unload Data dialog has the following components:

Save the data files on the server computer using UNLOAD statements Select this option to export data to files on the server computer. Selecting this option places an exclusive lock on the whole table while you are unloading it. UNLOAD statements provide better performance than OUTPUT statements. In the file, the data is exported with one row per line, values are separated by a comma delimiter, and strings are enclosed in single quotes. The Browse button is disabled if you select this option and the database is not running on the local computer.

Save the data files on the local computer using OUTPUT statements Select this option to export data files on the local computer. In the file, the data is exported with one row per line, values are separated by a comma delimiter, and strings are enclosed in single quotes

Save the data in the following directory Type the directory where you want the data saved. If you choose to save the data files on the server computer, relative file names specify files relative to the database server's starting directory. You can click Browse to locate the directory where you want to save the files.

Order data by primary key Select this option to order the exported data in order by primary key values to make reloading quicker.

Save the reload file to the following file on the local computer Type a name and location for the *reload.sql* file that is used to reload the data.

Use LOAD statements to reload the data from the server computer Select this option to use LOAD statements to reload the data. LOAD statements provide better performance than INPUT statements. Choose this option if the file names referenced in the *reload.sql* file are relative to the server computer.

 For more information, see [“Using the LOAD TABLE statement to import data” \[SQL Anywhere Server - SQL Usage\]](#).

Use INPUT statements to reload the data from the local computer Select this option to use INPUT statements to reload the data. Choose this option if the file names referenced in the *reload.sql* file are relative to the local computer.

See also

- ◆ [“UNLOAD TABLE statement” \[SQL Anywhere Server - SQL Reference\]](#)
- ◆ [“OUTPUT statement \[Interactive SQL\]” \[SQL Anywhere Server - SQL Reference\]](#)
- ◆ [“LOAD TABLE statement” \[SQL Anywhere Server - SQL Reference\]](#)
- ◆ [“INPUT statement \[Interactive SQL\]” \[SQL Anywhere Server - SQL Reference\]](#)

Update JAR File dialog

The Update JAR file dialog has the following components:

Where is the updated JAR file located? In the text box, type the path of the JAR file that you want to update. If you don't know the path, you can click the Browse button to search for the file. For example, *C:\my JAR files\Silver.jar*.

Install all classes Select this option if you want to install all the classes in this JAR file.

Install selected classes Select this option to identify specific classes to install from the selected JAR file. Separate each class with a comma. You can click Select to view a list of classes in the selected JAR file.

- ◆ **Select All** Installs all the classes in the JAR file list.
- ◆ **Clear All** Clears all the classes in the JAR file list so they are not installed.

See also

- ◆ [“Using Java in the Database” \[SQL Anywhere Server - Programming\]](#)

Update Java Class dialog

The Update Java Class dialog has the following components:

Where is the updated Java Class file located? Type the complete path of the Java class that you want to update. For example, *C:\my classes\Utility.class*.

Alternatively, you can click Browse to search for the Java class.

See also

- ◆ [“Using Java in the Database” \[SQL Anywhere Server - Programming\]](#)
- ◆ [“Updating classes and JAR files” \[SQL Anywhere Server - Programming\]](#)

User Options dialog

Note

When you change options settings, some of the settings take effect immediately, while for others to take effect you must restart the database.

The User Options dialog has the following components:

User Displays the name of the selected user.

Show Provides a list of option types. For example, if you choose Database Options, only database-related options appear in the Options list.

Options list Shows the option settings and default values based on the type of options selected in the Show list. Once you select an option, you can use the buttons at the side of the dialog.

- ◆ **New** This button is not enabled when you are setting user options. You must open the Database Options dialog to add new options.
- ◆ **Remove Now** This button is not enabled when you are setting user options. You must open the Database Options dialog to remove options.
- ◆ **Set Temporary Now** To change an option setting for a user temporarily, select an option from the Options list, type the desired setting in the Value field, then click Set Temporary Now.

Temporary values only last for the current Sybase Central session.

- ◆ **Set Permanent Now** To change a setting for a user permanently, select an option from the Options list, type the desired setting in the Value field, then click Set Temporary Now.

Permanent values last between sessions until they are explicitly changed again.

Value Select an option in the Options list and type the desired setting in the Value field. You can make the setting temporary or permanent by clicking Set Temporary Now and Set Permanent Now respectively. An option value cannot be set for an individual user ID unless there is already a PUBLIC group setting for that option.

 For information about specific options, see [“Alphabetical list of options” \[SQL Anywhere Server - Database Administration\]](#).

See also

- ◆ [“SET OPTION statement” \[SQL Anywhere Server - SQL Reference\]](#)
- ◆ [“Working with databases” \[SQL Anywhere Server - SQL Usage\]](#)
- ◆ [“Managing User IDs and Permissions” \[SQL Anywhere Server - Database Administration\]](#)

Windows CE Message Types for SQL Remote dialog

The Windows CE Message Types for SQL Remote dialog has the following components:

Your Windows CE device has the following message types This window lists the available message types for your Windows CE device. To select a message type for SQL Remote replication, select a message type from the list and click OK.

- ◆ The supported message types are FILE, FTP, and SMTP.


The selected message type has the following parameters This window lists the name and value for each parameter for the selected message type.

- ◆ **Name** Lists the parameter names for the selected message type.
- ◆ **Value** Shows the value for the parameter for the selected message type. You can change the value by clicking in the field and typing a different value.

The following tables list the parameters for each of the supported SQL Remote message types.

FILE message control parameters

Name	Values	Default	Description
Directory	String	''	Set to the directory under which the messages are stored. The setting is an alternative to the SQL-REMOTE environment variable. See “SQLREMOTE environment variable” [SQL Anywhere Server - Database Administration] .
Debug	YES, NO	NO	When set to YES, all file system calls made by the FILE link are displayed.
Unlink_Delay	Integer	Pause for 1 second after first failed attempt, 2 seconds after second failed attempt, and so on.	Set to the number of seconds to wait before attempting to delete a file if the previous attempt to delete the file failed.

 For more information about the FILE message system, see [“The file message system” \[SQL Remote\]](#).

FTP message control parameters

Name	Values	Default	Description
Host	String	''	The host name or IP address of the computer where the messages are stored.
User	String	''	The user name for accessing the ftp host.
Password	String	''	The password for accessing the ftp host.
Root_Directory	String	''	The root directory within the ftp host site under which the messages are stored.
Port	String	''	The IP port number used for the ftp connection. This is usually not required.
Debug	YES, NO	NO	This parameter controls whether debugging output appears.


Name	Values	Default	Description
Active_Mode	YES, NO	NO	<p>This parameter controls whether the client or the server initiates all data transfer connections.</p> <p>When this parameter is set to NO, (Passive mode) the client initiates all data transfer connections, in this case the message link.</p> <p>When this parameter is set to YES (Active mode) the server initiates all data connections.</p> <p>If your FTP server is sitting behind an incorrectly configured firewall you may not be able to use the default passive transfer mode.</p> <p>For more information about this parameter, see “Troubleshooting ftp problems” [SQL Remote].</p>

☞ For more information about the FTP message system, see [“The ftp message system” \[SQL Remote\]](#).

SMTP message control parameters

Name	Values	Default	Description
Local_Host	String	' '	The name of the local computer. The local host name is required to initiate a session with any SMTP server. In most network environments, the local host name can be determined automatically and you do not need to supply this value.
TOP_Supported	YES, NO	YES	<p>SQL Remote uses a POP3 command called TOP when enumerating incoming messages. The TOP command may not be supported by all POP servers.</p> <p>Set this value to NO to use the RETR command, which is less efficient but works with all POP servers.</p>
Smtplib_Host	String	' '	The name of the computer on which the SMTP server is running. It corresponds to the SMTP host field in the SMTP/POP3 login dialog.
Pop3_Host	String	' '	The name of the computer on which the POP host is running. It corresponds to the POP3 host field in the SMTP/POP3 login dialog.
Pop3_Userid	String	' '	The POP user ID corresponds to the user ID field in the SMTP/POP3 login dialog.

Name	Values	Default	Description
Pop3_password	String	''	The POP password corresponds to the password field in the SMTP/POP3 login dialog.
Debug	YES, NO	NO	This parameter controls whether debugging information appears. When set to YES, SMTP and POP3 commands and responses appear.

 For more information about the SMTP message system, see [“The SMTP message system” \[SQL Remote\]](#).

See also

- ◆ [“Working with message types” \[SQL Remote\]](#)
- ◆ [“Using message types” \[SQL Remote\]](#)

Debugger help

The following sections describe the dialogs available in the SQL Anywhere debugger.

☞ For more information about using the debugger, see “[Debugging Procedures, Functions, Triggers, and Events](#)” [[SQL Anywhere Server - SQL Usage](#)].

Debugger Add Watch dialog

Enter a SQL expression (for stored procedures) or Java expression (for Java classes) to watch. The expression appears in the Watch window when Sybase Central is running a Debug task.

For example, to track the SQLSTATE value when debugging stored procedures, just enter SQLSTATE.

See also

- ◆ “[Expressions](#)” [[SQL Anywhere Server - SQL Reference](#)]

Debugger Breakpoints dialog

The Debugger Breakpoints dialog has the following components:

All breakpoints A list of all breakpoints in the current database. The following is a description of the columns:

- ◆ **Procedure** The stored procedure to which the breakpoint applies.
- ◆ **Context** The line of source code that contains the breakpoint.
- ◆ **Condition** The condition that must be true in order for the breakpoint to interrupt execution.
- ◆ **Count** The number of times the breakpoint is skipped before it interrupts execution. A value of 0 means that the breakpoint always stops execution.
- ◆ **Database** The database to which the breakpoint applies.
- ◆ **Server** The database server to which the breakpoint applies.

Close Close the Breakpoints dialog.

Edit Edit the currently selected breakpoint. For example, you can set or modify a condition that must be satisfied before the breakpoint interrupts execution.

View Code Close the Breakpoints dialog and show code for the selected breakpoint.

Enable Enable the selected breakpoint, so that it interrupts execution. The breakpoint is shown as a red circle in the code window.

Disable Disable the selected breakpoint, so that it does not interrupt execution. The breakpoint is shown as a gray circle in the code window.

Remove Delete the selected breakpoint from the list.

New Create a new breakpoint.

See also

- ◆ [“Working with breakpoints” \[SQL Anywhere Server - SQL Usage\]](#)

Debugger Edit or Add Breakpoint dialog

The Debugger Edit and Add Breakpoint dialogs have the following components:

Server The database server to which the breakpoint applies.

Database The database to which the breakpoint applies.

Procedure For SQL procedures, the stored procedure to which the breakpoint applies.

Class For Java classes, the class to which the breakpoint applies.

Condition A condition that must evaluate to true for the breakpoint to interrupt execution.

The condition does not have to depend only on variables within the procedure. For example, you can set a breakpoint to apply to a connection made by a specified user, you can enter the following condition:

```
CURRENT USER = 'user-name'
```

☞ For more information, see [“Search conditions” \[SQL Anywhere Server - SQL Reference\]](#).

Count The number of times the breakpoint is skipped before it interrupts execution. A value of 0 means that the breakpoint always stops execution.

Enable this breakpoint Select this option for the breakpoint to interrupt execution.

See also

- ◆ [“Editing breakpoint conditions” \[SQL Anywhere Server - SQL Usage\]](#)

Debugger Java Source dialog

The Debugger Java Source dialog has the following components:

List of folders A list of folders or individual files where the debugger looks for Java source.

Browse Folder Locate a folder to add to the list.

Browse File Locate an individual file to add to the list.

See also

- ◆ [“Creating a class” \[SQL Anywhere Server - Programming\]](#)

Index Consultant

The Index Consultant guides you in the proper selection of indexes for your database. It guides you through the process of selecting indexes for a single query or for a set of database requests (called a **workload**). It creates many different sets of virtual indexes. For each set, the Index Consultant optimizes queries and other requests as if those virtual indexes were present. The Index Consultant then gathers the results of these explorations into a set of recommendations.

See also

- ◆ [“Index Consultant” \[SQL Anywhere Server - SQL Usage\]](#)
- ◆ [“Understanding Index Consultant recommendations” \[SQL Anywhere Server - SQL Usage\]](#)
- ◆ [“Implementing Index Consultant recommendations” \[SQL Anywhere Server - SQL Usage\]](#)

UltraLite projects

In version 9.0.2 and earlier, you can assign SQL statements in a reference database to an UltraLite project. By grouping them this way, you can develop multiple static UltraLite applications using the same reference database.

When the UltraLite generator runs against a reference database to generate the database source code files, it takes a project name as an argument and generates the code for the SQL statements in that project. If you are using embedded SQL, the SQL preprocessor defines the UltraLite project for you and you do not need to create it explicitly.

UltraLite statements

In version 9.0.2 and earlier, you define the data access requests available to an UltraLite application by adding a set of SQL statements to the UltraLite project for that application in your reference database. The UltraLite generator then creates the code for a database engine that can execute the set of SQL statements.

In the Static C++ API, you can also use publications to define data access methods. If you are using embedded SQL, the SQL preprocessor adds the SQL statements in your embedded SQL source files to the reference database for you.

Publications

A publication is a database object that identifies the data that is to be synchronized. A publication consists of articles, which are subsets of a table's columns, rows, or both. Each publication can contain one or more entire tables, or partial tables consisting of selected rows and columns. In a single publication, no table can be included in more than one article.

In MobiLink, publications exist only on the clients. A publication consists of articles. MobiLink users can synchronize a publication by creating a synchronization subscription to it. SQL Remote users can receive a publication by subscribing to it.

See also

- ◆ MobiLink SQL Anywhere clients: [“Publishing data”](#) [*MobiLink - Client Administration*]
- ◆ MobiLink UltraLite clients: [“Publications in UltraLite”](#) [*MobiLink - Client Administration*]
- ◆ SQL Remote: [“Publishing data”](#) [*SQL Remote*]

Articles

In MobiLink or SQL Remote, an article represents a whole table, or a subset of the columns and rows in a table. Articles are grouped together in a publication.

See also

- ◆ MobiLink SQL Anywhere clients: [“Altering existing publications”](#) [*MobiLink - Client Administration*]
- ◆ MobiLink UltraLite clients: [“Publications in UltraLite”](#) [*MobiLink - Client Administration*]
- ◆ SQL Remote: [“Publishing data”](#) [*SQL Remote*]

Subscriptions

In MobiLink, a **synchronization subscription** links a particular MobiLink user with a publication. It can also contain other information needed for synchronization. For example, you can specify the address of the MobiLink server and any desired options for a synchronization subscription. Values for a specific synchronization subscription override those set for MobiLink users. Synchronization subscriptions are required only in MobiLink SQL Anywhere remote databases. Server logic is implemented through synchronization scripts, stored in the MobiLink system tables in the consolidated database.

In SQL Remote, data is organized into publications for replication. To receive SQL Remote messages, a **subscription** must be created for a user ID with REMOTE permissions. Publications and subscriptions are two-way relationships in SQL Remote. If you create a subscription for a remote user to a publication on a consolidated database, you should also create a subscription for the consolidated database on the remote database. The Extraction utility carries this out automatically.

See also

- ◆ [MobiLink: “Creating synchronization subscriptions”](#) [*MobiLink - Client Administration*]
- ◆ [SQL Remote: “Publications and subscriptions”](#) [*SQL Remote*]

Connect dialog tools

Tools The following utilities are available from the Tools button on the Connect dialog:

- ◆ **Test connection** This tool is only available when you are connecting to a SQL Anywhere database. Tests whether the information provided results in a proper connection.

Click Show Details to see debugging information about how the connection parameters are used to find the database server.

- ◆ **Setup Windows CE proxy port** This tool is only available if you have ActiveSync installed and are connecting to a SQL Anywhere or UltraLite database. It helps you setup a TCP/IP port redirector for connecting to Windows CE databases (if Windows CE services are installed).

See also

- ◆ [“Connect Dialog Help” on page 1](#)
- ◆ [“Working with the Connect dialog” \[*SQL Anywhere Server - Database Administration*\]](#)

Indexes folder

The Indexes folder provides a way for you to view all the indexes in a database. Once you have connected to a database, click the Indexes folder to display all the indexes.

The following information is displayed for each entry, and can be used to sort the list:

- ◆ **Index name** Shows the name of the index.
- ◆ **Object name** Shows the name of the object with which the index is associated.
- ◆ **Object owner** Shows the name of the owner of the object with which the index is associated.
- ◆ **Index type** Shows the type of index. The type can be foreign key index, primary key index, unique constraint index, or index.
- ◆ **Unique** Shows whether values in the index must be unique. The unique value is set when you create a new index.
- ◆ **Columns** Shows all the columns in the index.

See also

- ◆ [“Index property sheet: General tab” on page 47](#)
- ◆ [“Creating indexes” \[*SQL Anywhere Server - SQL Usage*\]](#)

Table edit undo

When editing tables in Sybase Central, you can undo your changes on a row by row basis.

Rows that have been edited are marked with a pencil icon to the left of the row. To undo the changes to any row that has been edited, click to select the row you want to undo, and choose Edit ► Undo. The changes to the selected row are undone and the pencil icon is removed. You can continue to undo changes to any other rows that are marked with the pencil icon.

See also

- ◆ [“Sybase Central” \[SQL Anywhere Server - Database Administration\]](#)
- ◆ [“Table property sheet: General tab” on page 93](#)

Database search

The Search feature in Sybase Central allows you to search a database for a specified object name, or to search for a string within the SQL of a database object.

The Search pane has the following components:

Find what Enter the object name or SQL string you want to search for, or choose an item from the dropdown list.

Look in Choose an item from the dropdown list to narrow your search.

Match case Select this option to find only text that exactly matches the text in the Find what box, including matching upper and lower case.

Find whole words only Select this option to match one or more whole words. For example, if you select this option and search for the word serve, the search will not find the word serve within the word server.

Search in SQL Select this option to search SQL statements for the specified string.

Search dynamic properties (connections, statistics, locks) Select this option to include dynamic properties in the search.

Search Click Search to find the object or string specified in Find What.

Results list Shows the name, object type, and context for each item that is found.

CHAPTER 4

MobiLink Admin Mode Help

Contents

Introduction	146
MobiLink property sheets	147

About this chapter

This chapter provides descriptions of all the property sheets and dialog boxes you can access from Admin mode when you connect using the MobiLink plug-in.

Introduction

When you work in Admin mode, you are connected to your consolidated or remote database and working live. In Model mode, by contrast, you are in a disconnected state, making changes to an XML file that you later deploy.

Admin mode allows you to use a graphical interface to perform the tasks that might otherwise be done in Model mode, programmatically, or with system procedures or SQL statements. Sybase Central provides property sheets that let you configure object properties, wizards that walk you through the steps for performing common administrative tasks.

When you make changes outside of Model mode, you cannot reverse-engineer them into the model.

See also

- ◆ [“MobiLink property sheets” on page 147](#)
- ◆ [“MobiLink Model Mode Help” on page 161](#)
- ◆ [“MobiLink Server System Procedures” \[*MobiLink - Server Administration*\]](#)
- ◆ [“MobiLink SQL Statements” \[*MobiLink - Client Administration*\]](#)

MobiLink property sheets

This section contains detailed descriptions of each MobiLink property sheet where you can view and configure an object's properties. When you are connected to MobiLink, each property sheet becomes available in the Sybase Central File menu when you select an object, or in a popup menu when you right-click an object.

Carrier property sheet: General tab

Properties are read at startup. When you change properties, you must shut down and restart the MobiLink server for them to take effect.

The General tab of the Carrier property sheet has the following components:

Name Shows the name of the carrier. You can change the name of the carrier in this field.

Type Shows the type of object.

Enabled Select this option to use this carrier. You can define and use multiple carrier mappings.

 For more information, see “enable property” [[MobiLink - Server-Initiated Synchronization](#)].

Description Provides a place for you to type a text description of this carrier.

See also

- ◆ “Setting properties” [[MobiLink - Server-Initiated Synchronization](#)]
- ◆ “Configuring gateways and carriers” [[MobiLink - Server-Initiated Synchronization](#)]

Carrier property sheet: Miscellaneous tab

The Miscellaneous tab of the Carrier property sheet has the following components:

Network provider id Shows the ID of the selected network provider.

SMTP Specify additional SMTP information.

◆ **User prefix** Type a user prefix.

◆ **Domain** Type the domain name of the carrier.

See also

- ◆ “Carrier properties” [[MobiLink - Server-Initiated Synchronization](#)]

Column property sheet: General tab

This Column property sheet displays information about columns that belong to a table.

The General tab of the Column property sheet has the following components:

Name The name of the column. You can edit the column name in this field.

Type Shows the object's type.

Table Shows the name of the table the column belongs to, as well as the table's owner.

Data type Shows the object's data type.

Allows null Shows whether nulls are allowed.

Default value Shows the default column value, if applicable.

Comment Provides a place for you to type a text description of the column. For example, you could use this area to describe the column's purpose in the system.

Connection Script property sheet: General tab

The Connection Script property sheet allows you to view information about the selected connection script. Connection scripts control high-level events that are not associated with a particular table. Use these events to perform global tasks that are required during every synchronization.

The General tab of the Connection Script property sheet has the following components:

Name Shows the name of the selected script version. A script version name is a string. You can edit the version name in the text box.

Type Shows the type of the selected object. In this case, the object type is a Version.

Script ID Shows an integer that uniquely identifies the selected connection script.

Version Shows a string that identifies the version name.

Version ID Shows an integer that uniquely identifies the selected version.

Language Shows the script language.

Deployed Shows whether or not the script has been deployed.

Shared versions Shows any shared versions.

See also

- ◆ [“Connection scripts” \[MobiLink - Server Administration\]](#)
- ◆ [“Script versions” \[MobiLink - Server Administration\]](#)

Database property sheet: General tab

The General tab of the Database property sheet has the following components:

Name Shows the name of the selected database.

Type Shows the type of database.

Product Shows the name of the product, for example, SQL Anywhere.

Version Shows the version number of the selected database.

User Shows the name of the MobiLink user.

Gateway property sheet: General tab

The General tab of the Gateway property sheet has the following components:

Name Shows the name of the gateway.

Type Shows the type of object.

Enabled Select this option to use this gateway.

 For more information, see “enable property” [*MobiLink - Server-Initiated Synchronization*].

Description Provides a place for you to type a text description of the gateway.

See also

- ◆ “Gateway properties” [*MobiLink - Server-Initiated Synchronization*]

Gateway property sheet: Server tab

The Server tab of the Gateway property sheet has the following components:

Server Specify the following server information for the gateway:

- ◆ **Host** Type the name of the computer on which the SMTP server is running.
- ◆ **This server requires authentication** Select this option if the selected server requires authentication. Selecting this activates the User and Password options.
 - ◆ **User** Type the user ID used for SMTP authentication.
 - ◆ **Password** Type the password used for SMTP authentication.

Headers Specify the following header information:

- ◆ **From** This is the sender address of the emails (SMTP requests). The default is anonymous.

See also

- ◆ “SMTP gateway properties” [*MobiLink - Server-Initiated Synchronization*]
- ◆ “smtp_gateway property” [*MobiLink - Server-Initiated Synchronization*]
- ◆ “sender property” [*MobiLink - Server-Initiated Synchronization*]

Gateway property sheet: Ports tab

The Ports tab of the Gateway property sheet has the following components:

Destination port Specify the destination (listener) port on the remote device.

- ◆ **Use the default port (5001)** Select this to use the default port.
- ◆ **Use this port** Select this and specify the port to be used.

Origin port Specify the origin (sender) port.

- ◆ **Use a system-assigned port** Select this to have the system assign a port the packet is sent from.
- ◆ **Use this port** Select this and specify the port to use to send out the packet.

Network address Specify the network address of the sender.

- ◆ **Use the default network address** Select this to use the default network address.
- ◆ **Use this network address** Select this and specify the IP address of the sender.

See also

- ◆ [“Gateways and carriers”](#) [*MobiLink - Server-Initiated Synchronization*]
- ◆ [“UDP gateway properties”](#) [*MobiLink - Server-Initiated Synchronization*]

Gateway property sheet: Gateways tab

The Gateways tab of the Gateway property sheet has the following components:

This device tracker gateway uses the following gateways Select one of the following options to specify the gateways that are used for device tracking:

- ◆ **SYNC gateway** Select SYNC gateway, and then choose the gateway used by the device tracker from the dropdown list. The default is Default-SYNC.
- ◆ **UDP gateway** Select UDP gateway, and then choose the gateway used by the device tracker from the dropdown list. The default is Default-UDP.
- ◆ **SMTP gateway** Select SMTP gateway, and then choose the gateway used by the device tracker from the dropdown list. The default is Default-SMTP.

See also

- ◆ [“Device tracking”](#) [*MobiLink - Server-Initiated Synchronization*]
- ◆ [“SYNC gateway properties”](#) [*MobiLink - Server-Initiated Synchronization*]
- ◆ [“UDP gateway properties”](#) [*MobiLink - Server-Initiated Synchronization*]
- ◆ [“SMTP gateway properties”](#) [*MobiLink - Server-Initiated Synchronization*]

Gateway property sheet: Device Tracker Delivery tab

The Device Tracker Delivery tab of the Gateway property sheet has the following components:

Confirm message delivery Select this option if you want the Listener to initiate synchronization when it receives a message to confirm with the consolidated database that the message was received. The Listener must be started with the -x option in order to provide connection information. This option is turned on by default.

See also

- ◆ “Gateways and carriers” [*MobiLink - Server-Initiated Synchronization*]

Gateway property sheet: SMTP Gateway Delivery tab

The SMTP Gateway Delivery tab of the Gateway property sheet has the following components:

Client version You can provide information about the version of the client using this gateway.

- ◆ **This gateway only supports 9.0.1 and higher clients** Select this option if all Listeners are SQL Anywhere version 9.0.1 or later clients. This is the default setting.

- ◆ **Confirm message delivery** Select this option to confirm message delivery. This setting has an effect only when sending directly through this gateway.

 For more information, see “confirm_delivery property” [*MobiLink - Server-Initiated Synchronization*].

- ◆ **This gateway only supports 9.0.0 clients** Select this option if all Listeners are SQL Anywhere version 9.0.0 clients.

Confirmation timeout You must provide the amount of time before a confirmation should time out. The default confirmation timeout is 10 minutes.

 For more information, see “confirm_timeout property” [*MobiLink - Server-Initiated Synchronization*].

- ◆ **Timeout after** Select a timeout interval for confirmations from the dropdown list.
- ◆ **Use the following timeout interval** Specify a timeout interval for confirmation in minutes and seconds.

See also

- ◆ “Gateways and carriers” [*MobiLink - Server-Initiated Synchronization*]

Gateway property sheet: SYNC Gateway Delivery tab

The SYNC Gateway Delivery tab of the Gateway property sheet has the following components:

Confirm message delivery Select this option to confirm message delivery. This setting has an effect only when sending directly through this gateway.

Confirm action Select this option to flag the Listener to reply with a confirmation after the action is performed on the remote device.

Confirmation timeout You must provide the amount of time before a confirmation should time out. The default confirmation timeout is 1 minute.

 For more information, see [“confirm_timeout property” \[MobiLink - Server-Initiated Synchronization\]](#).

- ◆ **Timeout after** Select a timeout interval for confirmations from the dropdown list.
- ◆ **Use the following timeout interval** Specify a timeout interval for confirmation in minutes and seconds.

See also

- ◆ [“Gateways and carriers” \[MobiLink - Server-Initiated Synchronization\]](#)

Gateway property sheet: UDP Gateway Delivery tab

The UDP Gateway Delivery tab of the Gateway property sheet has the following components:

Client version You can provide information about the version of the client using this gateway.

- ◆ **This gateway only supports 9.0.1 and higher clients** Select this option if all Listeners are SQL Anywhere version 9.0.1 or later clients. This is the default setting.
 - ◆ **Confirm message delivery** Select this option to confirm message delivery. This setting has an effect only when sending directly through this gateway.

 For more information, see [“confirm_delivery property” \[MobiLink - Server-Initiated Synchronization\]](#).

- ◆ **This gateway only supports 9.0.0 clients** Select this option if all Listeners are SQL Anywhere version 9.0.0 clients.

Confirmation timeout You must provide the amount of time before a confirmation should time out. The default confirmation timeout is 1 minute.

 For more information, see [“confirm_timeout property” \[MobiLink - Server-Initiated Synchronization\]](#).

- ◆ **Timeout after** Select a timeout interval for confirmations from the dropdown list.
- ◆ **Use the following timeout interval** Specify a timeout interval for confirmation in minutes and seconds.

See also

- ◆ [“Gateways and carriers” \[MobiLink - Server-Initiated Synchronization\]](#)

Global Notification property sheet: General tab

Properties are read at startup. When you change properties, you must shut down and restart the MobiLink server for them to take effect.

The General tab of the Global Notification property sheet has the following components:

Verbosity Specify the level of verbosity for all Notifiers, gateways, and carriers. You must choose one of the following levels:

- ◆ **No tracing (level 0)** Do not use tracing. This is the default setting.
- ◆ **Startup and shutdown tracing (level 1)** Use a startup, shutdown, and property trace.
- ◆ **Notifications tracing (level 2)** Display notification messages.
- ◆ **Full tracing (level 3)** Use a poll-level trace.

See also

- ◆ [“verbosity property” \[MobiLink - Server-Initiated Synchronization\]](#)

Notifier property sheet: General tab

Properties are read at startup. When you change properties, you must shut down and restart the MobiLink server for them to take effect.

The General tab of the Notifier property sheet has the following components:

Name Shows the name of the Notifier. You can change the name of the Notifier in this field.

Type Shows the type of object.

Enabled Select this option to be able to use this Notifier.

☞ For more information, see [“enable property” \[MobiLink - Server-Initiated Synchronization\]](#).

Display control window when running Select this option if you want the Notifier dialog to be open on the computer where the Notifier is running. This user interface allows users to temporarily change the polling interval, or poll immediately. It can also be used to shut down the Notifier without shutting down the MobiLink server. (Once stopped, the Notifier can only be restarted by shutting down and restarting the MobiLink server.) This option is selected by default.

☞ For more information, see [“gui property” \[MobiLink - Server-Initiated Synchronization\]](#).

Share the database connection with other notifiers Select this option if you want the database connection to be shared with other notifiers.

Description Provides a place for you to type a description of the Notifier.

See also

- ◆ [“MobiLink Notification Properties” \[MobiLink - Server-Initiated Synchronization\]](#)

Notifier property sheet: Connection tab

Properties are read at startup. When you change properties, you must shut down and restart the MobiLink server for them to take effect.

The Connection tab of the Notifier property sheet has the following components:

Isolation Level Specify an isolation level for the connection. The default isolation level is Read Committed (Level 1). You must choose one of the following:

- ◆ Read uncommitted (level 0)
- ◆ Read committed (level 1)
- ◆ Repeatable read (level 2)
- ◆ Serializable (level 3)

☞ For more information, see “[isolation property](#)” [*MobiLink - Server-Initiated Synchronization*] and “[Isolation levels and consistency](#)” [*SQL Anywhere Server - SQL Usage*].

Connection String Specify a JDBC connection string to override the default connection behavior. This is an optional value.

By default, the Notifier uses `ianywhere.ml.script.ServerContext` to connect to the consolidated database. This means that it uses the connection string that was specified in the current `mlsrv10` session's command line.

You can specify a connection string to connect to any database, including the consolidated database. It may be useful to connect to another database when you want notification logic and data to be separate from your synchronization data.

☞ For more information, see “[connect_string property](#)” [*MobiLink - Server-Initiated Synchronization*].

See also

- ◆ “[MobiLink Notification Properties](#)” [*MobiLink - Server-Initiated Synchronization*]

Notifier property sheet: Polling tab

Properties are read at startup. When you change properties, you must shut down and restart the MobiLink server for them to take effect.

The Polling tab of the Notifier property sheet has the following components:

Poll every Select a polling interval from the dropdown list. The default is 30 seconds.

Use the following polling interval Specify a polling interval for the Notifier.

☞ For more information, see “[poll_every property](#)” [*MobiLink - Server-Initiated Synchronization*].

See also

- ◆ “MobiLink Notification Properties” [[MobiLink - Server-Initiated Synchronization](#)]

Notifier property sheet: Events tab

The Events tab of the Notifier property sheet has the following components:

Events list Shows the name and SQL statement associated with each notifier event. Select an event to display the SQL Statement in the pane below.

SQL Statement Shows the selected SQL statement. Make any necessary changes to the SQL statement and then click Apply to save the changes.

See also

- ◆ “Notifier properties” [[MobiLink - Server-Initiated Synchronization](#)]
- ◆ “Notifier events” [[MobiLink - Server-Initiated Synchronization](#)]

Plug-in Preferences property sheet: general tab

The General tab of the MobiLink Plug-in Preferences property sheet has the following components:

Settings Specify one or more of the following preferences to determine the settings for the MobiLink Plug-in.

- ◆ **Show Create Synchronization Model wizard Primary Key Requirements page** Select this preference if you want the Create Synchronization Model wizard Primary Key Requirements page to appear when you open the wizard.
- ◆ **Automatically close message dialogs after operations complete** Select this preference if you want message dialogs to close automatically when an operation completes.
- ◆ **Warn when overwriting a script that was deployed as part of a synchronization model** Select this preference when you want to be warned that a script that was deployed as part of a synchronization mode is going to be over-written.
- ◆ **Warn when excluding a remote column from synchronization** Select this preference when you want to be warned when a remote column is excluded from synchronization.

Restore Defaults Click Restore Defaults to return the preferences on this tab to their default values (selected or cleared). By default, all preferences on this tab except Automatically Close Message Dialogs After Operations Complete are selected.

Remote Database property sheet: General tab

The General tab of the Remote Database property sheet has the following components:

Name Shows the name of the remote database.

Type Shows the type of object.

See also

- ◆ [“Creating a remote database” \[MobiLink - Client Administration\]](#)
- ◆ [“Remote IDs” \[MobiLink - Client Administration\]](#)

Synchronization Model property sheet: General tab

The General tab of the Synchronization Model property sheet has the following components:

Name Shows the name of the synchronization model.

Type Shows the type of object.

File Shows the name and location of the synchronization model file.

Publication name Shows the name of the publication.

Script version Shows the name of the script version used for synchronization.

Description Provides a place for you to type a description of the synchronization model.

See also

- ◆ [“The MobiLink synchronization process” \[MobiLink - Getting Started\]](#)

Synchronized Table property sheet: General tab

The General tab of the Synchronized Table property sheet has the following components:

Name Shows the name of the synchronized table.

Type Shows the type of object.

ID Shows an integer that uniquely identifies the synchronized table.

See also

- ◆ [“Create Synchronization Model wizard: Table Synchronization Mapping page” on page 166](#)
- ◆ [“Add Table Mappings wizard: Table Synchronization Mapping page” on page 172](#)

Subscription property sheet: General tab

The General tab of the Subscription property sheet has the following components:

Name Shows the name of the publication.

Type Shows the type of object.

Remote ID Shows the remote ID that uniquely identifies a database. This column references the rid column of the ml_database table.

User Shows the name of the MobiLink user associated with the remote database.

Subscription ID Shows the subscription_id column value from the ml_subscription table. This value, together with the remote database ID, makes up the primary key for the ml_subscription table.

Progress Shows the point to which all operations for the subscription have been uploaded and acknowledged.

Last upload time Shows the time at the consolidated database when the remote's last successful upload was committed.

Last download time Shows the timestamp value indicating when the MobiLink user last downloaded data.

See also

- ◆ “Creating synchronization subscriptions” [*MobiLink - Client Administration*]
- ◆ “Remote IDs” [*MobiLink - Client Administration*]
- ◆ “Automatic validation” [*MobiLink - Server Administration*]
- ◆ “Progress offsets” [*MobiLink - Client Administration*]

Table property sheet: General tab

The General tab of the Table property sheet has the following components:

Name Shows the name of the table.

Type Shows the type of object.

Owner Shows the database user who created and owns the table.

Comment Provides a place for you to type a text description of the table. For example, you could use this area to describe the table's purpose in the system.

See also

- ◆ “MobiLink Consolidated Databases” [*MobiLink - Server Administration*]

Table Script property sheet: General tab

The General tab of the Table Script property sheet has the following components:

Name Shows the name of the table script.

Type Shows the type of object.

Script ID Show an integer that uniquely identifies the selected table script.

Version Shows the name of the version that the table script belongs to.

Version ID Shows an integer that uniquely identifies the version that the table script belongs to.

Synchronized table Shows the name of the synchronized table that the table script belongs to.

Language Shows the language that the table script is written in.

Deployed Shows whether or not the script has been deployed.

Shared versions Shows any shared versions.

See also

- ◆ [“Adding and deleting scripts” \[MobiLink - Server Administration\]](#)

User property sheet: General tab

The General tab of the User property sheet has the following components:

Name Shows the name of the user.

Type Shows the type of object.

ID Shows an integer that uniquely identifies the user.

This user has a password Select this option to set a password for the user. Clearing this option disables the Password and Confirm Password options.

- ◆ **Password** Type the password for the user. For added security, the characters appear as asterisks. Passwords are case sensitive.
- ◆ **Confirm password** Confirm the password that you typed in the Password text box by entering it again. The contents of the two fields must match exactly. Passwords are case sensitive.

See also

- ◆ [“About MobiLink users” \[MobiLink - Client Administration\]](#)
- ◆ [“Creating and registering MobiLink users” \[MobiLink - Client Administration\]](#)
- ◆ [“Providing initial passwords for users” \[MobiLink - Client Administration\]](#)

Version property sheet: General tab

The Version property sheet allows you to view information about the selected script version. Script versions allow you to organize your scripts into sets, which are run under different circumstances. By specifying a particular version, MobiLink clients can select which set of synchronization scripts will be used to process the upload stream and prepare the download stream.

The General tab of the Version property sheet has the following components:

Name Shows the name of the selected script version. A script version name is a string. You can edit the version name in the text box.

Type Shows the type of the selected object. In this case, the object type is a Version.

ID Shows an integer that uniquely identifies the selected version.

Description Provides a place for you to type a text description of the version. For example, you could use this area to describe the version's purpose in the system.

See also

- ◆ [“Script versions” \[MobiLink - Server Administration\]](#)

CHAPTER 5

MobiLink Model Mode Help

Contents

MobiLink Model mode wizards	162
--	------------

About this chapter

This chapter provides descriptions of the wizards available from Model mode in the MobiLink plug-in.

MobiLink Model mode wizards

The wizards available in MobiLink Model mode walk you through the steps for creating a synchronization model, adding table mappings, updating schema, and deploying a synchronization model, making these complicated tasks much easier to perform.

Create Synchronization Model wizard: Introduction

A synchronization model makes it easy for you to create MobiLink applications. A synchronization model is an XML file that is created by the Create Synchronization Model wizard in Sybase Central. When you run the wizard, you are prompted to connect to a consolidated database in order to obtain schema information. However, the only change that might be made to your consolidated database at this point is if your consolidated database has not yet been set up as a MobiLink consolidated database; in this case, a setup script is applied that adds system objects required by MobiLink. Otherwise, changes are not made until you deploy the model.

After you complete the Create Synchronization Model wizard, the model appears in Model mode. You can use Model mode to further customize your model. When you are in Model mode, you are working offline: no changes are made to your consolidated database. Your model is stored in an XML file with the extension *.mlsm*.

When your model is complete, you use the Deploy wizard to deploy it. The deploy wizard makes your system live by making changes to your consolidated database. It can also create remote databases and files that you can use to configure the MobiLink server and run your application.

The Sybase Central model creation functionality includes an Update Schema wizard to change table mappings in the model, if required.

You cannot reverse-engineer a MobiLink application in your consolidated database back into Model mode. Once deployed, any changes that you make to your MobiLink application cannot be reflected in the *.mlsm* file.

See also

- ◆ [“Deploy Synchronization Model wizard: Introduction” on page 173](#)
- ◆ [“Parts of the synchronization system” \[MobiLink - Getting Started\]](#)
- ◆ [“Initiating synchronization” \[MobiLink - Client Administration\]](#)

Create Synchronization Model wizard: Welcome page

The Welcome page of the Create Synchronization Model wizard has the following components:

Name Type the name you want to use to identify the synchronization model.

Location Specify the name and location of the folder to use for the new synchronization model, or click Browse and then select a folder.

Create Synchronization Model wizard: Primary Key Requirements page

In a synchronization system, the primary key is the only way to identify the same row in different databases (remote and consolidated) and the only way to detect conflicts. Therefore, MobiLink applications must adhere to the following rules:

- ◆ Every remote table that is to be synchronized must have a primary key.
- ◆ Never update the values of primary keys.
- ◆ Primary keys must be unique across all synchronized databases.

The Primary Key page of the Create Synchronization Model wizard is used to remind you that your applications and databases meet the primary key requirements for MobiLink synchronization, as listed above, before you continue creating the synchronization model. Note that you cannot continue to the next page of the Create Synchronization Model wizard unless the three primary key conditions are selected.

☞ For more information about primary key requirements, see [“Maintaining unique primary keys” \[MobiLink - Server Administration\]](#)

The Primary Key page of the Create Synchronization Model wizard has the following components:

All my tables have primary keys Select this condition if all of your remote tables have primary keys.

My applications do not update primary keys Select this condition if your applications do not update primary keys.

I have ensured that new rows have unique primary keys Select this condition if you have ensured that new rows have unique primary keys.

Do not show this Primary Key Requirements page again Select this option if you do not want this Primary Key Requirements page to appear again. This option can also be changed from the Plug-in Preferences page of the MobiLink plug-in in Sybase Central.

Note

You can create and deploy a synchronization model without primary keys on the consolidated database if you write your own events.

See also

- ◆ [“MobiLink and primary keys” \[MobiLink - Server Administration\]](#)

Create Synchronization Model wizard: Consolidated Database Schema page

You must connect to the consolidated database so that the wizard can obtain schema information from it.

The MobiLink setup process adds system objects to the database that are required by MobiLink. See [“Setting up a consolidated database” \[MobiLink - Server Administration\]](#).

Changes are not made to the consolidated database, with the exception if the installation of the MobiLink system setup, until you deploy your model using the Deploy Synchronization Model wizard. The connection to the consolidated database is closed if you connect to a different database, or when you exit the wizard.

The Consolidated Database Schema page of the Create Synchronization Model wizard has the following components:

Choose a consolidated database Click to choose a consolidated database that will provide the schema information for the synchronization model. The Connect dialog appears. Specify the necessary information to connect to the consolidated database. See [“Connect dialog: Identification tab \(MobiLink and QAnywhere\)” on page 4](#) and [“Connect dialog: Advanced tab \(MobiLink and QAnywhere\)” on page 11](#).

If the database has not been set up as a MobiLink consolidated database, you are prompted to install MobiLink system setup. See [“Setting up a consolidated database” \[MobiLink - Server Administration\]](#).

The following fields are all blank until you specify a consolidated database, then they are updated to show the information for the selected consolidated database.

Name Shows the name of the consolidated database.

User Shows the user ID of the user connected to the consolidated database.

Product Shows the name of product the consolidated database is from. For example, SQL Anywhere.

Version Shows the version of the product being used.

See also


- ◆ [“MobiLink Consolidated Databases” \[MobiLink - Server Administration\]](#)

Create Synchronization Model wizard: Remote Database Schema page

The Remote Database Schema page of the Create Synchronization Model wizard has the following components:

Do you have an existing remote database? Specify whether or not you have an existing remote database to use.

- ◆ **No, create a new remote database schema** Choose this option if you do not have an existing remote database to use. If you select this option, you must specify tables from the consolidated database to use to create the remote database schema.
- ◆ **Yes, use an existing remote database** Choose this option to connect to an existing SQL Anywhere or UltraLite remote database to obtain the remote schema. You should choose this option if you will be mapping columns of types not supported by SQL Anywhere and UltraLite.
- ◆ **Choose a remote database** Click this button to choose a remote database to provide the schema information for the synchronization model. The Connect dialog appears. Specify the necessary information to connect to the remote database.

 For more information, see [“Connect dialog: Identification tab \(SQL Anywhere\)” on page 2](#), [“Connect dialog: Database tab \(SQL Anywhere\)” on page 7](#), and [“Connect dialog: Advanced tab \(SQL Anywhere\)” on page 10](#).

- ◆ **Name** Shows the name of the remote database.
- ◆ **User** Shows the user ID of the user connected to the remote database.

- ◆ **Product** Shows the name of product the remote database is from. For example, SQL Anywhere.
- ◆ **Version** Shows the version of the product being used.

See also

- ◆ [“SQL Anywhere Clients” \[MobiLink - Client Administration\]](#)
- ◆ [“UltraLite Clients” \[MobiLink - Client Administration\]](#)

Create Synchronization Model wizard: New Remote Database Schema page

This page allows you to choose the consolidated database tables that are used to create the remote database schema. Selected tables from the consolidated database are created in the remote database, and synchronization is set up between the matching consolidated and remote tables.

 For more information, see [“How remote tables relate to consolidated tables” \[MobiLink - Server Administration\]](#).

The New Remote Database Schema page of the Create Synchronization Model wizard has the following components:

Tables list Lists all the tables, including table name and owner, in the consolidated database you are currently connected to. System tables and MobiLink system tables are excluded from the list.

Select All Click Select All to select all the tables in the list to be included in the remote database schema.

Clear Click Clear All to clear all the checkboxes in the Tables list.

Owner Select a specific user from the dropdown list, and then use the Select Owner button to select tables owned by the selected user.

Select Owner Click Select Owner to select all the tables owned by the user specified in the Owner dropdown.

See also

- ◆ [“MobiLink Data Mappings Between Remote and Consolidated Databases” \[MobiLink - Server Administration\]](#)

Create Synchronization Model wizard: Existing Remote Database page

This page allows you to choose the remote database tables that you want to be synchronized.

 For more information, see [“How remote tables relate to consolidated tables” \[MobiLink - Server Administration\]](#).

The Existing Remote Database page of the Create Synchronization Model wizard has the following components:

Tables list Lists all the tables, including table name and owner, in the remote database you are currently connected to. System tables and MobiLink system tables are excluded from the list.

Select All Click Select All to select all the tables in the list to be included in synchronization.

Clear Click Clear All to clear all the checkboxes in the Tables list.

Owner Select a specific user from the dropdown list, and then use the Select Owner button to select tables owned by the selected user.

Select Owner Click Select Owner to select all the tables owned by the user specified in the Owner dropdown.

See also

- ◆ [“MobiLink Data Mappings Between Remote and Consolidated Databases” \[MobiLink - Server Administration\]](#)

Create Synchronization Model wizard: Table Synchronization Mapping page

This page allows you to specify the mappings between consolidated and remote tables.

The Table Synchronization Mapping page of the Create Synchronization Model wizard has the following components:

Remote Table list Lists all the specified remote tables.

Direction Shows a graphical representation of the direction of synchronization. The default is bi-directional. To change the direction, select a new direction from the dropdown list. The direction can be: bi-directional, download to remote only, or upload to consolidated only.

Consolidated Table list Lists the consolidated tables, on the right side of the page, that correspond to the remote tables, listed on the left side of the page. To change the consolidated table for any of the remote tables, select a consolidated table from the dropdown list.

Note

Default table mappings are made on a best effort basis. Mappings may not be found for all tables, and of the tables that are mapped, the mappings may not be what you intended, so you should verify all tables mappings before proceeding.

See also

- ◆ [“Upload-only and download-only synchronizations” \[MobiLink - Server Administration\]](#)

Create Synchronization Model wizard: Download Type page

The Download Type page of the Create Synchronization Model wizard has the following components:

Which type of download do you want to use by default? Provides options to set which type of download you would like to use as the default.

- ◆ **Timestamp-based download** Select this option to use timestamp based download as the default.

☞ For more information, see “[Timestamp-based downloads](#)” [*MobiLink - Server Administration*].

- ◆ **Snapshot download** Select this option to use snapshot download as the default.

☞ For more information, see “[Snapshot synchronization](#)” [*MobiLink - Server Administration*].

- ◆ **Custom download logic** Select this option if you want to write your own `download_cursor` script and `download_delete_cursor` script instead of having them generated for you. If you use generated scripts, you can edit them later.

☞ For more information, see “[Writing download_cursor scripts](#)” [*MobiLink - Server Administration*], and “[Writing download_delete_cursor scripts](#)” [*MobiLink - Server Administration*].

See also

- ◆ “[download_cursor table event](#)” [*MobiLink - Server Administration*]
- ◆ “[download_delete_cursor table event](#)” [*MobiLink - Server Administration*]

Create Synchronization Model wizard: Timestamp Download Options page

Timestamp-based downloads require a Timestamp column for each consolidated table to track when changes are made to rows. This page allows you to specify the name of the timestamp column as well as whether the column should be added to synchronized tables or whether shadow tables should be created.

The Timestamp Download Options page of the Create Synchronization Model wizard has the following components:

Timestamp column name Shows the name of the timestamp column.

Use timestamp column in synchronized tables Select this option to add the timestamp columns to your synchronized tables on the consolidated database. A timestamp column is added to each synchronized table if it does not already exist.

Use shadow tables to hold timestamp columns Select this option if you want a shadow table created for each synchronized consolidated database table. The timestamp column is created in this shadow table. See “[Writing download_delete_cursor scripts](#)” [*MobiLink - Server Administration*].

See also

- ◆ “[Timestamp-based downloads](#)” [*MobiLink - Server Administration*]

Create Synchronization Model wizard: Download Deletes page

This page allows you to specify whether you want deletes to be downloaded from the consolidated database.

The Download Deletes page of the Create Synchronization Model wizard has the following components:

Do you want data deleted on the consolidated database to be deleted from the remote database? Choose one of the following options to specify whether or not data deleted from the consolidated database is also deleted from the remote database:

- ◆ **Yes** Select Yes if you want to download deletes from the consolidated database.
- ◆ **No** Select No if you do not want to download deletes from the consolidated database.

Use shadow tables to record deletions Choose this option if you want to use shadow tables to track deletes in the consolidated database.

- ◆ **Timestamp column name** Shows the name of the timestamp column. The default is last_modified.

Use logical deletes Choose this option if you want to use logical deletes in the consolidated database to help with download deletes.

- ◆ **Column name** Shows the name of the column that is used to indicate if a row has been deleted. This column is added if it is not already present. The default name is deleted.
- ◆ **Value if row deleted** Shows the value that appears if the row has been deleted. The default is Y.
- ◆ **Value if row not deleted** Shows the value that appears if the row has not been deleted. The default is N.

See also

- ◆ [“Handling deletes” \[MobiLink - Server Administration\]](#)
- ◆ [“Writing download_delete_cursor scripts” \[MobiLink - Server Administration\]](#)

Create Synchronization Model wizard: Download Subset page

Each MobiLink remote database can contain a subset of the data in the consolidated database. This page allows you to choose those subsets.

The Download Subset page of the Create Synchronization Model wizard has the following components:

Do you want all remote databases to download the same data? Choose one of the options below to specify whether all remote databases will download the same data:

- ◆ **Yes** Choose this option if you want all remote databases to download the same data.
- ◆ **No** Choose this option if you do not want all remote databases to download the same data. If you select this option, the How Do You Want to Determine the Subsets? option becomes available. The download subset options are:
 - ◆ **By synchronization user** Choose this option to partition data by MobiLink user name.
 - ◆ **By remote ID** Choose this option to partition data by remote ID.
 - ◆ **By using a SQL expression in the download cursor's WHERE clause** Choose this option and specify a SQL expression on the next page to determine which rows are downloaded.

See also

- ◆ [“Partitioning rows among remote databases” \[MobiLink - Server Administration\]](#)

Create Synchronization Model wizard: Download Subset by Synchronization User page

This page allows you to specify the information required to subset data by MobiLink user name. It prompts you to choose columns that already exist in your consolidated database. You can choose a column to use directly, or base the subsetting on a join of columns.

The Download Subset by Synchronization User page of the Create Synchronization Model wizard has the following components:

Use a column in each downloaded table For downloaded tables that include the specified column, each row is downloaded by only one synchronization user. For tables that are also uploaded, you must either synchronize the column or define a default value for it.

◆ **Column name** Choose a column name from the dropdown list.

Use a column in a joined relationship table Specify the following information for the join:

◆ **Table to join** Choose a table from the dropdown list.

◆ **Column to match** Choose a column from the dropdown list.

◆ **Choose the columns for joining each downloaded table T with the relationship table in the following join condition** Choose a column from each of the dropdown lists.

Create Synchronization Model wizard: Download Subset by Remote ID page

This page allows you to specify the information required to subset data by remote ID. It prompts you to choose columns that already exist in your consolidated database. You can choose a column to use directly, or base the subsetting on a join of columns.

The Download Subset by Remote ID page of the Create Synchronization Model wizard has the following components:

Use a column in each downloaded table For downloaded tables that include the specified column, each row is downloaded by only one remote ID. For tables that are also uploaded, you must either synchronize the column or define a default value for it.

◆ **Column name** Choose a column name from the dropdown list.

Use a column in a joined relationship table Specify the following information for the join:

◆ **Table to join** Choose a table from the dropdown list.

◆ **Column to match** Choose a column from the dropdown list.

◆ **Choose the columns for joining each downloaded table T with the relationship table in the following join condition** Choose a column from each of the dropdown lists.

Create Synchronization Model wizard: Download Subset by SQL Expression page

This page allows you to specify the information required to subset downloads by SQL expression.

The Download Subset by SQL Expression page of the Create Synchronization Model wizard has the following components:

Tables to add to the download cursor's FROM clause Type a list of tables, separated by commas, to specify tables that need to be joined. See [“Writing download_cursor scripts” \[MobiLink - Server Administration\]](#).

SQL expression to use in the download cursor's WHERE clause Type a SQL expression to be used in the download cursor's WHERE clause. See [“Writing download_cursor scripts” \[MobiLink - Server Administration\]](#).

See also

- ◆ [“Writing download_delete_cursor scripts” \[MobiLink - Server Administration\]](#)

Create Synchronization Model wizard: Upload Conflict Detection page

This page allows you to set the level of conflict detection used on upload.

The Upload Conflict Detection page of the Create Synchronization Model wizard has the following components:

No conflict detection Select this option if you do not want any conflict detection on upload. Uploaded updates are applied without checking for conflicts.

Row-based conflict detection Select this option to use row-based conflict detection on upload. A conflict is detected if the row has been updated by both the remote and consolidated databases since the last synchronization. See [“upload_fetch table event” \[MobiLink - Server Administration\]](#) and [“upload_update table event” \[MobiLink - Server Administration\]](#).

Column-based conflict detection Select this option to use column-based conflict detection. A conflict is detected if the same column has been updated for the row in both the remote and consolidated databases. See [“upload_fetch_column_conflict table event” \[MobiLink - Server Administration\]](#).

See also

- ◆ [“Handling conflicts” \[MobiLink - Server Administration\]](#)

Create Synchronization Model wizard: Upload Conflict Resolution page

This page allows you to set the method of resolution for detected conflicts.

The Upload Conflict Resolution page of the Create Synchronization Model wizard has the following components:

Consolidated database wins Select this option to reject all uploaded updates from the remote database that conflict with the consolidated database. If two users change the same row, the second update is ignored.

Remote database wins Select this option to accept all uploaded updates from the remote database, even if they conflict with the consolidated database. You should only use this option with column-based conflict detection. Otherwise it is the same as not using conflict detection. If two users change the same data, the second overwrites the first.

Newer wins, using a timestamp column that you maintain Select this option to use a timestamp column to determine which changes should be accepted.

◆ **Timestamp column** Choose the timestamp column from the dropdown list.

Custom conflict resolution Select this option to use your own resolve_conflicts script.

☞ For more information, see [“Resolving conflicts with resolve_conflict scripts” \[MobiLink - Server Administration\]](#).

See also

- ◆ [“Resolving conflicts” \[MobiLink - Server Administration\]](#)
- ◆ [“How download timestamps are generated and used” \[MobiLink - Server Administration\]](#)
- ◆ [“Timestamp-based downloads” \[MobiLink - Server Administration\]](#)

Create Synchronization Model wizard: Publication, Script Version and Description page

This page allows you to specify names for the publication and script version, as well as specify a description.

The Publication, Script Version and Description page of the Create Synchronization Model wizard has the following components:

What do you want to name the publication? Type a name for the publication.

What do you want to name the script version? Type a name for the script version.

You can include a description for this synchronization model Optionally, you can provide a description to help identify this synchronization model.

Create Synchronization Model wizard: Completing the Create Synchronization Model Wizard page

This page provides a summary of the name and location of the new synchronization model, based on the information you specified.

To complete the wizard and create the new synchronization model, review the information and then click Finish. When you click Finish, the connection to the consolidated database is closed. You then work offline. Your synchronization model opens in Sybase Central Model mode. See [“Model mode” \[MobiLink - Getting](#)

Started]. No changes are made to the consolidated database until you deploy the model. See “[Deploy Synchronization Model wizard: Introduction](#)” on page 173.

To make changes before creating the synchronization model, click Back.

Add Table Mappings wizard: Tables to be Mapped page

This page allows you to select remote tables that are not currently being synchronized, so they can be mapped for synchronization.

The Tables to be Mapped page of the Add Table Mappings wizard has the following components:

Which non-synchronized remote database tables do you now want to synchronize? To include a table in the synchronization, select the checkbox beside the table name so that a checkmark appears. You can click Select All to include all the tables in the list in the synchronization.

Select All Select this option to include all the tables in the synchronization.

Clear All Select this option clear all the checkboxes in the list.

Owner Select a specific user from the dropdown list, and then use the Select Owner button to select tables owned by the selected user.

Select Owner Click Select Owner to select all the tables owned by the user specified in the Owner dropdown.

See also

- ◆ “[MobiLink Data Mappings Between Remote and Consolidated Databases](#)” [*MobiLink - Server Administration*]

Add Table Mappings wizard: Table Synchronization Mapping page

This page allows you to specify the mappings between consolidated and remote tables.

The Table Synchronization Mapping page of the Add Table Mappings wizard has the following components:

Remote Table list Lists all the remote tables selected on the Tables to be Mapped page of the Add Table Mappings wizard.

Direction Shows a graphical representation of the direction of synchronization. The default is bi-directional. To change the direction, select a new direction from the dropdown list. The direction can be: bi-directional, download to remote only, or upload to consolidated only.

Consolidated Table list Lists the consolidated tables, on the right side of the page, that correspond to the remote tables, listed on the left side of the page. To change the consolidated table for any of the remote tables, select a consolidated table from the dropdown list.

See also

- ◆ “[-ds option](#)” [*MobiLink - Client Administration*]
- ◆ “[Upload-only and download-only synchronizations](#)” [*MobiLink - Server Administration*]

- ◆ “Required scripts” [*MobiLink - Server Administration*]

Deploy Synchronization Model wizard: Introduction

When you have completed your model, you deploy it with the Deploy Synchronization Model wizard. There are multiple things that can be deployed:

- ◆ Changes to the consolidated database.
- ◆ SQL Anywhere or UltraLite remote databases (you can choose to have a database created, or have tables added to an existing database, or use an existing database without change).
- ◆ Batch files to run utilities required by your application.
- ◆ MobiLink server configuration.
- ◆ Server-initiated synchronization configuration.

Deploying to the consolidated database

The Deploy wizard provides two options for deploying to the consolidated database:

- ◆ Apply your model directly to your consolidated database by populating MobiLink system tables and creating all required shadow tables, columns, triggers, and stored procedures. It also optionally creates batch files to run your MobiLink application.
- ◆ Create a SQL file that contains all the same changes. You can inspect this file, alter it, and run it anytime. The effect is identical to applying the changes directly.

Deploying remote databases

You can choose to use an existing remote database or have the wizard create one for you. The wizard can create remote databases directly or you can have it create a SQL file that creates the remote databases.

The wizard creates a remote database (either SQL Anywhere or UltraLite) with default database creation options using the database owner that you specified in the model. Alternatively, you can create a remote database outside of the Create Synchronization Model wizard with your own custom settings and use the wizard to add the required remote tables, or you can deploy to an existing remote database that already has the remote tables.

Deploying batch files to run utilities

The wizard can create the following batch files:

- ◆ A batch file to run the MobiLink server with options that you specify.
- ◆ For SQL Anywhere remote databases, a batch file to run dbmlsync with options that you specify.
- ◆ For UltraLite remote databases, a batch file to run ulsync with options that you specify. Ulsync is used for testing of synchronization so it helps you get started when you don't have a working UltraLite application.
- ◆ If you are setting up server-initiated synchronization, the Deploy Synchronization Model wizard can also create batch files to run the Notifier and the Listener.

Note

After deploying a model, you can alter it. The best way to alter the model is to make changes in Sybase Central Model mode and re-deploy it. You can also alter your deployed system in Sybase Central's Admin mode or by directly changing the database using system procedures or using other methods. However, when you alter a deployed model, you cannot reverse-engineer it back to the model.

See also

- ◆ [“Create Synchronization Model wizard: Introduction” on page 162](#)

Deploy Synchronization Model wizard: Welcome page

The Welcome page of the Deploy Synchronization Model wizard has the following components:

Deploy immediately using last deployment settings Select this option to deploy the synchronization model immediately, using the last deployment settings that were used. This option is only available if you have previously deployed a synchronization model.

Run this wizard initialized with last deployment settings Select this option to run the Deploy Synchronization Model wizard initialized with the last deployment settings. This option is only available if you have previously deployed a synchronization model.

Specify the deployment details for one or more of the following Specify the deployment details for one of more of the following options:

- ◆ **Consolidated database** Choose this option to specify deployment details for the consolidated database.
- ◆ **Remote database and synchronization client** Choose this option to specify deployment details for the remote database and synchronization client.
- ◆ **MobiLink server** Choose this option to specify deployment details for the MobiLink server.

See also

- ◆ [“Deploy Synchronization Model wizard” \[MobiLink - Getting Started\]](#)

Deploy Synchronization Model wizard: Consolidated Database Deployment Destination page

This page allows you to specify whether you want to deploy the consolidated database synchronization model to a file, to be run later, or directly to a database.

The Consolidated Database Deployment Destination page of the Deploy Synchronization Model wizard has the following components:

Save changes to the following SQL file (and create a command file in the same folder) Choose this option to specify a file where the synchronization model is saved. Type the file name and location, or click Browse and then select the file. Note that if there is a file with the same name as this model, it is overwritten when this model is deployed.

Connect to the database to directly apply the changes Choose this option to deploy the synchronization model directly to a consolidated database.

Choose a consolidated database Click to choose the consolidated database that you want the synchronization model deployed to. The Connect dialog appears. Specify the necessary information to connect to the consolidated database.

See also

- ◆ [“Deploy Synchronization Model wizard” \[MobiLink - Getting Started\]](#)

Deploy Synchronization Model wizard: Remote Database Deployment page

This page allows you to choose the type of remote database that the synchronization model will be deployed to.

The Remote Database Deployment page of the Deploy Synchronization Model wizard has the following components:

New SQL Anywhere database Choose this option to create a new SQL Anywhere database using the remote schema from the synchronization model, and default database creation options. See [“Creating a database” \[SQL Anywhere Server - SQL Usage\]](#).

New UltraLite database Choose this option to create a new UltraLite database using the remote schema from the synchronization model, and default database creation options. See [“Creating UltraLite databases” \[UltraLite - Database Management and Reference\]](#).

Existing SQL Anywhere or UltraLite database Choose this option to deploy the synchronization model to an existing SQL Anywhere or UltraLite remote database.

See also

- ◆ [“Deploy Synchronization Model wizard” \[MobiLink - Getting Started\]](#)
- ◆ [“Deploying remote databases” \[MobiLink - Client Administration\]](#)

Deploy Synchronization Model wizard: New SQL Anywhere Remote Database page

This page allows you to specify whether you want to make a command file and SQL file that you can run later to create the SQL Anywhere remote database or create the new SQL Anywhere remote database immediately.

The New SQL Anywhere Remote Database page of the Deploy Synchronization Model wizard has the following components:

Make a command file and a SQL file with commands to create the database Choose this option to create a SQL file and command file that can be run later to create the remote database.

- ◆ **SQL file** Type the name and location of the SQL file or click Browse and then select the file. The command file is created in the same location.

Create a remote SQL Anywhere database Choose this option to create a remote SQL Anywhere database, in the specified location, with the default database creation options.

- ◆ **SQL Anywhere database file** Type the name and location of the main SQL Anywhere database file for the remote database, or click Browse and then select the file. A transaction log file is created in the same location.

See also

- ◆ [“Deploy Synchronization Model wizard”](#) [*MobiLink - Getting Started*]
- ◆ [“Creating a remote database”](#) [*MobiLink - Client Administration*]

Deploy Synchronization Model wizard: New UltraLite Remote Database page

This page allows you to specify whether you want to make a command file and SQL file that you can run later to create the UltraLite remote database or create the new UltraLite remote database immediately.

The New UltraLite Remote Database page of the Deploy Synchronization Model wizard has the following components:

Make a command file and a SQL file with commands to create the database Choose this option to create a SQL file and command file that can be run later to create the remote database.

- ◆ **SQL file** Type the name and location of the SQL file, or click Browse and then select the file. The command file is created in the same location.

Create a remote UltraLite database Choose this option to create a remote UltraLite database, in the specified location, with the default database creation options.

- ◆ **UltraLite database file** Type the name and location of the main UltraLite database file for the remote database, or click Browse and then select the file.

See also

- ◆ [“Deploy Synchronization Model wizard”](#) [*MobiLink - Getting Started*]
- ◆ [“Creating a remote database”](#) [*MobiLink - Client Administration*]

Deploy Synchronization Model wizard: Existing Remote Database page

This page allows you to specify whether you want to deploy the synchronization model to a command file and SQL file that you can run later to update the remote database or connect to the remote database and update it immediately.

The Existing Remote Database page of the Deploy Synchronization Model wizard has the following components:

Save changes to the following SQL file (and create a command file in the same folder) Choose this option to specify the name and location of the SQL file, or click Browse and then select the file. The command file is created in the same location.

- ◆ **Include SQL commands to create the remote schema** Select this option to include SQL commands to create the remote schema.
- ◆ **Remote database type** Choose SQL Anywhere or UltraLite from the dropdown list to specify the remote database type.

Connect to the remote database to directly apply the changes Choose this option to deploy the synchronization model directly to a remote database.

Choose a remote database Click to choose the remote database that you want the synchronization model deployed to. The Connect dialog appears. Specify the necessary information to connect to the remote database.

See also

- ◆ [“Deploy Synchronization Model wizard” \[MobiLink - Getting Started\]](#)

Deploy Synchronization Model wizard: MobiLink User page

This page allows you to specify a MobiLink user name and password.

The MobiLink User page of the Deploy Synchronization Model wizard has the following components:

What user name do you want to use for connecting to the MobiLink server? Type the MobiLink user name you want to use to connect to the MobiLink server. See [“About MobiLink users” \[MobiLink - Client Administration\]](#).

What password do you want to use? Type the password for the user name you specified. See [“About MobiLink users” \[MobiLink - Client Administration\]](#).

Register this user in the consolidated database for MobiLink authentication Select this option if you want the specified MobiLink user to be registered at the consolidated database. See [“MobiLink user authentication utility \[mluser\]” \[MobiLink - Server Administration\]](#).

See also

- ◆ [“Deploy Synchronization Model wizard” \[MobiLink - Getting Started\]](#)
- ◆ [“Creating and registering MobiLink users” \[MobiLink - Client Administration\]](#)

Deploy Synchronization Model wizard: Synchronization Stream Parameters page

This page allows you to specify the communication stream to use between the MobiLink client and server.

The Synchronization Stream Parameters page of the Deploy Synchronization Model wizard has the following components:

TCP/IP Select this option and specify a port to use TCP/IP for communications between the MobiLink client and server. This is the default, and is recommended for the best performance.

◆ **Port** Enter the socket port number on which the MobiLink server should listen. The default port is 2439.

TLS Select this option and specify a port to use TCP/IP with transport-layer security for communications between the MobiLink client and server.

◆ **Port** Enter the socket port number on which the MobiLink server should listen. The default port is 2439.

HTTP Select this option and specify a port to use the standard web protocol for communications between the MobiLink client and server.

◆ **Port** Enter the socket port number the MobiLink server should listen on. The default port is 80.

HTTPS Select this option and specify a port to use a variant of HTTP that handles secure transactions. The HTTPS protocol implements HTTP over SSL/TLS using RSA or ECC encryption.

◆ **Port** Enter the socket port number on which the MobiLink server should listen. The default port is 443.

Separately licensed component required

ECC encryption and FIPS-approved encryption require a separate license. All strong encryption technologies are subject to export regulations.

See [“Separately licensed components” \[SQL Anywhere 10 - Introduction\]](#).

See also

- ◆ [“Deploy Synchronization Model wizard” \[MobiLink - Getting Started\]](#)
- ◆ [“-x option” \[MobiLink - Server Administration\]](#)

Deploy Synchronization Model wizard: Secure Stream Encryption Type page

This page allows you to choose the type of encryption to use for the secure synchronization stream.

The Secure Stream Encryption Type page of the Deploy Synchronization Model wizard has the following components:

RSA Choose this option to use RSA encryption.

◆ **Use a FIPS 140-2 certified implementation of RSA** Select this option to use a Federal Information Processing Standard (FIPS) 140-2 certified security algorithm for encryption.

Elliptic Curve Cryptography (ECC) Choose this option to use Elliptic Curve Cryptography (ECC) for encryption.

Separately licensed component required

ECC encryption and FIPS-approved encryption require a separate license. All strong encryption technologies are subject to export regulations.

See “Separately licensed components” [[SQL Anywhere 10 - Introduction](#)].

See also

- ◆ “Deploy Synchronization Model wizard” [[MobiLink - Getting Started](#)]
- ◆ “tls_type” [[MobiLink - Client Administration](#)]

Deploy Synchronization Model wizard: Client Stream Parameters page

This page allows you to choose communication stream parameters that apply only to the MobiLink client.

The Client Stream Parameters page of the Deploy Synchronization Model wizard has the following components:

Host Type the host name or IP address of the MobiLink server computer.

Additional client stream parameters If necessary, type additional client stream parameters, separated by semicolons, in the form (option=value;...). See “MobiLink Client Network Protocol Options” [[MobiLink - Client Administration](#)].

See also

- ◆ “Deploy Synchronization Model wizard” [[MobiLink - Getting Started](#)]

Deploy Synchronization Model wizard: MobiLink Server Stream Parameters page

This page allows you to choose communication stream parameters that apply only to the MobiLink server.

The MobiLink Server Stream Parameters page of the Deploy Synchronization Model wizard has the following components:

Additional server stream options If necessary, type additional server stream options, separated by semicolons, in the form (option=value;...). See “-x option” [[MobiLink - Server Administration](#)].

See also

- ◆ “Deploy Synchronization Model wizard” [[MobiLink - Getting Started](#)]
- ◆ “MobiLink Server Options” [[MobiLink - Server Administration](#)]

Deploy Synchronization Model wizard: Secure Stream Server Certificate page

This page allows you to specify a certificate file to use for the encrypted synchronization stream.

The Secure Stream Server Certificate page of the Deploy Synchronization Model wizard has the following components:

Identity certificate file Type the name of the certificate file the client uses to authenticate the server, or click Browse and then select the file. See “[certificate_name](#)” [*MobiLink - Client Administration*].

See also

- ◆ “[Deploy Synchronization Model wizard](#)” [*MobiLink - Getting Started*]

Deploy Synchronization Model wizard: Secure Stream Client Parameters page

This page allows you to choose the client security options for the encrypted synchronization stream.

The Secure Stream Client Parameters page of the Deploy Synchronization Model wizard has the following components:

The client computer's certificate store Choose this option to use the certificate store on the client computer.

The trusted root certificates file specified below Choose this option to specify a file containing a list of trusted root certificates.

- ◆ **Trusted root certificate file** Type the name and location of the trusted root certificate file, or click Browse and then select the file. See “[trusted_certificates](#)” [*MobiLink - Client Administration*]

Certificate company If necessary, specify a certificate company. If this is specified, server certificates are only accepted when the Organization field on the certificate matches this value. See “[certificate_company](#)” [*MobiLink - Client Administration*].

Certificate unit If necessary, specify a certificate unit. If this is specified, server certificates are only accepted when the Organization Unit field on the certificate matches this value. See “[certificate_unit](#)” [*MobiLink - Client Administration*].

Certificate name If necessary, specify a certificate name. If this is specified, server certificates are only accepted when the Common Name field on the certificate matches this value. See “[certificate_name](#)” [*MobiLink - Client Administration*].

See also

- ◆ “[Deploy Synchronization Model wizard](#)” [*MobiLink - Getting Started*]
- ◆ “[Verifying certificate fields](#)” [*SQL Anywhere Server - Database Administration*]

Deploy Synchronization Model wizard: Verbosity for MobiLink Synchronization Server page

This page allows you to set the level of verbosity for the MobiLink server, which determines how much information is reported by the MobiLink server.

The Verbosity for MobiLink Synchronization Server page of the Deploy Synchronization Model wizard has the following components:

No information per synchronization except warnings and errors Choose this option if you want only warnings and errors to be reported in the MobiLink server window and error log for each synchronization. This is the default.

Minimum per synchronization information (-v) Choose this option if you want the minimum amount of information to be reported in the MobiLink server window and error log for each synchronization. See “-v option” [[MobiLink - Server Administration](#)].

Typical debug verbosity (-vcnrs) Choose this option if you want the typical amount of information for debugging to be reported in the MobiLink server window and error log for each synchronization. The following information appears:

- ◆ The content of each synchronization script when it is invoked.
- ◆ Row-count summaries.
- ◆ The column values of each row uploaded or downloaded.
- ◆ the name of each synchronization script as it is invoked.

☞ For more information, see “-v option” [[MobiLink - Server Administration](#)].

Maximal verbosity (-v+) Choose this option to turn on all logging options that increase verbosity. See “-v option” [[MobiLink - Server Administration](#)].

See also

- ◆ “Deploy Synchronization Model wizard” [[MobiLink - Getting Started](#)]

Deploy Synchronization Model wizard: Options for MobiLink Server page

This page allows you to set options for the MobiLink server.

The Options for MobiLink Server page of the Deploy Synchronization Model wizard has the following components:

What name do you want to give the MobiLink server? Type the name of the MobiLink server.

Additional MobiLink server command-line options Type any additional MobiLink server options. See “MobiLink Server Options” [[MobiLink - Server Administration](#)].

Where do you want to save the command file that will be generated for starting the MobiLink server? Type the location where you want the command file saved, or click Browse and then select the file.

See also

- ◆ “Deploy Synchronization Model wizard” [[MobiLink - Getting Started](#)]

Deploy Synchronization Model wizard: Verbosity for SQL Anywhere Remote Synchronization Client page

This page allows you to set the level of verbosity for the remote SQL Anywhere synchronization client, which determines how much information is reported by the synchronization client.

The Verbosity for SQL Anywhere Remote Synchronization Client page of the Deploy Synchronization Model wizard has the following components:

Minimum synchronization progress information Choose this option if you want the minimum amount of information to be reported in the MobiLink server window and error log for each synchronization.

Medium verbosity (-v) Choose this option if you want a small amount of information to be reported in the MobiLink server window and error log for each synchronization. See “-v option” [[MobiLink - Client Administration](#)].

Debug verbosity (-v+) Choose this option if you want the typical amount of information for debugging to be reported in the MobiLink server window and error log for each synchronization. This turns on all logging options except for c (expose the connect string in the log) and p (expose the password in the log).

 For more information, see “-v option” [[MobiLink - Client Administration](#)].

See also

- ◆ “Deploy Synchronization Model wizard” [[MobiLink - Getting Started](#)]

Deploy Synchronization Model wizard: Advanced Options for SQL Anywhere Remote Synchronization Client page

This page allows you to specify additional synchronization options for the remote synchronization client.

The Advanced Options for SQL Anywhere Remote Synchronization Client page of the Deploy Synchronization Model wizard has the following components:

Extended options table Lists the available extended options for the SQL Anywhere remote synchronization client.

◆ **Name** Shows the name of the extended option. See “MobiLink SQL Anywhere Client Extended Options” [[MobiLink - Client Administration](#)].

◆ **Value** Depending on the extended option you choose, either type a value for the option in this field, or choose On or Off from the dropdown list. See “MobiLink SQL Anywhere Client Extended Options” [[MobiLink - Client Administration](#)].

If you want to specify additional command-line options for the synchronization client (dbmlsync), type them below Type any additional command-line options for dbmlsync. See “dbmlsync syntax” [[MobiLink - Client Administration](#)].

Where do you want to save the command file that will be generated for starting dbmlsync? Type the location where you want the command file saved, or click Browse and then select the file.

See also

- ◆ [“Deploy Synchronization Model wizard”](#) [*MobiLink - Getting Started*]
- ◆ [“Using dbmlsync extended options”](#) [*MobiLink - Client Administration*]
- ◆ [“Customizing dbmlsync synchronization”](#) [*MobiLink - Client Administration*]

Deploy Synchronization Model wizard: Advanced Options for UltraLite Remote Synchronization Client

This page allows you to choose advanced options for the UltraLite synchronization testing utility (ulsync).

The Advanced Options for UltraLite Remote Synchronization Client of the Deploy Synchronization Model wizard has the following components:

If you want to specify additional command-line options for ulsync, type them below Type any additional command-line options for ulsync. See [“UltraLite Synchronization utility \(ulsync\)”](#) [*UltraLite - Database Management and Reference*].

Where do you want to save the command file that will be generated for starting ulsync? Type the location where you want the command file saved, or click Browse and then select the file.

See also

- ◆ [“Deploy Synchronization Model wizard”](#) [*MobiLink - Getting Started*]

Deploy Synchronization Model wizard: Server Initiated Synchronization Listener page

This page allows you to choose options for the Listener used on the remote computer in server-initiated synchronization. See [“Listeners”](#) [*MobiLink - Server-Initiated Synchronization*]. To choose Notifier settings, open your model in Sybase Central, and then click the Notification tab in the right pane. See [“Setting up server-initiated synchronization in Model mode”](#) [*MobiLink - Getting Started*].

The Server Initiated Synchronization Listener page of the Deploy Synchronization Model wizard has the following components:

Remote database file name Type the name of the remote database file. The Listener needs this information to obtain the remote ID. The Listener needs to be started in the same folder as the remote database file, or else you need to edit the Listener option file. See [“Listener syntax”](#) [*MobiLink - Server-Initiated Synchronization*].

Run SQL Anywhere MobiLink client (dbmlsync) Choose this option to run the SQL Anywhere MobiLink client (dbmlsync). See [“MobiLink SQL Anywhere Client Utility \[dbmlsync\]”](#) [*MobiLink - Client Administration*].

Post a Windows message to a window class Choose this option to post a Windows message to a window class.

- ◆ **Windows message** Type the message contents or the ID of the Windows message, if one exists. See the post command in [“Listener syntax”](#) [*MobiLink - Server-Initiated Synchronization*].

- ◆ **Window class name** Type the window class name. See “-wc option” [*MobiLink - Client Administration*].

Additional Listener (dblsn) command-line options Type any additional Listener command-line options.

Where do you want to save the command file that will be generated for starting dblsn? Type the location where you want the command file saved, or click Browse and then select the file. Note that a Listener option file, *dblsn.txt*, is created in the same folder as the command file.

See also

- ◆ “Listener syntax” [*MobiLink - Server-Initiated Synchronization*]
- ◆ “Deploy Synchronization Model wizard” [*MobiLink - Getting Started*]
- ◆ “Message handlers” [*MobiLink - Server-Initiated Synchronization*]
- ◆ “Storing Listener options” [*MobiLink - Server-Initiated Synchronization*]

Deploy Synchronization Model wizard: Completing the Deploy Wizard page

The Completing the Deploy Wizard page of the Deploy Synchronization Model wizard confirms that you have completed the wizard.

To create the deployment files or write the changes to the databases you have selected, click Finish. If there is a file with the same name as this model, it is overwritten.

To make changes before deploying the synchronization model, click Back.

See also

- ◆ “Deploy Synchronization Model wizard” [*MobiLink - Getting Started*]

Update Schema wizard: Welcome page

This page allows you to update the consolidated and remote schemas in your synchronization model.

The Welcome page of the Update Schema wizard has the following components:

Which schema do you want to update? Choose one of the following to update your schema:

- ◆ **The consolidated database schema** Choose this option to update the schema for your consolidated database.
- ◆ **The remote database schema** Choose this option to update the schema for your remote database.
- ◆ **Both the consolidated and remote database schemas** Choose this option to update the schema for your consolidated database and remote database.

See also

- ◆ “MobiLink Data Mappings Between Remote and Consolidated Databases” [*MobiLink - Server Administration*]

Update Schema wizard: Consolidated Database Schema page

You must connect to the database that will be the consolidated database in your MobiLink application so that the wizard can obtain schema information for it.

The MobiLink setup process adds system objects to the database that are required by MobiLink. See [“Setting up a consolidated database”](#) [*MobiLink - Server Administration*].

The Consolidated Database Schema page of the Update Schema wizard has the following components:

Choose a consolidated database Click to choose a consolidated database to provide the schema information for the synchronization model. The Connect dialog appears. Specify the necessary information to connect to the consolidated database.

 For more information, see [“Connect dialog: Identification tab \(MobiLink and QAnywhere\)”](#) on page 4 and [“Connect dialog: Advanced tab \(MobiLink and QAnywhere\)”](#) on page 11.

The following fields are all blank until you specify a consolidated database, then they are updated to show the information for the selected consolidated database.

Name Shows the name of the consolidated database.

User Shows the user ID of the user connected to the consolidated database.

Product Shows the name of product the consolidated database is from. For example, SQL Anywhere.

Version Shows the version of the product being used.

Update Schema wizard: Remote Database Schema page

This page allows you to choose the location used to obtain the remote database schema.


The Remote Database Schema page of the Update Schema wizard has the following components:

How do you want to update the remote schema in your synchronization model? Choose one of the following to specify how to update the remote schema:

◆ **From the consolidated database schema** Select this option if you want to choose tables from the consolidated database to use to update the remote database schema.

◆ **From an existing remote database** Select this option to connect to an existing SQL Anywhere or UltraLite remote database to update the remote schema.

◆ **Choose a remote database** Click this button to choose a remote database to provide the schema information for the synchronization model. The Connect dialog appears. Specify the necessary information to connect to the remote database.

 For more information, see [“Connect dialog: Identification tab \(SQL Anywhere\)”](#) on page 2, [“Connect dialog: Database tab \(SQL Anywhere\)”](#) on page 7, and [“Connect dialog: Advanced tab \(SQL Anywhere\)”](#) on page 10.

◆ **Name** Shows the name of the remote database.

- ◆ **User** Shows the user ID of the user connected to the remote database.
- ◆ **Product** Shows the name of product the remote database is from. For example, SQL Anywhere.
- ◆ **Version** Shows the version of the product being used.

Update Schema wizard: New Remote Database Schema page

This page allows you to choose the consolidated database tables that are used to update the remote database schema. Use the Add Table Mappings wizard to set up synchronization between the matching consolidated and remote tables. See [“Add Table Mappings wizard: Tables to be Mapped page” on page 172](#) and [“Add Table Mappings wizard: Table Synchronization Mapping page” on page 172](#).

 For more information, see [“How remote tables relate to consolidated tables” \[MobiLink - Server Administration\]](#).

The New Remote Database Schema page of the Update Schema wizard has the following components:

Tables list Lists all the tables, including table name and owner, in the consolidated database you are currently connected to.

Select All Click Select All to select all the tables in the list to be included in the remote database schema.

Clear Click Clear All to clear all the checkboxes in the Tables list.

Owner Select a specific user from the dropdown list, and then use the Select Owner button to select tables owned by the selected user.

Select Owner Click Select Owner to select all the tables owned by the user specified in the Owner dropdown.

See also

- ◆ [“MobiLink Data Mappings Between Remote and Consolidated Databases” \[MobiLink - Server Administration\]](#)

Update Schema wizard: Completing the Update Schema wizard page

This page provides a summary of the detected schema changes.

To complete the wizard and update the synchronization model schema, review the information and then click Finish.

To make changes before updating the schema, click Back.

CHAPTER 6

QAnywhere Help

Contents

QAnywhere plug-in property sheets	188
QAnywhere dialog boxes	199

About this chapter

This chapter provides descriptions of all the property sheets and dialogs you can access from the QAnywhere plug-in for Sybase Central.

QAnywhere plug-in property sheets

The QAnywhere plug-in provides a number of property sheets that let you configure object properties.

The following sections contain detailed descriptions of each property sheet in the QAnywhere plug-in. Each one becomes available in the File menu when you select an object, and is also available in a popup menu when you right-click an object.

Client property sheet: Properties tab

The Properties tab of the Client property sheet has the following components:

Property name Enter a property name and then click Apply to filter the properties shown in the list below.

Show system properties Indicates whether system properties are shown. Place a checkmark in the box to indicate that the system properties are shown. If the checkbox is cleared, then system properties do not appear.

Properties list Lists the name and value of the properties for the message store.

- ◆ **New** To add a new property, click New and enter the name and value.
- ◆ **Edit** To edit the value of an existing property, select the property from the list and then click Edit, then enter the new value.
- ◆ **Delete** To delete a property, select the property from the list, click Delete, and then confirm the deletion.

See also

- ◆ “Deploying QAnywhere applications” [*MobiLink - Server Administration*]
- ◆ “Writing QAnywhere Client Applications” [*QAnywhere*]

Client property sheet: Transmission Rules tab

Client transmission rules govern the behavior of messages going from the client to the server.

☞ For more information, see “Client transmission rules” [*QAnywhere*].

The Transmission Rules tab of the Client property sheet has the following components:

Use the default transmission rules Shows whether the default transmission rules are used.

Customize the transmission rules Shows whether customized transmission rules are used.

Transmission rules list Lists the schedule and condition for customized transmission rules.

- ◆ **New** To add a new transmission rule, click New. The Rule Editor dialog appears. This is only available if Customize the Transmission Rules is selected.

- ◆ **Edit** To edit an existing transmission rule, select the rule from the list and then click Edit. The Rule Editor dialog appears. This is only available if Customize the Transmission Rules is selected and there is at least one transmission rule selected.
- ◆ **Delete** To delete an existing rule, select the rule from the list and then click Delete, then confirm the deletion.

See also

- ◆ [“Message transmission rules” \[QAnywhere\]](#)
- ◆ [“Rule syntax” \[QAnywhere\]](#)

Client property sheet: Members tab

The Members tab of the Client property sheet has the following components:

Name Shows the name of the object.

Members of Shows a list of members, including the destination client, destination queue, and delivery condition information, for the selected destination alias.

- ◆ **New** To add a new member, click New. The New Member dialog appears.
- ◆ **Edit** To edit an existing member, choose a member from the list and then click Edit. The Edit Member dialog appears.
- ◆ **Delete** To delete a member, choose a member from the list and then click Delete, then confirm the deletion.

Client Store property sheet: General tab

The General tab of the Client Store property sheet has the following components:

Type Shows the type of object.

Product Shows the name of the database application.

Version Shows the version of the database application.

Client ID Shows the client ID.

Computer Shows the name of the computer.

Client Store property sheet: Properties tab

The Properties tab of the Client Store property sheet has the following components:

Property name Enter a property name and then click Apply to filter the client message store properties shown in the list below. You can also type the first few characters of a property name and then click Apply to display all properties that begin with that prefix.

Show system properties Indicates whether system properties are shown. Place a checkmark in the box to indicate that the system properties are shown. If the checkbox is cleared, then system properties do not appear.

Properties list Lists the name and value of the properties for the message store.

- ◆ **New** To add a new property, click New and enter the property name and value.
- ◆ **Edit** To edit the value of an existing property, select the property from the list and then click Edit, then enter the new value.
- ◆ **Delete** To delete a property, select the property from the list, click Delete, and then confirm the deletion.

Connector property sheet: General tab

The General tab of the Connector property sheet has the following components:

Name Shows the name of the connector. This is the value of the `ianywhere.connector.address` property. See [“QAnywhere message addresses” \[QAnywhere\]](#).

Type Shows the type of the connector. See [“Setting up JMS connectors” \[QAnywhere\]](#) and [“Setting up web service connectors” \[QAnywhere\]](#).

Startup type Choose a startup type from the dropdown list. The default is automatic.

Dead outgoing message address Shows the address that a message is sent to when it cannot be processed. This sets the `ianywhere.connector.outgoing.deadMessageAddress` property.

State Shows the current state, if known. Click one of the following to change the state:

- ◆ Start
- ◆ Stop
- ◆ Pause
- ◆ Resume

Logging level Move the slider from top (high) to bottom (low) to set the error logging level. This sets the `ianywhere.connector.logLevel` property.

Compression level Click Enable compression and move the slider from left (low) to right (high) to set the level of compression. This sets the `ianywhere.connector.compressionLevel` property.

See also

- ◆ [“Opening connectors” \[QAnywhere\]](#)
- ◆ [“Closing connectors” \[QAnywhere\]](#)

Connector property sheet: JMS tab

The JMS tab of the Connector property sheet has the following components:

Receiver destination Enter the queue name used by the connector to listen for messages from JMS targeted for QAnywhere clients. This sets the `xjms.receiveDestination` property.

JNDI factory Shows the factory name used to access the external JMS JNDI name service. You can edit the name in this field. This sets the `xjms.jndi.factory` property.

URL Shows the URL to access the JMS JNDI name service. You can edit the URL in this field. This sets the `xjms.jndi.url` property.

User name Shows the authentication name to connect to the external JMS JNDI name service. You can edit the user name in this field. This sets the `xjms.jndi.authName` property.

Password Shows the authentication password to connect to the external JMS JNDI name service. You can edit the password in this field. This sets the `xjms.jndi.password.e` property.

Queue factory Shows the external JMS provider queue factory name. You can edit the queue factory name in this field. This sets the `xjms.queueFactory` property.

User name Shows the user ID used to connect to the external JMS queue connection. You can edit the user name in this field. This sets the `xjms.queueConnectionAuthName` property.

Password Shows the password to connect to the external JMS queue connection. You can edit the password in this field. This sets the `xjms.queueConnectionPassword.e` property.

Topic factory Shows the external JMS provider topic factory name. You can edit the topic factory name in this field. This sets the `xjms.topicFactory` property.

User name Shows the user name used to connect to the external JMS topic connection. You can edit the user name in this field. This sets the `xjms.topicConnectionAuthName` property.

Password Shows the password to connect to the external JMS topic connection. You can edit the password in this field. This sets the `xjms.topicConnectionPassword.e` property.

Dead message destination Shows the address that a message is sent to when it cannot be processed. Enter the queue name to be used for dead messages.

See also

- ◆ [“Introduction” \[QAnywhere\]](#)
- ◆ [“JMS connector properties” \[QAnywhere\]](#)
- ◆ [“Configuring multiple connectors” \[QAnywhere\]](#)

Connector property sheet: Web Service tab

The connector listens for QAnywhere messages sent to a particular address, and makes web service calls when messages arrive. Web service responses are sent back to the originating client as QAnywhere messages. All messages sent to the web services connector should be created using the proxy classes generated by the QAnywhere WSDL compiler.

The Web Service tab of the Connector property sheet has the following components:

URL Shows the URL that the web service is located at. For example, `http://localhost:8080/qanyserv/F2C`.

Socket timeout (ms) Shows the timeout in milliseconds for socket connects, reads, and writes. Specify 0 or do not specify a timeout value to wait indefinitely. This sets the `webservice.socket.timeout` property.

HTTP user name Shows the user name if the web service requires HTTP authentication. This sets the `webservice.http.authName` property.

HTTP password Shows the password if the web service requires HTTP authentication. This sets the `webservice.http.password.e` property.

Proxy host Shows the host name if the web service must be accessed through an HTTP proxy. If you specify this property, you must also specify the Proxy port property. This sets the `webservice.http.proxy.host` property.

Proxy port Shows the port to connect to on the proxy server. If you specify this property, you must specify the Proxy host property. This sets the `webservice.http.proxy.port` property.

Proxy user name Show the proxy user name to use if the proxy requires authentication. If you specify this property, you must also specify the Proxy password property. This sets the `webservice.http.proxy.authName` property.

Proxy password Shows the proxy password to use if the proxy requires authentication. If you specify this property, you must also specify the Proxy user name property.

Use FIPS Select this option to use FIPS algorithms for HTTPS connections. If you select this option, the URL should specify `https`. This option is not selected by default.

Separately licensed component required

ECC encryption and FIPS-approved encryption require a separate license. All strong encryption technologies are subject to export regulations.

See [“Separately licensed components” \[SQL Anywhere 10 - Introduction\]](#).

Trusted certificates If Use FIPS is selected, specify a file containing a list of root certificates used for secure synchronization. This sets the `trusted_certificates` option.

☞ For more information, see [“trusted_certificates” \[MobiLink - Client Administration\]](#).

Certificate company Shows the certificate company. If specified, the application only accepts server certificates when the Organization field on the certificate matches this value. This sets the `certificate_company` option.

☞ For more information, see [“certificate_company” \[MobiLink - Client Administration\]](#).

Certificate unit Shows the certificate unit. If specified, the application only accepts server certificates when the Organization Unit field on the certificate matches this value. This sets the `certificate_unit` option.

☞ For more information, see [“certificate_unit” \[MobiLink - Client Administration\]](#).

Certificate name Shows the certificate name. If specified, the application only accepts server certificates when the Common Name field on the certificate matches this value. This sets the `certificate_name` option.

☞ For more information, see [“certificate_name” \[MobiLink - Client Administration\]](#).

See also

- ◆ [“Setting up mobile web services” \[QAnywhere\]](#)
- ◆ [“Compiling and running mobile web service applications” \[QAnywhere\]](#)

Connector property sheet: Transmission Rules tab

The Transmission Rules tab of the Connector property sheet has the following components:

Use the default transmission rules Shows whether the default transmission rules are used.

Customize the transmission rules Shows whether customized transmission rules are used.

Transmission rules list Shows the customized transmission rules.

- ◆ **New** To add a new transmission rule, click New. The Rule Editor dialog appears. This is only available if Customize the Transmission Rules is selected.
- ◆ **Edit** To edit an existing transmission rule, select the rule from the list and then click Edit. The Rule Editor dialog appears. This is only available if Customize the Transmission Rules is selected and at least one transmission rule is selected.
- ◆ **Delete** To delete an existing rule, select the rule from the list and then click Delete, then confirm the deletion.

See also

- ◆ [“Message transmission rules” \[QAnywhere\]](#)

Connector property sheet: Properties tab

The Properties tab of the Connector property sheet has the following components:

Properties list Shows the previously-defined properties.

- ◆ **New** To add a new property, click New and enter the name and value.
- ◆ **Edit** To edit the value of an existing property, select the property from the list and then click Edit, then enter the new value.
- ◆ **Delete** To delete a property, select the property from the list, click Delete, and then confirm the deletion.

See also

- ◆ [“Addressing QAnywhere messages meant for JMS” \[QAnywhere\]](#)
- ◆ [“JMS connector properties” \[QAnywhere\]](#)

Message property sheet: General tab

The General tab of the Message property sheet has the following components:

Source Shows the client name of the message source.

Destination Shows the client and name of the message destination.

Creation date Shows the date the message was created.

Priority Shows the priority level assigned to the message.

Status Shows the status of the message.

Expiry date Shows the expiration date of the message, if applicable.

ID Shows the ID of the message.

Sequence # Shows the sequence number of the message.

Properties Shows a list of the properties.

Show system properties Indicates whether system properties are shown. Select this option to indicate that the system properties are shown. If the checkbox is cleared, then system properties no not appear.

See also

- ◆ [“QAnywhere Properties” \[QAnywhere\]](#)
- ◆ [“Message properties” \[QAnywhere\]](#)
- ◆ [“Managing message properties” \[QAnywhere\]](#)

Message property sheet: Content tab

The Content tab of the Message property sheet has the following components:

Content Shows the content of the selected message.

See also

- ◆ [“Message properties” \[QAnywhere\]](#)

Message property sheet: History tab

The History tab of the Message property sheet has the following components:

History Shows the history for the selected message.

See also

- ◆ [“ml_qa_status_history” \[MobiLink - Server Administration\]](#)

Server Store property sheet: General tab

The General tab of the Server Store property sheet has the following components:

Name Shows the name of the server store.

Type Shows the type of object.

Product Shows the name of the database application.

Version Shows the version of the database application.

Computer Shows the name of the computer.

See also

- ◆ [“Setting up the server message store” \[QAnywhere\]](#)
- ◆ [“About server management requests” \[QAnywhere\]](#)

Server Store property sheet: Server Properties tab

The Server Properties tab of the Server Store property sheet has the following components:

Rules evaluation period (ms) Sets the time in milliseconds between evaluations of rules, including message transmission and persistence rules. Since, typically, rules are evaluated on the fly as messages are transmitted to the server store, the rule evaluation period is only for rules that are timing-sensitive. The default value is 60000 (one minute).

This corresponds to the `ianywhere.qa.server.autoRulesEvaluationPeriod` server property.

Schedule date format Sets the date format used for server-side transmission rules. By default, the date format is `yyyy-MM-dd`.

Schedule time format Sets the time format used for server-side transmission rules. By default, the time format is `HH:mm:ss`.

This corresponds to the `ianywhere.qa.server.scheduleTimeFormat` server property.

Management request address Sets the agent portion of the address to which to send server management requests. If this property is not set, this value is `ianywhere.server`.

Server password Click to set the password for authenticating server management requests. If this property is not set, the password is `QAnywhere`.

This corresponds to the `ianywhere.qa.server.password.e` server property.

Logging level Sets the logging level of the messaging. Move the slider from top (high) to bottom (low) to set the error logging level.

- ◆ **(low)** Indicates that only message errors are logged. This corresponds to a value of 1 for the `ianywhere.qa.server.logLevel` server property.
- ◆ - Additionally causes warnings to be logged. This corresponds to a value of 2 for the `ianywhere.qa.server.logLevel` server property. This is the default.
- ◆ - Additionally causes informational messages to be logged. This corresponds to a value of 3 for the `ianywhere.qa.server.logLevel` server property.

- ◆ **(high)** Additionally causes more verbose informational messages to be logged, including details about each QAnywhere message that is transmitted by the MobiLink server. This corresponds to a value of 4 for the `ianywhere.qa.server.logLevel` server property.

Compression level Configures the amount of compression applied to each message received by a QAnywhere connector. Click Enable Compression and move the slider from left (low) to right (high) to set the level of compression. The compression is an integer between 0 and 9, with 0 being no compression and 9 being the most compression. The default is 0.

This corresponds to the `ianywhere.qa.compressionLevel` server property. See “[Server properties](#)” [[QAnywhere](#)].

Restore Defaults Click Restore Defaults to return the preferences on this tab to their default values.

See also

- ◆ “[Server properties](#)” [[QAnywhere](#)]
- ◆ “[Setting server properties with Sybase Central](#)” [[QAnywhere](#)]

Server Store property sheet: Client Properties tab

The Client Properties tab of the Server Store property sheet has the following components:

Client Choose a Client from the dropdown list and then click Apply to display only the properties for the selected client.

Property name Type the name of a specific property and then click Apply to display only the named property. You can also type the first few characters of a property name and then click Apply to display all properties that begin with that prefix.

Show system properties Indicates whether system properties are shown. Place a checkmark in the box to indicate that the system properties are shown. If the checkbox is cleared, then system properties do not appear.

- ◆ **Apply** Applies the options selected for the client, property name, and system properties and displays the applicable properties in the Properties list.
- ◆ **Reset** Resets the filtering criteria.

Properties list Lists the client, name, and value for the server store properties.

- ◆ **New** To add a new property, click New and enter the name and value.
- ◆ **Edit** To edit the value of an existing property, select the property from the list and click Edit, then enter the new value.
- ◆ **Delete** To delete a property, select the property from the list, click Delete, and then confirm the deletion.

Server Store property sheet: Transmission Rules tab

Server transmission rules govern the behavior of messages going from the server to the client. Server transmission rules are handled by the MobiLink server. They apply both when you are using push notifications and when you are not using notifications.

The Transmission Rules tab of the Server Store property sheet has the following components:

Customize the default transmission rules Shows whether customized transmission rules are used.

Transmission rules list Lists customized transmission rules for the server store. You can add new rules, and edit and delete existing rules.

- ◆ **New** To add a new transmission rule, click New. The Rule Editor dialog appears. This is only available if Customize the Default Transmission Rules is selected.
- ◆ **Edit** To edit an existing transmission rule, select the rule from the list and then click Edit. The Rule Editor dialog appears. This is only available if Customize the Default Transmission Rules is selected and there is at least one transmission rule selected.
- ◆ **Delete** To delete an existing rule, select the rule from the list, click Delete, and then confirm the deletion.

See also

- ◆ [“Server transmission rules” \[QAnywhere\]](#)

Server Store property sheet: Deletion Rules tab

By default, messages are deleted from the client message store when the status of the message is determined to be received, expired, cancelled, or undeliverable, and the final state has been transmitted back to the message originator. You may want to keep messages longer for purposes such as auditing. Server-side delete rules apply to all messages in the server message store.

The Deletion Rules tab of the Server Store property sheet has the following components:

Customize the default deletion rules Shows whether custom deletion rules are enabled. Select this option to enable custom deletion rules. If the checkbox is cleared, then custom deletion rules cannot be used.

Deletion rules list Lists customized deletion rules for the server store. You can add new rules, and edit and delete existing rules.

- ◆ **New** To add a new deletion rule, click New. The Rule Editor dialog appears. This is only available if Customize the Default Deletion Rules is selected.
- ◆ **Edit** To edit an eliciting deletion rule, choose a rule from the list and then click Edit. The Rule Editor dialog appears. This is only available if Customize the Default Deletion Rules is selected and there is at least one deletion rule selected.
- ◆ **Delete** To delete a deletion rule, choose a rule from the list, click Delete, and then confirm the deletion.

See also

- ◆ [“Server delete rules” \[QAnywhere\]](#)

QAnywhere dialog boxes

Most of the configurable settings in the QAnywhere plug-in are in dialog boxes, which can be accessed either from the File menu or the Tools menu. If you have different plug-ins installed in Sybase Central, each plug-in may provide different menu items.

The File menu contains commands related to the objects that appear in the main Sybase Central window. These menu items change depending on which object you select. For example, if you select Agent Files, the File menu shows commands and options related to agent files. You can also access all these menu items in popup menus when you right-click an object.

You can configure an object's settings in QAnywhere using property sheets. These property sheets appear in the File menu (or the popup menu) when you select an object that has configurable properties.

The Tools menu contains commands related to connecting, disconnecting, plug-in management, and Sybase Central options. These menu items always remain visible, regardless of the objects you select in the main window.

☞ For descriptions of these property sheets, see [“QAnywhere plug-in property sheets” on page 188](#).

Agent Configuration dialog: General tab

The General tab of the Agent Configuration dialog has the following components:

Client message store ID Enter the unique ID that identifies the client message store. The client message store ID is a MobiLink remote ID.

☞ For more information, see [“-id option” \[QAnywhere\]](#).

Agent window should be Choose whether the Agent window should be visible, hidden, or minimized. The default is Visible.

Incremental upload size Type a value, in kilobytes, that determines the size of each upload part. When this option is specified, uploads are sent to MobiLink in one or more parts. When the option is not set, uploads are sent as a single unit. The value of this option specifies, very approximately, the size of each upload part. You cannot use the Increment extended option with scripted upload or transactional upload.

☞ For more information, see [“Increment \(inc\) extended option” \[MobiLink - Client Administration\]](#).

Policy Select the policy type used to determine when to send and receive messages. This corresponds to the qaagent -policy option.

☞ For more information, see [“-policy option” \[QAnywhere\]](#).

The policy can be one of the following values:

- ◆ **Automatic** Select this option to receive messages when a push notification is received.
- ◆ **Scheduled** Select this option to send and receive messages at a specified interval. The default is 10 seconds.

- ◆ **On demand** Select this option to send messages only when the QAnywhere client application makes the appropriate method call.
- ◆ **Custom** Select this option and specify a file name and location to use a client transmission rules file to determine when messages are sent and received.
 - ◆ **Rules file** Specify the name of the rules file you want to use, or click Browse to locate the file.
 - ◆ **Edit Rules** The Rules dialog appears where you can edit the selected rules file. This button is only available if a rules file is specified.
 - ◆ **New Rules** The Rules dialog appears where you can create a new rules file.

See also

- ◆ [“QAnywhere Agent” \[QAnywhere\]](#)

Agent Configuration dialog: Message Store tab

The Message Store tab of the Agent Configuration dialog has the following components:

User ID Type a database user ID to connect to the client message store. The default is ml_qa_user.

Password Type the password for the database user ID. The default is qanywhere.

ODBC data source Type the name of the ODBC data source, or click Browse to locate it.

Database file Type the name of the database file to connect to, or click Browse to locate the database file.

Encryption key If the client message store is encrypted using strong encryption, specify the encryption key required to access the database.

Database name You can connect to the client message store by specifying a database name rather than a database file, if the client message store is already running.

Server name Type the name of the server, if you want to use a database server that is already running.

Other Type any additional connection information.

Test connection Click Test Connection to test the connection information you entered. The Test Connection dialog appears.

See also

- ◆ [“-c option” \[QAnywhere\]](#)
- ◆ [“Running the QAnywhere Agent” \[QAnywhere\]](#)
- ◆ [“QAnywhere Agent” \[QAnywhere\]](#)

Agent Configuration dialog: Server tab

The Server tab of the Agent Configuration dialog has the following components:

User name Type the user name used to access the server.

Password Type the server password.

Use persistent connection for transferring messages Show whether a persistent connection is used for transferring messages. select this option to enable a persistent connection. If the checkbox is cleared, then a persistent connection is not used.

☞ For more information, see “-pc option” [*QAnywhere*].

Servers list Lists the MobiLink servers the Agent will exchange messages with.

- ◆ **New** To add another server, click New. The MobiLink Server Properties dialog appears.
- ◆ **Edit** To edit the properties for an existing server, select the server from the list and then click Edit. The MobiLink Server Properties dialog appears.
- ◆ **Delete** To delete a server, select it from the list, and then click Delete.
- ◆ **Up arrow** Click the Up Arrow to move the selected server up in the list. The Agent tries to use the first server in the list. If it is unavailable, it tries the second server in the list, and so on, until it is successful.
- ◆ **Down arrow** Click the Down Arrow to move the selected server down in the list. The Agent tries to use the first server in the list. If it is unavailable, it tries the second server in the list, and so on, until it is successful.
- ◆ **Failover retry count** Type the number of times that the QAnywhere Agent should retry the connection to the primary MobiLink server before trying an alternate server.
- ◆ **Failover delay** Type the delay, in seconds, between attempts to retry the primary server before attempting to use an alternate server.

Listen for push notification from servers Select this option to receive push notifications. If this option is selected, the following additional options are available:

- ◆ **Listen on port** Type the port on which the Listener listens for push notifications. The default is 5001.

☞ For more information, see “-lp option” [*QAnywhere*].

- ◆ **Use a persistent connection for push notifications** Select this option if your MobiLink server is behind a firewall that blocks outgoing UDP packets. This is only available if Listen on Port is selected.

☞ For more information, see “-push option” [*QAnywhere*].

See also

- ◆ “Running the QAnywhere Agent” [*QAnywhere*]
- ◆ “qaagent syntax” [*QAnywhere*]

Agent Configuration dialog: Logging tab

The Logging tab of the Agent Configuration dialog has the following components:

Enable Agent logging Select this option to enable Agent logging. If the checkbox is cleared, Agent logging is not enabled. All additional options on the Logging tab are only available if Enable Agent Logging is selected.

◆ **Log these events** Select one or more of the following events to log. If a checkbox is cleared, that event is not logged. A high level of verbosity may affect performance and should normally be used in the development phase only.

- ◆ Message transfers
- ◆ Push notifications
- ◆ Rule executions
- ◆ Synchronization client
- ◆ Network status changes
- ◆ Listener events

☞ For more information, see “-v option” [[QAnywhere](#)].

Log to Type the path and name of the file used to store the logged information, or click Browse to navigate to the file and then click Open. If the file already exists, new log information is appended to the end of the file.

☞ For more information, see “-o option” [[QAnywhere](#)].

Erase contents of file on startup Select this option if you want the contents of the log file to be erased on startup. If the checkbox is cleared, the contents of the file are not erased on startup.

☞ For more information, see “-ot option” [[QAnywhere](#)].

Grow log file indefinitely Select this option if you do not want to limit the size of the log file.

Limit size of log file Select this option to limit the size of the log file to a predefined size.

◆ **Start a new log file when size reaches** Type the size the log file can reach, in kilobytes, before a new log file is started. The default is 64 KB. This option is only available if you selected Limit Size of Log File.

◆ **Keep one old log file** Select this option to keep only one old log file. The most recent log file is kept.

☞ For more information, see “-on option” [[QAnywhere](#)].

◆ **Keep all old log files** Select this option to keep all old log files.

☞ For more information, see “-os option” [[QAnywhere](#)].

See also

- ◆ “-o option” [[QAnywhere](#)]
- ◆ “-ot option” [[QAnywhere](#)]
- ◆ “-v option” [[QAnywhere](#)]

Member dialog

The Member dialog has the following components:

Address The components in the Address pane allow you to specify the necessary address information for the new member.

- ◆ **Client name** Type the name of the client.
- ◆ **To which queue should this message be sent?** Select one of the following options to determine which queue the message is sent to:
 - ◆ **The one specified in the original message** Select this option to use the queue that was specified in the original message.
 - ◆ **This queue** Select this option and type the name of the queue to be used.

Condition Shows any conditions defined for the member.

- ◆ **Message variables** Choose a message variable from the list to add it to the Condition pane.
- ◆ **Status constants** Choose a status constant from the list to add it to the Condition pane.

See also

- ◆ [“QAMessage members” \[QAnywhere\]](#)

MobiLink dialog

The MobiLink dialog has the following components:

Network The following network options are available:

- ◆ **Host** Type the name of the host where the MobiLink server is running.
- ◆ **Port** Type the port number of the host where the MobiLink server is running.

Protocol parameters The following protocol parameters are available:

- ◆ **Protocol** Choose a network protocol from the dropdown list. You can choose one of:
 - ◆ TCP/IP
 - ◆ HTTP
 - ◆ HTTPS
 - ◆ TLS

If you choose HTTPS or TLS for the protocol, the following additional options are available:

- ◆ **Cipher** Select either RSA or ECC.

- ◆ **Use FIPS-compliant algorithms** If you select RSA, the Use FIPS-compliant Algorithms option is available. Select this option to enable FIPS-compliant algorithms. If the checkbox is cleared, then FIPS-compliant algorithms are not used.
- ◆ **Certificate file** Type the name and location of the certificate file to be used, or click Browse, select the certificate file, and then click Open.
- ◆ **Additional security parameters** Type one or more additional security parameters. For multiple parameters, use semicolons as separators.

Rule dialog: Deletion Rules tab

The Deletion Rules tab of the Rule dialog has the following components:

Rules Shows the schedule type and condition of existing deletion rules.

- ◆ **New** To add a new deletion rule, click New. The Rule Editor dialog appears.
- ◆ **Edit** To edit an existing deletion rule, choose a rule from the list and then click Edit. The Rule Editor dialog appears.
- ◆ **Delete** To delete a deletion rule, choose a rule from the list, click Delete, and then confirm the deletion.

See also

- ◆ [“Message delete rules” \[QAnywhere\]](#)

Rule dialog: Transmission Rules tab

The Transmission Rules tab of the Rule dialog has the following components:

Rules Shows the schedule type and condition of existing transmission rules.

- ◆ **New** To add a new transmission rule, click New. The Rule Editor dialog appears.
- ◆ **Edit** To edit an existing transmission rule, choose a rule from the list and then click Edit. The Rule Editor dialog appears.
- ◆ **Delete** To delete a transmission rule, choose a rule from the list, click Delete, and then confirm the deletion.

See also

- ◆ [“Message transmission rules” \[QAnywhere\]](#)

Rule Editor dialog

The Rule Editor dialog has the following components:

Condition Either edit a condition from the list or use the buttons below the condition list to add new conditions. When the scheduled time occurs, the condition is applied to each message. If the message satisfies the condition, then the message is transmitted.

- ◆ **Message Variables** Choose one of the predefined message variables from the list. The message variable is inserted in the conditions list.
- ◆ **Status Constants** Choose one of the predefined status constants from the list. The status constant is inserted in the conditions list.

Schedule type Choose one of the following options to specify the schedule policy used to determine when message transmission should occur. By default, Automatic is selected.

- ◆ **Automatic** The automatic policy attempts to keep the client and server message stores as up-to-date as possible.
- ◆ **Custom** A custom policy allows you to define when message transmission occurs and which messages to send in the message transmission. The custom policy is defined by a set of rules stored in a file. Click Edit and then specify when message transmission is to occur, then click OK.

See also

- ◆ [“QAnywhere Transmission and Delete Rules” \[QAnywhere\]](#)
- ◆ [“-policy option” \[QAnywhere\]](#)
- ◆ [“Determining when message transmission should occur on the client” \[QAnywhere\]](#)

CHAPTER 7

SQL Anywhere UltraLite Help

Contents

Introduction to property sheets	208
Introduction to dialog boxes	217

About this chapter

This chapter provides descriptions of all the property sheets and dialogs that you can access from the SQL Anywhere UltraLite plug-in for Sybase Central.

Introduction to property sheets

The UltraLite plug-in provides a number of property sheets that let you configure object properties.

The following sections contain detailed descriptions of each property sheet in the UltraLite plug-in. Each one becomes available on the File menu when you select an object, and is also available in a popup menu when you right-click an object.

Article property sheet: General tab

The General tab of the Article property sheet has the following components:

Name Shows the name of the table included in the article.

Type Shows the type of the object.

Publication Shows the publication the article belongs to.

See also

- ◆ [“Working with UltraLite publications” \[UltraLite - Database Management and Reference\]](#)

Article property sheet: Where Clause tab

UltraLite applications can use row subsets by supplying a WHERE clause, with one exception: articles in UltraLite publications governing HotSync synchronization cannot use a WHERE clause.

The WHERE Clause tab of the Article property sheet has the following components:

This article has the following WHERE clause You can edit the WHERE clause in the text box to restrict the table rows that are included in the article. You do not need to include the keyword WHERE.

For example, to include only the rows that contain a salary of more than \$50000, type:

```
Salary > 50000
```

See also

- ◆ [“Working with UltraLite publications” \[UltraLite - Database Management and Reference\]](#)

Column property sheet: General tab

This Column property sheet displays information about columns that belong to a table.

The General tab of the Column property sheet has the following components:

Name Shows the name of the column. You can change the column name in the text box.

Type Shows the type of object.

Table Shows the name of the table the column belongs to.

See also

- ◆ [“Working with UltraLite tables and columns”](#) [*UltraLite - Database Management and Reference*]
- ◆ [“Adding a column to an UltraLite table”](#) [*UltraLite - Database Management and Reference*]

Column property sheet: Data Type tab

The Data Type tab of the Column property sheet has the following components:

Built-in type This option, which is always selected, enables you to choose a predefined data type for the column from the dropdown list. Integers, character strings, and dates are examples of predefined data types. For some of these types, you can specify size and/or scale.

Note that in UltraLite, the built-in type VARCHAR is the equivalent of both CHAR and VARCHAR in SQL Anywhere.

- ◆ **Size** Specifies the length of string columns, or the total number of digits to the left and right of the decimal point in the result of any decimal arithmetic for numeric columns. For numeric columns, the size is also called the precision value.

For more information about the precision value, see [“precision property”](#) [*UltraLite - Database Management and Reference*].

- ◆ **Scale** Specifies the minimum number of digits after the decimal point when an arithmetic result is truncated to the maximum precision value.

 For more information about data types, see [“Data types in UltraLite”](#) [*UltraLite - Database Management and Reference*].

See also

- ◆ [“Working with UltraLite tables and columns”](#) [*UltraLite - Database Management and Reference*]
- ◆ [“Adding a column to an UltraLite table”](#) [*UltraLite - Database Management and Reference*]

Column property sheet: Value tab

The Value tab of the Column property sheet has the following components:

No default value Select this option if the column does not require a default value.

Default value Select this option if the column does require a default value. Choosing the Default value option enables the User-defined and System-defined options.

- ◆ **User-defined** Type a custom value (string, number, or other expression) for the default value.
 - ◆ **Literal string** Specify whether or not the default value for the column should be treated as a literal string. This option is selected by default for character columns and domains with a character base type. When you select this option, the default text does not need to be enclosed in single quotes, and you do not need to escape embedded single quotes or backslashes in the string.

When you clear this option, the automatic quoting and escaping behavior is turned off and the specified default value text is passed as is UltraLite.

- ◆ **System-defined** Lets you select a pre-defined value (for example, autoincrement) for the default value. You must select a value from the dropdown list. If you have based the column on a domain, you can retain the domain's default value (if any) or override it for the column.
- ◆ **Partition size** When you select global autoincrement for the system-defined value, you can also supply a partition size.

Global autoincrement assigns each new row a value of one greater than the previous highest value in the column. The partition size restricts the maximum value that global autoincrement can use. You can enter any positive integer for the partition size. Generally, you should select a value so that the supply of numbers is rarely, if ever, exhausted.

For more information, see [“Using GLOBAL AUTOINCREMENT in UltraLite” \[MobiLink - Client Administration\]](#) and [“CREATE TABLE statement” \[UltraLite - Database Management and Reference\]](#).


See also

- ◆ [“Working with UltraLite tables and columns” \[UltraLite - Database Management and Reference\]](#)
- ◆ [“Adding a column to an UltraLite table” \[UltraLite - Database Management and Reference\]](#)

Database property sheet: General tab

The General tab of the Database property sheet has the following components:

Database properties listed on this tab cannot be changed without recreating the database.

 For information about rebuilding a database, see [“Creating UltraLite databases” \[UltraLite - Database Management and Reference\]](#).

Name Shows the name of the database.

Type Shows the type of object.

Database file Shows the root database file for the database.

Page size Shows the page size of the database in bytes.

User Shows the user ID of the user connected to the database.

Connection name Shows the connection name for the user connected to this database.

Encryption type Shows whether or not the database is encrypted, and the type of encryption: Simple, AES, AES FIPS. If encryption is not enabled in the database, None appears.

Case sensitive Shows whether or not the database is case sensitive. This property applies to the data in the database, but not to table names, column names, and other identifiers. Passwords are always case sensitive.

Collation Shows the type of collation used for the database.

Character set Shows the character set used for the database.

See also

- ◆ [“Creating UltraLite databases” \[UltraLite - Database Management and Reference\]](#)
- ◆ [“UltraLite Database Settings Reference” \[UltraLite - Database Management and Reference\]](#)

Database property sheet: Extended Information tab

The Extended Information tab of the Database property sheet has the following components:

Database properties list Lists the name and value of the properties for the database. Click Refresh to update the values. You can also press F5 to refresh the values.

- ◆ **Refresh** Click Refresh to update the values in the Database Properties list.

Description Describes the selected property.

See also

- ◆ [“Creating UltraLite databases” \[UltraLite - Database Management and Reference\]](#)
- ◆ [“UltraLite Database Settings Reference” \[UltraLite - Database Management and Reference\]](#)

Foreign Key property sheet: General tab

The General tab of the Foreign Key property sheet has the following components:

Name Shows the name of the foreign key. You can edit the name of the foreign key in this field.

Type Shows the type of object.

Foreign table Shows the name of the table to which the foreign key applies.

Primary constraint Shows the name of the primary key or unique constraint that the foreign key references.

Primary constraint type Show the type of constraint the foreign key references. This can only be a primary key or a unique constraint.

Primary table Shows the table containing the primary key or unique constraint in this foreign key relationship.

Allows null Determines whether the foreign key columns allow NULL values. To use this option, the foreign key columns must all have Allow Nulls set to Yes.

Check on commit Forces the database to wait for a COMMIT before checking the integrity of the foreign key, overriding the setting of the wait_for_commit database option.

Maximum hash size Shows an integer value for the maximum hash size in the range [0,32]. The default maximum hash size is the value of the database property maximum hash size when the database was created, which has a default of 4.

For more information, see “max_hash_size property” [[UltraLite - Database Management and Reference](#)].

See also

- ◆ “Working with UltraLite indexes” [[UltraLite - Database Management and Reference](#)]
- ◆ “sysindex system table” [[UltraLite - Database Management and Reference](#)]
- ◆ “sysixcol system table” [[UltraLite - Database Management and Reference](#)]
- ◆ “Working with UltraLite tables and columns” [[UltraLite - Database Management and Reference](#)]

Foreign Key property sheet: Columns tab

The Columns tab of the Foreign Key property sheet has the following components:

Columns list Shows the column in the foreign and primary tables.

- ◆ **Details** Displays the Column Details dialog, which shows a summary of the properties of the selected column.

See also

- ◆ “Working with UltraLite indexes” [[UltraLite - Database Management and Reference](#)]
- ◆ “Working with UltraLite tables and columns” [[UltraLite - Database Management and Reference](#)]

Index property sheet: General tab

The General tab of the Index property sheet has the following components:

Name Shows the name of the index. You can edit the name of the index in this field.

Type Shows the type of object. The object type can be foreign key index, primary key index, unique constraint index, or index.

Unique Shows whether values in the index must be unique. The unique value is set when you create a new index.

Table Shows the name and owner of the table with which the index is associated. This is only displayed if the index is on a table.

Maximum hash size Shows an integer value for the maximum hash size in the range [0,32]. The default maximum hash size is the value of the database property maximum hash size when the database was created, which has a default of 4.

See also

- ◆ “Working with UltraLite indexes” [[UltraLite - Database Management and Reference](#)]

- ◆ “Adding UltraLite indexes” [[UltraLite - Database Management and Reference](#)]

Index property sheet: Columns tab

The Columns tab of the Index property sheet has the following components:

Columns list Shows all the columns in the index, as well as their data type, sequence and order (either ascending or descending). You set the order when you create a new index.

The columns are sorted by their sequence, which is a unique number starting at 0. The order of the numbers determines the relative position of the columns in the index.

- ◆ **Details** Displays the Column Details dialog, which shows a summary of the properties of the selected column.

See also

- ◆ “Working with UltraLite indexes” [[UltraLite - Database Management and Reference](#)]

Primary Key or Unique Constraint property sheet: General tab

The General tab of the Primary Key or Unique Constraint property sheet has the following components:

Name Shows the name of the primary key or unique constraint. You can edit the name of the primary key or unique constraint in this field.

Type Shows the type of object.

Table Shows the name of the table to which the primary key or unique constraint applies.

Maximum hash size Shows an integer value for the maximum hash size in the range [0,32]. The default maximum hash size is the value of the database property maximum hash size when the database was created, which has a default of 4.

See also

- ◆ “CREATE TABLE statement” [[UltraLite - Database Management and Reference](#)]
- ◆ “Working with UltraLite indexes” [[UltraLite - Database Management and Reference](#)]

Primary Key or Unique Constraint property sheet: Columns tab

The Columns tab of the Primary Key or Unique Constraint property sheet has the following components:

Columns list Shows all the columns in the primary key or unique constraint, as well as their data type, sequence and order (either ascending or descending). You set the order when you create a new index.

The columns are sorted by their sequence, which is a unique number starting at 0. The order of the numbers determines the relative position of the columns in the index.

- ◆ **Details** Displays the Column Details dialog, which shows a summary of the properties of the selected column.

See also

- ◆ [“CREATE TABLE statement” \[UltraLite - Database Management and Reference\]](#)
- ◆ [“Working with UltraLite indexes” \[UltraLite - Database Management and Reference\]](#)

Publication property sheet: General tab

The General tab of the Publication property has the following components:

Name Shows the name of the publication. You can change the publication's name in the text box.

Type Shows the type of object.

See also

- ◆ [“Working with UltraLite publications” \[UltraLite - Database Management and Reference\]](#)
- ◆ [“CREATE PUBLICATION statement” \[UltraLite - Database Management and Reference\]](#)
- ◆ [“ALTER PUBLICATION statement” \[UltraLite - Database Management and Reference\]](#)
- ◆ [“DROP PUBLICATION statement” \[UltraLite - Database Management and Reference\]](#)

Publication property sheet: Articles tab

The Articles tab of the Publication property sheet has the following components:

- ◆ **Tables tab** The Tables tab lets you select tables to synchronize.
- ◆ **WHERE Clauses tab** The WHERE Clauses tab lets you type a WHERE clause to restrict the rows included in the selected table.

UltraLite applications can use row subsets by supplying a WHERE clause, with one exception: articles in UltraLite publications governing HotSync synchronization cannot use a WHERE clause.

Each tab is described in detail below.

Tables tab

The Tables tab lets you select tables and add them to the list of articles that are included in the client database.

Available tables list Lists all the user tables in the database you are currently connected to.

Selected tables list Lists all the tables that are included in the publication synchronization.

- ◆ **Add** Adds the selected table in the Available Tables list to the Selected Tables list so the table is included in the publication.
- ◆ **Remove** Removes the selected table from the Selected Tables list so the table is not included in the publication.

WHERE Clauses tab

UltraLite applications can use row subsets by supplying a WHERE clause, with one exception: articles in UltraLite publications governing HotSync synchronization cannot use a WHERE clause.

The WHERE Clauses tab lets you supply a WHERE clause to restrict the rows that are included in the client database.

Articles list Select a table from the list of tables included in the publication.

The selected article has the following WHERE clause In the text box, type the WHERE clause for the table to restrict the rows that are included in the article.

 For more information, see [“Publishing only some rows using a WHERE clause” \[SQL Remote\]](#).

See also

- ◆ [“Working with UltraLite publications” \[UltraLite - Database Management and Reference\]](#)
- ◆ [“CREATE PUBLICATION statement” \[UltraLite - Database Management and Reference\]](#)
- ◆ [“ALTER PUBLICATION statement” \[UltraLite - Database Management and Reference\]](#)
- ◆ [“DROP PUBLICATION statement” \[UltraLite - Database Management and Reference\]](#)

Table property sheet: General tab

The General tab of the Table property sheet has the following components:

Name Shows the name of the table. You can change the table's name in the text box.

Type Shows the type of object.

Synchronization type The following options are available:

- ◆ **Normal** Select this option to use normal synchronization. Only changed rows are synchronized.
- ◆ **Always** Select this option if you want synchronization to run continuously. All rows are synchronized. Tables marked as Always have the **allsync** suffix added to their names. For more information, see [“Using allsync and nosync suffixes” \[UltraLite - Database Management and Reference\]](#).
- ◆ **Never** Select this option if you do not want synchronization to run at all. Tables marked as Never have the **nosync** suffix added to their names. For more information, see [“Using allsync and nosync suffixes” \[UltraLite - Database Management and Reference\]](#).

Primary Key The Primary Key pane has the following components:

- ◆ **Name** Shows the name of the primary key for the selected table.
- ◆ **Set Primary Key Now** Opens the Primary Key wizard where you can specify or change the primary key for the selected table.
- ◆ **Columns** Shows the primary key columns for the table.

See also

- ◆ [“Working with UltraLite tables and columns” \[UltraLite - Database Management and Reference\]](#)
- ◆ [“Creating UltraLite tables” \[UltraLite - Database Management and Reference\]](#)

Table property sheet: Columns tab

The Columns tab of the Table property sheet has the following components:

Columns list Lists all the columns of the table, as well as their type.

Details Displays the Column Details dialog, which shows a summary of the properties for the column.

See also

- ◆ [“Working with UltraLite tables and columns” \[UltraLite - Database Management and Reference\]](#)

User property sheet: General tab

The General tab of the User property sheet has the following components:

Name Shows the name of the user.

Type Shows the type of object.

Password Type the password for the user. For added security, characters are masked by asterisks. Passwords are case sensitive.

Confirm password Confirm the password that you typed in the Password text box by entering it again. The contents of the two fields must match exactly. Passwords are case sensitive.

See also

- ◆ [“Working with UltraLite users” \[UltraLite - Database Management and Reference\]](#)
- ◆ [“Adding a new UltraLite user” \[UltraLite - Database Management and Reference\]](#)
- ◆ [“Deleting an existing UltraLite user” \[UltraLite - Database Management and Reference\]](#)


Introduction to dialog boxes

You can find most of the configurable settings in the UltraLite plug-in in dialog boxes, which can be accessed either through the File menu or the Tools menu. Note that the different Sybase Central plug-ins may provide different menu items.

The File menu contains commands related to the objects that appear in the main Sybase Central window. These menu items change depending on which object you select. For example, if you select a table, the File menu shows commands and options related to tables. Likewise, if you select a column, the File menu changes to show column options. You can also access all these menu items in popup menus when you right-click an object.

The Tools menu contains commands related to connecting, disconnecting, plug-ins, and Sybase Central options. These menu items always remain visible, regardless of the objects you select in the main window.

You can also configure settings in UltraLite using property sheets. These property sheets appear in the File menu (or the popup menu) when you select an object that has configurable properties.

 For descriptions of these property sheets, see [“Introduction to property sheets” on page 208](#).

Database Options dialog

The Database Options dialog has the following components:

Database Displays the name of the selected database.

Options list Shows the option settings and default values for the database. Once you select an option, you can use the buttons at the side of the dialog.

- ◆ **Set Now** To change an option setting for the database, select an option from the Options list, type the desired setting in the Value field, then click Set Now.
- ◆ **Reset Now** To reset any value you have changed, select an option from the Options list and click Reset Now. The value is reset to its default value.

Value Select an option in the Options list and type the desired setting in the Value field.

See also

- ◆ [“Working with UltraLite Databases” \[UltraLite - Database Management and Reference\]](#)
- ◆ [“UltraLite Database Settings Reference” \[UltraLite - Database Management and Reference\]](#)
- ◆ [“UID connection parameter” \[UltraLite - Database Management and Reference\]](#)
- ◆ [“PWD connection parameter” \[UltraLite - Database Management and Reference\]](#)

Plug-in Preferences dialog: General tab

The General tab of the Plug-in Preferences dialog has the following components:

Settings The preferences on the General tab govern how UltraLite responds when you perform specific tasks in Sybase Central. Choose one or more of the following settings:

- ◆ **Confirm deletions when editing table data** Select this preference if you want UltraLite to prompt you before table data is deleted on the Data tab in Sybase Central.
- ◆ **Confirm updates when editing table data** Select this preference if you want UltraLite to prompt you before table data is updated on the Data tab in Sybase Central.
- ◆ **Confirm implicit updates when editing table data** Select this preference if you want UltraLite to prompt you before implicit updates are made in Sybase Central. Implicit updates are made when you are editing a row on the Data tab and then click anywhere else in Sybase Central outside the row you are currently editing.
- ◆ **Confirm cancellations when editing table data** Select this preference if you want Sybase Central to prompt you when you cancel changes to table data on the Data tab in Sybase Central.

Restore Defaults Click Restore Defaults to return the preferences on this tab to their default values (selected or cleared). By default, all the preferences on this tab are selected.

Plug-in Preferences dialog: Utilities tab

The Utilities tab of the Plug-in Preferences dialog has the following components:

Settings The preferences on the Utilities tab govern whether wizard introduction pages appear and whether wizard message windows close when the wizard is finished. Choose one or more of the following settings:

- ◆ **Show Create Database wizard introduction page** Select this preference if you want the Create Database wizard introduction page to appear when you open the wizard.
- ◆ **Show Erase Database wizard introduction page** Select this preference if you want the Erase Database wizard introduction page to appear when you open the wizard.
- ◆ **Show Extract Database wizard introduction page** Select this preference if you want the Extract Database wizard introduction page to appear when you open the wizard.
- ◆ **Show Load Database wizard introduction page** Select this preference if you want the Load Database wizard introduction page to appear when you open the wizard.
- ◆ **Show Migrate C++ API wizard introduction page** Select this preference if you want the Migrate C++ API wizard introduction page to appear when you open the wizard.
- ◆ **Show Synchronize Database wizard introduction page** Select this preference if you want the Synchronize Database wizard introduction page to appear when you open the wizard.
- ◆ **Show Unload Database wizard introduction page** Select this preference if you want the Unload Database wizard introduction page to appear when you open the wizard.
- ◆ **Show Upgrade Database wizard introduction page** Select this preference if you want the Upgrade Database wizard introduction page to appear when you open the wizard.

- ◆ **Close wizard messages window when completed** Select this preference if you want the wizard messages window to close after it is finished. By default, this preference is not selected.

Restore Defaults Click Restore Defaults to return the preferences on this tab to their default values (selected or cleared). By default, all preferences on this tab except Close Wizard Messages Window When Completed are selected.

Plug-in Preferences dialog: Table Data tab

The Table Data tab of the Plug-in Preferences dialog has the following components:

Which font do you want to use to show table data? Select one of the following options to specify the font that is used for table data on the Data tab when viewing table data in Sybase Central:

- ◆ **System** Select this option to use the computer's normal text font. This is the default setting.

- ◆ **Editor** Select this option to use the same font as the Code Editor.

☞ For more information about the Code Editor, see [“Format tab” on page 233](#).

- ◆ **Custom** Select this option to specify the font, font style, and point size you want to use. Click Browse to select the desired settings in the Font dialog.

CHAPTER 8

Interactive SQL Help

Contents

About Interactive SQL 222
Introduction to Interactive SQL dialogs 224

About this chapter

This chapter provides descriptions of all the dialog boxes and wizards you can access in Interactive SQL.

About Interactive SQL

The following table provides a guide to where you can look for information about how to run and use Interactive SQL.

If you want to know...	Then see...
How to start Interactive SQL	"Starting Interactive SQL" [<i>SQL Anywhere Server - Database Administration</i>]
How to connect to a database	"Tutorial: Using the Sample Database" [<i>SQL Anywhere Server - Database Administration</i>]
How to use the Interactive SQL toolbar	"Interactive SQL main window description" [<i>SQL Anywhere Server - Database Administration</i>]
How to open a new Interactive SQL window	"Opening multiple windows" [<i>SQL Anywhere Server - Database Administration</i>]
Where to find information about keyboard shortcuts	"Interactive SQL keyboard shortcuts" [<i>SQL Anywhere Server - Database Administration</i>]
How to display data	"Executing SQL statements from Interactive SQL" [<i>SQL Anywhere Server - Database Administration</i>]
How to execute SQL commands in Interactive SQL	"Executing SQL statements from Interactive SQL" [<i>SQL Anywhere Server - Database Administration</i>]
Where to find more detailed information on selecting data	"Queries: Selecting Data from a Table" [<i>SQL Anywhere Server - SQL Usage</i>]
Where to find information about using the Query Editor to build SELECT statements	"Introducing the Query Editor" on page 268
Where to find more information on loading and unloading data	"Transferring data into and out of databases" [<i>SQL Anywhere Server - SQL Usage</i>]
How to set Interactive SQL options	"Options dialog: General tab" on page 227
How to automate common tasks	"Using SQL command files" [<i>SQL Anywhere Server - SQL Usage</i>]
How to use JDBC escape syntax	"Using JDBC escape syntax" [<i>SQL Anywhere Server - Programming</i>]
How to print from Interactive SQL	"Printing SQL statements" [<i>SQL Anywhere Server - Database Administration</i>]
How to print the graphical plan from Interactive SQL	"Graphical plans" [<i>SQL Anywhere Server - SQL Usage</i>]

If you want to know...	Then see...
How to analyze queries using the Index Consultant	“Using the Index Consultant” [<i>SQL Anywhere Server - SQL Usage</i>]
What the syntax is for SQL data types, language elements, functions, and statements	“SQL syntax help” on page 294

Introduction to Interactive SQL dialogs

You can access all the dialogs in Interactive SQL through the Tools and Data menus. With these dialogs, you can configure Interactive SQL settings, search for table and procedure names to insert into your queries, edit your queries, and export a results set.

The Tools menu contains the following dialogs:

Lookup Table Name The Lookup Table Name dialog lets you browse table and column names and insert them into the SQL Statements pane. See [“Lookup Table Name dialog” on page 226](#).

Lookup Procedure Name The Lookup Procedure Name dialog lets you browse procedure names and insert them into the SQL Statements pane. See [Lookup Procedure Name dialog](#).

Edit Query The Query Editor provides a graphical way to create and edit SELECT statements in Interactive SQL. See [“Introducing the Query Editor” on page 268](#).

Index Consultant The Index Consultant guides you in the proper selection of indexes. You can use the Index Consultant to analyze the benefits of indexes for an individual query. See [“Using the Index Consultant” \[SQL Anywhere Server - SQL Usage\]](#).

Options The Options dialog sets options for commands, appearance, importing and exporting data, and messages in Interactive SQL. See [“Options dialog: General tab” on page 227](#).

The Data menu contains the following dialogs:

Export The Export dialog allows you to set options when exporting a result set to a file in Interactive SQL.

Export dialog

File name Type the name of the file you are exporting the result set to. Alternatively, you can click Browse to locate a file.

Format Select one of the following output formats:

- ◆ **ASCII** The output is an ASCII format file with one row per line in the file. All values are separated by commas, and strings are enclosed in apostrophes (single quotes).

Three other special sequences are also used. The two characters `\n` represent a newline character, `\\` represents a single `\`, and the sequence `\xDD` represents the character with hexadecimal code DD. This is the default output format.

- ◆ **dBase II** The output is a dBASE II format file with the column definitions at the top of the file. Note that a maximum of 32 columns can be output. Column names are truncated to 11 characters, and each row of data in each column is truncated to 255 characters.

- ◆ **dBase III** The output is a dBASE III format file with the column definitions at the top of the file. Note that a maximum of 128 columns can be output. Column names are truncated to 11 characters, and each row of data in each column is truncated to 255 characters.

- ◆ **Excel** The output is an Excel 2.1 worksheet. The first row of the worksheet contains column labels (or names if there are no labels defined). Subsequent worksheet rows contain the actual table data.
- ◆ **Fixed** The output is fixed format with each column having a fixed width. No column headings are output in this format. The width for each column is computed from the data type for the column, and is large enough to hold any value of that data type. The exception is that LONG VARCHAR and LONG BINARY data defaults to 32 KB.
- ◆ **FoxPro** The output is a FoxPro format file with column definitions at the top of the file. Note that a maximum of 128 columns can be output. Column names are truncated to 11 characters. Column names are truncated to 11 characters, and each row of data in each column is truncated to 255 characters.
- ◆ **HTML** The output is in the Hyper Text Markup Language format.
- ◆ **Lotus 1-2-3** The output is a Lotus WKS format worksheet. Column names will be put as the first row in the worksheet. Note that there are certain restrictions on the maximum size of Lotus WKS format worksheets that other software (such as Lotus 1-2-3) can load. There is no limit to the size of file Interactive SQL can produce.
- ◆ **SQL Statements** The output is an Interactive SQL INPUT statement required to recreate the information in the table.
- ◆ **XML** The output is an XML file encoded in UTF-8 and containing an embedded DTD. Binary values are encoded in CDATA blocks with the binary data rendered as 2-hex-digit strings. The INPUT statement does not accept XML as a file format.

Encoding Specify the code page that is used to write the file. You can only specify this option if you have selected the **ASCII** format. You can specify the encoding to be used, or if you select (Default), the default encoding for the computer Interactive SQL is running on is used.

Escape text data When you select this option, characters following the escape character are recognized and interpreted as special characters by the database server. The default escape character is the backslash (\). New line characters can be included as the combination \n, other characters can be included in data as hexadecimal ASCII codes, such as \x09 for the tab character. A sequence of two backslash characters (\\) is interpreted as a single backslash. A backslash followed by any character other than n, x, X or \ is interpreted as two separate characters. For example, \q inserts a backslash and the letter q.

- ◆ **Escape character** You can specify the escape character for characters stored as hexadecimal codes. The default escape character is the backslash (\).

See also

- ◆ [“OUTPUT statement \[Interactive SQL\]” \[SQL Anywhere Server - SQL Reference\]](#)

Lookup Procedure Name dialog

The Lookup Procedure Name dialog allows you to look up the names of procedures stored in the database. Once you find the procedure you are looking for, you can insert it into the SQL Statements pane at your current cursor position.

The Lookup Procedure Name dialog has the following components:

Type the first few characters of the procedure you're looking for Type the first few characters of the procedure name in the text box to restrict the list of procedures to only those that start with the text you enter.

Click the procedure you want, then click OK Select the procedure from the list. Click OK to insert the procedure name into the SQL Statements pane at your current cursor position.

Show owner names Select this option if you want to prefix each procedure name in the list with the name of the database user who owns the procedure.

Show system objects Select this option if you want the system-supplied stored procedures to appear in the list.

Tip

You can use the SQL wildcard characters % (percent sign) and _ (underscore) to help narrow your search. % matches any string of zero or more characters, while _ matches any one character.

For example, to list all the procedures that contain the word profile, type **%profile%**.

If you want to search for a percent sign or underscore within a procedure name, you must prefix the percent sign or underscore with a ~ (tilde).

Lookup Table Name dialog

The Lookup Table Name dialog allows you to look up the names of tables and columns stored in the database that you are currently connected to. Once you find the table or column name you are looking for, you can insert it into the SQL Statements pane at your current cursor position.

The Lookup Table Name dialog has the following components:

Type the first few characters of the table you're looking for Type the first few characters of the table name in the text box to restrict the list of tables to only those that start with the text you enter.

Click the table you want, then click OK or Show Columns Select the desired table from the list and then click OK to insert the table name into the SQL Statements pane.

You can use the following options to restrict the tables that appear in the list. If you know what type of table you are looking for, select only that type to restrict the list. You can select any or all of the table types listed below, and you can also choose to show the names of the table owner in the list.

- ◆ **Show tables** All permanent, non-system tables owned by any owner. Temporary tables do not appear in the list of tables.
- ◆ **Show system tables** All system tables.
- ◆ **Show views** All views.
- ◆ **Show owner names** Select this option to include table owners in the list.

Show Columns Once you select a table from the list, click Show Columns to see a list of all of the columns in the selected table. In the Select Column dialog, click OK to enter the selected column name into the SQL Statements pane at your current cursor position.

Tip

You can use the SQL wildcard characters % (percent sign) and _ (underscore) to help narrow your search. % matches any string of zero or more characters, while _ matches any one character. For example, to list all the procedures that contain the word profile, type **%profile%**. If you want to search for a percent sign or underscore within a procedure name, you must prefix the percent sign or underscore with a ~ (tilde).

Options dialog: General tab

The General tab of the Options dialog in Interactive SQL has the following components:

Commit The following options let you select when to commit changes to the database. You can also commit manually by entering an explicit COMMIT statement whenever appropriate.

- ◆ **After each command** Select this option to commit changes to the database after each SQL statement is executed.
- ◆ **On exit** Select this option to commit changes to the database when you exit your Interactive SQL session. This is the default setting.

For more information, see “[auto_commit option \[Interactive SQL\]](#)” [*SQL Anywhere Server - Database Administration*].

Command files The following options control Interactive SQL's behavior when running command files.

- ◆ **When an error occurs** Select an option to control how Interactive SQL responds when it encounters an error while executing statements. Depending on the option you choose, Interactive SQL can continue executing, stop executing, or shut down. The default setting is Prompt.

For more information about configuring how Interactive SQL responds to errors while executing statements from a command file, see “[on_error option \[Interactive SQL\]](#)” [*SQL Anywhere Server - Database Administration*].

- ◆ **Echo command files to log** If you select this option, Interactive SQL logs SQL statements that are executed to the log file.

By default, command files are copied to the log.

For more information, see “[echo option \[Interactive SQL\]](#)” [*SQL Anywhere Server - Database Administration*].

Folders Select one of the following options to specify which directory Interactive SQL uses first when browsing for files.

- ◆ **Last folder used** If you select this option, the initial browser directory is the one where you last used the file browser. This is the default setting.

- ◆ **Current folder** If you select this option, the initial directory used by the browser is the current folder, as defined by the operating system.

Fast Launcher The fast launcher is designed to reduce Interactive SQL's startup time. When the fast launcher is turned on, the fast launcher process (*dbisqlg.exe* for Interactive SQL) starts when you log in. The fast launcher is only available on Windows.

Note that the fast launcher process requires a significant amount of memory, and the impact on application startup time depends on your system configuration.

- ◆ **Enable fast launcher** Select this option to turn on the fast launcher. The fast launcher is turned on by default. If you want to turn the fast launcher off, clear this checkbox. You must log out and log in again for these settings to take effect.

- ◆ **Configure** Opens the DBISQL Fast Launcher Configuration dialog where you can configure the TCP/IP port used by the fast launcher and set the inactivity timer.

The fast launcher uses a TCP/IP port on your computer. If another program is already using this port, you can change the port number used by the fast launcher in this dialog.

When the fast launcher is not used for the amount of time specified in the inactivity timer, it shuts down, which frees up memory for other applications. By default, the inactivity timer is set to never shut down.

File Association On Windows, you can make Interactive SQL the default editor for *.sql* files.

- ◆ **Make ISQL the default editor for .SQL and plan files** Select this option to make Interactive SQL the default editor for *.sql* and graphical plan files on Windows. SQL Anywhere graphical plan files have the extension *.saplan*.

If you select this option, Windows uses Interactive SQL to automatically open the file when you double-click it. Note that Interactive SQL does not run the file automatically.

See also

- ◆ [“SET OPTION statement \[Interactive SQL\]” \[SQL Anywhere Server - SQL Reference\]](#)
- ◆ [“Using the fast launcher” \[SQL Anywhere Server - Database Administration\]](#)

Options dialog: Results tab

The Results tab of the Options dialog in Interactive SQL has the following components:

Display null values as Specify how you want nulls to appear in table columns. You can use any string for this value. The default value is (NULL). If this field is blank, null values appear as an empty string.

 For more information, see [“nulls option \[Interactive SQL\]” \[SQL Anywhere Server - Database Administration\]](#).

Maximum number of rows to display Specify the maximum number of rows that appear in the Results pane. The default is 500.

☞ For more information, see “[isql_maximum_displayed_rows option \[Interactive SQL\]](#)” [*SQL Anywhere Server - Database Administration*].

Truncation length Specify the number of characters that are displayed in each column in the Results pane. If you enter a value of 0, the columns are not truncated. The default is 256.

☞ For more information, see “[truncation_length option \[Interactive SQL\]](#)” [*SQL Anywhere Server - Database Administration*].

Show multiple result sets Select this option if you want Interactive SQL to display multiple result sets in the Results pane when you execute a procedure that returns multiple SELECT statements. When running in windowed mode, each result set appears on a separate tab in the Results pane. The setting of this option also applies to Interactive SQL when running in command prompt mode. By default, Interactive SQL does not display multiple result sets.

Show row number Select this option if you want row numbers to appear beside your results in the Results pane. This option is on by default.

Automatically refetch results Select this option if you want Interactive SQL to automatically regenerate the result set after you execute an INSERT, UPDATE, or DELETE statement. By default, Interactive SQL refetches result sets.

☞ For more information, see “[auto_refetch option \[Interactive SQL\]](#)” [*SQL Anywhere Server - Database Administration*].

Console Mode The following options let you specify which result set(s) are printed when a *.sql* file is run. This option has no effect when running in windowed mode.

- ◆ **The last one** Prints the result set from the last statement.
- ◆ **None** Does not print any result sets.

For more information, see “[isql_print_result_set option \[Interactive SQL\]](#)” [*SQL Anywhere Server - Database Administration*].

- ◆ **All of them** Prints result sets for each statement that returns a result set. You must select Show Multiple Result Sets to enable this option.

Font Select one of the following options to specify the font that is used for table data in the Interactive SQL Results pane.

- ◆ **System font** Select this option to use the computer's normal text font. This is the default setting.
- ◆ **Editor font** Select this option to use the same font as the Code Editor.

☞ For more information about the SQL Statement Pane, see “[Format tab](#)” on page 233.

- ◆ **Custom font** Select this option to specify the font, font style, and point size you want to use. Click Browse to select the desired settings in the Font dialog.

See also

- ◆ [“SET OPTION statement \[Interactive SQL\]” \[SQL Anywhere Server - SQL Reference\]](#)

Options dialog: Import/Export tab

The Import/Export tab of the Options dialog in Interactive SQL has the following components:

Default export format To choose a format for exporting files, select a file format from the dropdown list. By default, the export format is ASCII. This format is used only if you do not specify a **FORMAT** clause in at **OUTPUT** statement. See [“OUTPUT statement \[Interactive SQL\]” \[SQL Anywhere Server - SQL Reference\]](#).

Default import format To choose a format for importing files, select a file format from the dropdown list. By default, the import format is ASCII. This format is used only if you do not specify a **FORMAT** clause in at **INPUT** statement. See [“INPUT statement \[Interactive SQL\]” \[SQL Anywhere Server - SQL Reference\]](#).

ASCII Options Specify the default symbols used for the field separator, quote string, and escape character when you import or export data in ASCII format.

- ◆ **Default field separator** The symbol used to separate values in ASCII files. The default value is a comma (,).
- ◆ **Default quote string** The symbol used to enclose strings in ASCII files. The default value is a single quote (').
- ◆ **Default escape character** The symbol used in place of unprintable characters in ASCII files. The escape character must be one, single-byte character. The default value is a backslash (\).
- ◆ **Default encoding** The encoding used when importing and exporting files. If you change this value, it is only changed for the current Interactive SQL session. When you start a new Interactive SQL session, it is restored to its default value. The default value is **(Default)**. If you select (Default), the encoding is determined as follows:
 - ◆ the code page specified in the **ENCODING** clause of the **INPUT**, **OUTPUT**, or **READ** statement
 - ◆ the code page specified with the **-codepage** command line option when Interactive SQL was started
 - ◆ the default code page for the computer Interactive SQL is running on

See also

- ◆ [“Importing and Exporting Data” \[SQL Anywhere Server - SQL Usage\]](#)
- ◆ [“SET OPTION statement \[Interactive SQL\]” \[SQL Anywhere Server - SQL Reference\]](#)

Options dialog: Messages tab

The Messages tab of the Options dialog in Interactive SQL has the following components:

Measure execution time for SQL statements Select this option if you want Interactive SQL to measure the time it takes for a statement to execute. The time appears on the Messages tab. By default, this option is selected.

Show separate Messages pane Select this option if you want information from the database server, such as execution time, to appear in the Messages pane between the SQL Statements and Results panes rather than on the Messages tab in the Results pane. By default, database server information appears on the Messages tab in the Results pane.

Default number of lines in Messages pane Type the number of lines you want returned in the Messages pane. The default number is 7. This value is used only if Show Separate Messages Pane is selected. If you select Show Separate Messages Pane, the number is also the height (in lines) of the Messages pane.

See also

- ◆ [“SET OPTION statement \[Interactive SQL\]” \[SQL Anywhere Server - SQL Reference\]](#)

Options dialog: Plan tab

The Plan tab of the Options dialog in Interactive SQL has the following components:

Plan These options allow you to select the level of detail Interactive SQL provides about the way your query is optimized. Plan information appears on the Plan tab in the Results pane.

- ◆ **Graphical plan** The execution plan is displayed as a tree diagram in the Plan tab. You can click a node in the plan diagram to see details about that part of the query. This plan is the default.
- ◆ **Graphical plan with root statistics** The execution plan is displayed as a tree diagram in the Plan tab, and you can click a node to see details about that part of the query. Statistics are also displayed in the root node which indicate the resources used during execution of the entire query.
- ◆ **Graphical plan with full statistics** The execution plan is displayed as a tree diagram in the Plan tab, and you can click a node to see details about that part of the query. Statistics are also displayed which indicate the resources used during execution by the part of the query that is selected.
- ◆ **Short plan** Basic information about an execution plan appears in one line on the Plan tab in the Results pane. This line lists the table(s) accessed and whether the rows are to be read sequentially or accessed through an index.
- ◆ **Long plan** Detailed information about an execution plan appears in multiple lines on the Plan tab.

For more information about the different types of execution plans, see [“Accessing the execution plan in Interactive SQL” \[SQL Anywhere Server - SQL Usage\]](#).

Assume read-only cursor Select this option if you want the query optimizer to treat the query as if it had been executed for a read-only cursor. By default, this option is not selected, indicating that the optimizer should get the plan for a read-write cursor.

 For more information, see [“PLAN function \[Miscellaneous\]” \[SQL Anywhere Server - SQL Reference\]](#).

Assume cursor is You can obtain a plan based on the type of cursor you specify. The query optimizer can assume the cursor is Asensitive, Insensitive, Sensitive, or Keyset-driven. The default is Asensitive.

☞ For more information, see “[PLAN function \[Miscellaneous\]](#)” [*SQL Anywhere Server - SQL Reference*], “[Asensitive cursors](#)” [*SQL Anywhere Server - Programming*], “[Insensitive cursors](#)” [*SQL Anywhere Server - Programming*], “[Sensitive cursors](#)” [*SQL Anywhere Server - Programming*], and “[Value-sensitive cursors](#)” [*SQL Anywhere Server - Programming*].

See also

- ◆ “[Accessing the execution plan in Interactive SQL](#)” [*SQL Anywhere Server - SQL Usage*]
- ◆ “[Reading execution plans](#)” [*SQL Anywhere Server - SQL Usage*]

Options dialog: Source Control tab

The Source Control tab of the Options dialog in Interactive SQL has the following components:

Enable source control integration Select this option if you want Interactive SQL to integrate with the source control system on your computer when you work with files.

- ◆ **Your current source control system** Select this option to use your current source control system. This option is only available on Windows platforms and only if you have an SCC-compliant source control program installed.
- ◆ **Custom source control system** Select this option to use command line programs for source control. Click [Configure](#) to see and edit the command line actions.
 - ◆ **Configure** Displays the Custom Source Control Options dialog where you can view and edit command line actions.
- ◆ **Automatically check out files when editor contents are modified** Select this option if you want source files to be automatically checked out of the source control program when editor contents are modified.

Options dialog: Editor tab

This tab allows you to configure the appearance of text typed in the SQL Statements pane. Note that any settings you specify on this tab also apply to the SQL Statements Pane when it is used in Sybase Central.

Editor tab

The Editor tab has the following components:

Vertical scroll bar Shows or hides a vertical scroll bar when the window is too small to contain all the text.

Horizontal scroll bar Shows or hides a horizontal scroll bar when the window is too small to contain all the text.

Tabs tab

The Tabs tab has the following components:

Tab size Lets you set the tab size (in number of spaces).

Indent size Lets you set the size of indents (in number of spaces).

Insert spaces Inserts n spaces when you press Tab instead of inserting one tab character. The value for n will be between one and the number of indent size spaces, depending on how many spaces are required to move the cursor forward to the next tab stop.

Keep tabs Inserts a tab character into the document and moves the cursor forward to the next tab stop when you press Tab.

Auto indent Lets you set the auto indent feature. You have the following options:

- ◆ **None** disables the feature.
- ◆ **Default** uses the tab and indent sizes that are set.
- ◆ **Smart** uses previous lines of code as a guideline for indenting open and closing braces.
 - ◆ **Indent opening brace** Select this option if you want opening braces to be indented. This option is enabled when the Smart option is selected.
 - ◆ **Indent closing brace** Select this option if you want closing braces to be indented. This option is enabled when the Smart option is selected.

Sample The Sample field shows an example of how code is formatted based on the options you choose for indenting opening and closing braces.

Format tab

The Format tab has the following components:

Text Highlighting Lets you specify the color and style of different types of text in the main editing window. Choose a type of text and then set the foreground, background, and style for that text type.

- ◆ **Foreground** Foreground refers to the color of the text.
- ◆ **Background** Background refers to the color of the screen behind the text.
- ◆ **Style** Lets you specify the type of formatting for a text type. You have the following choices:
 - ◆ Plain
 - ◆ Italic
 - ◆ Bold
 - ◆ Italic and Bold

Font Lets you specify the font that appears in the SQL Statements pane.

Font size Lets you specify the font point size of the text that appears in the SQL Statements pane.

Caret color Lets you specify the color of the blinking on-screen cursor indicator.

Sample Shows an updated sample of the text with the settings you configure above.

Reset All Returns all settings to their default values.

Print tab

The Print tab has the following components:

Header Lets you specify what information appears in the header, as well as how it is formatted, when you print the contents of the SQL Statements pane. The header text is left aligned by default. Click the > button for a list of available options.

Footer Lets you specify what information appears in the footer, as well as how it is formatted, when you print the contents of the SQL Statements pane. The footer text is left aligned by default. Click the > button for a list of available options.

◆ **> button** Clicking the > button lets you choose from the following options for the header or footer:

- ◆ File Name
- ◆ File Time
- ◆ File Date
- ◆ Page Number
- ◆ Page Count
- ◆ Current Time
- ◆ Current Date
- ◆ Left Align
- ◆ Center
- ◆ Right Align

The items that you select do not all need to have the same alignment. For example, you can choose to left align the file name and right align the date in the header. By default, all text in both the header and the footer is left aligned. You must specify the alignment before the type of text. For example, if you want the file name to be centered in the header, type **&C&F** in the Header field, or click the > button and select the Center option and then click the > button again and select the Filename option.

In addition to specifying these options, you can type text that you want to appear in the header and footer fields. For example, if you type **Page &P of &p** in the Footer field, **Page 1 of 1** appears in the footer of the printed document.

Font size Lets you select the font point size for the printed text.

Text Completion tab

The Text Completion tab has the following components:

What objects do you want in the list? Select the objects you want to appear in the text completion window. By default, the names of all database objects appear in the text completion list.

- ◆ **Tables and views** Select this option if you want tables and views to appear in the text completion list.
- ◆ **Columns** Select this option if you want columns to appear in the text completion list.
- ◆ **Stored procedures** Select this option if you want stored procedures to appear in the text completion list.
- ◆ **SQL functions** Select this option if you want built-in SQL functions to appear in the text completion list.

Show system objects Select this option if you want system objects to appear in the text completion list.

Show owner names This option controls whether an object's owner is displayed in the list of objects. It does not control whether the owner name appears in the completed text.

Show tool tips Select this option if you want tool tips to appear in the text completion window.

Quote identifiers Select this option if you want identifiers to be enclosed in double quotes. Identifiers must be enclosed in double quotes if any of the following conditions are true:

- ◆ The identifier contains spaces.
- ◆ The first character of the identifier is not an alphabetic character.
- ◆ The identifier contains a reserved word.
- ◆ The identifier contains characters other than alphabetic characters and digits.

See “[Identifiers](#)” [[SQL Anywhere Server - SQL Reference](#)].

Automatically complete text Select this option if you want identifier names to be completed automatically, so long as there is only one match. If multiple identifiers match the text you type, a list appears where you can choose the identifier you want.

See also

- ◆ “[Using text completion](#)” [[SQL Anywhere Server - Database Administration](#)]
- ◆ “[Text completion keyboard shortcuts](#)” [[SQL Anywhere Server - Database Administration](#)]

Options dialog: Query Editor tab

This tab allows you to configure settings for the Query Editor.

The Query Editor tab of the Interactive SQL Options dialog has the following components:

Fully qualify table and column names Select this option if you want table and column names to be fully qualified with their owner names when constructing queries in the Query Editor.

☞ For information about qualifying table and column names, see “SQL queries” [[SQL Anywhere Server - SQL Usage](#)].

Quote names Select this option if you want the names of identifiers to be enclosed in double quotes when constructing queries in the Query Editor.

☞ For information about quoting identifiers, see “Identifiers” [[SQL Anywhere Server - SQL Reference](#)].

Get list of tables on startup Select this option if you want the Query Editor to populate its list of tables as soon as it opens. This option is selected by default. If you are connected to a database with a large number of tables or have a slow communications link, you may want to turn this option off so the Query Editor opens more quickly.

Options dialog: Check for Updates tab

This tab allows you to configure whether SQL Anywhere should check for software updates and how often it should do so. Checking for updates is done on application startup.

You can also check for updates any time from the Start menu by choosing Programs ► SQL Anywhere 10 ► Check For Updates and from the Sybase Central, Interactive SQL, and Console utility Help menus.

The Check For Updates tab of the Options dialog has the following components:

When to check for updates Choose one of the following options to specify how often SQL Anywhere should check for updates. By default, Never is selected.

- ◆ **On application startup** Select this option if you want Interactive SQL to check for updates each time the current application is launched.
- ◆ **Daily** Select this option if you want SQL Anywhere to check for updates the first time the current application is started each day.
- ◆ **Weekly** Select this option if you want SQL Anywhere to check for updates the first time the current application is started each week.
- ◆ **Monthly** Select this option if you want SQL Anywhere to check for updates the first time the current application is started each month.
- ◆ **Never** Select this option if you do not want Interactive SQL to check for updates. This is the default setting.

What to check for Choose any combination of the following options to specify what types of updates Interactive SQL should check for. By default, all of the following options are selected.

- ◆ **Express Bug Fix** Select this option if you want Interactive SQL to check for Express Bug Fixes.

An express bug fix is a subset of the software with one or more bug fixes. The bug fixes are listed in the release notes for the update. Bug fix updates may only be applied to installed software with the same

version number. Some testing has been performed on the software, but the software has not undergone full testing. You should not distribute these files with your application unless you have verified the suitability of the software yourself.

- ◆ **Maintenance Release** Select this option if you want Interactive SQL to check for maintenance releases of the software.

A maintenance release is a complete set of software that upgrades installed software from an older version with the same major version number (version number format is *major.minor.patch.build*). Bug fixes and other changes are listed in the release notes for the upgrade.

- ◆ **Other Information** Select this option to check for other information, such as new product releases or upcoming events.

MobiLink Monitor Help

Contents

Introducing the MobiLink Monitor	240
Connect to MobiLink Server dialog	242
Edit Watch dialog	245
Go To dialog	246
New Watch dialog	247
Export to Database dialog	248
Options dialog: General tab	249
Options dialog: Table tab	251
Options dialog: Graph tab	252
Options dialog: Chart Layout tab	254
Options dialog: Chart Colors tab	255
Options dialog: Overview tab	256
Sample property sheet: Sample tab	257
Sample property sheet: Range tab	258
Session property sheet: General tab	259
Session property sheet: Statistics tab	260
Synchronization property sheet: General tab	261
Synchronization property sheet: Upload tab	262
Synchronization property sheet: Download tab	263
Synchronization property sheet: Synchronization tab	264
Watch Manager dialog	265

About this chapter

This chapter provides descriptions of all the dialog boxes and property sheets you can access from the MobiLink Monitor.

Introducing the MobiLink Monitor

The MobiLink Monitor is a MobiLink administration tool that provides you with detailed information about the performance of your synchronizations. You can view the data in tabular or graphical form in the Monitor interface.

When you start the Monitor and connect it to a MobiLink server, the Monitor begins to collect statistical information about all synchronizations that occur in that monitoring session. The Monitor continues to collect data until you disconnect it or shut down the MobiLink server.

You can also save the data in binary format for viewing with the Monitor later, or in *.csv* format to open in another tool, such as Microsoft Excel; or you can export it to an ODBC data source such as a MobiLink-supported relational database.

Monitor output allows you to see a wide variety of information about your synchronizations. For example, you can quickly identify synchronizations that result in errors, or that meet other criteria that you specify. You can identify possible contention in synchronization scripts by checking to see if synchronizations of differing durations have phases that end around the same time (because synchronizations are waiting for a previous phase to finish before they can continue).

The MobiLink Monitor can be used routinely in development and production because monitoring does not degrade performance, particularly when the Monitor is run on a different computer from the MobiLink server.

Using the MobiLink Monitor

The Monitor has four panes:

- ◆ **Details Table** is the top pane. It is a spreadsheet that shows the total time taken by each synchronization, with a breakdown showing the amount of time taken by each part of the synchronization. For more information, see “[Details Table pane](#)” [*MobiLink - Server Administration*].
- ◆ **Utilization Graph** is the second pane. It provides a graphical representation of the data. The scale at the bottom of the Graph pane represents time. The same scale is used for the Graph pane and Chart pane. You can select the data that appears in the Chart by drawing a box around data in the Overview pane, or by choosing View ► Go To. For more information, see “[Utilization Graph pane](#)” [*MobiLink - Server Administration*].
- ◆ **Chart** is the third pane. It provides a graphical representation of the data. The scale at the bottom of this pane represents time. You can select the data that appears in the Chart by drawing a box around data in the Overview pane, or by choosing View ► Go To. For more information, see “[Chart pane](#)” [*MobiLink - Server Administration*].
- ◆ **Overview** is the bottom pane. It shows an overview of all the data. To choose data to see in the Chart, click in the Overview pane and draw a box. The Chart shows everything that is located in the box. For more information, see “[Overview pane](#)” [*MobiLink - Server Administration*].

In addition, there is an Options dialog that you can use to customize the data, and properties dialogs for viewing more detailed information. For more information, see:

- ◆ “[Options dialog](#)” [*MobiLink - Server Administration*]
- ◆ “[Options dialog: General tab](#)” on page 249

- ◆ “Options dialog: Table tab” on page 251
- ◆ “Options dialog: Graph tab” on page 252
- ◆ “Options dialog: Chart Layout tab” on page 254
- ◆ “Options dialog: Chart Colors tab” on page 255
- ◆ “Options dialog: Overview tab” on page 256
- ◆ “Session properties” [*MobiLink - Server Administration*]
- ◆ “Session property sheet: General tab” on page 259
- ◆ “Session property sheet: Statistics tab” on page 260
- ◆ “Sample properties” [*MobiLink - Server Administration*]
- ◆ “Sample property sheet: Sample tab” on page 257
- ◆ “Sample property sheet: Range tab” on page 258
- ◆ “Synchronization properties” [*MobiLink - Server Administration*]
- ◆ “Synchronization property sheet: General tab” on page 261
- ◆ “Synchronization property sheet: Upload tab” on page 262
- ◆ “Synchronization property sheet: Download tab” on page 263
- ◆ “Synchronization property sheet: Synchronization tab” on page 264

Connect to MobiLink Server dialog

This dialog lets you connect to a running MobiLink server. A Monitor connection is like a synchronization connection to the MobiLink server in that most of the parameters are the same. You must use parameters that are compatible with the MobiLink server's settings. For all MobiLink Monitor sessions, the script version is set to **for_MLMonitor_only**.

The Connect to MobiLink Server dialog has the following components:

User Type the name of the MobiLink user for the connection. If you started the MobiLink server with `-zu+`, then it doesn't matter what user ID you supply.

Password Type a password for the connection. This must be the correct password for the MobiLink user you specify. Leave this field blank if the MobiLink user does not have a password.

Host The network name or IP address of the computer on which the MobiLink server is running. By default, it is the computer where the Monitor is running. You can use **localhost** if the MobiLink server is running on the same computer as the Monitor.

Protocol Select the communications stream protocol to be used for the connection. This protocol and port should be set to the same protocol and port as the MobiLink server is using for synchronization requests.

- ◆ **HTTP** Select this option to connect via HTTP. By default, HTTP version **1.1** is used.
 - ◆ **Port** The MobiLink server communicates over a specific port. By default, the port number is 80 for HTTP. If you choose a value other than this, you must configure your MobiLink server to listen on the port you specify.
- ◆ **HTTPS** Select this option to connect via HTTPS. The HTTPS communication stream uses Certicom RSA security.
 - ◆ **Port** The MobiLink server communicates over a specific port. By default, the port number is 443 for HTTPS. If you choose a value other than this, you must configure your MobiLink server to listen on the port you specify.
 - ◆ **Encryption** Choose the same type of encryption that the MobiLink server is using. For HTTPS, this is usually RSA encryption.

The following options are available for encryption:

- ◆ **ECC** Elliptic-curve encryption (ECC) requires a separate license.
- ◆ **RSA** RSA encryption is provided free with SQL Anywhere.
- ◆ **RSA (FIPS 140-2 certified)** Federal Information Processing Standard (FIPS) 140-2 specifies requirements for security algorithms. FIPS 140-2 is granted by the American and Canadian governments through the National Institute of Standards and Testing (NIST) and the Canadian Communication Security Establishment (CSE). FIPS technology requires a separate license.

To use HTTPS, you must have MobiLink client-side data stream encryption installed on the computer running the MobiLink Monitor. The MobiLink Monitor trusts all certificates, so when you use HTTPS, you do not specify any certificate-related parameters in the Additional Protocol Options field.

Separately licensed component required

ECC encryption and FIPS-approved encryption require a separate license. All strong encryption technologies are subject to export regulations.

See “Separately licensed components” [[SQL Anywhere 10 - Introduction](#)].

For more information about security, see “[Encrypting MobiLink client/server communications](#)” [[SQL Anywhere Server - Database Administration](#)].

- ◆ **TCP/IP** Select this option to connect via TCP/IP.
 - ◆ **Port** The MobiLink server communicates over a specific port. By default, the port number is 2439 for TCP/IP. If you choose a value other than this, you must configure your MobiLink server to listen on the port you specify.
- ◆ **TLS (TCP/IP with transport layer security)** Select this option to connect via TCP/IP with transport layer security.
 - ◆ **Port** The MobiLink server communicates over a specific port. By default, the port number is 2439 for TLS (TCP/IP with transport layer security). If you choose a value other than this, you must configure your MobiLink server to listen on the port you specify.
 - ◆ **Encryption** Choose the same type of encryption that the MobiLink server is using. For HTTPS, this is usually RSA encryption.

The following options are available for encryption:

- ◆ **ECC** Elliptic-curve encryption (ECC) requires a separate license.
- ◆ **RSA** RSA encryption is provided free with SQL Anywhere.
- ◆ **RSA (FIPS 140-2 certified)** Federal Information Processing Standard (FIPS) 140-2 specifies requirements for security algorithms. FIPS 140-2 is granted by the American and Canadian governments through the National Institute of Standards and Testing (NIST) and the Canadian Communication Security Establishment (CSE). FIPS technology requires a separate license.

Additional protocol options Specify optional network parameters in this field. The allowed values depend on the connection stream type.

The following table lists the parameters you can specify. These parameters are supported by all connection streams (TCP/IP, HTTP, and HTTPS), except where noted otherwise.

Parameter	Description
<code>buffer_size=number</code>	HTTP and HTTPS only. The maximum body size for a fixed content length message, in bytes. Changing the option increases or decreases the amount of memory allocated for sending content. The default is 65535.

Parameter	Description
client_port = <i>nnnnn</i> client_port = <i>nnnnn-mmmmm</i>	<p>A range of client ports for communication. If only one value is specified, the end of the range is 100 greater than the initial value, for a total of 101 ports.</p> <p>The option can be useful for clients inside a firewall communicating with a MobiLink server outside the firewall.</p>
persistent = { 0 1 }	<p>HTTP and HTTPS only. 1 (True) means that the client attempts to use the same TCP/IP connection for all HTTP requests in a synchronization. A setting of 0 (False) is more compatible with intermediate agents. The default is 0.</p> <p>Note: You should only set persistent to 1 if you are connecting directly to a MobiLink server. If you are connecting through an intermediate agent such as a proxy or redirector, a persistent connection may cause problems.</p>
proxy_host = <i>proxy_hostname</i>	HTTP and HTTPS only. The host name of the proxy server.
proxy_port = <i>proxy_portnumber</i>	HTTP and HTTPS only. The port number of the proxy server. The default value is 80.
url_suffix = <i>suffix</i>	HTTP and HTTPS only. The suffix to add to the URL on the first line of each HTTP request. When synchronizing through a proxy server or the MobiLink redirector, the suffix may be necessary in order to find the MobiLink server. The default value is MobiLink .
version = <i>versionnumber</i>	HTTP and HTTPS only. A string specifying the version of HTTP to use. You have a choice of 1.0 or 1.1 . The default value is 1.1 .

☞ For more information about these network parameters, see “[MobiLink Client Network Protocol Options](#)” [[MobiLink - Client Administration](#)].

See also

- ◆ “[Starting the MobiLink Monitor](#)” [[MobiLink - Server Administration](#)]

Edit Watch dialog

The Edit Watch dialog has the following components:

Name The name of the watch. You cannot change the name of a predefined watch (Active, Completed, or Failed).

Conditions list You must specify a property, comparison operator, and value to identify synchronizations that the Monitor should track. You can specify as many conditions as you require. Once you select a property, an operator, and a value, click Add to add the condition to the watch.

You cannot edit the values that appear in the Conditions list. To change a watch condition, select the condition from the Conditions list and click Remove. Then, add a new condition with the desired settings.

◆ **Property** Select the property you want the Monitor to track from the dropdown list.

For a complete list of properties that are available in the MobiLink Monitor, see [“MobiLink statistical properties”](#) [*MobiLink - Server Administration*].

◆ **Operator** Select a comparison operator. The list of available operators depends on the property you select.

◆ **Value** Enter the value to which the property is compared.

◆ **Add** Click to add the selected conditions, as set in the Property, Operator, and Value fields, to the watch. This is disabled for System watches.

◆ **Remove** Click to remove the selected condition from the watch. This is disabled for System watches.

Synchronization display These options let you specify a pattern and color to identify the watch in the Chart and Overview panes.

◆ **Chart pattern** Select a pattern for the watch in the Chart pane.

◆ **Overview color** Select a color for the watch in the Overview pane.

See also

◆ [“Customizing your statistics”](#) [*MobiLink - Server Administration*]

Go To dialog

The Go To dialog has the following components:

Start date & time The Go To dialog takes you to the specified date and time in the Chart pane of the Monitor. Type the start date and time of the data that you want to view. If you change this setting, you must specify the year, month, and day.

Chart range Lets you specify the duration of time that appears in the Chart pane. The chart range can be specified in milliseconds, seconds, minutes, hours, or days by selecting one of these options from the dropdown list. The chart range determines the granularity of the data: a smaller length of time means that more detail is visible.

See also

- ◆ [“Chart pane”](#) [*MobiLink - Server Administration*]

New Watch dialog

The New Watch dialog has the following components:

Name Type a name for the watch.

Conditions You must specify a property, comparison operator, and value to identify synchronizations the Monitor should track. You can specify as many conditions as you require. Once you select a property, an operator, and a value, click Add to add the condition to the new watch.

You cannot edit the values that appear in the Conditions list. To change a watch condition, select the condition from the Conditions list and click Remove. Then, add a new condition with the desired settings.

◆ **Property** Select the property you want the Monitor to track.

For a complete list of properties that are available, see [“MobiLink statistical properties”](#) [*MobiLink - Server Administration*].

◆ **Operator** Select a comparison operator. The list of available operators depends on the property you select.

◆ **Value** Enter a value for the specified property.

◆ **Add** Click to add the selected conditions, as set in the Property, Operator, and Value fields, to the watch. This is disabled for System watches.

◆ **Remove** Click to remove the selected condition from the watch. This is disabled for System watches.

Synchronization display These options let you select a pattern and color to identify the watch in the Chart and Overview panes.

◆ **Chart pattern** Select a pattern for the watch in the Chart pane.

◆ **Overview color** Select a color for the watch in the Overview pane.

See also

◆ [“Customizing your statistics”](#) [*MobiLink - Server Administration*]

Export to Database dialog

You can save MobiLink Monitor data to any consolidated database supported by MobiLink, or to Excel spreadsheets using the Export to Database dialog. You must be disconnected from the MobiLink server when you export data from the Monitor.

Note

The data source must have quoted identifiers enabled because some of the columns are reserved words. The MobiLink Monitor enables quoted identifiers automatically for SQL Anywhere, Adaptive Server Enterprise, and Microsoft SQL Server databases. If quoted identifiers is not enabled, the export fails.

For more information about quoted identifiers, see “Character strings and quotation marks” [[SQL Anywhere Server - SQL Usage](#)] and “quoted_identifier option [compatibility]” [[SQL Anywhere Server - Database Administration](#)].

The Export to Database dialog has the following components:

Master table Type a name for the master table created to hold Monitor data. The table name must be 128 characters or less. If the table does not exist, it is created by the Monitor. For Excel output, the table name identifies the worksheet that is created.

This table contains one row per synchronization, including all the information that can appear in the Monitor's Details Table pane, as well as an export_time column that contains the time the export was performed. Its primary key consists of the export_time and sync columns. By default this table is called mlm_by_sync.

Details table Type a name for the details table created to hold Monitor data. The table name must be 128 characters or less. By default this table is called mlm_by_table. If the table does not exist, it is created by the Monitor. For Excel output, the table name identifies the worksheet that is created.

This table contains one row per table per synchronization, and has a column for each of the upload, download, and synchronization statistics that appear on the Synchronization property sheet in the Monitor, as well as an export_time column that contains the time the export was performed. The details table has a foreign key relationship to the master table's export_time and sync columns. The primary key for the details table consists of the export_time, sync, and table_name columns.

Overwrite any existing data Select this option if you want to overwrite data in existing tables. If you do not choose to overwrite the data, new data is appended to existing data.

See also

- ◆ “Saving Monitor data” [[MobiLink - Server Administration](#)]
- ◆ “Synchronization property sheet: General tab” on page 261

Options dialog: General tab

The General tab of the Options dialog has the following components:

Prompt to connect on startup This option controls whether the Connect to MobiLink Server dialog appears when the MobiLink Monitor is started. By default, this option is selected, which means that when the Monitor is started without any command line options, the Connect to MobiLink Server dialog appears. If you do not want the Connect to MobiLink Server dialog to appear when you start the Monitor without command line options, clear the checkbox beside this option.

Max synchronization count This is the maximum number of synchronizations that are kept in the current session. The default maximum synchronization count is 100000. Once the limit is reached, you can choose to replace the oldest synchronizations with new ones by selecting the Replace Old Synchronizations With New Ones option.

Replace old synchronizations with new ones This option controls whether new synchronizations replace the oldest or newest synchronizations in the session when the Monitor reaches the maximum synchronization count for the current session. This option is selected by default, meaning that new synchronizations replace the oldest synchronizations in the session.

Maximum sample time Specify the maximum sample time by entering a value and selecting one of the following measures of times from the dropdown list:

- ◆ s (seconds)
- ◆ m (minutes)
- ◆ h (hours)
- ◆ d (days)

Save automatically when connected to MobiLink server Select this option to save Monitor sessions automatically to a file when the Monitor is connected to a MobiLink server. *The setting for this option takes effect the next time the MobiLink Monitor connects to a synchronization server. It does not change the setting for current connections.* Data from the Monitor session is saved as a binary file (*.mlm*) by default. Selecting this option enables the Output File and Save Every fields. When this option is selected for a connection, the Monitor starts saving session information when it connects to a MobiLink server and stops saving information when it disconnects. The data contained in the output file is overwritten by new data for each time the Monitor connects to a MobiLink server.

- ◆ **Output file** Type the name of the binary file (with the extension *.mlm*) where you want to save the current session automatically. You can also click Browse to locate the file.

If you want to view the data in another tool, such as Microsoft Excel, you must save the data in a comma-separated file (*.csv*) by choosing File ► Save As.

If you supply an extension to the file name, it must be *.mlm* or *.csv*. These are the only file formats the MobiLink Monitor supports.

- ◆ **Save every** Specify how often you want the data saved to the file specified above. By default, the output file is saved every 120 seconds.

Note

To restore the Monitor's default settings, delete the file *.mlMonitorSettings*. This file is stored in your user profiles directory.

Options dialog: Table tab

This tab lets you configure the columns that appear in the Details Table pane. The settings on this tab persist between MobiLink Monitor sessions.

The Table tab of the Options dialog has the following components:

Hidden Columns list Lists all the columns that can appear in the Details Table pane that are not currently visible in the pane. To display a column in the Details Table pane, select the column or columns in the Hidden Columns list and then click the right arrow. The selected column or columns appear in the Visible Columns list.

Visible Columns list Lists all the columns that currently appear in the Details Table pane. To remove a column from the Visible Columns list so that it no longer appears in the Details Table pane, select the column and then click the left arrow. Columns that are added to the Visible Columns list are added to the end of the list.

The order of the columns in the Visible Columns list determines the order of the columns in the Details Table pane. To move a column up the list, select the column and then click the up arrow. To move a column further down the list, select the column and then click the down arrow.

Tip

You can also change the order of the columns by dragging the column headings in the Details Table pane.

Reset Click Reset to restore the list of columns that appear in the Details Table pane to its default settings.

See also

- ◆ “Details Table pane” [[MobiLink - Server Administration](#)]

Options dialog: Graph tab

The Utilization Graph provides a graphical representation of the data in MobiLink Monitor.

The Graph tab of the Options dialog has the following components:

Utilization statistics list Select and clear the properties listed to specify which properties appear in the utilization graph.

- ◆ **Show** Select this option to show the property in the utilization graph. Properties without a checkmark do not appear.
- ◆ **Property** Shows the available properties that you can choose to appear in the utilization graph. Only properties with a checkmark appear in the graph.

The list of properties comes from the MobiLink server or the *.mlm* file, and is saved in *.mlmonitorsettings*. If you delete *.mlmonitorsettings*, the properties have placeholder values (19 through 24).

The possible properties are:

- ◆ **TCP/IP work queue** This queue represents work done by the low-level network layer in the MobiLink server. This layer is responsible for both reading and writing packets from and to the network. The queue is full of read and write requests. It grows when it gets notified of incoming data to read off the network and/or when it is told by the Stream worker to write to the network.

If this queue gets backed up, it is usually due to a backlog of either reads or writes—sometimes both, but usually one or the other. Reads can get backed up if the MobiLink server is using a lot of RAM and memory pages are being swapped in and out a lot. Consider getting more RAM in this case. Writes can get backed up if the network connection between the clients and server is slow. If this queue is the only queue that is backed up, look at the CPU usage. If CPU usage is high, there may be read/memory problems. If CPU usage is low, you may have slow writes. Consider using a faster network.

- ◆ **Stream work queue** This queue represents work done by the high-level network layer in the MobiLink server. This layer is responsible for higher-level network protocol work such as HTTP, encryption, and compression. This queue grows when lots of reads come in from the TCP/IP layer and/or when lots of write requests come in from the Command processor layer. If this queue is the only queue that is backed up, consider removing some network protocols, such as HTTP or compression. If this isn't possible, consider reducing the number of concurrent syncs allowed using the `-sm` option. See “`-sm` option” [[MobiLink - Server Administration](#)].
- ◆ **Heartbeat work queue** This queue represents the layer in the MobiLink server that is responsible for sending pulsed events within the server. This layer is responsible, for example, for triggering the one-per-second pulses of samples to the connected MobiLink Monitors.

It is highly unlikely that this queue gets backed, up so it is not visible by default.

- ◆ **Command processor work queue** This represents work done by the MobiLink server both to interpret internal MobiLink protocol commands and to apply these commands to the consolidated database. This queue grows when lots of requests come in. Request types include synchronization requests, Listener requests, mlfiletransfer requests, and so on. The queue also grows when the

consolidated database is busy working on synchronizations, yet more synchronization requests keep coming in.

If this queue is the only queue that is backed up, look at the CPU usage. If CPU usage is high, the volume of requests may be too high. Consider reducing the number of concurrent syncs allowed, using the `-sm` option. If CPU usage is low, look to improving the performance of the consolidated database. See “`-sm` option” [*MobiLink - Server Administration*].

◆ **Color** For each property, click Color and select a color from the dropdown list that is used to represent the selected property in the utilization graph.

◆ **Scale** Double-click the scale field and type a value to change the scale used for the graph.

The vertical scale on the Utilization Graph always goes from 0 to 100. This represents zero to one hundred percent of the scale. Each value has its own scale. By default, all scales are 5, meaning that values are expected to be in a range of 0 to 20, scaled (by 5) to the range 0 to 100. If a value becomes greater than 20, the scale is automatically adjusted such that the largest value is at 100.

To determine the maximum value in the display, divide the scale into 100. For example, if the TCP/IP work queue scale is 2.381, then the maximum value is $(100 / 2.381) = 42$. The actual maximum isn't usually important. What is important is that values towards the top of the graph are approaching the largest currently-known value for the given property—in other words, the peak load for that property as observed in the current monitoring session.

When the graphs are consistently towards the top of the display and you notice that synchronization throughput is down, you may have a performance problem that needs investigation. Similarly, if one or more values creeps upward over time without diminishing, then there is likely a performance problem. Note that the graphs may often be towards the top of the display with MobiLink server performing well. This indicates that MobiLink server is busy and successfully processing the job.

Selection border Select a color from the dropdown list for the border of the utilization graph. By default, the border is Black.

Grid lines Select a color from the dropdown list for the grid lines. By default, the grid lines are Light Gray.

Graph background Select a color from the dropdown list for the graph background. By default, the graph background is White.

Use antialiasing to smooth graph Antialiasing is a technique used to make graphics look smoother. Selecting this option makes the graph look better, but it may be slower to draw.

See also

◆ “Utilization Graph pane” [*MobiLink - Server Administration*]

Options dialog: Chart Layout tab

This tab lets you configure the appearance and behavior of the Chart pane.

The Chart Layout tab of the Options dialog has the following components:

Minimum synchronization bar height Specifies the minimum display height for synchronization bars. Together with the Vertical Gap Between Synchronization Bars option, this determines the threshold for the Chart pane to have a vertical scroll bar.

The default minimum height of synchronization bars in the Chart pane is 5 pixels.

Vertical gap between synchronization bars Specifies how much relative vertical space should appear between synchronization bars in the Chart pane.

The default gap size between synchronization bars in the Chart pane is 150%.

Show horizontal chart ruler Select this option if you want to see the chart ruler showing the synchronization time. This option is selected by default.

Show vertical chart ruler Select this option if you want to see the chart ruler showing the data grouped by synchronization user. This option is selected by default.

Scroll chart automatically when connected Select this option if you want the chart to scroll automatically when you are connected to a MobiLink server. This option is selected by default.

If you want to see the complete date and time in the Chart pane, hover your cursor over the ruler.

Note

To restore the Monitor's default settings, delete the file *.mlMonitorSettings*. This file is stored in your user profiles directory.

Options dialog: Chart Colors tab

This tab lets you specify the colors used in the Chart pane.

The default color scheme for the Chart pane uses green for uploads, red for downloads, and blue for begin and end phases. A darker shade indicates earlier parts of a phase.

The Chart Colors tab of the Options dialog has the following components:

Sync request By default, the sync request phase is Gold.

Authenticate user By default, the authenticate user phase is Dark Green.

Begin synchronization By default, the begin synchronization phase is Ocean Blue.

Upload By default, the upload phase is Lime Green.

Prepare for download By default, the prepare for download phase is Dark Red.

Download By default, the download phase is Coral.

End synchronization By default, the end synchronization phase is Periwinkle.

Selected sync outline By default, the outline for a selected synchronization is Black.

Sync outline By default, synchronizations are outlined in Gray.

Chart background By default, the background of the Chart pane is White.

Note

To restore the Monitor's default settings, delete the file *.mlMonitorSettings*. This file is stored in your user profiles directory.

Options dialog: Overview tab

The Overview tab of the Options dialog has the following components:

Keep overview window attached to main window Clear this option if you want the Overview pane to be detached from the Chart pane.

Vertical gap between synchronization bars Specifies the relative size of the vertical gap that appears between synchronization bars in the Overview pane. The default size is 25%.

Colors for built-in watches Use the dropdown lists to choose the colors used to identify the components of predefined watches.

- ◆ **Active synchronizations** Select a color to identify synchronizations that are still active. By default, active synchronizations are Light Gray. You can also set the color for active synchronizations in the Edit Watch dialog.
- ◆ **Completed synchronizations** Select a color to identify synchronizations that have completed. By default, completed synchronizations are Light Gray. You can also set the color for completed synchronizations in the Edit Watch dialog.
- ◆ **Failed synchronizations** Select a color to identify failed synchronizations. By default, failed synchronizations are Red. You can also set the color for failed synchronizations in the Edit Watch dialog.

Chart region outline Select a color for the outline that is used to select synchronizations you want to appear in the Chart pane. By default, the chart outline is Black.

Overview background Select a background color for the Overview pane. By default, the background is White.

Note

To restore the Monitor's default settings, delete the file *.mlMonitorSettings*. This file is stored in your user profiles directory.

Sample property sheet: Sample tab

The Sample property sheet provides detailed statistics for time intervals. Each time interval is about one second long.

The Sample tab of the Sample property sheet has the following components:

Interval Shows information for the one-second time interval it represents.

- ◆ **Sample** Shows the number of the sample. Samples are numbered by the Monitor to reflect the order in which they were received.
- ◆ **Start time** Shows the start of a sample time period of approximately one second.
- ◆ **End time** Shows the end of a sample time period of approximately one second.

Statistics Shows the following columns:

- ◆ **Color** Shows the color used to represent the property.
- ◆ **Property** Shows the type of property. See “[MobiLink statistical properties](#)” [[MobiLink - Server Administration](#)].
- ◆ **Value** Shows the value of the property.
- ◆ **Limit** Shows the maximum allowed value for the property.

Note

The list of properties is obtained from the MobiLink server or the *.mlm* file that was opened, and it uses the language of the MobiLink server. Some characters may not display properly if the Monitor is using a different language.

Sample property sheet: Range tab

The Range tab shows averages or sums for the entire range of samples that were visible when the property sheet was opened. The Range statistics are not calculated until you click the Calculate button on the Range tab.

The Range tab of the Sample property sheet has the following components:

Interval Shows information for the one-second time interval it represents.

- ◆ **Samples** Shows the range of numbers for the samples. Samples are numbered by the Monitor to reflect the order in which they were received.
- ◆ **Start time** Shows the start of a sample time period for the range of samples.
- ◆ **End time** Shows the end of a sample time period for the range of samples.

Statistics Shows the following columns:

- ◆ **Color** Shows the color used to represent the property.
- ◆ **Property** Shows the type of property.
- ◆ **Value** Shows the average value of the property for the selected range.
- ◆ **Limit** Shows the maximum allowed value for the property.

Note

The list of properties is obtained from the MobiLink server or the *.mlm* file that was opened, and it uses the language of the MobiLink server. Some characters may not display properly if the Monitor is using a different language.

Session property sheet: General tab

The General tab of the Session property sheet has the following components:

Name The name of the file to which the session is saved. You name the session when you save it to a file (this can be done on the General tab of the Options dialog). If the session is not saved to a file, a name does not appear for the session.

Server The name of the server for the current session.

Server Language The language of the server.

Number of synchronizations The total number of synchronizations in the session.

Replaced synchronizations The number of synchronizations that have been replaced because of the maximum synchronization count. You can change the maximum synchronization count on the General tab of the Options dialog.

Monitor session started The date and time when the session started. If you opened a *.csv* file, this is the start time of the first synchronization.

Monitor session ended The date and time when the session ended. If you opened a *.csv* file, this is the end time of the last synchronization.

Monitor session duration The total length of the session. If you have opened a *.csv* file, this is the time between the start of the first synchronization and the last synchronization.

Session property sheet: Statistics tab

The Statistics tab of the Session property sheet has the following components:

Color Shows the color used to represent the property.

Property Shows the type of property.

Value Shows the value of the property.

Limit Shows the maximum allowed value for the property.

Note

The list of properties is obtained from the MobiLink server or the *.mlm* file that was opened, and it uses the language of the MobiLink server. Some characters may not display properly if the Monitor is using a different language.

Synchronization property sheet: General tab

The General tab of the Synchronization property sheet has the following components:

Overall Synchronization Statistics These statistics provide general information about the selected synchronization.

- ◆ **Sync** A unique number assigned to each synchronization within a session by the MobiLink Monitor.
- ◆ **User** The name of MobiLink client.
- ◆ **Version** The name of the synchronization version.
- ◆ **Start time** Date-time (in ISO-8601 extended format) for the start of the synchronization. The format is either `YYYY-MM-DD hh:mm:ss.sss` or `YYYY-MM-DD hh:mm:ss,sss`, depending on your locale setting.

This time may be later than when the synchronization was requested by the client.

- ◆ **End time** Date-time (in ISO-8601 extended format) for the end of the synchronization. The format is either `YYYY-MM-DD hh:mm:ss.sss` or `YYYY-MM-DD hh:mm:ss,sss`, depending on your locale setting.
- ◆ **Active** Yes if the synchronization is in progress, otherwise no.
- ◆ **Completed** Yes if the synchronization completed successfully, otherwise no.

Synchronization Phase Statistics These statistics provide information about each phase of the synchronization.

- ◆ **Sync request** The time between receiving a sync request and starting to authenticate the user.
- ◆ **Authenticate User** The time required to verify that a sync request has the correct format and to authenticate the user.
- ◆ **Begin synchronization** The time required for the `begin_synchronization` event.
- ◆ **Upload** The time required for the uploaded data to be applied to the consolidated database.
- ◆ **Prepare for download** The time required for the `prepare_for_download` event.
- ◆ **Download** The time required for data to be fetched from the consolidated database and downloaded to the remote database.
- ◆ **End synchronization** The time required for the `end_synchronization` event.

See also

- ◆ “MobiLink statistical properties” [[MobiLink - Server Administration](#)]

Synchronization property sheet: Upload tab

The Upload tab of the Synchronization property sheet has the following components:

Statistics for You can choose to view upload statistics for all the tables that were synchronized or for individual tables. If you have opened a *.csv* file, you cannot view statistics for individual tables.

Number of warnings Total number of warnings that occurred for the upload.

Number of errors Total number of errors that occurred for the upload.

Inserted rows Number of row insertions that were uploaded from the synchronization client.

Deleted rows Number of row deletions that were uploaded from the synchronization client.

Updated rows Number of row updates that were uploaded from the synchronization client.

Conflicted inserts Number of uploaded inserts for which conflicts were detected.

Conflicted deletes Number of uploaded deletes for which conflicts were detected.

Conflicted updates Number of uploaded updates for which conflicts were detected.

Ignored inserts Number of uploaded inserts that were ignored.

Ignored deletes Number of uploaded deletes that were ignored.

Ignored updates Number of uploaded updates that were ignored.

Total bytes Total number of bytes uploaded from the synchronization client.

Deadlocks Number of deadlocks in the consolidated database that were detected during the upload.

Total rows Total number of rows uploaded from the synchronization client.

See also

- ◆ [“MobiLink statistical properties” \[MobiLink - Server Administration\]](#)

Synchronization property sheet: Download tab

The Download tab of the Synchronization property sheet has the following components:

Statistics for You can choose to view download statistics for all the tables that were synchronized or for individual tables. If you have opened a *.csv* file, you cannot view statistics for individual tables.

Number of warnings Number of warnings that occurred during the download.

Number of errors Number of errors that occurred during the download.

Rows fetched Number of rows fetched from the consolidated database by the MobiLink server (using *download_cursor* scripts).

Rows for delete Number of row deletions fetched from the consolidated database by the MobiLink server (using *download_delete_cursor* scripts).

Filtered rows Number of fetched rows that were not downloaded to the MobiLink client because they matched rows that the client uploaded.

Total bytes Bytes downloaded to the synchronization client.

Total rows Total number of rows downloaded to the synchronization client.

See also

- ◆ [“MobiLink statistical properties” \[MobiLink - Server Administration\]](#)

Synchronization property sheet: Synchronization tab

The Synchronization tab of the Synchronization property sheet has the following components:

Statistics for You can choose to view synchronization statistics for all the tables that were synchronized or for individual tables. If you have opened a *.csv* file, you cannot view statistics for individual tables.

Number of warnings Total number of warnings that occurred for the synchronization.

Number of errors Total number of errors that occurred for the synchronization.

Deadlocks Total number of deadlocks that occurred for the synchronization.

Number of tables Number of client tables that were involved in the synchronization.

Connection retries Number of times the MobiLink server retried the connection to the consolidated database.

See also

- ◆ [“MobiLink statistical properties” \[MobiLink - Server Administration\]](#)

Watch Manager dialog

The Watch Manager allows you to visibly distinguish synchronizations that meet criteria you specify, such as synchronizations that receive warnings or take a long time.

The Watch Manager dialog has the following components:

Available watches list This pane lists all available watches. There are three predefined watches: Active, Completed, and Failed. When you create a new watch, it is added to this list of watches.

- ◆ **New** Opens the New Watch dialog where you can create a new watch.
- ◆ **Edit** Opens the Edit Watch dialog where you can add or remove watch conditions and configure the synchronization display of the selected watch. You can edit any watch in the Available Watches list. For the predefined watches (Active, Completed, and Failed), you can only change the Chart pattern and overview color.
- ◆ **Delete** Deletes the selected watch from the Available Watches pane.

Current watches list Lists the watches that are active in order of their precedence. These watches can be edited to change the way they appear, and you can deactivate them by removing them from the Current Watches pane.

The order of watches in the Current Watches pane is important. Watches that are closer to the top of the list are processed first. You can use the Move Up and Move Down buttons to organize the order of the watches in the Current Watches pane.

- ◆ **Move Up** Moves the selected watch up one position in the list in the Current Watches pane.
- ◆ **Move Down** Moves the selected watch down one position in the list in the Current Watches pane.

Add Adds the watch selected in the Available Watches pane to the list of Current Watches.

Remove Removes the selected watch from the list of Current Watches.

Add All Adds all the available watches to the Current Watches pane.

Remove All Removes all the watches from the Current Watches pane.

See also

- ◆ [“Customizing your statistics” \[MobiLink - Server Administration\]](#)

Query Editor Help

Contents

Introducing the Query Editor	268
Tables tab	270
Joins tab	272
Columns tab	274
INTO tab	275
WHERE tab	276
GROUP BY tab	277
HAVING tab	279
ORDER BY tab	280
Expression Editor	281
Results pane	283
SQL pane	284

About this chapter

This section describes the Query Editor, which is a tool for building and editing SQL queries.

Introducing the Query Editor

The Query Editor is a tool that helps you build SELECT statements. You can create SQL queries in the Query Editor, or you can import queries and edit them. When you have finished your query, click OK to export it back into Sybase Central or Interactive SQL for processing.

The Query Editor provides a series of tabs that guide you through the components of a SQL query, most of which are optional. The tabs are presented in the order that SQL queries are usually built:

Tab	Description
“Tables tab” on page 270	Use this tab to specify the tables in your query.
“Joins tab” on page 272	Use this tab to specify a join strategy for combining the data in the tables. If you include more than one table in your query, you should specify a join strategy for combining the data in the tables. If you do not specify a join strategy for tables you added in the Tables tab, the Query Editor suggests one; if there is a foreign key relationship between the tables, it generates a join condition based on that relationship, or it suggests a cross product. When you import queries, the Query Editor accepts exactly the join strategy that you have specified (and an unspecified JOIN is not defaulted to KEY JOIN, as it would be otherwise in SQL Anywhere).
“Columns tab” on page 274	Use this tab to specify the columns in your result set. If you do not specify columns, all columns appear.
“INTO tab” on page 275	Use this tab if you want to assign results to variables.
“WHERE tab” on page 276	Use this tab if you want to specify conditions for restricting the rows in your result set.
“GROUP BY tab” on page 277	Use this tab if you want to group rows in the result set.
“HAVING tab” on page 279	Use this tab to restrict the rows in your result set based on group values.
“ORDER BY tab” on page 280	Use this tab if you want to sort the rows.

The Query Editor also contains the following tools:

Dialog	Description
“Expression Editor” on page 281	Use the Expression Editor to build search conditions or define computed columns.
Derived table or subquery dialog	Use this dialog, which is nearly identical to the main Query Editor, to create derived tables and subqueries.

Each component of the Query Editor has context-sensitive online help that describes how to use the tab, and provides links into the SQL Anywhere documentation that explains relevant concepts and usage.

Using the Query Editor

To open the Query Editor, open Interactive SQL, connect to a database, and click Tools ► Edit Query. If you have SQL code selected in Interactive SQL, the selected code is automatically imported into the Query Editor.

When you finish creating a query in the Query Editor, click OK to write the query to the Interactive SQL Statements pane.

You do not need to use SQL code to create queries with the Query Editor. However, you can use SQL with the Query Editor in the following ways:

- ◆ You can create a query in the SQL Statements pane in Interactive SQL, and import it into the Query Editor by highlighting the code before you open the editor.
- ◆ At any time while using the Query Editor, you can click SQL at the bottom of the dialog to see the SQL code for the query you are building. You can directly edit the code, and the fields are automatically updated in the Query Editor user interface.

You can configure the Editor from Interactive SQL or Sybase Central so that the SQL is fully formed, meaning that all table and column names fully qualified and names are quoted. This extra formatting is not normally necessary, but it ensures that the SQL works in all situations. You can also choose to get a list of tables on startup.

Query Editor limitations

The Query Editor builds SQL Anywhere SELECT statements. It is not designed to create views, although you can create them in Interactive SQL and reference them in the Query Editor. Nor was it designed to create update statements or other non-SELECT SQL statements. It creates a single SELECT statement, so it does not build unions or intersects of SELECT statements. In addition, the Query Editor does not support Transact-SQL syntax.

More information

- ◆ For an introduction to selecting data, see [“Queries: Selecting Data from a Table” \[SQL Anywhere Server - SQL Usage\]](#).
- ◆ For reference documentation, see [“SELECT statement” \[SQL Anywhere Server - SQL Reference\]](#).
- ◆ For more information about selecting data, see [“Queries: Selecting Data from a Table” \[SQL Anywhere Server - SQL Usage\]](#).

Tables tab

Use the Tables tab to select the tables, derived tables, and views you want to include in your query. You can create derived tables using the Create a Derived Table button. You cannot create views in the Query Editor, but you can create them in Interactive SQL and reference them in the Query Editor.


Include tables that you want to get data from, and tables that you want to include in joins. If you include more than one table or view in your query, you should use the Joins tab to specify how the tables are to be joined.

Caution

If you are including more than one table in your query, and the tables are large, you should define a join strategy on the Joins tab after adding each table. The processing can become very slow if you do not change the join strategy because the Query Editor sometimes has to default to a cross product and the Query Editor processes your query as you work.

Dialog components

Table pattern To restrict the tables in the Matching Tables box, type the name or partial name of tables. You can use wildcard characters in the pattern. For example, to get only tables starting with SYS, type SYS%.

 For more information about using wild cards in the table pattern, see [“LIKE search condition” \[SQL Anywhere Server - SQL Reference\]](#).

Owner pattern To restrict the tables in the Matching Tables box, type the name or partial name of an owner. You can use wildcard characters in the pattern. For example, to get only tables starting with SYS, type SYS%.


 For more information about using wild cards in the owner pattern, see [“LIKE search condition” \[SQL Anywhere Server - SQL Reference\]](#).

Table type To restrict the tables in the Matching Tables box, choose a type of table from the dropdown list. For example, you can choose to view only system tables.

Matching tables This lists all the tables in the database that match the criteria above. The default is all tables.

Selected tables To add a table to your query, select a table in the Matching Tables box and click the right arrow. The table appears in the Selected Tables box. To create a derived table for your query, click the middle icon (between the two arrows). If you add more than one table, you should use the Joins tab to specify a join strategy. When you add tables to your query by specifying them in the Selected Tables box, they are joined by default as cross products.

Results Click Results at the bottom of the dialog to see the results of your query, or an error message if the query contains errors.

SQL Click SQL at the bottom of the dialog to see the fully-formed SQL code for your query. You will notice that this SQL looks a little different from the SQL you normally write.

About views and derived tables

You can add views and derived tables to your query, as well as tables.

A view is a SELECT statement that is stored in the database as an object. You cannot create views in the Query Editor, but you can create them in Interactive SQL and enter them as tables in the Query Editor.

You can create derived tables in the Query Editor. Derived tables allow you to nest queries within a FROM clause. With derived tables, you can perform grouping of groups, or you can construct a join with a group, without having to create a view.

More information

- ◆ For more information about the Query Editor, see [“Introducing the Query Editor” on page 268](#).
- ◆ For an introduction to specifying tables, see [“The FROM clause: specifying tables” \[SQL Anywhere Server - SQL Usage\]](#).
- ◆ For reference information about specifying tables, see [“FROM clause” \[SQL Anywhere Server - SQL Reference\]](#).
- ◆ For reference information about derived tables, see [“FROM clause” \[SQL Anywhere Server - SQL Reference\]](#).
- ◆ For an introduction to subqueries, see [“Using Subqueries” \[SQL Anywhere Server - SQL Usage\]](#).
- ◆ For more information about subqueries, see [“Subqueries in search conditions” \[SQL Anywhere Server - SQL Reference\]](#).

Joins tab

Use this tab if you have more than one table in your query.

When you include more than one table in a query, the tables must somehow be joined. This tab allows you to define your joins.

Default joins

When you specify tables in the Tables tab, the Query Editor tries to generate a default join condition. It does this for two reasons. First, the Query Editor processes the query as you create it. If there is no default join, the tables create a cross product, and this can result in slow processing. Secondly, the Query Editor suggests a join strategy that might work for you.

If you add tables in the Query Editor Tables tab, the Query Editor checks to see if a foreign key relationship has been created between the tables. If there is one foreign key, it uses it to generate an ON condition. If there is more than one foreign key relationship, it uses the first one it finds. If there are no foreign keys, it does not generate an ON clause and the tables become a cross product.

You can always review your query by clicking the SQL tab, which is located at the bottom of the Query Editor dialog. You can edit your join strategy directly on the SQL tab, or you can use the Joins tab user interface to change it.

☞ For more information about key joins, ON conditions, and cross products, see [“Joins: Retrieving Data from Several Tables” \[SQL Anywhere Server - SQL Usage\]](#).

Tip: All the fields in the Joins tab are resizable. You can also expand the Query Editor by pulling on its edges. You may need to resize the fields and dialog in order to read your table names.

Dialog components

Left table expression Select a table from the dropdown list. Only tables that have been entered in the Tables tab are available. Placing a table on the right or left is significant for outer joins.

Join type Select a join type from the dropdown list.

☞ For information about join types, see [“Joined tables” \[SQL Anywhere Server - SQL Usage\]](#).

Right table expression Select a table from the dropdown list. Only tables that have been entered in the Tables tab are available. Placing a table on the right or left is significant for outer joins.

Condition Double-click to create an ON condition, if desired. The Query Editor inserts the keyword ON. For key joins and natural joins, the ON condition is generated by SQL Anywhere.

☞ For information about ON conditions, see [“Explicit join conditions \(the ON clause\)” \[SQL Anywhere Server - SQL Usage\]](#).

Add/Delete Use to add or delete lines. Click the gray circle to the left of the line to select the line.

You must delete blank lines. This does not affect the tables in your query: to add or delete a table, use the Tables tab.

Results This pane displays the results of your query, or an error message if the query contains errors.

SQL Click SQL at the bottom of the dialog to see the SQL code for your query.

Using the joins tab

When you add more than one table to a query, the Query Editor attempts to create a default join strategy. If it cannot find a foreign key relationship between the tables, the default is a cross product. In most cases, cross products are not desirable.

To add or edit the join strategy, choose a table, a join type, and another table, all from the dropdown lists. Alternatively, click the SQL tab and edit the code directly.

Troubleshooting

If you receive an error message indicating that your join is not correct, click the SQL tab at the bottom of the window to review the SQL code. It may happen that empty quotation marks or extra commas have been inserted in your code, particularly if you have added and deleted lines on the Join tab. For example, the following query produces an error message. You need to delete the empty quotes that appear after *SalesOrders*:

```
FROM ("Customers"  
      JOIN "SalesOrders") ""  
      JOIN "SalesOrderItems"
```

More information

- ◆ For more information about the Query Editor, see [“Introducing the Query Editor” on page 268](#).
- ◆ For more information about joins, see [“Joins: Retrieving Data from Several Tables” \[SQL Anywhere Server - SQL Usage\]](#).

Columns tab

Use this tab to restrict the columns that appear in your result set. You can specify columns, column aliases, computed columns, or subqueries. You specify subqueries using the Expression Editor.

Dialog components

Available columns This box lists all the tables you have chosen for your query, and the columns in each table.

Selected columns By default, all columns are selected for your query. To delete a column, select it in the Selected Columns box and click the left arrow. To display a column in your result set, select a column or set of columns in the Available Columns box and click the right arrow. Use the up and down arrows to reorder the columns in the Selected Columns box.

If you select the same column more than once, an alias is applied. You can edit the alias name.

DISTINCT Select DISTINCT if you want to eliminate duplicate rows from your result set.

Note: Many statements take significantly longer to execute when DISTINCT is specified, so you should reserve DISTINCT for cases where it is necessary. In addition, DISTINCT treats nulls as duplicates, so when you select DISTINCT, only one null is returned in the results.

Limit rows You can choose to retrieve only the first row of the result set, or only the number of rows that you specify. No matter what you choose, the maximum number of rows that appear in the Query Editor is 25.

Results Click Results at the bottom of the dialog to see the results of your query, or an error message if the query contains errors.

SQL Click SQL at the bottom of the dialog to see the SQL code for your query.

Adding a subquery

To add a subquery in the Query Editor, click the Add a Computed Column button, which is located between the lists of columns. The Expression Editor appears. In the Expression Editor, click the Subquery button, which is located beside the Not button.

More information

- ◆ For more information about the Query Editor, see [“Introducing the Query Editor” on page 268](#).
- ◆ For information about selecting columns, see [“The SELECT list: specifying columns” \[SQL Anywhere Server - SQL Usage\]](#).
- ◆ For more information about creating subqueries, see [“Expression Editor” on page 281](#).

INTO tab

Use this tab if you want to assign results to variables.

Dialog components

Include INTO variables Select this option if you want to edit the variable names in the INTO variables column.

Selected columns This box lists all the columns you have chosen for your query.

INTO variables This is a list of variables to receive the value for each select list item. You can type the variable names directly into the fields.

Results Click Results at the bottom of the dialog to see the results of your query, or an error message if the query contains errors.

SQL Click SQL at the bottom of the dialog to see the SQL code for your query.

About INTO

INTO is used in procedures and triggers only. It specifies where the result set goes. There must be one variable for each column.

More information

- ◆ For more information about the Query Editor, see [“Introducing the Query Editor” on page 268](#).

WHERE tab

Use this tab to restrict the rows in your result set.

Dialog components

Criteria Use the Criteria pane to enter your WHERE conditions. You can type directly into this pane, or use the Expression Editor. To edit existing expressions, highlight the expression before you open the Expression Editor. Otherwise, what you create in the Expression Editor is appended to previously existing expressions.

Expression Editor Click the Calculator icon, located in the bottom right of the Criteria pane, to open the Expression Editor and build your WHERE condition.

Results Click Results at the bottom of the dialog to see the results of your query, or an error message if the query contains errors.

SQL Click SQL at the bottom of the dialog to see the SQL code for your query.

More information

- ◆ For more information about the Query Editor, see [“Introducing the Query Editor”](#) on page 268.
- ◆ For an introduction to search conditions, see [“The WHERE clause: specifying rows”](#) [*SQL Anywhere Server - SQL Usage*].
- ◆ For more information about search conditions, see [“Search conditions”](#) [*SQL Anywhere Server - SQL Reference*].

GROUP BY tab

Use this tab if you want to group rows in the result set.

Dialog components

Available columns This box lists all the tables you have chosen for your query, and the columns in each table.

GROUP BY columns To group by a column, select a column or set of columns in the Available Columns box and click the right arrow. To delete a column, select it in the GROUP BY Columns box and click the left arrow. Use the up and down arrows to scroll through the columns in the GROUP BY Columns box.

Expression Editor Click the Calculator icon, located between the right and left arrows, to open the Expression Editor and build your GROUP BY condition.

CUBE button Click this button to create a CUBE operation query. CUBE adds subtotal rows into the result sets of queries with GROUP BY clauses, providing all possible combinations of the variables specified in the query.

ROLLUP button Click this button to create a ROLLUP operation query. ROLLUP adds subtotal rows into the result sets of queries with GROUP BY clauses.

Set button Click this button to create a concatenated grouping sets operation query. Like ROLLUP and CUBE, this operation adds subtotal rows into the result sets of queries with GROUP BY clauses.

GROUPING SETS Select this option to add GROUPING SETS to a query.

Results Click the Results tab at the bottom of the dialog to see the results of your query, or an error message if the query contains errors.

SQL Click the SQL tab at the bottom of the dialog to see the SQL code for your query.

About GROUP BY conditions

You can group by columns, alias names, or functions. The result of the query contains one row for each distinct set of values in the named columns, aliases, or functions. All null-containing rows are treated as a single set. The resulting rows are often referred to as groups since there is one row in the result for each group of rows from the table list. Aggregate functions can then be applied to these groups to get meaningful results.

When GROUP BY is used, the Columns tab, HAVING tab, and ORDER BY tab must not reference any identifier that is not named in the GROUP BY tab. The exception is that the Columns tab and HAVING tab may contain aggregate functions.

More information

- ◆ For more information about the Query Editor, see [“Introducing the Query Editor” on page 268](#).
- ◆ For an introduction to GROUP BY, see [“Applying aggregate functions to grouped data” \[SQL Anywhere Server - SQL Usage\]](#).
- ◆ For more information about GROUP BY, see [“The GROUP BY clause: organizing query results into groups” \[SQL Anywhere Server - SQL Usage\]](#).

- ◆ For more information about ROLLUP, see [“Using ROLLUP” \[SQL Anywhere Server - SQL Usage\]](#).
- ◆ For more information about CUBE, see [“Using CUBE” \[SQL Anywhere Server - SQL Usage\]](#).
- ◆ For more information about GROUPING SETS, see [“GROUP BY GROUPING SETS” \[SQL Anywhere Server - SQL Usage\]](#).

HAVING tab

Use this tab to restrict the rows in your result set based on group values.

Dialog components

Criteria Use the Criteria pane to enter your HAVING conditions. You can type directly into this pane, or use the Expression Editor. To edit existing expressions, highlight the expression before you open the Expression Editor. Otherwise, what you create in the Expression Editor is appended to previously existing expressions.

Expression Editor Click the Calculator icon, located in the bottom right of the Criteria pane, to open the Expression Editor and build your HAVING condition.

Results Click Results at the bottom of the dialog to see the results of your query, or an error message if the query contains errors.

SQL Click SQL at the bottom of the dialog to see the SQL code for your query.

About HAVING conditions

HAVING conditions can only be used if either the statement has a GROUP BY clause or the selected columns in the Columns tab include only aggregate functions. Any column names referenced in the HAVING clause must either be in the GROUP BY clause or be used as a parameter to an aggregate function in the HAVING clause.

More information

- ◆ For more information about the Query Editor, see [“Introducing the Query Editor” on page 268](#).
- ◆ For an introduction to HAVING, see [“Applying aggregate functions to grouped data” \[SQL Anywhere Server - SQL Usage\]](#).
- ◆ For more information about HAVING, see [“The HAVING clause: selecting groups of data” \[SQL Anywhere Server - SQL Usage\]](#).

ORDER BY tab

Use this tab to sort the rows in your result set.

Dialog components

Available columns This box lists all the tables you have chosen for your query, and the columns in each table. It also lists any computed columns that you defined in the Columns tab.

ORDER BY columns This box stores the columns you have chosen to sort on. To sort on a column, select a column or set of columns in the Available Columns box and click the right arrow. To delete a column, select it in the ORDER BY Columns box and click the left arrow. Use the up and down arrows to specify the order of column evaluation. You can sort on column aliases.

Expression Editor Click the Calculator icon, located between the right and left arrows, to open the Expression Editor and build your ORDER BY condition.

Results Click Results at the bottom of the dialog to see the results of your query, or an error message if the query contains errors.

SQL Click SQL at the bottom of the dialog to see the SQL code for your query.

About ORDER BY conditions

Each item in the ORDER BY list can be labeled as an up arrow for ascending order (the default) or a down arrow for descending order. To change the order from ascending to descending, click the arrow.

The only way to ensure that rows are returned in a particular order is to use ORDER BY. In the absence of an ORDER BY clause, SQL Anywhere returns rows in whatever order is most efficient. This means that the appearance of result sets may vary depending on when you last accessed the row and other factors.

More information

- ◆ For more information about the Query Editor, see [“Introducing the Query Editor” on page 268](#).
- ◆ For an introduction to ORDER BY, see [“The ORDER BY clause: ordering results” \[SQL Anywhere Server - SQL Usage\]](#).
- ◆ For more information about ORDER BY, see [“The ORDER BY clause: sorting query results” \[SQL Anywhere Server - SQL Usage\]](#) and [“Strategic sorting of query results” \[SQL Anywhere Server - SQL Usage\]](#).

Expression Editor

The Expression Editor helps you create search conditions, computed columns, and subqueries. To edit existing expressions, highlight the expression before you open the Expression Editor. Otherwise, what you create in the Expression Editor is appended to previously existing expressions when you click OK.

Dialog components

Expression This is where you build your expression.

Columns This box lists the columns that are in your query. To insert a column into your expression, double-click it here, or type it directly into the Expression box.


Functions Functions are predefined expressions used to return information about the database. To insert a function into your expression, choose it from the dropdown list.

 For information about functions, see “[UltraLite SQL Function Reference SQL Functions](#)” [[SQL Anywhere Server - SQL Reference](#)].


Stored Procedures This box lists the stored procedures that you can use.

Numeric keypad The numeric keypad is located in the bottom left section of the dialog. Click a number to insert it into the expression. You can also type numbers from your keyboard.

Comparison operators These arithmetic symbols, such as =, appear in the middle of the bottom section of the dialog. Click a symbol to insert it into the expression. Only a subset of common operators are included here, but you can type others from your keyboard.

 For information about comparison operators, see “[Comparison operators](#)” [[SQL Anywhere Server - SQL Reference](#)].

Logical operators Logical operators, such as AND, appear in the right bottom section of the dialog. Click an operator to insert it into the expression. This group is a subset of commonly used logical operators. You can use any logical operator by typing it from your keyboard.

 For information about logical operators, see “[Logical operators](#)” [[SQL Anywhere Server - SQL Reference](#)].

Create a subquery button The subquery button is located with the logical operators. Click it to access a dialog that guides you in creating subqueries.

Adding a subquery

To create a subquery, open the Expression Editor and click the Subquery button (located next to the NOT button). This opens the Subquery dialog, which looks identical to the main Query Editor except that the word Subquery is in the title bar. You create a subquery just as you create a main query.

Editing a subquery

To edit a subquery in the Query Editor, highlight the subquery in the Criteria box, and click the Expression Editor button. Highlight the code in the Expression Editor, and click the Subquery button.

More information

- ◆ For more information about the Query Editor, see [“Introducing the Query Editor”](#) on page 268.
- ◆ For more information about search conditions, see [“Search conditions”](#) [*SQL Anywhere Server - SQL Reference*].
- ◆ For more information about subqueries, see [“Subqueries in search conditions”](#) [*SQL Anywhere Server - SQL Reference*].

Results pane

This pane shows you your result set or an error message. By default, you get only the first 25 rows of your result set. To see the entire result set, export your query back to Interactive SQL by clicking OK.

More information

- ◆ For more information about the Query Editor, see [“Introducing the Query Editor” on page 268](#).
- ◆ For a complete list of error messages, see [SQL Anywhere 10 - Error Messages \[*SQL Anywhere 10 - Error Messages*\]](#).

SQL pane

This pane shows you the SQL code as it is developed. You can directly edit the code, and the fields are automatically updated in the Query Editor user interface.

You will notice that this SQL looks a little different from the SQL you normally write. This SQL is fully formed, meaning that all tables are prefixed with owner name, all strings are enclosed in quotation marks, and so on. This extra formatting is not normally necessary, but it ensures that the SQL works in all situations.

More information

- ◆ For more information about the Query Editor, see [“Introducing the Query Editor” on page 268](#).

CHAPTER 11

SQL Anywhere Console Utility Help

Contents

Using the SQL Anywhere Console utility	286
Console options	287
Connection Viewer	288
Message Viewer	289
Property Viewer	290
Check For Updates	291

About this chapter

This chapter contains help for the SQL Anywhere Console (dbconsole) utility.

Using the SQL Anywhere Console utility

The SQL Anywhere Console utility provides administration and monitoring facilities for database server connections.

The SQL Anywhere Console is available on all supported platforms except Windows CE, AIX, HP-UX, HP-UX Itanium, and Linux Itanium. On these platforms, you can use the connection-level, server-level, and database-level properties to obtain information or you can monitor your server from a computer running an operating system that supports the SQL Anywhere Console (such as Windows 95/98/Me, Windows NT/2000/XP, Mac OS X, or Linux).

☞ For more information about the SQL Anywhere Console utility, see [“The SQL Anywhere Console utility” \[SQL Anywhere Server - Database Administration\]](#).

Console options

You can set the following options for the SQL Anywhere Console utility:

Disable new connections Select this option to prevent other users from connecting to the database. The may be useful for some maintenance operations.

Enable request logging Select this option to record requests that the server processes to the log file. This option is primarily for troubleshooting purposes.

☞ For more information, see “-zr server option” [[SQL Anywhere Server - Database Administration](#)].

Remember last statement Select this option to instruct the database server to capture the most recently-prepared SQL statement for each connection to databases on the server. For stored procedure calls, only the outermost procedure call appears, not the statements within the procedure.

☞ For more information, see “-zl server option” [[SQL Anywhere Server - Database Administration](#)].

Idle client shutdown time Select this option to disconnect connections that have not submitted a request for the amount of time specified in the adjacent field. By default, this value is 120 seconds.

Quitting time You can type a time when the database server is to shut down. Use the same format as the current time, which is as follows:

YYYY-MM-DD HH:NN:SS.SS

Current time Displays the current time.

Log messages to file Select this option to log server messages to a file that you specify in the field below. You can click Browse to locate a file to which server messages are logged.


See also

- ◆ “sa_server_option system procedure” [[SQL Anywhere Server - SQL Reference](#)]
- ◆ “Server-level properties” [[SQL Anywhere Server - Database Administration](#)]

Connection Viewer

You can set the following options for the Connection Viewer:

Select which connection properties to display Shows the name and description of all connection properties. Select the connection properties you want to appear by placing a checkmark in the checkbox beside the property name.

 For more information about the connection properties in this list, see [“Connection-level properties” \[SQL Anywhere Server - Database Administration\]](#).

Refresh rate Type a time to specify how often the values are refreshed for selected properties. By default, values are refreshed every 4 seconds.

Message Viewer

Setting these options configures the Message Viewer in all places it can be viewed, including the Messages Pane in the SQL Anywhere Console utility, and the Server Messages and Executed SQL pane in Sybase Central.

You can set the following options for the Message Viewer:

Messages only Select if you only want messages to appear in the Message Viewer.

Time and messages Select this option if you want the date and time for each message to appear in the Message Viewer.

Refresh rate Type a time to specify how often the values are refreshed for selected properties. By default, values are refreshed every 4 seconds.


Property Viewer

You can set the following options for the Property Viewer:

Database Properties

You can set the following options for database properties:

Select which database properties to display Shows the name and description of all database properties. Select the database properties you want to appear by placing a checkmark in the checkbox beside the property name.


 For more information about database properties, see “[Database-level properties](#)” [*SQL Anywhere Server - Database Administration*].

Refresh rate Type a time to specify how often the values are refreshed for selected properties. By default, values are refreshed every 4 seconds.

Server Properties

You can set the following options for server properties:

Select which server properties to display Shows the name and description of all database server properties. Select the database server properties you want to appear by placing a checkmark in the checkbox beside the property name.

 For more information about server properties, see “[Server-level properties](#)” [*SQL Anywhere Server - Database Administration*].

Refresh rate Type a time to specify how often the values are refreshed for selected properties. By default, values are refreshed every 4 seconds.

Check For Updates

You can configure whether the SQL Anywhere Console utility should check for software updates and how often it should do so. Checking for updates is done on application startup.

You can check for updates any time from the Start menu by choosing Programs ► SQL Anywhere 10 ► Check For Updates and from the Sybase Central, Interactive SQL, and Console utility Help menus.

The Check For Updates tab of the Options dialog in the SQL Anywhere Console utility has the following components:

When to check for updates Choose one of the following options to specify how often the SQL Anywhere Console utility should check for updates. By default, Never is selected.

- ◆ **On application startup** Select this option if you want the SQL Anywhere Console utility to check for updates each time it is launched.
- ◆ **Daily** Select this option if you want the SQL Anywhere Console utility to check for updates the first time it is started each day.
- ◆ **Weekly** Select this option if you want SQL Anywhere to check for updates the first time the SQL Anywhere Console utility is started each week.
- ◆ **Monthly** Select this option if you want the SQL Anywhere Console utility to check for updates the first time it is started each month.
- ◆ **Never** Select this option if you do not want the SQL Anywhere Console utility to check for updates. This is the default setting.

What to check for Choose any combination of the following options to specify what types of updates the SQL Anywhere Console utility should check for. By default, all of the following options are selected.

- ◆ **Express Bug Fix** Select this option if you want the SQL Anywhere Console utility to check for Express Bug Fixes.

An express bug fix is a subset of the software with one or more bug fixes. The bug fixes are listed in the release notes for the update. Bug fix updates may only be applied to installed software with the same version number. Some testing has been performed on the software, but the software has not undergone full testing. You should not distribute these files with your application unless you have verified the suitability of the software yourself.

- ◆ **Maintenance Release** Select this option if you want the SQL Anywhere Console utility to check for maintenance releases of the software.

A maintenance release is a complete set of software that upgrades installed software from an older version with the same major version number (version number format is *major.minor.patch.build*). Bug fixes and other changes are listed in the release notes for the upgrade.

- ◆ **Other Information** Select this option to check for other information, such as new product releases or upcoming events.

CHAPTER 12

SQL Language Links

Contents

SQL syntax help	294
-----------------------	-----

About this chapter

This chapter provides a list of SQL statements that are available to users of SQL Anywhere. It also includes links to the SQL language elements, data types, and functions supported by SQL Anywhere.

SQL syntax help

The following list provides links into the SQL Anywhere documentation for the following topics: SQL language elements, SQL statements, data types, and functions that are available to users of SQL Anywhere.

SQL data types

- [“Character data types” \[SQL Anywhere Server - SQL Reference\]](#)
- [“Numeric data types” \[SQL Anywhere Server - SQL Reference\]](#)
- [“Money data types” \[SQL Anywhere Server - SQL Reference\]](#)
- [“Bit array data types” \[SQL Anywhere Server - SQL Reference\]](#)
- [“Date and time data types” \[SQL Anywhere Server - SQL Reference\]](#)
- [“Binary data types” \[SQL Anywhere Server - SQL Reference\]](#)
- [“Domains” \[SQL Anywhere Server - SQL Reference\]](#)
- [“Data type conversions” \[SQL Anywhere Server - SQL Reference\]](#)
- [“Java and SQL data type conversion” \[SQL Anywhere Server - SQL Reference\]](#)

SQL functions

- [“Function types” \[SQL Anywhere Server - SQL Reference\]](#)
- [“Alphabetical list of functions” \[SQL Anywhere Server - SQL Reference\]](#)

SQL language elements

- [“Keywords” \[SQL Anywhere Server - SQL Reference\]](#)
- [“Identifiers” \[SQL Anywhere Server - SQL Reference\]](#)
- [“Strings” \[SQL Anywhere Server - SQL Reference\]](#)
- [“Constants” \[SQL Anywhere Server - SQL Reference\]](#)
- [“Operators” \[SQL Anywhere Server - SQL Reference\]](#)
- [“Expressions” \[SQL Anywhere Server - SQL Reference\]](#)
- [“Search conditions” \[SQL Anywhere Server - SQL Reference\]](#)
- [“Special values” \[SQL Anywhere Server - SQL Reference\]](#)
- [“Variables” \[SQL Anywhere Server - SQL Reference\]](#)
- [“Comments” \[SQL Anywhere Server - SQL Reference\]](#)
- [“NULL value” \[SQL Anywhere Server - SQL Reference\]](#)

SQL statements

- [“Using the SQL statement reference” \[SQL Anywhere Server - SQL Reference\]](#)

“ALLOCATE DESCRIPTOR statement [ESQL]” [*SQL Anywhere Server - SQL Reference*]

“ALTER DATABASE statement” [*SQL Anywhere Server - SQL Reference*]

“ALTER DBSPACE statement” [*SQL Anywhere Server - SQL Reference*]

“ALTER DOMAIN statement” [*SQL Anywhere Server - SQL Reference*]

“ALTER EVENT statement” [*SQL Anywhere Server - SQL Reference*]

“ALTER FUNCTION statement” [*SQL Anywhere Server - SQL Reference*]

“ALTER INDEX statement” [*SQL Anywhere Server - SQL Reference*]

“ALTER MATERIALIZED VIEW statement” [*SQL Anywhere Server - SQL Reference*]

“ALTER PROCEDURE statement” [*SQL Anywhere Server - SQL Reference*]

“ALTER PUBLICATION statement [MobiLink] [SQL Remote]” [*SQL Anywhere Server - SQL Reference*]

“ALTER REMOTE MESSAGE TYPE statement [SQL Remote]” [*SQL Anywhere Server - SQL Reference*]

“ALTER SERVER statement” [*SQL Anywhere Server - SQL Reference*]

“ALTER SERVICE statement” [*SQL Anywhere Server - SQL Reference*]

“ALTER STATISTICS statement” [*SQL Anywhere Server - SQL Reference*]

“ALTER SYNCHRONIZATION SUBSCRIPTION statement [MobiLink]” [*SQL Anywhere Server - SQL Reference*]

“ALTER SYNCHRONIZATION USER statement [MobiLink]” [*SQL Anywhere Server - SQL Reference*]

“ALTER TABLE statement” [*SQL Anywhere Server - SQL Reference*]

“ALTER TRIGGER statement” [*SQL Anywhere Server - SQL Reference*]

“ALTER VIEW statement” [*SQL Anywhere Server - SQL Reference*]

“ATTACH TRACING statement” [*SQL Anywhere Server - SQL Reference*]

“BACKUP statement” [*SQL Anywhere Server - SQL Reference*]

“BEGIN statement” [*SQL Anywhere Server - SQL Reference*]

“BEGIN TRANSACTION statement [T-SQL]” [*SQL Anywhere Server - SQL Reference*]

“BREAK statement [T-SQL]” [*SQL Anywhere Server - SQL Reference*]

“CALL statement” [*SQL Anywhere Server - SQL Reference*]

“CASE statement” [*SQL Anywhere Server - SQL Reference*]

“CHECKPOINT statement” [*SQL Anywhere Server - SQL Reference*]

“CLEAR statement [Interactive SQL]” [*SQL Anywhere Server - SQL Reference*]

[“CLOSE statement \[ESQL\] \[SP\]” \[SQL Anywhere Server - SQL Reference\]](#)

[“COMMENT statement” \[SQL Anywhere Server - SQL Reference\]](#)

[“COMMIT statement” \[SQL Anywhere Server - SQL Reference\]](#)

[“CONFIGURE statement \[Interactive SQL\]” \[SQL Anywhere Server - SQL Reference\]](#)

[“CONNECT statement \[ESQL\] \[Interactive SQL\]” \[SQL Anywhere Server - SQL Reference\]](#)

[“CONTINUE statement \[T-SQL\]” \[SQL Anywhere Server - SQL Reference\]](#)

[“CREATE DATABASE statement” \[SQL Anywhere Server - SQL Reference\]](#)

[“CREATE DBSPACE statement” \[SQL Anywhere Server - SQL Reference\]](#)

[“CREATE DECRYPTED FILE statement” \[SQL Anywhere Server - SQL Reference\]](#)

[“CREATE DOMAIN statement” \[SQL Anywhere Server - SQL Reference\]](#)

[“CREATE ENCRYPTED FILE statement” \[SQL Anywhere Server - SQL Reference\]](#)

[“CREATE EVENT statement” \[SQL Anywhere Server - SQL Reference\]](#)

[“CREATE EXISTING TABLE statement” \[SQL Anywhere Server - SQL Reference\]](#)

[“CREATE EXTERNLOGIN statement” \[SQL Anywhere Server - SQL Reference\]](#)

[“CREATE FUNCTION statement” \[SQL Anywhere Server - SQL Reference\]](#)

[“CREATE INDEX statement” \[SQL Anywhere Server - SQL Reference\]](#)

[“CREATE LOCAL TEMPORARY TABLE statement” \[SQL Anywhere Server - SQL Reference\]](#)

[“CREATE MATERIALIZED VIEW statement” \[SQL Anywhere Server - SQL Reference\]](#)

[“CREATE MESSAGE statement \[T-SQL\]” \[SQL Anywhere Server - SQL Reference\]](#)

[“CREATE PROCEDURE statement” \[SQL Anywhere Server - SQL Reference\]](#)

[“CREATE PROCEDURE statement \[T-SQL\]” \[SQL Anywhere Server - SQL Reference\]](#)

[“CREATE PUBLICATION statement \[MobiLink\] \[SQL Remote\]” \[SQL Anywhere Server - SQL Reference\]](#)

[“CREATE REMOTE MESSAGE TYPE statement \[SQL Remote\]” \[SQL Anywhere Server - SQL Reference\]](#)

[“CREATE SCHEMA statement” \[SQL Anywhere Server - SQL Reference\]](#)

[“CREATE SERVER statement” \[SQL Anywhere Server - SQL Reference\]](#)

[“CREATE SERVICE statement” \[SQL Anywhere Server - SQL Reference\]](#)

[“CREATE STATISTICS statement” \[SQL Anywhere Server - SQL Reference\]](#)

[“CREATE SUBSCRIPTION statement \[SQL Remote\]” \[SQL Anywhere Server - SQL Reference\]](#)

“CREATE SYNCHRONIZATION SUBSCRIPTION statement [MobiLink]” [*SQL Anywhere Server - SQL Reference*]

“CREATE SYNCHRONIZATION USER statement [MobiLink]” [*SQL Anywhere Server - SQL Reference*]

“CREATE TABLE statement” [*SQL Anywhere Server - SQL Reference*]

“CREATE TRIGGER statement” [*SQL Anywhere Server - SQL Reference*]

“CREATE TRIGGER statement [T-SQL]” [*SQL Anywhere Server - SQL Reference*]

“CREATE VARIABLE statement” [*SQL Anywhere Server - SQL Reference*]

“CREATE VIEW statement” [*SQL Anywhere Server - SQL Reference*]

“DEALLOCATE statement” [*SQL Anywhere Server - SQL Reference*]

“DEALLOCATE DESCRIPTOR statement [ESQL]” [*SQL Anywhere Server - SQL Reference*]

“Declaration section [ESQL]” [*SQL Anywhere Server - SQL Reference*]

“DECLARE statement” [*SQL Anywhere Server - SQL Reference*]

“DECLARE CURSOR statement [ESQL] [SP]” [*SQL Anywhere Server - SQL Reference*]

“DECLARE CURSOR statement [T-SQL]” [*SQL Anywhere Server - SQL Reference*]

“DECLARE LOCAL TEMPORARY TABLE statement” [*SQL Anywhere Server - SQL Reference*]

“DELETE statement” [*SQL Anywhere Server - SQL Reference*]

“DELETE (positioned) statement [ESQL] [SP]” [*SQL Anywhere Server - SQL Reference*]

“DESCRIBE statement [ESQL]” [*SQL Anywhere Server - SQL Reference*]

“DESCRIBE statement [Interactive SQL]” [*SQL Anywhere Server - SQL Reference*]

“DETACH TRACING statement” [*SQL Anywhere Server - SQL Reference*]

“DISCONNECT statement [ESQL] [Interactive SQL]” [*SQL Anywhere Server - SQL Reference*]

“DROP statement” [*SQL Anywhere Server - SQL Reference*]

“DROP CONNECTION statement” [*SQL Anywhere Server - SQL Reference*]

“DROP DATABASE statement” [*SQL Anywhere Server - SQL Reference*]

“DROP EXTERNLOGIN statement” [*SQL Anywhere Server - SQL Reference*]

“DROP PUBLICATION statement [MobiLink] [SQL Remote]” [*SQL Anywhere Server - SQL Reference*]

“DROP REMOTE MESSAGE TYPE statement [SQL Remote]” [*SQL Anywhere Server - SQL Reference*]

“DROP SERVER statement” [*SQL Anywhere Server - SQL Reference*]

“DROP SERVICE statement” [*SQL Anywhere Server - SQL Reference*]

“DROP STATEMENT statement [ESQL]” [*SQL Anywhere Server - SQL Reference*]

“DROP STATISTICS statement” [[SQL Anywhere Server - SQL Reference](#)]

“DROP SUBSCRIPTION statement [SQL Remote]” [[SQL Anywhere Server - SQL Reference](#)]

“DROP SYNCHRONIZATION SUBSCRIPTION statement [MobiLink]” [[SQL Anywhere Server - SQL Reference](#)]

“DROP SYNCHRONIZATION USER statement [MobiLink]” [[SQL Anywhere Server - SQL Reference](#)]

“DROP VARIABLE statement” [[SQL Anywhere Server - SQL Reference](#)]

“EXCEPT operation” [[SQL Anywhere Server - SQL Reference](#)]

“EXECUTE statement [ESQL]” [[SQL Anywhere Server - SQL Reference](#)]

“EXECUTE statement [T-SQL]” [[SQL Anywhere Server - SQL Reference](#)]

“EXECUTE IMMEDIATE statement [SP]” [[SQL Anywhere Server - SQL Reference](#)]

“EXIT statement [Interactive SQL]” [[SQL Anywhere Server - SQL Reference](#)]

“EXPLAIN statement [ESQL]” [[SQL Anywhere Server - SQL Reference](#)]

“FETCH statement [ESQL] [SP]” [[SQL Anywhere Server - SQL Reference](#)]

“FOR statement” [[SQL Anywhere Server - SQL Reference](#)]

“FORWARD TO statement” [[SQL Anywhere Server - SQL Reference](#)]

“FROM clause” [[SQL Anywhere Server - SQL Reference](#)]

“GET DATA statement [ESQL]” [[SQL Anywhere Server - SQL Reference](#)]

“GET DESCRIPTOR statement [ESQL]” [[SQL Anywhere Server - SQL Reference](#)]

“GET OPTION statement [ESQL]” [[SQL Anywhere Server - SQL Reference](#)]

“GOTO statement [T-SQL]” [[SQL Anywhere Server - SQL Reference](#)]

“GRANT statement” [[SQL Anywhere Server - SQL Reference](#)]

“GRANT CONSOLIDATE statement [SQL Remote]” [[SQL Anywhere Server - SQL Reference](#)]

“GRANT PUBLISH statement [SQL Remote]” [[SQL Anywhere Server - SQL Reference](#)]

“GRANT REMOTE statement [SQL Remote]” [[SQL Anywhere Server - SQL Reference](#)]

“GRANT REMOTE DBA statement [MobiLink] [SQL Remote]” [[SQL Anywhere Server - SQL Reference](#)]

“GROUP BY clause” [[SQL Anywhere Server - SQL Reference](#)]

“HELP statement [Interactive SQL]” [[SQL Anywhere Server - SQL Reference](#)]

“IF statement” [[SQL Anywhere Server - SQL Reference](#)]

“IF statement [T-SQL]” [[SQL Anywhere Server - SQL Reference](#)]

“INCLUDE statement [ESQL]” [[SQL Anywhere Server - SQL Reference](#)]

“INPUT statement [Interactive SQL]” [*SQL Anywhere Server - SQL Reference*]

“INSERT statement” [*SQL Anywhere Server - SQL Reference*]

“INSTALL JAVA statement” [*SQL Anywhere Server - SQL Reference*]

“INTERSECT operation” [*SQL Anywhere Server - SQL Reference*]

“LEAVE statement” [*SQL Anywhere Server - SQL Reference*]

“LOAD STATISTICS statement” [*SQL Anywhere Server - SQL Reference*]

“LOAD TABLE statement” [*SQL Anywhere Server - SQL Reference*]

“LOCK TABLE statement” [*SQL Anywhere Server - SQL Reference*]

“LOOP statement” [*SQL Anywhere Server - SQL Reference*]

“MESSAGE statement” [*SQL Anywhere Server - SQL Reference*]

“OPEN statement [ESQL] [SP]” [*SQL Anywhere Server - SQL Reference*]

“OUTPUT statement [Interactive SQL]” [*SQL Anywhere Server - SQL Reference*]

“PARAMETERS statement [Interactive SQL]” [*SQL Anywhere Server - SQL Reference*]

“PASSTHROUGH statement [SQL Remote]” [*SQL Anywhere Server - SQL Reference*]

“PREPARE statement [ESQL]” [*SQL Anywhere Server - SQL Reference*]

“PREPARE TO COMMIT statement” [*SQL Anywhere Server - SQL Reference*]

“PRINT statement [T-SQL]” [*SQL Anywhere Server - SQL Reference*]

“PUT statement [ESQL]” [*SQL Anywhere Server - SQL Reference*]

“RAISERROR statement [T-SQL]” [*SQL Anywhere Server - SQL Reference*]

“READ statement [Interactive SQL]” [*SQL Anywhere Server - SQL Reference*]

“READTEXT statement [T-SQL]” [*SQL Anywhere Server - SQL Reference*]

“REFRESH MATERIALIZED VIEW statement” [*SQL Anywhere Server - SQL Reference*]

“REFRESH TRACING LEVEL statement” [*SQL Anywhere Server - SQL Reference*]

“RELEASE SAVEPOINT statement” [*SQL Anywhere Server - SQL Reference*]

“REMOTE RESET statement [SQL Remote]” [*SQL Anywhere Server - SQL Reference*]

“REMOVE JAVA statement” [*SQL Anywhere Server - SQL Reference*]

“REORGANIZE TABLE statement” [*SQL Anywhere Server - SQL Reference*]

“RESIGNAL statement” [*SQL Anywhere Server - SQL Reference*]

“RESTORE DATABASE statement” [*SQL Anywhere Server - SQL Reference*]

“RESUME statement” [*SQL Anywhere Server - SQL Reference*]

“RETURN statement” [[SQL Anywhere Server - SQL Reference](#)]

“REVOKE statement” [[SQL Anywhere Server - SQL Reference](#)]

“REVOKE CONSOLIDATE statement [SQL Remote]” [[SQL Anywhere Server - SQL Reference](#)]

“REVOKE PUBLISH statement [SQL Remote]” [[SQL Anywhere Server - SQL Reference](#)]

“REVOKE REMOTE statement [SQL Remote]” [[SQL Anywhere Server - SQL Reference](#)]

“REVOKE REMOTE DBA statement [SQL Remote]” [[SQL Anywhere Server - SQL Reference](#)]

“ROLLBACK statement” [[SQL Anywhere Server - SQL Reference](#)]

“ROLLBACK TO SAVEPOINT statement” [[SQL Anywhere Server - SQL Reference](#)]

“ROLLBACK TRANSACTION statement [T-SQL]” [[SQL Anywhere Server - SQL Reference](#)]

“ROLLBACK TRIGGER statement” [[SQL Anywhere Server - SQL Reference](#)]

“SAVE TRANSACTION statement [T-SQL]” [[SQL Anywhere Server - SQL Reference](#)]

“SAVEPOINT statement” [[SQL Anywhere Server - SQL Reference](#)]

“SELECT statement” [[SQL Anywhere Server - SQL Reference](#)]

“SET statement” [[SQL Anywhere Server - SQL Reference](#)]

“SET statement [T-SQL]” [[SQL Anywhere Server - SQL Reference](#)]

“SET CONNECTION statement [Interactive SQL] [ESQL]” [[SQL Anywhere Server - SQL Reference](#)]

“SET DESCRIPTOR statement [ESQL]” [[SQL Anywhere Server - SQL Reference](#)]

“SET OPTION statement” [[SQL Anywhere Server - SQL Reference](#)]

“SET OPTION statement [Interactive SQL]” [[SQL Anywhere Server - SQL Reference](#)]

“SET REMOTE OPTION statement [SQL Remote]” [[SQL Anywhere Server - SQL Reference](#)]

“SET SQLCA statement [ESQL]” [[SQL Anywhere Server - SQL Reference](#)]

“SETUSER statement” [[SQL Anywhere Server - SQL Reference](#)]

“SIGNAL statement” [[SQL Anywhere Server - SQL Reference](#)]

“START DATABASE statement” [[SQL Anywhere Server - SQL Reference](#)]

“START ENGINE statement [Interactive SQL]” [[SQL Anywhere Server - SQL Reference](#)]

“START JAVA statement” [[SQL Anywhere Server - SQL Reference](#)]

“START LOGGING statement [Interactive SQL]” [[SQL Anywhere Server - SQL Reference](#)]

“START SUBSCRIPTION statement [SQL Remote]” [[SQL Anywhere Server - SQL Reference](#)]

“START SYNCHRONIZATION DELETE statement [MobiLink]” [[SQL Anywhere Server - SQL Reference](#)]

“STOP DATABASE statement” [*SQL Anywhere Server - SQL Reference*]

“STOP ENGINE statement” [*SQL Anywhere Server - SQL Reference*]

“STOP JAVA statement” [*SQL Anywhere Server - SQL Reference*]

“STOP LOGGING statement [Interactive SQL]” [*SQL Anywhere Server - SQL Reference*]

“STOP SUBSCRIPTION statement [SQL Remote]” [*SQL Anywhere Server - SQL Reference*]

“STOP SYNCHRONIZATION DELETE statement [MobiLink]” [*SQL Anywhere Server - SQL Reference*]

“SYNCHRONIZE SUBSCRIPTION statement [SQL Remote]” [*SQL Anywhere Server - SQL Reference*]

“SYSTEM statement [Interactive SQL]” [*SQL Anywhere Server - SQL Reference*]

“TRIGGER EVENT statement” [*SQL Anywhere Server - SQL Reference*]

“TRUNCATE TABLE statement” [*SQL Anywhere Server - SQL Reference*]

“UNION operation” [*SQL Anywhere Server - SQL Reference*]

“UNLOAD statement” [*SQL Anywhere Server - SQL Reference*]

“UNLOAD TABLE statement” [*SQL Anywhere Server - SQL Reference*]

“UPDATE statement” [*SQL Anywhere Server - SQL Reference*]

“UPDATE (positioned) statement [ESQL] [SP]” [*SQL Anywhere Server - SQL Reference*]

“UPDATE statement [SQL Remote]” [*SQL Anywhere Server - SQL Reference*]

“VALIDATE statement” [*SQL Anywhere Server - SQL Reference*]

“WAITFOR statement” [*SQL Anywhere Server - SQL Reference*]

“WHENEVER statement [ESQL]” [*SQL Anywhere Server - SQL Reference*]

“WHILE statement [T-SQL]” [*SQL Anywhere Server - SQL Reference*]

“WINDOW clause” [*SQL Anywhere Server - SQL Reference*]

“WRITETEXT statement [T-SQL]” [*SQL Anywhere Server - SQL Reference*]

Index

A

- add service dependencies dialog
 - description, 104
- add service group dependencies dialog
 - description, 104
- add table mappings wizard
 - description, 172
- add tracing level dialog
 - description, 105
- add watch dialog
 - description, 132
- agent configuration dialog
 - description, 199
- article property sheet
 - about, 26
 - UltraLite, 208
- articles
 - property sheet, 26, 208

B

- breakpoints dialog
 - description, 132

C

- carrier property sheet
 - description, 147
- change settings dialog
 - description, 105
- change tracing level dialog
 - description, 106
- change user to consolidated user dialog
 - description, 107
- change user to remote user dialog
 - description, 107
- check constraint property sheet
 - about, 27
- check constraints
 - property sheet, 27
- check for updates tab
 - console [dbconsole] utility options dialog, 291
 - Interactive SQL options dialog, 236
- client
 - property sheet, 188

- client message store
 - property sheet, 189
- client property sheet
 - description, 188
- client store
 - property sheet, 189
- client store property sheet
 - description, 189
- Code Editor
 - configuring appearance, 232
- column permissions dialog
 - description, 108
- column property sheet
 - about, 29
 - MobiLink, 147
 - UltraLite, 208
- column property sheet (view)
 - about, 31
- columns
 - property sheet, 29, 147, 208
- columns (view)
 - property sheet, 31
- configuring
 - Interactive SQL, 227
 - SQL Anywhere Console [dbconsole] utility, 287
- connect dialog
 - advanced tab (MobiLink and QAnywhere), 11
 - advanced tab (SQL Anywhere), 10
 - advanced tab (UltraLite), 12
 - database tab (SQL Anywhere), 7
 - description, 1
 - identification tab (MobiLink and QAnywhere), 4
 - identification tab (SQL Anywhere), 2
 - identification tab (UltraLite), 6
- connect to MobiLink server dialog
 - description, 242
- connected user property sheet
 - about, 32
- connected users
 - property sheet, 32
- connection details dialog
 - description, 108
- connection script property sheet
 - about, 148
- connection scripts
 - property sheet, 148
- connection viewer
 - configuring, 288

- connector
 - property sheet, 190
- connector property sheet
 - description, 190
- console utility [dbconsole]
 - configuring, 287
 - connect dialog description, 1
 - options dialog, 287
 - preferences, 287
 - setting options, 287
- consolidated user options dialog
 - description, 109
- consolidated user property sheet
 - about, 33
- consolidated users
 - property sheet, 33
- conventions
 - documentation, x
 - file names in documentation, xii
- CREATE EVENT statement
 - schedule property sheet, 78
- create synchronization model
 - introduction, 162
 - wizard, 162
- create trigger condition dialog
 - description, 110
- CREATE TRIGGER statement
 - create trigger condition dialog, 110
- D**
- database options dialog
 - description, 110
- database property sheet
 - about, 35
 - description (ML plug-in), 148
 - UltraLite, 210
- databases
 - property sheet, 35, 210
- dbconsole utility
 - connect dialog description, 1
 - options dialog, 287
- dbspace property sheet
 - about, 39
- dbspaces
 - property sheet, 39
- debugger help
 - about, 132
- deploy synchronization model
 - wizard, 173
- deploy synchronization model wizard
 - introduction, 173
- dialog boxes
 - about, 104, 199, 217
 - add service dependencies, 104
 - add service group dependencies, 104
 - add tracing level, 105
 - add watch, 132
 - agent configuration, 199
 - breakpoints, 132
 - change settings, 105
 - change tracing level, 106
 - change user to consolidated user, 107
 - change user to remote user, 107
 - column permissions, 108
 - connect dialog, 1
 - connect dialogODBC configuration dialog, 13
 - connect to MobiLink server, 242
 - connection details, 108
 - consolidated user options, 109
 - create trigger condition, 110
 - database options, 110
 - debugger, 132
 - edit or add breakpoint, 133
 - edit trigger condition, 111
 - edit watch, 245
 - export to database, 248
 - filter objects by owner, 111
 - go to, 246
 - grant permissions, 112
 - graphical plan, 112
 - group options, 113
 - Interactive SQL, 224
 - Interactive SQL options, 227
 - Java source, 133
 - lookup procedure name, 225
 - lookup table name, 226
 - member, 203
 - MobiLink, 203
 - MobiLink Monitor, 239
 - MobiLink Monitor options, 249
 - new members, 113
 - new memberships, 114
 - new watch, 247
 - open analysis and connect to tracing database, 114
 - plug-in preferences, 116, 217

pre-allocate space for dbspace, 119
publisher options, 119
QAnywhere, 199
query rewrite optimization history, 120
recommendation, 120
remote user options, 121
rule editor, 204
sample properties, 258
set clustered index, 122
set consolidated user, 122
set publisher, 122
set service group, 123
SQL Anywhere, 104
SQL Anywhere Console [dbconsole] utility options, 287
SQL Anywhere plug-in options, 114
SQL statement, 123
SQL viewer options, 124
start database, 124
TLS encryption options, 21
trigger event, 125
UltraLite, 217
unload data, 126
update JAR file, 127
update Java class, 127
user options, 127, 217
watch manager, 265
Windows CE message types for SQL Remote, 128

dialogs
 export, 224

directory access server property sheet
 about, 40

directory access servers
 property sheet, 40

documentation
 conventions, x
 SQL Anywhere, viii

domain property sheet
 about, 40

domains
 property sheet, 40

E

edit or add breakpoint dialog
 description, 133

edit trigger condition dialog
 description, 111

edit watch dialog
 description, 245

editor tab
 Interactive SQL options dialog, 232

event property sheet
 about, 41

events
 property sheet, 41

export dialog
 description, 224

export to database dialog
 description, 248

Expression Editor
 Query Editor, 281

external login property sheet
 about, 42

external logins
 property sheet, 42

F

fast launcher
 setting port number, 228

feedback
 documentation, xv
 providing, xv

filter objects by owner dialog
 description, 111

foreign key property sheet
 description, 43
 UltraLite, 211

foreign keys
 property sheet, 43, 211

function property sheet
 description, 45

functions
 property sheet, 45

G

gateway property sheet
 description, 149

gateways
 property sheet, 149

general tab
 Interactive SQL options dialog, 227

global notification property sheet
 description, 153

go to dialog

- description, 246
- grant permissions dialog
 - description, 112
- graphical plan dialog
 - description, 112
- group options dialog
 - description, 113
- group property sheet
 - description, 46
- groups
 - property sheet, 46

I

- icons
 - used in manuals, xii
- import/export tab
 - Interactive SQL options dialog, 230
- Index Consultant
 - description, 134
- index property sheet
 - description, 47
 - UltraLite, 212
- indexes
 - property sheet, 47, 212
- install-dir
 - documentation usage, xii
- integrated login property sheet
 - description, 50
- integrated logins
 - property sheet, 50
- Interactive SQL
 - configuring, 227
 - connect dialog description, 1
 - dialogs, 224
 - export dialog, 224
 - options dialog, 227
 - preferences, 227
 - setting options, 227
 - tools menu, 224
- Interactive SQL help
 - about, 221

J

- JAR file property sheet
 - description, 49
- JAR files
 - property sheet, 49

- Java class property sheet
 - description, 49
- Java classes
 - property sheet, 49
- Java source dialog
 - description, 133

K

- Kerberos login property sheet
 - description, 50
- Kerberos logins
 - property sheet, 50

L

- login mapping property sheet
 - description, 50
- looking up
 - procedures, 225
- lookup procedure name dialog
 - description, 225
- lookup table name dialog
 - description, 226

M

- maintenance plan report
 - property sheet, 50
- maintenance plan report property sheet
 - description, 50
- member dialog
 - description, 203
- message
 - property sheet, 193
- message property sheet
 - description, 193
- message type property sheet
 - description, 50
- message types
 - property sheet, 50
- message viewer
 - configuring, 289
- messages tab
 - Interactive SQL options dialog, 230
- MobiLink admin help
 - about, 145
- MobiLink dialog
 - description, 203
- MobiLink model help

- about, 161
- MobiLink Monitor
 - connect to MobiLink server, 242
- MobiLink Monitor dialog boxes
 - about, 239
- MobiLink Monitor property sheets
 - about, 239
- MobiLink plug-in
 - connect dialog description, 1
- MobiLink plug-in preferences
 - property sheet, 155
- MobiLink plug-in preferences property sheet
 - description, 155
- MobiLink property sheets
 - introduction, 147
- MobiLink user property sheet
 - description, 51
- MobiLink users
 - property sheet, 51
- MobiLink wizards
 - MobiLink model mode, 162

N

- new members dialog
 - description, 113
- new memberships dialog
 - description, 114
- new watch dialog
 - description, 247
- newsgroups
 - technical support, xv
- Notifier property sheet
 - description, 153

O

- ODBC configuration dialog
 - advanced tab, 20
 - database tab, 17
 - DBMLSync tab, 21
 - description, 14
 - login tab, 16
 - network tab, 18
 - ODBC tab, 14
- ODBC data sources
 - ODBC configuration dialog, 14
- open analysis and connect to tracing database dialog
 - description, 114

- options
 - SQL Anywhere Console [dbconsole] utility, 287
- options dialog
 - configuring Interactive SQL, 227
 - configuring the MobiLink Monitor, 249
 - configuring the SQL Anywhere Console [dbconsole] utility, 287
 - configuring the SQL Anywhere plug-in, 114

P

- parameter property sheet
 - description, 58
- parameters
 - property sheet, 58
- plan tab
 - Interactive SQL options dialog, 231
- plug-in preferences dialog
 - description, 116
 - UltraLite, 217
- port number
 - fast launcher, 228
- pre-allocate space for dbspace dialog
 - description, 119
- preferences
 - Interactive SQL, 227
 - SQL Anywhere Console [dbconsole] utility, 287
- primary key
 - property sheet, 213
- primary key property sheet
 - UltraLite, 213
- primary key sheet
 - description, 59
- primary keys
 - property sheet, 59
- procedure property sheet
 - description, 60
- procedures
 - property sheet, 60
- projects
 - property sheet, 96
- property sheets
 - articles, 26, 208
 - carriers, 147
 - check constraint, 27
 - client store, 189
 - clients, 188
 - columns, 29, 147, 208

- columns (view), 31
- connected users, 32
- connection scripts, 148
- connector, 190
- consolidated users, 33
- databases, 35, 148, 210
- dbspaces, 39
- directory access server, 40
- domains, 40
- events, 41
- external logins, 42
- foreign keys, 43, 211
- functions, 45
- gateways, 149
- global notifications, 153
- groups, 46
- indexes, 47, 212
- integrated logins, 50
- introduction, 26, 188, 208
- JAR files, 49
- Java classes, 49
- Kerberos logins, 50
- login mappings, 50
- maintenance plan report, 50
- message, 193
- message types, 50
- MobiLink, 147
- MobiLink Monitor, 239
- MobiLink plug-in preferences, 155
- MobiLink users, 51
- Notifier, 153
- parameter properties, 58
- primary key, 59, 213
- procedures, 60
- proxy tables, 61
- publications, 63, 214
- publisher, 72
- QAnywhere, 188
- remote databases, 155
- remote procedures, 74
- remote servers, 75
- remote users, 76
- sample, 257
- schedules, 78
- server store, 194
- servers, 79
- session, 259
- SQL Anywhere, 26

- SQL Anywhere services, 82
- SQL Remote subscription, 84
- statistics, 85
- subscriptions, 156
- synchronization, 261
- synchronization model, 156
- synchronization subscription, 85
- synchronized tables, 156
- system triggers, 92
- table scripts, 157
- tables, 93, 157, 215
- triggers, 96
- UltraLite, 208
- UltraLite projects, 96
- UltraLite statements, 96
- unique constraints, 97, 213
- users, 158
- users (SQL Anywhere), 98
- users (UltraLite), 216
- versions, 158
- views, 99
- web services, 102
- property viewer
 - configuring, 290
- proxy table property sheet
 - description, 61
- proxy tables
 - property sheet, 61
- publication property sheet
 - description, 63
 - UltraLite, 214
- publications
 - property sheet, 63, 214
- publisher
 - property sheet, 72
- publisher options dialog
 - description, 119
- publisher property sheet
 - description, 72

Q

- QAnywhere dialog boxes
 - about, 199
- QAnywhere help
 - overview, 187
- Query Editor
 - Columns tab, 274

- Expression Editor, 281
- GROUP BY tab, 277
- HAVING tab, 279
- help, 267
- INTO tab, 275
- introducing, 268
- Joins tab, 272
- limitations, 269
- ORDER BY tab, 280
- Results pane, 283
- SQL pane, 284
- Tables tab, 270
- Transact-SQL not supported, 269
- troubleshooting joins, 273
- unions not supported, 269
- WHERE tab, 276
- query editor tab
 - Interactive SQL options dialog, 235
- query rewrite optimization history dialog
 - description, 120

R

- recommendation dialog
 - description, 120
- remote database property sheet
 - about, 155
- remote databases
 - property sheet, 155
- remote procedure property sheet
 - description, 74
- remote procedures
 - property sheet, 74
- remote server property sheet
 - description, 75
- remote servers
 - property sheet, 75
- remote user options dialog
 - description, 121
- remote user property sheet
 - description, 76
- remote users
 - property sheet, 76
- results
 - exporting from Interactive SQL, 224
- results tab
 - Interactive SQL options dialog, 228
- rule editor dialog

- description, 204

S

- sample properties dialog
 - range tab, 258
- sample property sheet
 - description, 257
- samples-dir
 - documentation usage, xii
- schedule property sheet
 - description, 78
- schedules
 - property sheet, 78
- server message store
 - property sheet, 194
- server property sheet
 - description, 79
- server store
 - property sheet, 194
- server store property sheet
 - description, 194
- servers
 - property sheet, 79
- service property sheet (SQL Anywhere)
 - description, 82
- services
 - property sheet (SQL Anywhere), 82
- session property sheet
 - description, 259
- set clustered index dialog
 - description, 122
- set consolidated user dialog
 - description, 122
- set publisher dialog
 - description, 122
- set service group dialog
 - description, 123
- setting options
 - Interactive SQL, 227
 - SQL Anywhere Console [dbconsole] utility, 287
- software
 - checking for updates, 236
- SQL Anywhere
 - documentation, viii
- SQL Anywhere Console utility [dbconsole]
 - configuring, 287
 - connect dialog description, 1

- dialog descriptions, 285
- options dialog, 287
- preferences, 287
- setting options, 287
- SQL Anywhere dialog boxes
 - about, 104
- SQL Anywhere help
 - overview, 25
- SQL Anywhere plug-in
 - connect dialog description, 1
- SQL Anywhere UltraLite help
 - overview, 207
- SQL language links
 - about, 293
- SQL Remote subscription property sheet
 - description, 84
- SQL Remote subscriptions
 - property sheet, 84
- SQL statement dialog
 - description, 123
- SQL statements pane
 - configuring appearance, 232
- SQL viewer options dialog
 - description, 124
- start database dialog
 - description, 124
- statistic property sheet
 - description, 85
- statistics
 - property sheet, 85
- subscription property sheet
 - about, 156
- subscriptions
 - property sheet, 156
- support
 - newsgroups, xv
- Sybase Central
 - connect dialog description, 1
 - dialog descriptions, 104, 199, 217
 - property sheet descriptions, 26, 188, 208
- synchronization model
 - property sheet, 156
- synchronization model property sheet
 - about, 156
- synchronization property sheet
 - description, 261
- synchronization subscription property sheet
 - description, 85

- synchronization subscriptions
 - property sheet, 85
- synchronized table property sheet
 - description, 156
- synchronized tables
 - property sheet, 156
- system trigger property sheet
 - description, 92
- system triggers
 - property sheet, 92

T

- table mappings
 - wizard, 172
- table property sheet
 - description, 93, 157
 - UltraLite, 215
- table script property sheet
 - about, 157
- table scripts
 - property sheet, 157
- tables
 - property sheet, 93, 157, 215
- technical support
 - newsgroups, xv
- TLS Encryption Options dialog
 - description, 21
- Tools menu
 - Interactive SQL, 224
- Transact-SQL
 - not supported in Query Editor, 269
- trigger conditions
 - create trigger condition dialog, 110
- trigger event dialog
 - description, 125
- trigger property sheet
 - description, 96
- triggers
 - create trigger condition dialog, 110
 - property sheet, 96
- troubleshooting
 - Query Editor runs slowly, 270
- typing completion
 - options dialog settings, 235

U

- UltraLite dialog boxes

- about, 217
- UltraLite plug-in
 - connect dialog description, 1
- UltraLite project property sheet
 - description, 96
- UltraLite projects
 - property sheet, 96
- UltraLite statement property sheet
 - description, 96
- unions
 - not supported in Query Editor, 269
- unique constraint property sheet
 - description, 97
 - UltraLite, 213
- unique constraints
 - property sheet, 97, 213
- unload data dialog
 - description, 126
- update JAR file dialog
 - description, 127
- update Java class dialog
 - description, 127
- user interface
 - dialog boxes, 104, 199, 217
 - property sheets, 26, 188, 208
- user options dialog
 - description, 127
 - UltraLite, 217
- user property sheet
 - description, 158
- user property sheet (SQL Anywhere)
 - description, 98
- user property sheet (UltraLite)
 - description, 216
- users
 - property sheet, 158
 - property sheet (SQL Anywhere), 98
 - property sheet (UltraLite), 216

V

- version property sheet
 - about, 158
- versions
 - property sheet, 158
- view property sheet
 - description, 99
- views

- property sheet, 99

W

- watch manager dialog
 - description, 265
- web services
 - property sheet, 102
- web services property sheet
 - description, 102
- Windows CE message types for SQL Remote dialog
 - description, 128
- wizards
 - add table mappings, 172
 - create synchronization model, 162
 - deploy synchronization model, 173
 - MobiLink Model mode, 162
