SQL Anywhere® Studio Help

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Contents

About This Manual

Subject	This manual provides context-sensitive help for the Connect dialog, the Query Editor, the MobiLink Monitor, the Console utility, the Index Consultant, and the Adaptive Server Anywhere debugger. It also contains context-sensitive help for all the property sheets and dialog boxes that are available in Sybase Central, as well as for MobiLink wizards.
Audience	This manual is for all users of Adaptive Server Anywhere.

SQL Anywhere Studio 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 Studio documentation

The SQL Anywhere Studio documentation is available in a variety of forms: in an online form that combines all books in one large help file; as separate PDF files for each book; and as printed books that you can purchase. The documentation consists of the following books:

- **Introducing SQL Anywhere Studio** This book provides an overview of the SQL Anywhere Studio database management and synchronization technologies. It includes tutorials to introduce you to each of the pieces that make up SQL Anywhere Studio.
- **What's New in SQL Anywhere Studio** This book is for users of previous versions of the software. It lists new features in this and previous releases of the product and describes upgrade procedures.
- **Adaptive Server Anywhere Getting Started** This book is for people new to relational databases or new to Adaptive Server Anywhere. It provides a quick start to using the Adaptive Server Anywhere database-management system and introductory material on designing, building, and working with databases.
- **Adaptive Server Anywhere Database Administration Guide** This book covers material related to running, managing, and configuring databases and database servers.
- **Adaptive Server Anywhere SQL User's Guide** 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.
- **Adaptive Server Anywhere SQL Reference Manual** This book provides a complete reference for the SQL language used by Adaptive Server Anywhere. It also describes the Adaptive Server Anywhere system tables and procedures.
- **Adaptive Server Anywhere Programming Guide** This book describes how to build and deploy database applications using the C, C++, and Java programming languages. Users of tools such as Visual Basic and PowerBuilder can use the programming interfaces provided by those tools. It also describes the Adaptive Server Anywhere ADO.NET data provider.

- **Adaptive Server Anywhere Error Messages** This book provides a complete listing of Adaptive Server Anywhere error messages together with diagnostic information.
- **SQL Anywhere Studio Security Guide** This book provides information about security features in Adaptive Server Anywhere databases. Adaptive Server Anywhere 7.0 was awarded a TCSEC (Trusted Computer System Evaluation Criteria) C2 security rating from the U.S. Government. This book may be of interest to those who wish to run the current version of Adaptive Server Anywhere in a manner equivalent to the C2-certified environment.
- **MobiLink Synchronization User's Guide** This book describes how to use the MobiLink data synchronization system for mobile computing, which enables sharing of data between a single Oracle, Sybase, Microsoft or IBM database and many Adaptive Server Anywhere or UltraLite databases.
- **MobiLink Synchronization Reference** This book is a reference guide to MobiLink command line options, synchronization scripts, SQL statements, stored procedures, utilities, system tables, and error messages.
- **iAnywhere Solutions ODBC Drivers** This book describes how to set up ODBC drivers to access consolidated databases other than Adaptive Server Anywhere from the MobiLink synchronization server and from Adaptive Server Anywhere remote data access.
- **SQL Remote User's Guide** This book describes all aspects of the SQL Remote data replication system for mobile computing, which enables sharing of data between a single Adaptive Server Anywhere or Adaptive Server Enterprise database and many Adaptive Server Anywhere databases using an indirect link such as e-mail or file transfer.
- **SQL Anywhere Studio Help** This book includes the context-sensitive help for Sybase Central, Interactive SQL, and other graphical tools. It is not included in the printed documentation set.
- **UltraLite Database User's Guide** This book is intended for all UltraLite developers. It introduces the UltraLite database system and provides information common to all UltraLite programming interfaces.
- **UltraLite Interface Guides** A separate book is provided for each UltraLite programming interface. Some of these interfaces are provided as UltraLite components for rapid application development, and others are provided as static interfaces for C, C++, and Java development.

In addition to this documentation set, PowerDesigner and InfoMaker include their own online documentation.

Documentation formats

SQL Anywhere Studio provides documentation in the following formats:

- **Online documentation** The online documentation contains the complete SQL Anywhere Studio documentation, including both 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 9 ➤ 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.

- **Printable books** The SQL Anywhere books are provided as a set of PDF files, viewable with Adobe Acrobat Reader.

  The PDF files are available on the CD ROM in the *pdf_docs* directory. You can choose to install them when running the setup program.

- **Printed books** The complete set of books is available from Sybase sales or from eShop, the Sybase online store. You can access eShop by clicking How to Buy ➤ eShop at *http://www.ianywhere.com*.

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 upper case, 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.

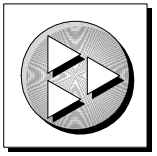
  [**QUOTES** { **ON** | **OFF** }]

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

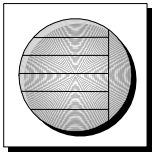
Graphic icons

The following icons are used in this documentation.

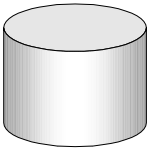
- A client application.



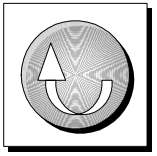
- A database server, such as Sybase Adaptive Server Anywhere.



- 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 Synchronization Server and the SQL Remote Message Agent.



- A programming interface.

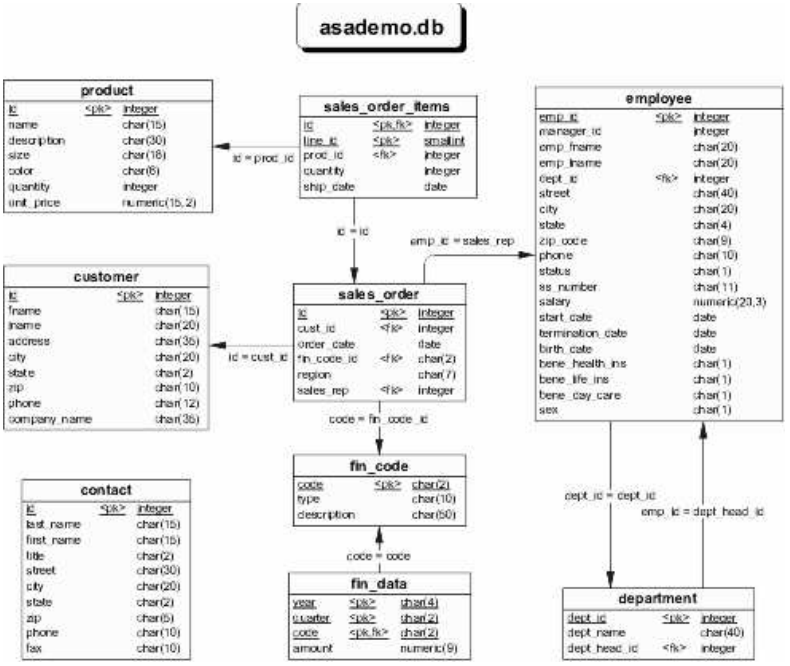
The Adaptive Server Anywhere sample database

Many of the examples throughout the documentation use the Adaptive Server Anywhere sample database.

The sample database is held in a file named *asademo.db*, and is located in your SQL Anywhere directory.

The sample database represents a small company. It contains internal information about the company (employees, departments, and finances) as well as product information and sales information (sales orders, customers, and contacts). All information in the database is fictional.

The following figure shows the tables in the sample database and how they relate to each other.



Finding out more and providing feedback

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

You can provide feedback on this documentation and on the software through newsgroups set up to discuss SQL Anywhere technologies. These newsgroups can be found 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.

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 insure 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.

CHAPTER 1

Connect Dialog Help

About this chapter

This chapter describes the Connect dialog used by Sybase Central, Interactive SQL, dbconsole, and the Adaptive Server Anywhere debugger.

Contents

Connect dialog: Identification tab

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

- **User ID** Type a user ID for the connection. For the sample database (asademo), the user ID is **DBA**. The user ID you supply must have permissions on a database in order to connect.

- **Password** Type a password for the connection. For the sample database (asademo), the password is **SQL**. The password must be the correct password for the user ID you supply.

  Extended characters used in passwords are case-sensitive, regardless of the database sensitivity setting.

  ☞ For more information about passwords and case sensitivity, see "Initialization utility options" [*ASA Database Administration Guide*, page 487].

- **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" [*ASA Getting Started*, page 163] from the dropdown list.

  ☞ For information about the DSN connection parameter, see "DataSourceName connection parameter [DSN]" [*ASA Database Administration Guide*, page 186].

  - **ODBC Administrator button** Click the ODBC 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" [*ASA Database Administration Guide*, page 53].

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.

- **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.

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.

Troubleshooting
If you use an ODBC data source and fail to connect, test your data source.

To test an ODBC data source, open the ODBC Data Source Administrator dialog (from the Start menu, choose Programs ➤ SQL Anywhere 9 ➤ Adaptive Server Anywhere ➤ ODBC Administrator).

On the User DSN tab of the ODBC Data Source Administrator dialog, select an ODBC data source from the list and click Configure. This opens the ODBC Configuration for Adaptive Server Anywhere dialog.

On the ODBC tab of the ODBC Configuration for Adaptive Server Anywhere dialog, click Test Connection. A dialog appears telling you whether or not the connection succeeds.

☞ For more information about ODBC data sources, see "Working with ODBC data sources" [*ASA Database Administration Guide*, page 53].

See also

"Simple connection examples" [*ASA Database Administration Guide*, page 45]

"Troubleshooting connections" [*ASA Database Administration Guide*, page 75]

"Troubleshooting server startup" [*ASA Database Administration Guide*, page 34]

"Troubleshooting network communications" [*ASA Database Administration Guide*, page 105]

Connect dialog: Database tab

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

- **Server name** Type the name of the Adaptive Server Anywhere personal server or network server. For example, **asademo**. 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 machine. If you do not have a default personal server and you omit the server name, the connection fails.

  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" [*ASA Database Administration Guide*, page 10].

- **Start line** The start line is a command to start a personal database server or a network server on your machine. 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\Sybase\SQL Anywhere 9\win32\dbeng9.exe**. Alternatively, you can select a recently used start line from the dropdown list.

  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 communications parameters.
  - 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" [*ASA Database Administration Guide*, page 10] and "The database server" [*ASA Database Administration Guide*, page 124].

- **Search network for database servers** Select this option if you want to connect to a server that is running on a machine other than your local machine. You should clear this option if you want to connect to a database server on your local machine.

- **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" [*ASA Database Administration Guide*, page 10] and "DatabaseName connection parameter [DBN]" [*ASA Database Administration Guide*, page 184].

- **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.

- **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.

  The Encryption key field is enabled only after you fill in the Database File field. If the database is strongly encrypted using AES or MDSR, you must specify a key in this field to access the database.

  You can also supply encryption options in the Start Line field.

  ☞ For more information about encryption keys, see "Encryption Key connection parameter [DBKEY]" [*ASA Database Administration Guide*, page 190].

- **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.

See also

- “Simple connection examples” [*ASA Database Administration Guide*, page 45]
- “Troubleshooting connections” [*ASA Database Administration Guide*, page 75]
- “Troubleshooting server startup” [*ASA Database Administration Guide*, page 34]
- “Troubleshooting network communications” [*ASA Database Administration Guide*, page 105]

Connect dialog: Advanced tab

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. 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"** 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.

  Tip
  You can specify a network protocol as a CommLinks connection parameter on this tab, but the protocols available depend on the driver you select. For jConnect, the TCP/IP protocol is used automatically.

  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" [*ASA Database Administration Guide*, page 174] and "How connection parameters work" [*ASA Database Administration Guide*, page 39].

- **Select a JDBC driver** Lets you choose the type of driver you want to use for the connection. All requests and commands you make when working with the database go through this driver. You have the following choices:
  - **iAnywhere JDBC driver** Select this option to use the iAnywhere JDBC driver to connect using an ODBC driver. It is the default driver when connecting from the MobiLink Sybase Central plug in.

    When you choose the iAnywhere JDBC driver, you must supply an ODBC data source, and only the items on the Identification tab are used to establish a connection.

    ☞ For more information about the iAnywhere JDBC driver, see "Using the iAnywhere JDBC driver" [*ASA Programming Guide*, page 115] and "Choosing a JDBC driver" [*ASA Programming Guide*, page 104].

☞ For more information about selecting a driver, see "Specifying a driver for your connection" [*ASA Database Administration Guide*, page 43].

- **jConnect 5** Select this option to use a JDBC driver called jConnect for JDBC (a Sybase product). This driver is platform-independent and offers the best performance. It supports all connection features, including the use of ODBC data sources. It is the recommended driver and is used by default unless you are connecting from the MobiLink Sybase Central plug-in.

See also

"Simple connection examples" [*ASA Database Administration Guide*, page 45]

"Troubleshooting connections" [*ASA Database Administration Guide*, page 75]

"Troubleshooting server startup" [*ASA Database Administration Guide*, page 34]

"Troubleshooting network communications" [*ASA Database Administration Guide*, page 105]

CHAPTER 2

Adaptive Server Anywhere Help

About this chapter

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

Contents

Introduction to property sheets

The Adaptive Server 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 Adaptive Server Anywhere 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.

Article property sheet

The Article property sheet consists of four tabs: General, Columns, WHERE Clause, and SUBSCRIBE BY Restriction.

See also "Publication design for Adaptive Server Anywhere" [*SQL Remote User's Guide*, page 102]

Article property sheet: General tab

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

- **Name** Shows the name of the article and the article's owner in parentheses.
- **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" on page 91

"Publication design for Adaptive Server Anywhere" [*SQL Remote User's Guide*, page 102]

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 for Adaptive Server Anywhere" [*SQL Remote User's Guide*, page 102]

Article property sheet: WHERE Clause tab

Articles defined for SQL Remote and MobiLink 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 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" [*ASA SQL Reference*, page 334]

"Publication design for Adaptive Server Anywhere" [*SQL Remote User's Guide*, page 102]

"The WHERE clause: specifying rows" [*ASA SQL User's Guide*, page 219]

Article property sheet: SUBSCRIBE BY Restriction tab

This tab only applies to SQL Remote articles.

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

- **None** Sets the article to avoid using SUBSCRIBE BY columns or clauses to partition rows.
- **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.

See also

"Publication design for Adaptive Server Anywhere" [*SQL Remote User's Guide*, page 102]

"CREATE PUBLICATION statement" [*ASA SQL Reference*, page 334]

Check Constraint property sheet

The Check Constraint property sheet consists of two tabs: General and Definition.

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 name of the check constraint in the adjacent 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" [*ASA SQL User's Guide*, page 24]

"Using CHECK constraints on tables" [*ASA SQL User's Guide*, page 86]

"Using CHECK constraints on columns" [*ASA SQL User's Guide*, page 85]

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.

See also

"Choosing constraints" [*ASA SQL User's Guide*, page 24]

"Using CHECK constraints on columns" [*ASA SQL User's Guide*, page 85]

"Using CHECK constraints on tables" [*ASA SQL User's Guide*, page 86]

Column property sheet

This Column property sheet displays information about columns that belong to a table. If you wish to view column properties for columns that belong a view, see "Column property sheet (View)" on page 15.

The Column property sheet for tables consists of four tabs: General, Data Type, Value, and Constraints.

See also "Working with tables" [*ASA SQL User's Guide*, page 37]

Column property sheet: General tab

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

- **Name** The name of the column. You can change the column name in the adjacent 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" [*ASA SQL User's Guide*, page 37]

Column property sheet: Data Type tab

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

- **Built-in type** Select this option 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.
  - **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]" [*ASA Database Administration Guide*, page 617].

- **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" [*ASA SQL Reference*, page 51].

- **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. If the database does not support Java, this option is not enabled.

See also

"Choosing data types for columns" [*ASA SQL User's Guide*, page 23]

"Using domains" [*ASA SQL User's Guide*, page 89]

"Ensuring Data Integrity" [*ASA SQL User's Guide*, page 75]

"Using Java in the Database" [*ASA Programming Guide*, page 81]

"Working with tables" [*ASA SQL User's Guide*, page 37]

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 is not a computed value and has no default 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** Lets you type a custom value (string, number, or other expression) for the default value. If you've based the column on a domain, you can retain the domain's default value (if any) or override it for the column.
  - **System-defined** Lets you 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" [*ASA SQL User's Guide*, page 81] and "CREATE TABLE statement" [*ASA SQL Reference*, page 361].

- **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" [*ASA SQL Reference*, page 250] and "Subqueries in expressions" [*ASA SQL Reference*, page 17].

See also

"SQL Functions" [*ASA SQL Reference*, page 83]

"Using column defaults" [*ASA SQL User's Guide*, page 79]

"Working with computed columns" [*ASA SQL User's Guide*, page 46]

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" [*ASA SQL User's Guide*, page 24]

"Ensuring Data Integrity" [*ASA SQL User's Guide*, page 75]

Column property sheet (View)

This Column property sheet displays information about columns that belong

to a view. If you wish to obtain information about columns that belong to a table, see “Column property sheet” on page 13.

The Column property sheet for views consists of one tab: General.

Column property sheet (View): General tab

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.

See also

“SQL Data Types” [*ASA SQL Reference*, page 51]

“Choosing constraints” [*ASA SQL User’s Guide*, page 24]

Connected User property sheet

The Connected User property sheet consists of two tabs: General and Extended Information.

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.
- **Type** Shows the type of object.
- **User** Shows the user ID.
- **Connection name** Shows the connection name for the database the user is connected to. Naming your connections allows multiple connections to the same database, or multiple connections to the same or different database server, to be easily identified.
- **Communication link** Shows the type of communications link used by the user’s connection. If the connection is between an Adaptive Server Anywhere client and network 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 is zero. If it is blocked, the connection number on which the connection is blocked due to a locking conflict.

See also "Managing connected users" [*ASA Database Administration Guide*, page 405]

"Connection-level properties" [*ASA Database Administration Guide*, page 647]

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** Provides a description of the selected property.

See also "Managing connected users" [*ASA Database Administration Guide*, page 405]

"Connection-level properties" [*ASA Database Administration Guide*, page 647]

Consolidated User property sheet

The Consolidated User property sheet consists of four tabs: General, Authorities, Permissions, and SQL Remote.

See also "Managing User IDs and Permissions" [*ASA Database Administration Guide*, page 389]

"Granting and revoking remote permissions" [*ASA Database Administration Guide*, page 402]

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.

  - **Password** Type the password for the consolidated user. For added security, the characters appear as asterisks.
  - **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.
- **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]" [*ASA SQL Reference*, page 460]

"Granting and revoking remote permissions" [*ASA Database Administration Guide*, page 402]

"Managing User IDs and Permissions" [*ASA Database Administration Guide*, page 389]

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 SQL Remote Message Agent should be run using a user ID with this type of authority to ensure that actions can be carried out without creating security loopholes. The MobiLink client utility, dbmlsync, also requires Remote DBA authority.

See also "Managing User IDs and Permissions" [*ASA Database Administration Guide*, page 389]

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 what 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" [*ASA Database Administration Guide*, page 389]

Consolidated User property sheet: SQL Remote tab

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

- **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 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]" [*ASA SQL Reference*, page 463]

Database property sheet

The Database property sheet consists of five tabs: General, Settings, Extended Information, SQL Remote, and Profiling.

See also "Working with databases" [*ASA SQL User's Guide*, page 27]

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" [*ASA SQL User's Guide*, page 539].

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 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. This value only appears for Adaptive Server Anywhere databases that are version 8 and higher.

  You can view a list of the capabilities that are enabled for the database on the Extended Information tab of the Database property sheet.
- **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.
- **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 allows multiple connections to the same database, or multiple connections to the same or different database server, to be easily identified.
- **Communication link** Shows the type of communications link used by the user's connection. If the connection is between an Adaptive Server Anywhere client and network 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" [*ASA Database Administration Guide,* page 664]

"Working with databases" [*ASA SQL User's Guide,* page 27]

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" [*ASA SQL User's Guide,* page 539].

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: Simple, AES, or MDSR. If encryption is not supported in the database, None appears.

  ☞ For information about the types of encryption supported by Adaptive Server Anywhere, see "Encrypting a database" [*SQL Anywhere Studio Security Guide,* page 16].
- **Case sensitive** Shows whether or not the database is case sensitive. This property applies to the data in the database, and to passwords, but not to table names, column names, and other identifiers.

- **Ignore trailing blanks** Shows whether the database ignores trailing blanks in comparisons.
- **Default collation** Shows the default collation of the database.
- **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.
- **Database Capabilities** Lists database capabilities. A green checkmark appears beside the capabilities that are enabled for the database. A red X appears beside capabilities that are not enabled for the database.

See also

"Working with databases" [*ASA SQL User's Guide*, page 27]

"Database-level properties" [*ASA Database Administration Guide*, page 664]

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** Provides a description of the property.

See also

"Working with databases" [*ASA SQL User's Guide*, page 27]

"Database-level properties" [*ASA Database Administration Guide*, page 664]

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** Type 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 User's Guide*, page 210].
- **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 then close** Sets the replication frequency so that the Message Agent runs once, sends all pending messages 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 User's Guide*, page 11]

Set Publisher dialog

Set Consolidated User dialog

Database property sheet: Profiling tab

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

- **Enable profiling on this database** Select this option if you want Adaptive Server 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.
  - **Reset Now** Deletes all the collected profiling data for the database. The database immediately starts collecting new profiling information about procedures, functions, events, and triggers.
  - **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.

See also

“Profiling database procedures” [*ASA SQL User’s Guide*, page 197]

Dbspace property sheet

The Dbspace property sheet consists of one tab: General.

Dbspace property sheet: General tab

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

- **Name** Shows the name of the dbspace.
- **Type** Shows the type of object.
- **File name** Shows the name of the database file that the dbspace points to. For new spaces, you can supply a new file name.
- **Pre-allocate Space Now** Displays the Pre-allocate Space for Dbspace dialog, which lets you pre-allocate storage in the dbspace by adding pages to it. Adding pages may improve performance for bulk-loading operations.

See also

“Pre-allocating space for database files” [*ASA Database Administration Guide*, page 258]

Pre-allocate Space for Dbspace dialog

Domain property sheet

The Domain property sheet consists of two tabs: General and Check Constraint.

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" [*ASA SQL Reference*, page 74]

Domain property sheet: Check Constraint tab

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

- **Check constraints list** Lets you define specified conditions on a column or set of columns to make up the check constraint of the table and restrict the values that can be entered in the column(s).

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

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

  ☞ For more information about check constraints, see "Using CHECK constraints on columns" [*ASA SQL User's Guide*, page 85].

See also "Using domains" [*ASA SQL User's Guide*, page 89]

"Choosing constraints" [*ASA SQL User's Guide*, page 24]

Event property sheet

The Event property sheet consists of two tabs: General and Conditions.

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.
- **Executes at** 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.
- **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" [*ASA SQL Reference*, page 304]

"Automating Tasks Using Schedules and Events" [*ASA Database Administration Guide*, page 267]

"Trigger Event dialog" on page 128

Event property sheet: Conditions tab

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

- **Manually** Executes the event only when you manually trigger it.
- **By the following schedules** Executes the event according to the schedule you define.
  - **New** Displays the Create Schedule dialog, which lets you create a new schedule for the event.

- **Edit** Displays the Edit Schedule dialog, which lets you change an existing schedule.
- **Delete** Removes the schedule from the list so that the event no longer executes according to that schedule.

♦ **When the following 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 "Choosing a system event" [*ASA Database Administration Guide*, page 272].

- **And the following trigger conditions** 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" [*ASA Database Administration Guide*, page 273].

  - **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" [*ASA SQL Reference*, page 304]

"Automating Tasks Using Schedules and Events" [*ASA Database Administration Guide*, page 267]

External Login property sheet

The External Login property sheet consists of one tab: General.

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 external login.

♦ **Type** Shows the type of object.

♦ **Remote server** Shows the name of the remote server the external login is used to communicate with.

- **User** Shows the name of the user the external login is for.
- **Login name** Shows the login name on the remote server.

See also "Working with external logins" [*ASA SQL User's Guide*, page 567]

"CREATE EXTERNLOGIN statement" [*ASA SQL Reference*, page 313]

Foreign Key property sheet

The Foreign Key property sheet consists of two tabs: General and Columns.

See also "Managing foreign keys" [*ASA SQL User's Guide*, page 43]

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 change the name of the foreign key in this field.
- **Type** Shows the type of object.
- **Table** Shows the name of the table the foreign key belongs to, as well as the table's owner.
- **Foreign table** The table containing the foreign key.
- **Primary table** The table containing the primary key in the foreign key relationship.
- **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.
- **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.
- **Update action** Defines the behavior of the table when a user tries to update data with one of the following values.
  - **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 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** Defines the behavior of the table when the user tries to delete data with one of the following values.

- **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.

♦ **Clustered** Shows whether the primary or foreign table uses a clustered index. Clustered indexes are supported for Adaptive Server Anywhere databases that are version 8.0.2 and higher.

Clustered indexes in Adaptive Server 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" [*ASA SQL Reference*, page 319].

- **Set Clustered Index Now** Opens the Set Clustered Index dialog where you can specify that an index on the primary or foreign table is a clustered index.

♦ **Index type** Shows the type of index the table has.

☞ For more information about indexes, see "Indexes" [*ASA SQL User's Guide*, page 395].

- **Maximum hash size** This information only appears for databases that are created with Adaptive Server Anywhere 7 or earlier. The hash size is the number of bytes used to store a value in an index.

  Adaptive Server Anywhere version 6 and 7 databases use regular B-tree indexes with a hash size of 10.

- **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" [*ASA SQL User's Guide*, page 43]

"Ensuring Data Integrity" [*ASA SQL User's Guide*, page 75]

"Set Clustered Index dialog" on page 125

Foreign Key property sheet: Columns tab

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

- **Foreign Columns list** Shows the column in the foreign table that references the primary key.
- **Primary Columns list** Shows the column containing the primary key that the foreign key references.
- **Details** Displays the Column Details dialog, which shows a summary of the properties of the selected column.

See also

"Managing foreign keys" [*ASA SQL User's Guide*, page 43]

Function property sheet

The Function property sheet consists of three tabs: General, Parameters, and Permissions. In most cases, the term procedure refers to both user-defined procedures *and* user-defined functions.

Function property sheet: General tab

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 created and 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" [*ASA SQL Reference*, page 84]

"CREATE PROCEDURE statement" [*ASA SQL Reference*, page 324]

Function property sheet: Parameters tab

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

- **Parameters list** Displays the name, 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.
  - **Inout** 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" [*ASA SQL User's Guide*, page 636]

"Using Procedures, Triggers, and Batches" [*ASA SQL User's Guide*, page 609]

"CREATE PROCEDURE statement" [*ASA SQL Reference*, page 324]

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” [*ASA Database Administration Guide*, page 400]

Grant Permissions dialog

Group property sheet

The Group property sheet consists of three tabs: General, Authorities, and Permissions.

See also

“Managing User IDs and Permissions” [*ASA Database Administration Guide*, page 389]

“Granting and revoking remote permissions” [*ASA Database Administration Guide*, page 402]

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.
  - **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.
- **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” [*ASA Database Administration Guide*, page 406]

“Managing User IDs and Permissions” [*ASA Database Administration Guide*, page 389]

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

See also "Permissions of groups" [*ASA Database Administration Guide*, page 409]

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" [*ASA Database Administration Guide*, page 406]

Index property sheet

The Index property sheet consists of two tabs: General and Columns.

Index property sheet: General tab

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

- **Name** Shows the name of the index.
- **Type** Shows the type of object.
- **Table** Shows the name and owner of the table with which the index is associated.
- **Dbspace** Shows the database file, or dbspace, where the index is located.
- **Unique** Shows whether values in the index must be unique. The unique value is set when you create a new index.
- **Clustered** Shows whether this index is a clustered index. Clustered indexes are supported for Adaptive Server Anywhere databases that are version 8.0.2 and higher.

  Clustered indexes in Adaptive Server 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" [*ASA SQL Reference*, page 319].

  - **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 type of index the table has.
- **Maximum hash size** This information only appears for databases that are created with Adaptive Server Anywhere 7 or earlier. The hash size is the number of bytes used to store a value in an index.

  ☞ For more information about indexes, see "Indexes" [*ASA SQL User's Guide*, page 395].

  Adaptive Server Anywhere version 6 and 7 databases use regular B-tree indexes with a hash size of 10.
- **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" [*ASA SQL User's Guide*, page 395]

"CREATE INDEX statement" [*ASA SQL Reference*, page 319]

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" [*ASA SQL User's Guide*, page 395]

"Working with indexes" [*ASA SQL User's Guide*, page 58]

"CREATE INDEX statement" [*ASA SQL Reference*, page 319]

Integrated Login property sheet

The Integrated Login property sheet consists of one tab: General.

Integrated Login property sheet: General tab

The General tab of the Integrated Login 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" [*ASA Database Administration Guide*, page 85]

JAR File property sheet

The JAR File property sheet consists of one tab: General.

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 Jars" [*ASA Programming Guide*, page 91].

Java Class property sheet

The Java Class property sheet consists of one tab: General.

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 the Java class.
- **Package** Shows the name of the Java archive that the object originated from.
- **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 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 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 Jars" [*ASA Programming Guide*, page 91].

Message Type property sheet

The Message Type property sheet consists of two tabs: General and SQL Remote Users.

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 User's Guide*, page 210]

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 User's Guide*, page 210]

MobiLink User property sheet

The MobiLink User property sheet consists of three tabs: General, Connection, and Extended Options.

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 Synchronization User's Guide*, page 104]

MobiLink User property sheet: Connection tab

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

- **Protocol** Specify 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]" [*ASA SQL Reference*, page 351].

  - **TCP/IP** Select this option to use the TCP/IP protocol for synchronization. TCP/IP supports both elliptic-curve (formerly Certicom) and RSA encryption.
  - **HTTP** Select this option to use the HTTP protocol for synchronization. HTTP supports both elliptic-curve (formerly Certicom) and RSA encryption.
  - **HTTPS** Select this option to use the HTTPS protocol for synchronization. You can only use RSA encryption with the HTTPS protocol.
  - **ActiveSync** Select this option to use ActiveSync to exchange data with the MobiLink provider for ActiveSync, which resides on the desktop machine. The ActiveSync parameters describe the communications between the MobiLink provider for ActiveSync and the MobiLink synchronization server.

    ☞ For more information, see "ActiveSync provider installation utility" [*MobiLink Synchronization Reference*, page 300].

- **Host** The IP number or host name of the machine on which the MobiLink synchronization server is running. The default value is localhost. You can use **localhost** if the synchronization server is running on the same machine 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 synchronization server executing on the desktop machine 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 synchronization 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 synchronization 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 synchronization 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 Synchronization User’s Guide*, page 198].

- **Network name** Specify the network name so that you can use MobiLink’s 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.

  Note
  Use of Certicom technology requires that you obtain the separately-licensable SQL Anywhere Studio security option and is subject to export regulations.

  ☞ For more information about security, see "Transport-Layer Security" [*MobiLink Synchronization User's Guide*, page 337].

- **Elliptic curves** Uses the elliptic-curve cipher to encrypt connections. You can use this cipher to encrypt TCP/IP and HTTP connections. This was formerly called Certicom encryption.
- **RSA** Uses the RSA cipher to encrypt all connections. You can use this cipher to encrypt TCP/IP, HTTP, and HTTPS connections.
  - **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]" [*ASA SQL Reference*, page 351].

Note

You can set connection parameters for synchronization in the following ways:

- on the dbmlsync command line using the -e or -eu options
- in Sybase Central
- using the following SQL statements:
  - CREATE SYNCHRONIZATION SUBSCRIPTION
  - ALTER SYNCHRONIZATION SUBSCRIPTION
  - CREATE SYNCHRONIZATION USER
  - ALTER SYNCHRONIZATION USER
  - CREATE SYNCHRONIZATION SUBSCRIPTION without specifying a synchronization user (this associates extended options with a publication)

When you store extended options and connection parameters in the database, dbmlsync reads the information from the database. If values are specified in both the database and the command line, the value strings are combined. If conflicting values are specified, dbmlsync resolves them as follows, where values occurring earlier in the list take precedence over those occurring later in the list:

- dbmlsync extended option -eu
- dbmlsync extended option -e
- specified on the subscription (whether by a SQL statement or in Sybase Central)
- specified on the MobiLink user (whether by a SQL statement or in Sybase Central)
- specified on the publication (whether by a SQL statement or in Sybase Central)

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]" [*ASA SQL Reference*, page 351]

"ALTER SYNCHRONIZATION USER statement [MobiLink]" [*ASA SQL Reference*, page 248]

"-e extended options" [*MobiLink Synchronization Reference*, page 44]

"-eu option" [*MobiLink Synchronization Reference*, page 71]

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 "-e extended options" [*MobiLink Synchronization Reference*, page 44].

Extended option	Default	Description
"CommunicationAddress (adr) extended option" [*MobiLink Synchronization Reference*, page 45]	''	Specifies the communication address for connecting to the MobiLink server. For allowed values, see "CREATE SYNCHRONIZATION USER statement [MobiLink]" [*ASA SQL Reference*, page 351].
"CommunicationType (ctp) extended option" [*MobiLink Synchronization Reference*, page 46]	''	Specifies the communication type for connecting to the MobiLink server. For allowed values, see "CREATE SYNCHRONIZATION USER statement [MobiLink]" [*ASA SQL Reference*, page 351].
"ConflictRetries (cr) extended option" [*MobiLink Synchronization Reference*, page 47]	-1 (continue indefinitely)	Specifies the number of retries if the download fails because of conflicts.
"DisablePolling (p) extended option" [*MobiLink Synchronization Reference*, page 47]	OFF	Disables automatic logscan polling.

Extended option	Default	Description
"DownloadBufferSize (dbs) extended option" [*MobiLink Synchronization Reference*, page 48]	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 to specify units of kilobytes or megabytes, respectively.
"DownloadOnly (ds) extended option" [*MobiLink Synchronization Reference*, page 49]	OFF	Specifies that synchronization should be download-only.
"ErrorLogSendLimit (el) extended option" [*MobiLink Synchronization Reference*, page 50]	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 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" [*MobiLink Synchronization Reference*, page 51]	ON	Specifies that triggers should be fired on the remote database when the download is applied.
"HoverRescanThreshold (hrt) extended option" [*MobiLink Synchronization Reference*, page 52]	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 to specify units of kilobytes or megabytes, respectively.

Extended option	Default	Description
"IgnoreHookErrors (eh) extended option" [*MobiLink Synchronization Reference*, page 53]	OFF	Specifies that errors that occur in hook functions should be ignored.
"IgnoreScheduling (isc) extended option" [*MobiLink Synchronization Reference*, page 53]	OFF	Specifies that scheduling settings should be ignored.
"Increment (inc) extended option" [*MobiLink Synchronization Reference*, page 54]	(infinite)	Controls the size of incremental uploads. By default, units of bytes are used. You can use the suffix k or m to to specify units of kilobytes or megabytes, respectively.
"LockTables (lt) extended option" [*MobiLink Synchronization Reference*, page 55]	ON	Specifies that articles (tables or parts of tables in the publications being synchronized) should be locked before synchronizing.
"Memory (mem) extended option" [*MobiLink Synchronization Reference*, page 56]	1 M	Specifies a cache size. By default, units of bytes are used. You can use the suffix k or m to to specify units of kilobytes or megabytes, respectively.
"MobiLinkPwd (mp) extended option" [*MobiLink Synchronization Reference*, page 56]	NULL	Specifies the MobiLink password.
"NewMobiLinkPwd (mn) extended option" [*MobiLink Synchronization Reference*, page 57]	NULL	Specifies a new MobiLink password.
"OfflineDirectory (dir) extended option" [*MobiLink Synchronization Reference*, page 58]	NULL	Specifies the path containing offline transaction logs.

Extended option	Default	Description
"PollingPeriod (pp) extended option" [*MobiLink Synchronization Reference*, page 58]	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" [*MobiLink Synchronization Reference*, page 59]	No schedule	Specifies a schedule for synchronization.
"ScriptVersion (sv) extended option" [*MobiLink Synchronization Reference*, page 61]	DEFAULT	Specifies a script version.
"SendColumnNames (scn) extended option" [*MobiLink Synchronization Reference*, page 62]	OFF	Specifies that column names should be sent in the upload.
"SendDownloadACK (sa) extended option" [*MobiLink Synchronization Reference*, page 62]	OFF	Specifies that a download acknowledgement should be sent from the client to the server.
"SendTriggers (st) extended option" [*MobiLink Synchronization Reference*, page 63]	OFF	Specifies that trigger actions should be sent on upload.
"TableOrder (tor) extended option" [*MobiLink Synchronization Reference*, page 64]	(none)	Specifies the order of tables in the upload stream.
"UploadOnly (uo) extended option" [*MobiLink Synchronization Reference*, page 65]	OFF	Specifies that synchronization should only include an upload.

Extended option	Default	Description
"Verbose (v) extended option" [*MobiLink Synchronization Reference*, page 65]	OFF	Specifies full verbosity. This option is identical to **dbmlsync -v+**.
"VerboseHooks (vs) extended option" [*MobiLink Synchronization Reference*, page 66]	OFF	Specifies that messages related to hook scripts should be logged. This option is identical to **dbmlsync -vs**.
"VerboseMin (vm) extended option" [*MobiLink Synchronization Reference*, page 67]	OFF	Specifies that a small amount of information should be logged. This option is identical to **dbmlsync -v**.
"VerboseOptions (vo) extended option" [*MobiLink Synchronization Reference*, page 68]	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" [*MobiLink Synchronization Reference*, page 68]	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" [*MobiLink Synchronization Reference*, page 69]	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" [*MobiLink Synchronization Reference*, page 70]	OFF	Specifies that information about the upload stream should be logged. This option is identical to **dbmlsync -vu**.

Note

You can set extended options for synchronization in the following ways:

- on the dbmlsync command line using the -e or -eu options
- in Sybase Central
- using the following SQL statements:
  - CREATE SYNCHRONIZATION SUBSCRIPTION
  - ALTER SYNCHRONIZATION SUBSCRIPTION
  - CREATE SYNCHRONIZATION USER
  - ALTER SYNCHRONIZATION USER
  - CREATE SYNCHRONIZATION SUBSCRIPTION without specifying a synchronization user (this associates extended options with a publication)

When you store extended options and connection parameters in the database, dbmlsync reads the information from the database. If values are specified in both the database and the command line, the value strings are combined. If conflicting values are specified, dbmlsync resolves them as follows, where values occurring earlier in the list take precedence over those occurring later in the list:

- dbmlsync extended option -eu
- dbmlsync extended option -e
- specified on the subscription (whether by a SQL statement or in Sybase Central)
- specified on the MobiLink user (whether by a SQL statement or in Sybase Central)
- specified on the publication (whether by a SQL statement or in Sybase Central)

Parameter property sheet

The Parameter property sheet consists of one tab: General. In most cases, the term procedure refers to both user-defined procedures *and* user-defined functions.

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" [*ASA SQL Reference*, page 51].
- **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" [*ASA SQL Reference*, page 324].
  - **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" [*ASA SQL Reference*, page 324].
  - **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.
  - **Inout** 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" [*ASA SQL Reference*, page 324]

Procedure property sheet

The Procedure property sheet consists of three tabs: General, Parameters, and Permissions. In most cases, the term procedure refers to both user-defined procedures *and* user-defined functions.

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 created and 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" [*ASA SQL Reference*, page 324]

Procedure property sheet: Parameters tab

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

- **Parameters list** Displays the name, 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.
  - **INOUT** 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" [*ASA SQL User's Guide*, page 636]

"Using Procedures, Triggers, and Batches" [*ASA SQL User's Guide*, page 609]

"CREATE PROCEDURE statement" [*ASA SQL Reference*, page 324]

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 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" [*ASA Database Administration Guide*, page 400]

"CREATE PROCEDURE statement" [*ASA SQL Reference*, page 324]

Proxy Table property sheet

The Proxy Table property sheet consists of four tabs: General, Columns, Permissions, and Miscellaneous.

See also

"Working with proxy tables" [*ASA SQL User's Guide*, page 569]

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 created and 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 table, and the name of the remote table the proxy table is based on.
- **Columns** Shows the primary key columns for the proxy table.
- **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" [*ASA SQL User's Guide*, page 569]

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" [*ASA SQL User's Guide*, page 569]

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" [*ASA SQL User's Guide*, page 569]

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** This option is not available for proxy tables.
- **Calculate** The button is not enabled for proxy tables.

See also "Working with proxy tables" [*ASA SQL User's Guide*, page 569]

Publication property sheet

The Publication property sheet consists of four tabs: General, Articles, Connection, and Extended Options.

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.
- **Owner** Shows the name of the database user who created and owns the publication.
- **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" [*ASA SQL Reference*, page 334]

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 include in your client database.
- **Columns tab** The Columns tab lets you select columns from the tables to include in your client database.
- **WHERE Clauses tab** The WHERE Clauses tab lets you type a WHERE clause to restrict the rows included in the article.

  Articles defined for SQL Remote and MobiLink 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.
- **SUBSCRIBE BY Restrictions tab** The SUBSCRIBE BY Restrictions lets you type a SUBSCRIBE BY restriction to define a subset of rows to be included in the article. This tab only applies to SQL Remote articles.

Each tab is described in detail below.

See also

"CREATE PUBLICATION statement" [*ASA SQL Reference*, page 334]

"Publishing only some rows using a WHERE clause" [*SQL Remote User's Guide*, page 96]

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

  You can use the Table Pattern and Owner Pattern fields to limit the tables shown in the Matching Tables list, and so locate the tables you want to include.
- **Selected Tables list** Lists all the tables that are included in the article for the client database. If you want to remove a table from the Selected Tables list, select the table, then click Delete.
  - **Add** Adds the table selected in the Matching Tables list to the Selected Tables list so the table is included in the article.
  - **Remove** Removes the selected table from the Selected Tables list so the table is not included in the article.

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.

- **Available columns list** Lists the tables selected on the Tables tab. Double-click a table in the list to display its columns. To add a column to the Selected Columns list, select the table in the Available Columns list, then click Add.
- **Selected columns list** Lists all the columns that are included in the article for the client database. If you want to remove a column from the Selected Columns list to remove the column from the article, select the column, then click Delete.
  - **Add** Adds the column selected in the Available Columns list to the Selected Columns list so it is included in your client database articles.
  - **Remove** Removes the column from the Selected Columns list so it is not included in the article.

WHERE Clauses tab

Articles defined for SQL Remote and MobiLink 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.

- **Articles list** Select a table from the list of tables included in the article.
- **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 User's Guide*, page 96].

See also

"The WHERE clause: specifying rows" [*ASA SQL User's Guide*, page 219]

SUBSCRIBE BY Restrictions tab

This tab only applies to SQL Remote articles.

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

- **Articles list** Select a table from the list of tables included in the article.
- **The selected 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** Select this option if you wish to include a specific column in the article.

- **Expression** In the text box, type a subscription expression to include a different set of rows in different subscriptions to publications containing the article.

See also "Publishing only some rows using a subscription expression" [*SQL Remote User's Guide*, page 97]

Publication property sheet: Connection tab

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

- **Protocol** Specify 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]" [*ASA SQL Reference*, page 351].

  - **TCP/IP** Select this option to use the TCP/IP protocol for synchronization. TCP/IP supports both elliptic-curve (formerly Certicom) and RSA encryption.
  - **HTTP** Select this option to use the HTTP protocol for synchronization. HTTP supports both elliptic-curve (formerly Certicom) and RSA encryption.
  - **HTTPS** Select this option to use the HTTPS protocol for synchronization. You can only use RSA encryption with the HTTPS protocol.
  - **ActiveSync** Select this option to use ActiveSync to exchange data with the MobiLink provider for ActiveSync, which resides on the desktop machine. The ActiveSync parameters describe the communications between the MobiLink provider for ActiveSync and the MobiLink synchronization server.

    ☞ For more information, see "ActiveSync provider installation utility" [*MobiLink Synchronization Reference*, page 300].

- **Host** The IP number or host name of the machine on which the MobiLink synchronization server is running. The default value is **localhost**. You can use localhost if the synchronization server is running on the same machine 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 synchronization server executing on the desktop machine 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 synchronization 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 synchronization 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 synchronization 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 Synchronization User's Guide*, page 198].

- **Network name** Specify the network name so that you can use MobiLink's 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.

> **Note**
> Use of Certicom technology requires that you obtain the separately-licensable SQL Anywhere Studio security option and is subject to export regulations.

☞ For more information about security, see "Transport-Layer Security" [*MobiLink Synchronization User's Guide*, page 337].

- **Elliptic curves** Uses the elliptic-curve cipher to encrypt connections. You can use this cipher to encrypt TCP/IP and HTTP connections. This was formerly called Certicom encryption.
- **RSA** Uses the RSA cipher to encrypt all connections. You can use this cipher to encrypt TCP/IP, HTTP, and HTTPS connections.
  - **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]" [*ASA SQL Reference*, page 351].

Note

You can set connection parameters for synchronization in the following ways:

- on the dbmlsync command line using the -e or -eu options
- in Sybase Central
- using the following SQL statements:
  - CREATE SYNCHRONIZATION SUBSCRIPTION
  - ALTER SYNCHRONIZATION SUBSCRIPTION
  - CREATE SYNCHRONIZATION USER
  - ALTER SYNCHRONIZATION USER
  - CREATE SYNCHRONIZATION SUBSCRIPTION without specifying a synchronization user (this associates extended options with a publication)

When you store extended options and connection parameters in the database, dbmlsync reads the information from the database. If values are specified in both the database and the command line, the value strings are combined. If conflicting values are specified, dbmlsync resolves them as follows, where values occurring earlier in the list take precedence over those occurring later in the list:

- dbmlsync extended option -eu
- dbmlsync extended option -e
- specified on the subscription (whether by a SQL statement or in Sybase Central)
- specified on the MobiLink user (whether by a SQL statement or in Sybase Central)
- specified on the publication (whether by a SQL statement or in Sybase Central)

If a field is blank on the Connection tab of the Publication property sheet, the publication may be inheriting the connection parameter setting from the synchronization subscription or the MobiLink user.

See also

“CREATE SYNCHRONIZATION USER statement [MobiLink]” [*ASA SQL Reference*, page 351]

“ALTER SYNCHRONIZATION USER statement [MobiLink]” [*ASA SQL Reference*, page 248]

“CREATE PUBLICATION statement” [*ASA SQL Reference*, page 334]

“ALTER PUBLICATION statement” [*ASA SQL Reference*, page 238]

“-x option” [*MobiLink Synchronization Reference*, page 24]

“-e extended options” [*MobiLink Synchronization Reference*, page 44]

Publication property sheet: Extended Options tab

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 “-e extended options” [*MobiLink Synchronization Reference*, page 44].

Extended option	Default	Description
“CommunicationAddress (adr) extended option” [*MobiLink Synchronization Reference*, page 45]	‘’	Specifies the communication address for connecting to the MobiLink server. For allowed values, see “CREATE SYNCHRONIZATION USER statement [MobiLink]” [*ASA SQL Reference*, page 351].

Extended option	Default	Description
"CommunicationType (ctp) extended option" [*MobiLink Synchronization Reference*, page 46]	''	Specifies the communication type for connecting to the MobiLink server. For allowed values, see "CREATE SYNCHRONIZATION USER statement [MobiLink]" [*ASA SQL Reference*, page 351].
"ConflictRetries (cr) extended option" [*MobiLink Synchronization Reference*, page 47]	-1 (continue indefinitely)	Specifies the number of retries if the download fails because of conflicts.
"DisablePolling (p) extended option" [*MobiLink Synchronization Reference*, page 47]	OFF	Disables automatic logscan polling.
"DownloadBufferSize (dbs) extended option" [*MobiLink Synchronization Reference*, page 48]	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 to specify units of kilobytes or megabytes, respectively.
"DownloadOnly (ds) extended option" [*MobiLink Synchronization Reference*, page 49]	OFF	Specifies that synchronization should be download-only.

Extended option	Default	Description
"ErrorLogSendLimit (el) extended option" [*MobiLink Synchronization Reference*, page 50]	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 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" [*MobiLink Synchronization Reference*, page 51]	ON	Specifies that triggers should be fired on the remote database when the download is applied.
"HoverRescanThreshold (hrt) extended option" [*MobiLink Synchronization Reference*, page 52]	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 to specify units of kilobytes or megabytes, respectively.
"IgnoreHookErrors (eh) extended option" [*MobiLink Synchronization Reference*, page 53]	OFF	Specifies that errors that occur in hook functions should be ignored.
"IgnoreScheduling (isc) extended option" [*MobiLink Synchronization Reference*, page 53]	OFF	Specifies that scheduling settings should be ignored.

Extended option	Default	Description
"Increment (inc) extended option" [*MobiLink Synchronization Reference*, page 54]	(infinite)	Controls the size of incremental uploads. By default, units of bytes are used. You can use the suffix k or m to to specify units of kilobytes or megabytes, respectively.
"LockTables (lt) extended option" [*MobiLink Synchronization Reference*, page 55]	ON	Specifies that articles (tables or parts of tables in the publications being synchronized) should be locked before synchronizing.
"Memory (mem) extended option" [*MobiLink Synchronization Reference*, page 56]	1 M	Specifies a cache size. By default, units of bytes are used. You can use the suffix k or m to to specify units of kilobytes or megabytes, respectively.
"MobiLinkPwd (mp) extended option" [*MobiLink Synchronization Reference*, page 56]	NULL	Specifies the MobiLink password.
"NewMobiLinkPwd (mn) extended option" [*MobiLink Synchronization Reference*, page 57]	NULL	Specifies a new MobiLink password.
"OfflineDirectory (dir) extended option" [*MobiLink Synchronization Reference*, page 58]	NULL	Specifies the path containing offline transaction logs.
"PollingPeriod (pp) extended option" [*MobiLink Synchronization Reference*, page 58]	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.

Extended option	Default	Description
"Schedule (sch) extended option" [*MobiLink Synchronization Reference*, page 59]	No schedule	Specifies a schedule for synchronization.
"ScriptVersion (sv) extended option" [*MobiLink Synchronization Reference*, page 61]	DEFAULT	Specifies a script version.
"SendColumnNames (scn) extended option" [*MobiLink Synchronization Reference*, page 62]	OFF	Specifies that column names should be sent in the upload.
"SendDownloadACK (sa) extended option" [*MobiLink Synchronization Reference*, page 62]	OFF	Specifies that a download acknowledgement should be sent from the client to the server.
"SendTriggers (st) extended option" [*MobiLink Synchronization Reference*, page 63]	OFF	Specifies that trigger actions should be sent on upload.
"TableOrder (tor) extended option" [*MobiLink Synchronization Reference*, page 64]	(none)	Specifies the order of tables in the upload stream.
"UploadOnly (uo) extended option" [*MobiLink Synchronization Reference*, page 65]	OFF	Specifies that synchronization should only include an upload.
"Verbose (v) extended option" [*MobiLink Synchronization Reference*, page 65]	OFF	Specifies full verbosity. This option is identical to **dbmlsync -v+**.
"VerboseHooks (vs) extended option" [*MobiLink Synchronization Reference*, page 66]	OFF	Specifies that messages related to hook scripts should be logged. This option is identical to **dbmlsync -vs**.

Extended option	Default	Description
"VerboseMin (vm) extended option" [*MobiLink Synchronization Reference*, page 67]	OFF	Specifies that a small amount of information should be logged. This option is identical to **dbmlsync -v**.
"VerboseOptions (vo) extended option" [*MobiLink Synchronization Reference*, page 68]	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" [*MobiLink Synchronization Reference*, page 68]	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" [*MobiLink Synchronization Reference*, page 69]	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" [*MobiLink Synchronization Reference*, page 70]	OFF	Specifies that information about the upload stream should be logged. This option is identical to **dbmlsync -vu**.

Note

You can set extended options for synchronization in the following ways:

- on the dbmlsync command line using the -e or -eu options
- in Sybase Central
- using the following SQL statements:
  - CREATE SYNCHRONIZATION SUBSCRIPTION
  - ALTER SYNCHRONIZATION SUBSCRIPTION
  - CREATE SYNCHRONIZATION USER
  - ALTER SYNCHRONIZATION USER

- CREATE SYNCHRONIZATION SUBSCRIPTION without specifying a synchronization user (this associates extended options with a publication)

When you store extended options and connection parameters in the database, dbmlsync reads the information from the database. If values are specified in both the database and the command line, the value strings are combined. If conflicting values are specified, dbmlsync resolves them as follows, where values occurring earlier in the list take precedence over those occurring later in the list:

- dbmlsync extended option -eu
- dbmlsync extended option -e
- specified on the subscription (whether by a SQL statement or in Sybase Central)
- specified on the MobiLink user (whether by a SQL statement or in Sybase Central)
- specified on the publication (whether by a SQL statement or in Sybase Central)

For example, if you specify FireTriggers=OFF using the `-e` option on the command line, and you specify FireTriggers=ON for the publication, synchronization is attempted using the `-e` option setting (FireTriggers=OFF).

If a field is blank on the Extended Options tab of the Publication property sheet, the publication may be inheriting the extended option value from the `-e` option, the `-eu` option, the synchronization subscription, or the MobiLink user. You should only supply extended option values on the Extended Options tab of the Publication property sheet if you want to override these other values.

Publisher property sheet

The Publisher property sheet consists of three tabs: General, Authorities, and Permissions.

See also

“Managing User IDs and Permissions” [*ASA Database Administration Guide*, page 389]

“Granting and revoking remote permissions” [*ASA Database Administration Guide*, page 402]

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.
  - **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.
- **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" [*ASA Database Administration Guide*, page 402]

"Managing User IDs and Permissions" [*ASA Database Administration Guide*, page 389]

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 SQL Remote Message Agent should be run using a user ID with this type of authority to ensure that actions can be carried out

without creating security loopholes. The MobiLink client utility, dbmlsync, also requires Remote DBA authority.

See also

"Granting and revoking remote permissions" [*ASA Database Administration Guide*, page 402]

"Managing User IDs and Permissions" [*ASA Database Administration Guide*, page 389]

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" [*ASA Database Administration Guide*, page 402]

Remote Procedure property sheet

The Remote Procedure property sheet consists of three tabs: General, Parameters, and Permissions.

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 created and 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** 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.
  - **INOUT** 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" [*ASA SQL User's Guide*, page 609]

"CREATE PROCEDURE statement" [*ASA SQL Reference*, page 324]

"Declaring parameters for procedures" [*ASA SQL User's Guide*, page 636]

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" [*ASA Database Administration Guide*, page 400]

Remote Server property sheet

The Remote Server property sheet consists of one tab: General.

See also

“Working with remote servers” [*ASA SQL User’s Guide*, page 562]

“Server property sheet” on page 72

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 select a different software platform from the dropdown list to change the server type.

  The server type that you select restricts the types of connection you can choose from. For example, if you select 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 Adaptive Server 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” [*ASA Programming Guide*, page 104] and “Creating remote servers using Sybase Central” [*ASA SQL User’s Guide*, page 563].
- **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 machine name or IP address and a port number in the form *hostname*:*portnumber*.

See also

“CREATE SERVER statement” [*ASA SQL Reference*, page 341]

“Working with remote servers” [*ASA SQL User’s Guide*, page 562]

Remote User property sheet

The Remote User property sheet consists of four tabs: General, Authorities, Permissions, and SQL Remote.

See also

“Managing User IDs and Permissions” [*ASA Database Administration Guide*, page 389]

“Granting and revoking remote permissions” [*ASA Database Administration Guide*, page 402]

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.
  - **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.
- **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” [*ASA Database Administration Guide*, page 402]

“Managing User IDs and Permissions” [*ASA Database Administration Guide*, page 389]

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 SQL Remote Message Agent should be run using a user ID with this type of authority to ensure that actions can be carried out without creating security loopholes. The MobiLink client utility, dbmlsync, also requires Remote DBA authority.

See also

"Granting and revoking remote permissions" [*ASA Database Administration Guide*, page 402]

"Managing User IDs and Permissions" [*ASA Database Administration Guide*, page 389]

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" [*ASA Database Administration Guide*, page 402]

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 User's Guide*, page 210].

  - **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. 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 remote group.
  - **Send every** Sets the replication frequency so that the publisher's agent runs continuously, sending messages to the remote group at the given 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" [*ASA Database Administration Guide*, page 402]

"CREATE SUBSCRIPTION statement [SQL Remote]" [*ASA SQL Reference*, page 347]

Server property sheet

The Server property sheet consists of three tabs: General, Extended Information, and Options.

Server property sheet: General tab

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

- **Name** Shows the name of the server.
- **Type** Shows the type of object.
- **Product** Shows the server's product type; for example, the product could be Sybase Adaptive Server Anywhere.
- **Version** Shows the version number of the server.
- **Computer** Shows the name of the computer on which the database server is running.

- **Operating system** Shows the operating system that the server is currently running on.
- **Operating system version** Shows the operating system version that the server is currently running on.

See also "Server-level properties" [*ASA Database Administration Guide*, page 657]

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 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" [*ASA Database Administration Guide*, page 657]

Server property sheet: Options tab

The database server options on this tab correspond to server options that can be reset while the server is running.

☞ For more information, see "sa_server_option system procedure" [*ASA SQL Reference*, page 739].

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** 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
  ```

- **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-level logging** Select this option to record requests that the server processes to the log file. This option is primarily for troubleshooting purposes. Selecting Enable Request-level Logging enables the options below.

- **Log all requests** All requests that the server processes are recorded to the log file.
- **Log SQL requests only** Limits the types of requests recorded to the log file.

  ☞ For a list of the SQL Statements that are logged when you select SQL Requests, see "sa_server_option system procedure" [*ASA SQL Reference*, page 739].

  - **Log file name** When you select Enable Request-level Logging, you must provide a log file name. You can also click Browse to locate the file.

  ☞ For information about request-level logging, see "-zr server option" [*ASA Database Administration Guide*, page 167].

- **Remember the last statement executed on each connection** Select this option to instruct the database server to capture the most recently-prepared SQL statement for each connection to a database on the server.

  ☞ For more information, see "-zl server option" [*ASA Database Administration Guide*, page 166].

See also "Server-level properties" [*ASA Database Administration Guide*, page 657]

Service property sheet

The Service property sheet consists of five tabs: General, Configuration, Account, Dependencies, and Polling.

See also "Managing services" [*ASA Database Administration Guide*, page 24]

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, stopped, or paused.

  ☞ For more information about the service status, see "Starting, stopping, and pausing services" [*ASA Database Administration Guide*, page 30].

- **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

"Managing services" [*ASA Database Administration Guide*, page 24]

"Understanding Windows services" [*ASA Database Administration Guide*, page 23]

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, **f:\Sybase\ASA90\win32\dbeng9.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 sample database as user ID DBA, type the following:

  ```
  -c "uid=DBA;pwd=SQL;dbn=asademo"
  ```

See also

"The Service Creation utility" [*ASA Database Administration Guide*, page 519]

"The database server" [*ASA Database Administration Guide*, page 124]

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 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 must choose a user ID from the dropdown list. 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** Re-type the user ID's password to confirm that it was entered correctly.

See also

"Managing services" [*ASA Database Administration Guide*, page 24]

"The Service Creation utility" [*ASA Database Administration Guide*, page 519]

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, 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 wish 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 no longer starts before the service.

See also

"Service dependencies" [*ASA Database Administration Guide*, page 31]

"Managing services" [*ASA Database Administration Guide*, page 24]

"Running more than one service" [*ASA Database Administration Guide*, page 31]

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, stopped, paused, or removed).
  - **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" [*ASA Database Administration Guide*, page 30]

"Managing services" [*ASA Database Administration Guide*, page 24]

SQL Remote Subscription property sheet

The SQL Remote Subscription property sheet consists of two tabs: General and Advanced.

SQL Remote Subscription property sheet: General tab

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

- **Name** Shows the name of the SQL Remote subscription.
- **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:

Advanced SQL Remote Subscription Actions dialog. You can start, stop, or synchronize the subscription from this dialog.

- **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 synchronize subscriptions automatically.

See also "START SUBSCRIPTION statement [SQL Remote]" [*ASA SQL Reference*, page 571]

Statistic property sheet

The Statistic property sheet consists of one tab: the General tab.

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 the checkbox to remove the statistic from the Performance Monitor.

See also "Monitoring and Improving Performance" [*ASA SQL User's Guide*, page 153]

Synchronization Subscription property sheet

The Synchronization Subscription property sheet consists of three tabs: General, Connection, and Extended Options.

Synchronization Subscription property sheet: General tab

The General tab of the Synchronization Subscription property sheet has the following components:

- **Name** Shows the name of the synchronization subscription.
- **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 Synchronization User's Guide*, page 125].

See also "Publications and subscriptions" [*SQL Remote User's Guide*, page 11]

Synchronization Subscription property sheet: Connection tab

The Connection tab of the Synchronization Subscription property sheet has the following components:

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

- **Protocol** Specify 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]" [*ASA SQL Reference*, page 351].

- **TCP/IP** Select this option to use the TCP/IP protocol for synchronization. TCP/IP supports both elliptic-curve (formerly Certicom) and RSA encryption.
- **HTTP** Select this option to use the HTTP protocol for synchronization. HTTP supports both elliptic-curve (formerly Certicom) and RSA encryption.
- **HTTPS** Select this option to use the HTTPS protocol for synchronization. You can only use RSA encryption with the HTTPS protocol.
- **ActiveSync** Select this option to use ActiveSync to exchange data with the MobiLink provider for ActiveSync, which resides on the desktop machine. The ActiveSync parameters describe the communications between the MobiLink provider for ActiveSync and the MobiLink synchronization server.

  ☞ For more information, see "ActiveSync provider installation utility" [*MobiLink Synchronization Reference,* page 300].

♦ **Host** The IP number or host name of the machine on which the MobiLink synchronization server is running. The default value is **localhost**. You can use localhost if the synchronization server is running on the same machine 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 synchronization server executing on the desktop machine 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 synchronization 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 synchronization 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 synchronization 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 Synchronization User's Guide*, page 198].
  - **Network name** Specify the network name so that you can use MobiLink's 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.

    Note
    Use of Certicom technology requires that you obtain the separately-licensable SQL Anywhere Studio security option and is subject to export regulations.

☞ For more information about security, see "Transport-Layer Security" [*MobiLink Synchronization User's Guide*, page 337].

- **Elliptic curves** Uses the elliptic-curve cipher to encrypt connections. You can use this cipher to encrypt TCP/IP and HTTP connections. This was formerly called Certicom encryption.
- **RSA** Uses the RSA cipher to encrypt all connections. You can use this cipher to encrypt TCP/IP, HTTP, and HTTPS connections.
  - **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]" [*ASA SQL Reference*, page 351].

Note

You can set connection parameters for synchronization in the following ways:

♦ on the dbmlsync command line using the -e or -eu options

♦ in Sybase Central

♦ using the following SQL statements:
  - CREATE SYNCHRONIZATION SUBSCRIPTION
  - ALTER SYNCHRONIZATION SUBSCRIPTION
  - CREATE SYNCHRONIZATION USER
  - ALTER SYNCHRONIZATION USER

- CREATE SYNCHRONIZATION SUBSCRIPTION without specifying a synchronization user (this associates extended options with a publication)

When you store extended options and connection parameters in the database, dbmlsync reads the information from the database. If values are specified in both the database and the command line, the value strings are combined. If conflicting values are specified, dbmlsync resolves them as follows, where values occurring earlier in the list take precedence over those occurring later in the list:

- dbmlsync extended option -eu
- dbmlsync extended option -e
- specified on the subscription (whether by a SQL statement or in Sybase Central)
- specified on the MobiLink user (whether by a SQL statement or in Sybase Central)
- specified on the publication (whether by a SQL statement or in Sybase Central)

For example, if you specify port 2439 for the synchronization subscription, and you specify port 80 for the publication, synchronization is attempted using the synchronization subscription's setting (port 2439).

See also

"CREATE SYNCHRONIZATION USER statement [MobiLink]" [*ASA SQL Reference*, page 351]

"ALTER SYNCHRONIZATION USER statement [MobiLink]" [*ASA SQL Reference*, page 248]

"-x option" [*MobiLink Synchronization Reference*, page 24]

"-e extended options" [*MobiLink Synchronization Reference*, page 44]

Synchronization Subscription property sheet: Extended Options tab

The Extended Options tab of the Synchronization Subscription property sheet has the following components:

- **This subscription 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 “-e extended options” [*MobiLink Synchronization Reference*, page 44].

Extended option	Default	Description
"CommunicationAddress (adr) extended option" [*MobiLink Synchronization Reference*, page 45]	''	Specifies the communication address for connecting to the MobiLink server. For allowed values, see "CREATE SYNCHRONIZATION USER statement [MobiLink]" [*ASA SQL Reference*, page 351].
"CommunicationType (ctp) extended option" [*MobiLink Synchronization Reference*, page 46]	''	Specifies the communication type for connecting to the MobiLink server. For allowed values, see "CREATE SYNCHRONIZATION USER statement [MobiLink]" [*ASA SQL Reference*, page 351].
"ConflictRetries (cr) extended option" [*MobiLink Synchronization Reference*, page 47]	-1 (continue indefinitely)	Specifies the number of retries if the download fails because of conflicts.
"DisablePolling (p) extended option" [*MobiLink Synchronization Reference*, page 47]	OFF	Disables automatic logscan polling.
"DownloadBufferSize (dbs) extended option" [*MobiLink Synchronization Reference*, page 48]	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 to specify units of kilobytes or megabytes, respectively.
"DownloadOnly (ds) extended option" [*MobiLink Synchronization Reference*, page 49]	OFF	Specifies that synchronization should be download-only.

Extended option	Default	Description
"ErrorLogSendLimit (el) extended option" [*MobiLink Synchronization Reference*, page 50]	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 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" [*MobiLink Synchronization Reference*, page 51]	ON	Specifies that triggers should be fired on the remote database when the download is applied.
"HoverRescanThreshold (hrt) extended option" [*MobiLink Synchronization Reference*, page 52]	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 to specify units of kilobytes or megabytes, respectively.
"IgnoreHookErrors (eh) extended option" [*MobiLink Synchronization Reference*, page 53]	OFF	Specifies that errors that occur in hook functions should be ignored.
"IgnoreScheduling (isc) extended option" [*MobiLink Synchronization Reference*, page 53]	OFF	Specifies that scheduling settings should be ignored.

Extended option	Default	Description
"Increment (inc) extended option" [*MobiLink Synchronization Reference*, page 54]	(infinite)	Controls the size of incremental uploads. By default, units of bytes are used. You can use the suffix k or m to to specify units of kilobytes or megabytes, respectively.
"LockTables (lt) extended option" [*MobiLink Synchronization Reference*, page 55]	ON	Specifies that articles (tables or parts of tables in the publications being synchronized) should be locked before synchronizing.
"Memory (mem) extended option" [*MobiLink Synchronization Reference*, page 56]	1 M	Specifies a cache size. By default, units of bytes are used. You can use the suffix k or m to to specify units of kilobytes or megabytes, respectively.
"MobiLinkPwd (mp) extended option" [*MobiLink Synchronization Reference*, page 56]	NULL	Specifies the MobiLink password.
"NewMobiLinkPwd (mn) extended option" [*MobiLink Synchronization Reference*, page 57]	NULL	Specifies a new MobiLink password.
"OfflineDirectory (dir) extended option" [*MobiLink Synchronization Reference*, page 58]	NULL	Specifies the path containing offline transaction logs.
"PollingPeriod (pp) extended option" [*MobiLink Synchronization Reference*, page 58]	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.

Extended option	Default	Description
"Schedule (sch) extended option" [*MobiLink Synchronization Reference*, page 59]	No schedule	Specifies a schedule for synchronization.
"ScriptVersion (sv) extended option" [*MobiLink Synchronization Reference*, page 61]	DEFAULT	Specifies a script version.
"SendColumnNames (scn) extended option" [*MobiLink Synchronization Reference*, page 62]	OFF	Specifies that column names should be sent in the upload.
"SendDownloadACK (sa) extended option" [*MobiLink Synchronization Reference*, page 62]	OFF	Specifies that a download acknowledgement should be sent from the client to the server.
"SendTriggers (st) extended option" [*MobiLink Synchronization Reference*, page 63]	OFF	Specifies that trigger actions should be sent on upload.
"TableOrder (tor) extended option" [*MobiLink Synchronization Reference*, page 64]	(none)	Specifies the order of tables in the upload stream.
"UploadOnly (uo) extended option" [*MobiLink Synchronization Reference*, page 65]	OFF	Specifies that synchronization should only include an upload.
"Verbose (v) extended option" [*MobiLink Synchronization Reference*, page 65]	OFF	Specifies full verbosity. This option is identical to **dbmlsync -v+**.
"VerboseHooks (vs) extended option" [*MobiLink Synchronization Reference*, page 66]	OFF	Specifies that messages related to hook scripts should be logged. This option is identical to **dbmlsync -vs**.

Extended option	Default	Description
"VerboseMin (vm) extended option" [*MobiLink Synchronization Reference*, page 67]	OFF	Specifies that a small amount of information should be logged. This option is identical to **dbmlsync -v**.
"VerboseOptions (vo) extended option" [*MobiLink Synchronization Reference*, page 68]	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" [*MobiLink Synchronization Reference*, page 68]	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" [*MobiLink Synchronization Reference*, page 69]	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" [*MobiLink Synchronization Reference*, page 70]	OFF	Specifies that information about the upload stream should be logged. This option is identical to **dbmlsync -vu**.

Note

You can set extended options for synchronization in the following ways:

- on the dbmlsync command line using the -e or -eu options
- in Sybase Central
- using the following SQL statements:
  - CREATE SYNCHRONIZATION SUBSCRIPTION
  - ALTER SYNCHRONIZATION SUBSCRIPTION
  - CREATE SYNCHRONIZATION USER
  - ALTER SYNCHRONIZATION USER

- CREATE SYNCHRONIZATION SUBSCRIPTION without specifying a synchronization user (this associates extended options with a publication)

When you store extended options and connection parameters in the database, dbmlsync reads the information from the database. If values are specified in both the database and the command line, the value strings are combined. If conflicting values are specified, dbmlsync resolves them as follows, where values occurring earlier in the list take precedence over those occurring later in the list:

- dbmlsync extended option -eu
- dbmlsync extended option -e
- specified on the subscription (whether by a SQL statement or in Sybase Central)
- specified on the MobiLink user (whether by a SQL statement or in Sybase Central)
- specified on the publication (whether by a SQL statement or in Sybase Central)

For example, if you specify FireTriggers=OFF using the `-e` option on the command line, and you specify FireTriggers=ON for the MobiLink user, synchronization is attempted using the `-e` option setting (FireTriggers=OFF).

System Trigger property sheet

The System Trigger property sheet consists of one tab: General.

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 system trigger.
- **Type** Shows the type of object.
- **Foreign table** Shows the table containing the foreign key.
- **Primary table** Shows the table containing the primary key in the foreign key relationship.
- **Event** Shows which kind of event, Insert, Delete, Update, or Update Columns, 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:
  - **Restrict** Generates an error and prevents the modification if an attempt to modify a referenced primary key value occurs. This is the default referential integrity action.
  - **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" [*ASA SQL User's Guide*, page 94]

Table property sheet

The Table property sheet consists of four tabs: General, Columns, Permissions, and Miscellaneous.

See also "Working with tables" [*ASA SQL User's Guide*, page 37]

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.
- **Dbspace** Shows the database file (or dbspace) where the table is located.
- **Name** Shows the name of the primary key for the selected table. Primary keys can be named for tables in Adaptive Server Anywhere databases that are version 9 and higher.
  - **Set Primary Key Now** Opens the Set Primary Key dialog where you can specify or change the primary key for the selected table.
- **Columns** Shows the primary key columns for the table.

- **Clustered** Shows whether the table has a clustered index. Clustered indexes are supported for Adaptive Server Anywhere databases that are version 8.0.2 and higher.

  Clustered indexes in Adaptive Server 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" [*ASA SQL Reference,* page 319].

  - **Set Clustered Index Now** Opens the Set Clustered Index dialog where you can specify that an index on this table is a clustered index.

- **Index type** Shows the type of index the table has.

- **Maximum hash size** This information only appears for databases created with Adaptive Server Anywhere 7 or earlier. The hash size is the number of bytes used to store a value in an index.

  ☞ For more information about indexes, see "Indexes" [*ASA SQL User's Guide,* page 395].

  Adaptive Server Anywhere version 6 and 7 databases use regular B-tree indexes with a hash size of 10.

- **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.

- **On commit** This control 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.

See also "Working with tables" [*ASA SQL User's Guide,* page 37]

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 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)" [*ASA SQL User's Guide,* page 42]

"Working with tables" [*ASA SQL User's Guide,* page 37]

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" [*ASA Database Administration Guide*, page 391]

"Working with tables" [*ASA SQL User's Guide*, page 37]

Table property sheet: Miscellaneous tab

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

- **Maximum table width** 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.

  ☞ For more information, see "ALTER TABLE statement" [*ASA SQL Reference*, page 250].
  - **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.
- **Table is replicating data** Select this option to include the table as part of a replication primary site.

  ☞ For more information about replication primary sites, see "Primary site components" [*ASA Database Administration Guide*, page 427].

See also "Working with tables" [*ASA SQL User's Guide*, page 37]

Template property sheet, Definition property sheet, and Site property sheet

The Template property sheet, Definition property sheet, and Site property sheet consist of four tabs: General, Articles, Connection, and Extended Options.

Note The Template, Definition, and Site property sheets are only available for databases created with version 7.x or earlier of Adaptive Server Anywhere.

Template, Definition, and Site property sheet: General tab

The General tab of the Template, Definition, and Site property sheets has the following components:

- **Name** Shows the name of the template, definition, or site.
- **Type** Shows the type of object.

- **Creator** Shows the database user who created and owns the template, definition, or site.
- **Site** This field only appears on the Definition property sheet. Shows the name that uniquely identifies this remote database within your MobiLink setup. You can edit the Site name in the adjacent field.
- **Template** This field only appears on the Site property sheet. Shows the name of the template used by the site.

Template and Definition property sheet: Articles tab

The Site property sheet does not have an Articles tab.

The Articles tab of the Template and Definition property sheets has the following components:

- **Tables tab** The Tables tab lets you select tables to include in your client database.
- **Columns tab** The Columns tab lets you select columns from the tables to include in your client database.
- **WHERE Clauses tab** The WHERE Clauses tab lets you type a WHERE clause to restrict the rows included in the article.

Each tab is described in detail below.

See also

"CREATE PUBLICATION statement" [*ASA SQL Reference*, page 334]

"Publishing only some rows using a WHERE clause" [*SQL Remote User's Guide*, page 96]

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 base tables in the database you are currently connected to.
- **Selected tables list** Lists all the tables that are included in the article for the client database.
  - **Add** Adds the table in the Matching Tables list to the Tables list so it is included in the article.
  - **Remove** Removes the table from the Tables list so it is not included in the article.

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.

- **Available columns list** Lists the tables selected on the Tables tab. Click a table in the list to display its columns.
- **Selected columns list** Lists all the columns that are included in the article for the client database.
  - **Add** Adds the column selected in the Available Columns list to the columns list so it is included in your articles to include in the client database.
  - **Delete** Removes the column from the Columns list so it is not included in the article.

WHERE Clauses tab

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 article.
- **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 User's Guide*, page 96].

See also

"The WHERE clause: specifying rows" [*ASA SQL User's Guide*, page 219]

Template, Definition, and Site property sheet: Connection tab

The Connection tab of the Template, Definition, and Site property sheets has the following components:

- **Protocol** Specify the communication protocol to use for synchronization. TCP/IP is used by default.
  - **TCP/IP** Select this option to use the TCP/IP protocol for synchronization. TCP/IP supports elliptic-curve (formerly Certicom) encryption.
  - **HTTP** Select this option to use the HTTP protocol for synchronization. HTTP supports elliptic-curve (formerly Certicom) encryption.
- **Host** The IP number or name of the machine on which the MobiLink synchronization server is running. On a local area network, the may be a machine name. The default value is **localhost**. You can use **localhost** if the synchronization server is running on the same machine as the client.
  - **Port** The MobiLink synchronization server communicates over a specific port. By default, the port number is 2439 for TCP/IP and 80 for HTTP. If you choose a value other than these, you must configure your MobiLink synchronization 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 field is enabled only when the HTTP protocol is selected.
  - **Proxy port** The port number of the proxy server. The default value is 80. This field is enabled only when the HTTP protocol is selected.
- **URL suffix** The suffix to add to the URL on the first line of each HTTP request. The parameter can be used to help ensure that a particular client connects to the intended server. This field is enabled only when the HTTP protocol is selected.
- **HTTP version** A string specifying the version of HTTP to use. You have a choice of **1.0** or **1.1**. This field is enabled only when the HTTP protocol is selected.
- **Security** You can encrypt all communication through the connection using elliptic-curve (formerly Certicom) encryption.
  - **Enable Certicom security** Select this option to use the elliptic-curve (formerly Certicom) encryption. Selecting this option enables the fields below.
  - **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. The 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.

See also "-x option" [*MobiLink Synchronization Reference*, page 24]

Template, Definition, and Site property sheet: Extended Options tab

The Extended Options tab of the Template, Definition, and Site property sheets has the following components:

Extended option	Default	Description
"ConflictRetries (cr) extended option" [*MobiLink Synchronization Reference*, page 47]	-1 (continue indefinitely)	Specifies the number of retries if the download fails because of conflicts.

Extended option	Default	Description
"FireTriggers (ft) extended option" [*MobiLink Synchronization Reference*, page 51]	ON	Specifies that triggers should be fired on the remote database when the download is applied.
"Increment (inc) extended option" [*MobiLink Synchronization Reference*, page 54]	(infinite)	Controls the size of incremental uploads. By default, units of bytes are used. You can use the suffix k or m to to specify units of kilobytes or megabytes, respectively.
"LockTables (lt) extended option" [*MobiLink Synchronization Reference*, page 55]	ON	Specifies that articles (tables or parts of tables in the publications being synchronized) should be locked before synchronizing.
"Memory (mem) extended option" [*MobiLink Synchronization Reference*, page 56]	1 M	Specifies a cache size. By default, units of bytes are used. You can use the suffix k or m to to specify units of kilobytes or megabytes, respectively.
"OfflineDirectory (dir) extended option" [*MobiLink Synchronization Reference*, page 58]	NULL	Specifies the path containing offline transaction logs.
"Schedule (sch) extended option" [*MobiLink Synchronization Reference*, page 59]	No schedule	Specifies a schedule for synchronization.
"ScriptVersion (sv) extended option" [*MobiLink Synchronization Reference*, page 61]	DEFAULT	Specifies a script version.

Extended option	Default	Description
"SendTriggers (st) extended option" [*MobiLink Synchronization Reference*, page 63]	OFF	Specifies that trigger actions should be sent on upload.
StreamCompression (sc) extended option	Medium	Compress upload data stream: choose LOW, MEDIUM, or HIGH.
"TableOrder (tor) extended option" [*MobiLink Synchronization Reference*, page 64]	(none)	Specifies the order of tables in the upload stream.
"Verbose (v) extended option" [*MobiLink Synchronization Reference*, page 65]	OFF	Specifies full verbosity.

Trigger property sheet

The Trigger property sheet consists of one tab: General.

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-lists events.

- **Level** Shows whether the trigger is a row-level trigger or a statement-level trigger.
- **Order** For triggers in the table that execute for the same kind of event with the same timing, the number determines the order in which these triggers fire.
- **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" [*ASA SQL User's Guide*, page 611]

"Using Procedures, Triggers, and Batches" [*ASA SQL User's Guide*, page 609]

UltraLite Project property sheet

The UltraLite Project property sheet consists of one tab: General.

UltraLite Project property sheet: General tab

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.

See also

"Creating an UltraLite project" [*UltraLite Database User's Guide*, page 204]

UltraLite Statement property sheet

The UltraLite Statement property sheet consists of two tabs: General and SQL Statement.

UltraLite Statement property sheet: General tab

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 "UltraLite Databases" [*UltraLite Database User's Guide*, page 27].

See also "Adding statements to a project" [*UltraLite Static C++ User's Guide*, page 21]

UltraLite Statement property sheet: SQL Statement

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.

See also "Defining SQL statements for your application" [*UltraLite Database User's Guide*, page 204]

"Adding statements to a project" [*UltraLite Static C++ User's Guide*, page 21]

Unique Constraint property sheet

The Unique Constraint property sheet consists of two tabs: General and Columns.

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 the adjacent field.
- **Type** Shows the type of object.
- **Table** Shows the table to which the unique constraint belongs.
- **Clustered** Shows whether the table containing the unique constraint has a clustered index. Clustered indexes are supported for Adaptive Server Anywhere databases that are version 8.0.2 and higher.

Clustered indexes in Adaptive Server 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" [*ASA SQL Reference*, page 319].

- **Set Clustered Index Now** Opens the Set Clustered Index dialog where you can specify that an index on the table containing the unique constraint is a clustered index.

- **Index type** Shows the type of index the table has.

See also "CREATE TABLE statement" [*ASA SQL Reference*, page 361]

Unique Constraint property sheet: Columns tab

The Columns tab of the Unique Constraint property sheet has the following components:

- **Columns list** Shows all the columns in the unique constraint, as well as the data type and comment for each column.
  - **Details** Displays the Column Details dialog, which shows a summary of the properties of the selected column.

See also "CREATE TABLE statement" [*ASA SQL Reference*, page 361]

User property sheet

The User property sheet consists of three tabs: General, Authorities, and Permissions.

See also "Managing User IDs and Permissions" [*ASA Database Administration Guide*, page 389]

"Granting and revoking remote permissions" [*ASA Database Administration Guide*, page 402]

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.
- **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.

- **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

"Granting and revoking remote permissions" [*ASA Database Administration Guide*, page 402]

"Managing User IDs and Permissions" [*ASA Database Administration Guide*, page 389]

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 SQL Remote Message Agent should be run using a user ID with this type of authority to ensure that actions can be carried out without creating security loopholes. The MobiLink client utility, dbmlsync, also requires Remote DBA authority.

See also

"Managing User IDs and Permissions" [*ASA Database Administration Guide*, page 389]

"GRANT statement" [*ASA SQL Reference*, page 456]

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" [*ASA Database Administration Guide*, page 402]

View property sheet

The View property sheet consists of three tabs: General, Columns, and Permissions.

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 created and owns the object.
- **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 "Creating views" [*ASA SQL User's Guide*, page 50]

"Working with views" [*ASA SQL User's Guide*, page 50]

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" [*ASA SQL User's Guide*, page 50]

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, 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" [*ASA Database Administration Guide*, page 398]

"Working with views" [*ASA SQL User's Guide*, page 50]

Web Service property sheet

The Web Service property sheet consists of two tabs: General and SQL Statement.

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 an RAW, XML, HTML, SOAP, or DISH web service. You can change the service type by selecting a different type from the dropdown list.
- **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.

  Place a checkmark in the box 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. Place a checkmark in the box to indicate that the web service requires security. If the web service requires security, then only HTTPS connections are accepted. If the checkbox 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 URIs, see "How URLs are interpreted" [*ASA Database Administration Guide*, page 227].

  - **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 following 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 following 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 following 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 "Using the Built-in Web Server" [*ASA Database Administration Guide*, page 219]

"CREATE SERVICE statement" [*ASA SQL Reference*, page 343]

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" [*ASA Database Administration Guide*, page 222]

"CREATE SERVICE statement" [*ASA SQL Reference*, page 343]

Introduction to dialog boxes

You can find most of the configurable settings in the Adaptive Server 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 Adaptive Server Anywhere 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 10.

Adaptive Server Anywhere 9 Plug-in Preferences dialog

The Plug-in Preferences dialog consists of two tabs: General and Utilities.

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 Adaptive Server 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 Adaptive Server Anywhere to warn you when you are connecting with a user ID that does not have DBA authority.
  - **Inform when a breakpoint is hit while debugging** Select this preference if you want Adaptive Server Anywhere to notify you when a breakpoint is hit when you are working in debug mode.
  - **Inform when a statement is cancelled while debugging** Select this option if you want Adaptive Server Anywhere to notify you when a

statement is cancelled when you are working in debug mode.

- **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 Adaptive Server 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 Adaptive Server Anywhere to prompt you before table data is updated on the Data tab in Sybase Central.
- **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.

- **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 Create Custom Collation wizard introduction page** Select this preference if you want the Create Custom Collation 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.

♦ **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.

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 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" [*ASA Database Administration Guide*, page 31]

"Running more than one service" [*ASA Database Administration Guide*, page 31]

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 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" [*ASA Database Administration Guide*, page 32]

"Running more than one service" [*ASA Database Administration Guide*, page 31]

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 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]" [*ASA SQL Reference*, page 460]

"Working with message types" [*SQL Remote User's Guide*, page 210]

"Granting and revoking remote permissions" [*ASA Database Administration Guide*, page 402]

"Managing SQL Remote permissions" [*SQL Remote User's Guide*, page 201]

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 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]" [*ASA SQL Reference*, page 463]

"Working with message types" [*SQL Remote User's Guide*, page 210]

"Granting and revoking remote permissions" [*ASA Database Administration Guide*, page 402]

"Managing SQL Remote permissions" [*SQL Remote User's Guide*, page 201]

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" [*ASA Database Administration Guide*, page 396]

Consolidated User Options dialog

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 temporarily change an option setting for the consolidated user, 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 permanently change a setting for the consolidated user, 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.

Note

When you change options settings, some of the settings take effect immediately, while for others to take effect you must restart the database.

☞ For information about specific options, see "Alphabetical list of options" [*ASA Database Administration Guide*, page 574].

See also

"SET OPTION statement" [*ASA SQL Reference*, page 556]

"Working with databases" [*ASA SQL User's Guide*, page 27]

"Managing User IDs and Permissions" [*ASA Database Administration Guide*, page 389]

Create Schedule dialog

The Create Schedule dialog consists of two tabs: General and Recurrence.

Create Schedule dialog: General tab

The General tab of the Create Schedule dialog has the following components:

- **Schedule** The name of the event schedule. You can change the name of the schedule in the adjacent text box.
- **Start time** Select one of the following options to specify a when the event occurs.
  - **At** Select this option to specify a 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 the time has passed) and each subsequent day.
  - **Between** A range of times during the day outside of which no scheduled times occur. 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" [*ASA SQL Reference*, page 304]

"Automating Tasks Using Schedules and Events" [*ASA Database Administration Guide*, page 267]

Create Schedule dialog: Recurrence tab

All of 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 checkbox 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 clicking the checkbox beside the desired day.
  - **days of the month** Select the day(s) of the month on which the selected event occurs by clicking the checkbox beside the desired day.

See also

"CREATE EVENT statement" [*ASA SQL Reference*, page 304]

"Automating Tasks Using Schedules and Events" [*ASA Database Administration Guide*, page 267]

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" [*ASA Database Administration Guide*, page 273]

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.

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 temporarily 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 Temporary Now.

  Temporary values only last for the current Sybase Central session.
- **Set Permanent Now** To permanently 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 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.

Note

When you change options, some of the settings take effect immediately, while for others to take effect, you must restart the database.

☞ For information about specific options, see "Alphabetical list of options" [*ASA Database Administration Guide*, page 574].

See also

"SET OPTION statement" [*ASA SQL Reference*, page 556]

"Working with databases" [*ASA SQL User's Guide*, page 27]

"Managing User IDs and Permissions" [*ASA Database Administration Guide*, page 389]

Edit Schedule dialog

The Edit Schedule dialog consists of two tabs: General and Recurrence.

Edit Schedule dialog: General tab

The General tab of the Edit Schedule dialog has the following components:

♦ **Schedule** The name of the schedule. When you are editing the schedule, you cannot change the schedule's name.

♦ **Start time** Select one of the following options to specify a when the event occurs.

- **At** Select this option to specify a 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 the time has passed) and each subsequent day.

- **Between** A range of times during the day outside of which no scheduled times occur. 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 enter a date in the text box or select the month, day, and year from the lists.

See also

"CREATE EVENT statement" [*ASA SQL Reference*, page 304]

"Automating Tasks Using Schedules and Events" [*ASA Database Administration Guide*, page 267]

Edit Schedule dialog: Recurrence tab

All of the settings on this tab are optional.

The Recurrence tab of the Edit 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 checkbox 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 clicking the checkbox beside the desired day.
  - **days of the month** Select the day(s) of the month on which the selected event occurs by clicking the checkbox beside the desired day.

See also

"CREATE EVENT statement" [*ASA SQL Reference*, page 304]

"Automating Tasks Using Schedules and Events" [*ASA Database Administration Guide*, page 267]

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" [*ASA Database Administration Guide*, page 273]

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. Other built-in tables, such as the MobiLink system tables, are owned by the user dbo.
- **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" [*ASA SQL User's Guide*, page 27]

"Displaying system objects in a database" [*ASA SQL User's Guide*, page 34]

Grant Permissions dialog

The Grant Permissions dialog has the following components:

- **Choose a user or group from the list of candidates** Lists the users or groups you can grant permissions to. Select a user and 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" [*ASA Database Administration Guide*, page 396]

"GRANT statement" [*ASA SQL Reference*, page 456]

Group Options dialog

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 temporarily change an option setting for a group, 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 permanently change an option setting for a group, 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.

Note

When you change options, some of the settings take effect immediately, while for others you must restart the database before they take effect.

☞ For information about specific options, see "Alphabetical list of options" [*ASA Database Administration Guide*, page 574].

See also

"SET OPTION statement" [*ASA SQL Reference*, page 556]

"Working with databases" [*ASA SQL User's Guide*, page 27]

"Managing User IDs and Permissions" [*ASA Database Administration Guide*, page 389]

New Members dialog

The New Members dialog has the following components:

- **Users list** 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:

- **Groups list** Lists the names and comments for all the groups in the database to which the selected group can be added.

Options dialog

The Options dialog has two tabs: Check for updates and Logging.

Options dialog: Check for updates tab

This tab allows you to configure whether SQL Anywhere Studio 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 9 ➤ 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 Studio should check for updates. By default, Never is selected.
  - **On application startup** Select this option if you want SQL Anywhere Studio to check for updates each time Sybase Central is started.
  - **Daily** Select this option if you want SQL Anywhere Studio to check for updates the first time Sybase Central is started each day.
  - **Weekly** Select this option if you want SQL Anywhere Studio to check for updates the first time Sybase Central is started each week.
  - **Monthly** Select this option if you want SQL Anywhere Studio to check for updates the first time Sybase Central is started each month.
  - **Never** Select this option if you do not want SQL Anywhere Studio 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 Studio should check for. By default, all of the following options are selected.

- **Express Bug Fix** Select this option if you want SQL Anywhere Studio 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 Studio 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 Design Details 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 Design Details pane.

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 to 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" [*ASA SQL Reference*, page 229]

"Pre-allocating space for database files" [*ASA Database Administration Guide*, page 258]

Publisher Options dialog

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 temporarily change an option setting for the publisher, 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 permanently change a setting for the publisher, 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.

Note

When you change options settings, some of the settings take effect immediately, while for others to take effect you must restart the database.

☞ For information about specific options, see "Alphabetical list of options" [*ASA Database Administration Guide*, page 574].

See also

"SET OPTION statement" [*ASA SQL Reference*, page 556]

"Working with databases" [*ASA SQL User's Guide*, page 27]

"Managing User IDs and Permissions" [*ASA Database Administration Guide*, page 389]

Remote User Options dialog

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 temporarily change an option setting for the consolidated user, 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 permanently change a setting for the consolidated user, 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.

Note

When you change options settings, some of the settings take effect immediately, while for others to take effect you must restart the database.

☞ For information about specific options, see "Alphabetical list of options" [*ASA Database Administration Guide*, page 574].

See also

"SET OPTION statement" [*ASA SQL Reference*, page 556]

"Working with databases" [*ASA SQL User's Guide*, page 27]

"Managing User IDs and Permissions" [*ASA Database Administration Guide*, page 389]

Set Consolidated User dialog

The Set Consolidated User dialog has the following components:

- **Choose a 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 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]" [*ASA SQL Reference*, page 460]

"Managing SQL Remote permissions" [*SQL Remote User's Guide*, page 201]

Set Clustered Index dialog

Clustered indexes are supported for Adaptive Server 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" [*ASA SQL Reference*, page 319]

"Using clustered indexes" [*ASA SQL User's Guide*, page 59]

Set Primary Key dialog

The Set Primary Key dialog has the following components:

- **Table** Shows the name of the selected table.
- **Specify a primary key for this table** Select this option to enable the options below where you can name and choose a primary key for the selected table.
- **Name** Shows the name of the primary key. You can edit the name in the adjacent field. Primary keys can be named for tables in Adaptive Server Anywhere databases that are version 9 and higher.
- **Columns list** Shows all the columns in the table. Place a checkmark in the checkbox beside the column name to make the column a primary key column. Clear the checkbox to remove a column from the primary key.
- **Create a clustered primary key** Select this option if you wish the primary key to have a clustered index. Note that only one index on a table can be a clustered index.

See also

"Managing primary keys" [*ASA SQL User's Guide*, page 42]

"Using clustered indexes" [*ASA SQL User's Guide*, page 59]

Set Publisher dialog

The Set Publisher dialog has the following components:

- **Choose a publisher from the list of candidates** Lists the users you can select the publisher from. Select a user and 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]" [*ASA SQL Reference*, page 462]

"Managing SQL Remote permissions" [*SQL Remote User's Guide*, page 201]

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" [*ASA Database Administration Guide*, page 31]

Start Database dialog

The Start Database dialog has the following components:

- **Server** Shows the name of the selected server on which the database is started.
- **Database file** Type the full path and name of the Adaptive Server Anywhere database file or write file on the server machine. For example, to start the sample database, type C:\Program Files\Sybase\SQL Anywhere 9\asademo.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 enabled for strongly encrypted databases.

  ☞ For more information, see "Encrypting a database" [*SQL Anywhere Studio Security Guide*, page 16] and "Creating a database using the dbinit command-line utility" [*ASA Database Administration Guide*, page 486].
- **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 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 shut down 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” [*ASA Database Administration Guide*, page 3]

“Working with databases” [*ASA SQL User’s Guide*, page 27]

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” [*ASA SQL Reference*, page 583]

“EVENT_CONDITION function [System]” [*ASA SQL Reference*, page 127]

“CREATE EVENT statement” [*ASA SQL Reference*, page 304]

“Automating Tasks Using Schedules and Events” [*ASA Database Administration Guide*, page 267]

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:\ProgramFiles\Sybase\Shared\java\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 the Select button to view a list of classes in the selected JAR file.
  - **JAR file list** Lists the classes in the selected JAR file. You can select individual classes from the list or click Select All to select all the classes.
    - **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" [*ASA Programming Guide,* page 81]

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 the Browse button to search for the Java class.

See also "Using Java in the Database" [*ASA Programming Guide,* page 81]

"Updating classes and Jars" [*ASA Programming Guide,* page 91]

User Options dialog

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 temporarily change an option setting for a user, 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 permanently change a setting for a user, 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.

Note

When you change options settings, some of the settings take effect immediately, while for others to take effect you must restart the database.

☞ For information about specific options, see "Alphabetical list of options" [*ASA Database Administration Guide*, page 574].

See also

"SET OPTION statement" [*ASA SQL Reference*, page 556]

"Working with databases" [*ASA SQL User's Guide*, page 27]

"Managing User IDs and Permissions" [*ASA Database Administration Guide*, page 389]

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 SQLREMOTE environment variable.
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, etc.	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 User's Guide*, page 215].

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.

Name	Values	Default	Description
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.
Active_Mode	YES, NO	NO	This parameter controls whether the client or the server initiates all data transfer connections. When this parameter is set to NO, (Passive mode) the client initiates all data transfer connections, in this case the message link. When this parameter is set to YES (Active mode) the server initiates all data connections. If your FTP server is sitting behind an incorrectly configured firewall you may not be able to use the default passive transfer mode. For more information about this parameter, see "Troubleshooting ftp problems" [*SQL Remote User's Guide*, page 217].

☞ For more information about the FTP message system, see "The ftp message system" [*SQL Remote User's Guide*, page 216].

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.

Name	Values	Default	Description
TOP_Supported	YES, NO	YES	SQL Remote uses a POP3 command called TOP when enumerating incoming messages. The TOP command may not be supported by all POP servers. Set this value to NO to use the RETR command, which is less efficient but works with all POP servers.
Smtp_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.
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 User's Guide*, page 218].

See also

- "Working with message types" [*SQL Remote User's Guide*, page 210]
- "Using message types" [*SQL Remote User's Guide*, page 210]

Debugger help

The following sections describe the dialogs available in the Sybase debugger.

☞ For more information about using the debugger, see "Debugging Logic in the Database" [*ASA SQL User's Guide*, page 673].

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" [*ASA SQL Reference*, page 15]

Debugger Breakpoints dialog

The Debugger Breakpoints dialog has the following components:

- **All breakpoints** A list of all breakpoints in the current database.
- **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 Breakpoint** Create a new breakpoint.

See also "Working with breakpoints" [*ASA SQL User's Guide*, page 685]

Debugger Edit or Add Breakpoint dialog

The Debugger Edit or Add Breakpoint dialog has 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" [*ASA SQL Reference*, page 22].
- **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** Check this box for the breakpoint to interrupt execution.

See also "Editing breakpoint conditions" [*ASA SQL User's Guide*, page 686]

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" [*ASA Programming Guide*, page 89]

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 overview” [*ASA SQL User’s Guide*, page 63]

“Understanding the Index Consultant” [*ASA SQL User’s Guide*, page 66]

“Understanding workloads” [*ASA SQL User’s Guide*, page 66]

“Understanding the analysis” [*ASA SQL User’s Guide*, page 67]

“Understanding the recommendations” [*ASA SQL User’s Guide*, page 68]

“Assessing the recommendations” [*ASA SQL User’s Guide*, page 69]

“Implementing the recommendations” [*ASA SQL User’s Guide*, page 70]

CHAPTER 3

Interactive SQL Help

About this chapter

This chapter provides descriptions of all the dialog boxes you can access in Interactive SQL.

Contents

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" [*ASA Getting Started*, page 70]
How to connect to a database	"Connecting Your Application to its Database" [*ASA Getting Started*, page 61]
How to use the Interactive SQL toolbar	"Interactive SQL main window description" [*ASA Getting Started*, page 70]
How to open a new Interactive SQL window	"Opening multiple windows" [*ASA Getting Started*, page 71]
Where to find information about keyboard shortcuts	"Interactive SQL keyboard shortcuts" [*ASA Getting Started*, page 72]
How to display data	"Using Interactive SQL to display data" [*ASA Getting Started*, page 75]
How to execute SQL commands in Interactive SQL	"Working with SQL statements in Interactive SQL" [*ASA Getting Started*, page 80]
Where to find more detailed information on selecting data	"Selecting Data from Database Tables" [*ASA Getting Started*, page 87]
Where to find information about using the Query Editor to build SELECT statements	"Introducing the Query Editor" on page 190
Where to find more information on loading and unloading data	"Introduction to import and export" [*ASA SQL User's Guide*, page 522]
How to set Interactive SQL options	"Options dialog" on page 144
How to automate common tasks	"Running SQL command files" [*ASA SQL User's Guide*, page 553]

If you want to know...	Then see...
How to use JDBC escape syntax	"Using JDBC escape syntax" [*ASA Programming Guide*, page 131]
How to print from Interactive SQL	"Printing SQL statements" [*ASA Getting Started*, page 83]
How to print the graphical plan from Interactive SQL	"Graphical plans" [*ASA SQL User's Guide*, page 429]
How to analyze queries using the Index Consultant	"Starting the Index Consultant" [*ASA SQL User's Guide*, page 65]

Introduction to Interactive SQL dialog boxes

You can access all the dialogs in Interactive SQL through the Tools menu. With these dialogs, you can configure Interactive SQL settings, search for table and procedure names to insert into your queries, and edit your queries.

The Tools menu contains the following dialogs:

- **Lookup Table Name** The "Lookup Table Name dialog" on page 142 lets you browse table and column names and insert them into the SQL Statements pane.
- **Lookup Procedure Name** The Lookup Procedure Name dialog lets you browse procedure names and insert them into the SQL Statements pane.
- **Edit Query** The Query Editor provides an alternative way to create and edit SELECT statements in Interactive SQL.

  ☞ For information, see "Introducing the Query Editor" on page 190.
- **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.

  ☞ For more information, see "Starting the Index Consultant" [*ASA SQL User's Guide*, page 65].
- **Options** The Options dialog sets options for commands, appearance, importing and exporting data, and messages in Interactive SQL.

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 an escape character. The escape character depends on the JDBC driver that you are using. If you are connected via jConnect, the escape character is '\' (backslash) while the escape character for the iAnywhere JDBC driver is '~' (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 tables that contain the word profile, type **%profile%**.

If you want to search for a percent sign or underscore within a table name, you must prefix the percent sign or underscore with an escape character. The escape character depends on the JDBC driver that you are using. If you are connected via jConnect, the escape character is '\' (backslash) while the escape character for the iAnywhere JDBC driver is '~' (tilde).

Options dialog

You can configure Interactive SQL using the Options dialog. This dialog provides settings for commands, appearance, result sets, import/export features, messages, the appearance of the query optimization plan, and code editor settings.

The Interactive SQL Options dialog consists of eight tabs: General, Results, Import/Export, Messages, Plan, Editor, Query Editor, and Check For Updates.

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 command 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 [ISQL]" [*ASA Database Administration Guide*, page 579].

- **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 from a command file. Depending on the option you choose, Interactive SQL can continue executing the file, stop executing the file, 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 [ISQL]" [*ASA Database Administration Guide*, page 611].
  - **Echo command files to log** If you select this option, Interactive SQL logs SQL statements that are executed from command files to the log file.

    By default, command files are copied to the log.

    ☞ For more information, see "ECHO option [ISQL]" [*ASA Database Administration Guide*, page 591].

- **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 platforms.

  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.
  - **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 machine. 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 platforms, you can make Interactive SQL the default editor for *.SQL* files.
  - **Make DBISQL the default editor for .SQL files** Select this option to make Interactive SQL the default editor for *.SQL* files on Windows.

    Windows uses Interactive SQL to automatically open the file when you double-click on it. Note that Interactive SQL does not run the file automatically.

See also "SET OPTION statement [Interactive SQL]" [*ASA SQL Reference*, page 559]

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 [ISQL]" [*ASA Database Administration Guide*, page 610].

- **Maximum number of rows to display** Specify the maximum number of rows that appear in the Results pane. The default is 500.

- **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 [ISQL]" [*ASA Database Administration Guide,* page 632].

- **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. Each result set appears on a separate tab in the Results pane. By default, Interactive SQL does not display multiple result sets.

  If you use the jConnect driver and select the Show Multiple Result Sets option, Interactive SQL must wait until the entire result set is retrieved before any rows appear in the Results pane. This can result in slower processing of large 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 [ISQL]" [*ASA Database Administration Guide,* page 579].

- **When running in console mode, which result sets do you want to see?** 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 and is set on a per-machine basis. This option is set only for the current Interactive SQL unless you click the Make Permanent button.
  - **The last one** Prints the result set from the last statement in the file.
  - **All of them** Prints result sets for each statement in the file that returns a result set.
  - **None** Does not print any result sets.

  ☞ For more information, see "ISQL_PRINT_RESULT_SET option [ISQL]" [*ASA Database Administration Guide,* page 600].

See also "SET OPTION statement [Interactive SQL]" [*ASA SQL Reference,* page 559]

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.
- **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.

  ☞ For more information about the import and export file formats supported by Interactive SQL, see "Data formats" [*ASA SQL User's Guide*, page 524].
- **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 (\).

See also

☞ "Importing and Exporting Data" [*ASA SQL User's Guide*, page 521]

"SET OPTION statement [Interactive SQL]" [*ASA SQL Reference*, page 559]

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. 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]" [*ASA SQL Reference*, page 559]

Options dialog: Plan tab

The Plan tab of the Options dialog in Interactive SQL has the following components:

- **Execution plan options** These options allow you to select the level of detail Interactive SQL provides about the way your query is optimized, select a plan type from the list of plan types. 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 on a node in the plan diagram to see details about that part of the query. This plan is the default.
  - **Graphical plan with statistics** The execution plan is displayed as a tree diagram in the Plan tab, and you can click on a node to see details about that part of the query. Statistics are also displayed which indicate the resources used 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 plan in Interactive SQL" [*ASA SQL User's Guide*, page 434].

- **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]" [*ASA SQL Reference*, page 170].

- **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]" [*ASA SQL Reference*, page 170], "Asensitive cursors" [*ASA Programming Guide*, page 38], "Insensitive cursors" [*ASA Programming Guide*, page 35], "Sensitive cursors" [*ASA Programming Guide*, page 36], and "Value-sensitive cursors" [*ASA Programming Guide*, page 39].

- **Show UltraLite plan** Select this option if you want the UltraLite plan to appear on a separate tab in the Results pane in Interactive SQL.

  You control the UltraLite plan type by selecting one of the types above (Graphical, Graphical Plan With Statistics, Short Plan, or Long Plan). This option is selected by default.

  ☞ For more information, see "GRAPHICAL_ULPLAN function [Miscellaneous]" [*ASA SQL Reference*, page 137], "LONG_ULPLAN function [Miscellaneous]" [*ASA SQL Reference*, page 152], and "SHORT_ULPLAN function [Miscellaneous]" [*ASA SQL Reference*, page 181].

See also

"Accessing the plan in Interactive SQL" [*ASA SQL User's Guide*, page 434]

"Reading access plans" [*ASA SQL User's Guide*, page 420]

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 code editor when it is used in Sybase Central.

The Editor tab of the Options dialog in Interactive SQL consists of four tabs: Editor, Tabs, Format, and Print.

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 wish opening braces to be indented. This option is enabled when the Smart option is selected.
    - **Indent closing brace** Select this option if you wish 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 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. Press 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. Press the > button for a list of available options.
  - **> button** Pressing 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 press the > button and select the Center option and then press 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.

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" [*ASA SQL User's Guide*, page 209].

- **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" [*ASA SQL Reference*, page 7].

Options dialog: Check for updates tab

This tab allows you to configure whether Adaptive Server 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 9 ➤ 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 Adaptive Server 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 Adaptive Server Anywhere to check for updates the first time the current application is started each day.

- **Weekly** Select this option if you want Adaptive Server Anywhere to check for updates the first time the current application is started each week.
- **Monthly** Select this option if you want Adaptive Server 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.

CHAPTER 4

MobiLink Help

About this chapter

This chapter provides descriptions of all the property sheets, dialog boxes, and wizards you can access when you connect using the MobiLink plug-in.

Contents

Introduction

When you connect to MobiLink, Sybase Central provides property sheets that let you configure object properties. You can view and change the settings for various objects using dialog boxes, while wizards can walk you through the steps for carrying out common administrative tasks.

See also

“MobiLink property sheets” on page 157

“MobiLink dialog boxes” on page 162

“MobiLink wizards” on page 165

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.

Synchronization View of a Database property sheet

The Synchronization View of a Database property sheet allows you to view information about the database you are currently connected to.

The Synchronization View of a Database property sheet consists of one tab: General.

Synchronization View of a Database property sheet: General tab

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

- **Name** Shows the name of the selected database.
- **Type** Shows the type of database.
- **Version** Shows the version number of the selected database.

User property sheet

The User property sheet allows you to view information about the selected user.

The User property sheet consists of one tab: General.

User property sheet: General tab

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

- **Name** Shows the name of the selected MobiLink user.
- **Type** Shows the type of the selected object.
- **User ID** Shows an integer that uniquely identifies the selected MobiLink user.
- **Password** Shows whether the selected MobiLink user has a password.

  If the selected MobiLink user does not have a password, (none) appears in the adjacent field. If the selected MobiLink user has a password, asterisks appear in place of the actual password.

- **Modify** Displays the User Authentication dialog where you can change the MobiLink user's name and password.

See also

"Authenticating MobiLink Users" [*MobiLink Synchronization User's Guide*, page 103]

User Authentication dialog

Version property sheet

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 Version property sheet consists of one tab: General.

Version property sheet: General tab

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.
- **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 Synchronization User's Guide*, page 49]

Service property sheet

The Service property sheet allows you to view information about the selected service.

The Service property sheet consists of four tabs: General, Configuration, Account, and Dependencies.

Service property sheet: General tab

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

- **Name** Shows the name of the selected service.
- **Type** Shows the type of the selected object. A service runs a database server or other application with a set of options.
- **Service Type** Shows the type of service. For example, it could be a MobiLink Synchronization service, Network Database Server service, or some other type of service.
- **Status** Shows whether the selected service is started, stopped, or paused.

  ☞ For more information about the service status, see "Adding, modifying, and removing services" [*MobiLink Synchronization User's Guide*, page 331].
- **Startup** You must select one of the following startup types for the selected service. The startup type 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

"Managing services" [*ASA Database Administration Guide*, page 24]

"Understanding Windows services" [*ASA Database Administration Guide*, page 23]

Service property sheet: Configuration tab

The Configuration tab of the MobiLink Service property sheet has the following components:

- **File name** Type the path of the executable file. For example, **f:\Sybase\ASA90\win32\dbmlsrv9.exe.**
- **Parameters** Type additional parameters, including 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 MobiLink synchronization service with verbose logging and three worker threads, type the following:

```
-c "dsn=ASA 9.0 Sample;uid=DBA;pwd=SQL"
-vc
-wu 3
```

See also "The Service Creation utility" [*ASA Database Administration Guide*, page 519]

Service property sheet: Account tab

The Account tab of the MobiLink 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** Select this option if you want to display the server window by clicking an icon on your desktop. This option is only available when you select Local System Account.
- **Other** Select this option to run the service under an account other than the local account. You must choose a user ID from the dropdown list.
  - **Password** Type the password for the account the service is to run under. When you select Other Account, you must supply the appropriate password for the selected user ID and confirm the password in the Confirm Password text box.
  - **Confirm password** Re-type the password to confirm that it was entered correctly.

See also "The Service Creation utility" [*ASA Database Administration Guide*, page 519]

Service property sheet: Dependencies tab

The Dependencies tab of the MobiLink Service property sheet has the following components:

- **This service belongs to the following load ordering group** Lets you specify which service group the selected service belongs to. To view all the service groups that exist on your system, click Change. The Look Up Group dialog appears, which lets you specify a service group for the selected service.
- **Change** Displays the Look Up Group dialog, which lets you, select which service group the selected service belongs to.
- **Services list** Lists all the services and service groups that must be started before the selected service. This list also shows the type of service or service group.

- **Add Services** Displays the Add Services to Dependencies dialog, which lets you view all services and select the ones you wish to add to the Services list on the Dependencies tab of the Service property sheet.
- **Add Service Groups** Displays the Add Service Groups to Dependencies dialog, which lets you select the service groups that you want to add to the Services list on the Dependencies tab of the Service property sheet.
- **Remove** Removes the selected service or service group from the Services list. The group or service no longer starts before the selected service.

See also

"Managing services" [*ASA Database Administration Guide*, page 24]

"Running more than one service" [*ASA Database Administration Guide*, page 31]

MobiLink dialog boxes

You can find many of the configurable settings in MobiLink in dialog boxes, which can be accessed through the File menu Sybase Central.

The File menu contains commands related to the objects that appear in the main Sybase Central window. These menu items change depending 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 user, the File menu changes to show options related to users. You can also access all of these menu items in popup menus when you right-click an object.

Test Scripts dialog

You can write scripts that are associated with events so that whenever an event occurs, the MobiLink synchronization server executes the associated script if one exists. The Test Scripts dialog allows you to test your synchronization scripts.

The Test Scripts dialog has the following components:

- **Version** Select a version to identify the set of synchronization scripts you want to test.
- **User** Type the user name of a MobiLink Synchronization Server user. If you do not specify a user, the user <Default User> is used for testing the synchronization scripts.
- **Script-testing window** Once you specify a version and a user, you can test your synchronization scripts by clicking Test. The test results appear in this window and include a list of which scripts are executed in which order. If there are any syntax errors or data type errors found during the test, they also appear in this window.
- **Test** Click Test to test for syntax errors in your synchronization scripts (identified by the version). The results appear in the Script-testing window.
- **Options** Displays the Test Scripts Options dialog where you can specify the synchronized table order for the synchronization script you are testing.

See also Test Scripts Options dialog

Test Scripts Options dialog

You can set options for when you test your synchronization scripts in the Test Scripts Options dialog.

The Test Scripts Options dialog has the following components:

- **Synchronization Tables** Lists all the tables in the consolidated database that you can synchronize. Select a table from this list and click Add to add it to the Synchronized Table Order list. You can select multiple tables by holding Shift while you click.
- **Synchronized Table Order** The order of tables in this list is the order in which the tables are synchronized when you test your synchronization scripts in the Test Scripts dialog. If you want to remove a table from this list, select a table and click Delete. You can select multiple tables by holding Shift while you click.
- **Add** Adds tables from the Synchronization Tables list to the Synchronized Table Order list.
- **Delete** Removes tables from the Synchronized Table Order list.
- **Default** Adds all the tables in the Synchronization Tables list to the Synchronized Table Order list and orders them based on the order of the rows in the ml_table table.

See also Test Scripts dialog

User Authentication dialog

The User Authentication dialog allows you to change the name and password for a MobiLink user.

The User Authentication dialog has the following components:

- **User name** Shows the name of the selected user. You can edit the user name in the adjacent field.
- **No Password** Select this option if the selected user does not require a password.
- **Password** Type the Password for the selected user. You must confirm the Password in the Confirm Password field.
- **Confirm password** Re-type the user's password to confirm that it was entered correctly.

See also "authenticate_user connection event" [*MobiLink Synchronization Reference*, page 100]

"Authenticating MobiLink Users" [*MobiLink Synchronization User's Guide*, page 103]

Share Version dialog

The Share Version dialog allows you to associate versions with more than one MobiLink event.

The Share Version dialog has the following components:

- **Version** Select the version to indicate which scripts are executed when the Event below occurs. A version can be associated with more than one event.
- **Event** Shows the name of the event that causes the scripts to execute.

MobiLink wizards

Wizards walk you through the steps for carrying out many common administrative tasks in MobiLink. You can also perform many of these tasks using stored procedures.

☞ For more information about MobiLink stored procedures, see "Stored Procedures" [*MobiLink Synchronization Reference*, page 261].

Add Connection Script wizard and Add Table Script wizard

About the Add Connection Script wizard

The Add Connection Script wizard walks you through the steps for creating a connection script. Connection scripts control actions centered on connecting and disconnecting. They also permit actions at synchronization-level events such as beginning and ending the upload or download process. You only need to write a connection-level script when some action must occur at a particular event.

About the Add Table Script wizard

The Add Table Script wizard walks you through the steps for creating a table script. Table scripts allow actions at specific events relating to the synchronization of a specific table, such as the start or end of uploading rows, resolving conflicts, or selecting rows to download.

The Add Connection Script wizard and Add Table Script wizard have the following components:

- **What is the version for the script?** Select a version for the table or connection script from the dropdown list.
- **What event is the new script for?** Select the event that causes this script to be executed from the dropdown list.
- **What is the language for the script?** Select a language for the script. You can choose either SQL or Java.
- **Edit the script of the new event immediately** Select this option if you want the script to appear in a window where you can edit it when you click Finish.

See also

"Script types" [*MobiLink Synchronization User's Guide*, page 46]

"Connection scripts" [*MobiLink Synchronization User's Guide*, page 46]

"ml_add_connection_script" [*MobiLink Synchronization Reference*, page 262]

"Table scripts" [*MobiLink Synchronization User's Guide*, page 46]

"ml_add_table_script" [*MobiLink Synchronization Reference*, page 263]

Add Service wizard

The Add Service wizard walks you through the steps for creating a MobiLink service. You can set up MobiLink synchronization server to be available all the time. The Add Service wizard allows you to set up a service on Windows so that you can run the MobiLink synchronization server in such a way that when you log off the computer it remains running.

The Add Service wizard consists of six pages: Choose Service Name and Startup, Choose Path Name, Specify Parameters, Choose Account, Choose Options, and Ready to Create a New Service.

See also

"Running MobiLink Outside the Current Session" [*MobiLink Synchronization User's Guide*, page 329]

Choose Name and Startup page

The Choose Name and Startup page of the Add Service wizard has the following components:

- **What is the name of the new service?** Type a name for the new service.
- **Which startup option would you like?** You can select one of the following startup options for the new 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

"Running MobiLink Outside the Current Session" [*MobiLink Synchronization User's Guide*, page 329]

Choose Path Name page

The Choose Path Name page of the Add Service wizard has the following components:

- **What is the executable file for the new service?** Provides a place for you to type the path of the executable file, for example,

f:\Sybase\ASA90\win32\dbmlsrv9.exe. You can click Default if you want MobiLink to find the executable file.

- **Default** Click Default if you want MobiLink to find the MobiLink Server executable in the Adaptive Server Anywhere installation directory.

See also "Running MobiLink Outside the Current Session" [*MobiLink Synchronization User's Guide*, page 329]

Specify Parameters page

The Specify Parameters page of the Add Service wizard has the following components:

- **What parameters do you want to use for this service?** 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 create a MobiLink synchronization service with verbose logging and three worker threads, enter the following:

  ```
  -c "dsn=ASA 9.0 Sample;uid=DBA;pwd=SQL"
  -vc
  -wu 3
  ```

  ☞ For a list of options, see "dbmlsrv9 options" [*MobiLink Synchronization Reference*, page 8].

- **Path** Provides a place for you to edit the path of the executable file.

See also "Running MobiLink Outside the Current Session" [*MobiLink Synchronization User's Guide*, page 329]

Choose Account page

The Choose Account page of the Add Service wizard has the following components:

- **Local system account** Select this option to run the service under your system's local account.
- **Other** Select this option to run the service under an account other than the local account. You must choose a user ID from the dropdown list.
  - **Password** When you select Other Account, you must type the appropriate password for the selected account. You must confirm the password in the Confirm Password text box.
  - **Confirm** Re-type the password to confirm that it was entered correctly.

See also "Running MobiLink Outside the Current Session" [*MobiLink Synchronization User's Guide*, page 329]

Choose Options page

The Choose Options page of the Add Service wizard has the following components:

- **Allow service to interact with desktop** Select this option if you want to display the server window by clicking an icon on your desktop. This option is only available when you select Local System Account on the Choose Account page of the Add Service wizard.
- **Start service when created** Select this option to start the new service once the wizard closes. This option is only available if you selected Automatic or Manual on the Choose Name and Startup page of the Add Service wizard.

See also "Running MobiLink Outside the Current Session" [*MobiLink Synchronization User's Guide*, page 329]

Ready to Create New Service page

The Ready to Create New Service page of the Add Service wizard has the following components:

- **Name** Shows the name of the new service.
- **Path** Shows the path of the executable file.
- **Parameters** Shows the connection parameters for the service.
- **Startup** Show the startup setting for the service, Automatic, Manual, or Disabled.
- **Account** Shows the name of the account the service runs under.
- **Interaction** Shows whether the service interacts with the desktop.
- **Start now** Shows whether the service starts once the wizard closes.

See also "Running MobiLink Outside the Current Session" [*MobiLink Synchronization User's Guide*, page 329]

Add Synchronized Table wizard

The Add Synchronized Table wizard allows you to add a table to the list of tables to be synchronized.

The Add Synchronized Table wizard has the following components:

- **Specify the remote table name** Select this option if the table you want to synchronize already exists in the remote database. Type the name of the remote table you want to add to the list of synchronized tables in the adjacent text box. The remote table and consolidated tables do not have to have the same name.
- **Consolidated has a table with the same name as the remote table** Select this option if the consolidated database already contains a table with the same name as the remote table you want to synchronize. Selecting this option enables both options below.
  - **Select the owner of the consolidated table with the same name** Select the owner of the consolidated database table that has the same name as the remote table from the dropdown list. You must select a consolidated table owner.
  - **Select the consolidated table** Select the consolidated table name from the list.

Add User wizard

The Add User wizard allows you to [under construction].

The Add User wizard has the following components:

- **What is the name of the new user?** Type a name for the new MobiLink user in the text box.
- **No Password** Select this option if the new MobiLink user does not require a password.
- **Password** Select this option if the new MobiLink user requires a password. Type a password for the new MobiLink user in the text box. You must confirm the password in the text box below.
- **Confirm password** Re-type the password to confirm it. The password must match exactly.

See also

"Authenticating MobiLink Users" [*MobiLink Synchronization User's Guide*, page 103]

Add Version wizard

The Add Version wizard allows you to add a new 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 Add Version wizard has the following components:

- **What is the name of the new version?** Type a name for the version in the text box. The version name must be unique: different versions cannot have the same name.
- **What is the description of the new version?** Provides a place for you to type a text description of the version.

See also

"Script versions" [*MobiLink Synchronization User's Guide*, page 49]

CHAPTER 5

MobiLink Monitor Help

About this chapter

This chapter provides descriptions of all the dialog boxes and property sheets you can access from the MobiLink Monitor.

Contents

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 synchronization server in that most of the parameters are the same. You must use parameters that are compatible with the MobiLink synchronization server's settings. For all MobiLink Monitor sessions, the script version is set to **for_MLMonitor_only**.

> **Tip**
> If synchronizations are occurring when the MobiLink Monitor is started, the Monitor must wait until a worker thread is free before it can start. Therefore, you may want to start the Monitor before starting synchronizations. Once the Monitor is running, it does not use a MobiLink worker thread.

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 here.
- **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 machine on which the MobiLink synchronization server is running. By default, it is the computer where the Monitor is running. You can use **localhost** if the synchronization server is running on the same machine as the Monitor.
- **Network protocol** Select the communications stream and port to be used for the connection. These values should be set to the same protocol and port as the MobiLink synchronization server is using for synchronization requests.
  - **TCP/IP** Select this option to connect via TCP/IP.
    - **Port** The MobiLink synchronization 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 synchronization server to listen on the port you specify.
  - **HTTP** Select this option to connect via HTTP. By default, version **1.1** is used.
    - **Port** The MobiLink synchronization 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 synchronization server to listen on the port you specify.

- **HTTPS** Select this option to connect via HTTPS.

  The HTTPS stream implements HTTP over SSL/TLS using RSA encryption. The RSA implementation uses Certicom technology. In order 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 Network Parameters field.

  Note
  Use of Certicom technology requires that you obtain the separately-licensable SQL Anywhere Studio security option and is subject to export regulations.

  ☞ For more information about security, see "Transport-Layer Security" [*MobiLink Synchronization User's Guide*, page 337].

  - **Port** The MobiLink synchronization 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 synchronization server to listen on the port you specify.

♦ **Additional network parameters** 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
buffer_size=*number*	HTTP and HTTPS only. The maximum body size for a fixed content length message, in bytes. Changing the option will decrease or increase the amount of memory allocated for sending content. The default is 65 535, except on UltraLite and Pocket PC, in which case it is 1 024.
client_port=*nnnnn* **client_port**=*nnnnn-mmmmm*	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. The option can be useful for clients inside a firewall communicating with a MobiLink synchronization server outside the firewall.

Parameter	Description
persistent={ **0** | **1** }	HTTP and HTTPS only. 1 (True) means that the client will attempt to use the same TCP/IP connection for all HTTPS requests in a synchronization. A setting of 0 (False) is more compatible with intermediate agents. The default is 0, except on Palm devices it is 1. *Note:* Except on Palm devices, you should only set persistent to 1 if you are connecting directly to MobiLink. If you are connecting through an intermediate agent such as a proxy or redirector, a persistent connection may cause problems.
proxy_host=*proxy_hostname*	HTTP and HTTPS only. The host name of the proxy server.
proxy_port= *proxy_portnumber*	HTTP and HTTPS only. The port number of the proxy server. The default value is 80.
url_suffix=*suffix*	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 synchronization server. The default value is **MobiLink**.
version= *versionnumber*	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 "Stream parameters reference" [*UltraLite Database User's Guide*, page 179].

See also

"Starting the MobiLink Monitor" [*MobiLink Synchronization User's Guide*, page 299]

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** You must specify a property, comparison operator, and value to identify synchronizations the Monitor should track. You can specify as many conditions as you wish. 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 Synchronization User’s Guide*, page 310].
  - **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.
- **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 Synchronization User’s Guide*, page 308]

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 date.
- **Chart range** Lets you specify the duration of time that appears in the Chart pane. The chart range can be viewed 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 Synchronization User's Guide*, page 304]

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 wish. 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 Synchronization User's Guide*, page 310].
  - **Operator** Select a comparison operator. The list of available operators depends on the property you select.
  - **Value** Enter a value for the specified property.
- **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 Synchronization User's Guide*, page 308]

Options dialog

The Options dialog consists of four tabs: General, Chart Layout, Chart Colors, and Overview.

To restore the Monitor's default settings, delete the file *.mlMonitorSettings*. This file is stored in your user profiles directory.

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 100 000. 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.
- **Save automatically when connected to MobiLink server** Select this option if you want your session to be saved automatically when the Monitor is connected to a MobiLink server. The 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, 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.

- **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.

See also

"Options" [*MobiLink Synchronization User's Guide*, page 305]

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 worker thread or synchronization user. This option is selected by default. You can choose whether you want the data grouped by worker thread or synchronization user from the View menu.

- **Scroll chart automatically when connected** Select this option if you want the chart to scroll automatically when you are connected to a MobiLink synchronization 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.

See also "Chart pane" [*MobiLink Synchronization User's Guide*, page 304]

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:

- **Verify upload** By default, the verify upload phase is Gold.
- **Preload upload** By default, the preload upload 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.

See also "Chart pane" [*MobiLink Synchronization User's Guide*, page 304]

Options dialog: Overview tab

The Overview tab of the Options dialog has the following components:

- **Keep overview window attached to main window** Clear this checkbox 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 boxes 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.

See also

"Overview pane" [*MobiLink Synchronization User's Guide*, page 305]

Session property sheet

The Session property sheet consists of one tab: General.

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.
- **Number of workers** The number of MobiLink worker threads.
- **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.

Synchronization property sheet

The Synchronization property sheet consists of four tabs: General, Upload, Download, and Synchronization.

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.
  - **Worker thread** The MobiLink worker thread used for the synchronization in the form *n.m*, where *n* is the stream number and *m* is the thread number.
  - **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 will be 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 will be 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.
  - **Verify upload** The time required to verify the synchronization protocol and authenticate the synchronization client.
  - **Preload upload** The time required for the transfer of the upload data from the client to the MobiLink synchronization server.
  - **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 Synchronization User's Guide,* page 310]

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 Synchronization User's Guide*, page 310]

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 synchronization server (using download_cursor scripts).
- **Rows for delete** Number of row deletions fetched from the consolidated database by the MobiLink synchronization 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 Synchronization User's Guide*, page 310]

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 synchronization server retried the connection to the consolidated database.

See also

"MobiLink statistical properties" [*MobiLink Synchronization User's Guide*, page 310]

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** 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** Lists the watches that are active in order of their precedence. These watches can be edited to change the way they display, 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 Synchronization User’s Guide,* page 308]

CHAPTER 6

Query Editor Help

About this chapter

This section describes the Query Editor, which is a tool for building and editing SQL queries.

Contents

Introducing the Query Editor

The Query Editor is a tool that helps you build Adaptive Server Anywhere 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 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:

- Tables tab Use this tab to specify the tables in your query.
- Joins tab 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 Adaptive Server Anywhere).
- Columns tab Use this tab to specify the columns in your result set. If you do not specify columns, all columns appear.
- Into tab Use this tab if you want to return results as procedure parameters.
- Where tab Use this tab if you want to specify conditions for restricting the rows in your result set.
- Group By tab Use this tab if you want to group rows in the result set.
- Having tab Use this tab to restrict the rows in your result set based on group values.
- Order By tab Use this tab if you want to sort the rows.

The Query Editor also contains

- Expression Editor 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 Adaptive Server 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 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 will work in all situations.

Query Editor limitations

The Query Editor builds Adaptive Server 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 “Selecting Data from Database Tables” [*ASA Getting Started*, page 87].
- For reference documentation, see “SELECT statement” [*ASA SQL Reference*, page 541].
- For more information about selecting data, see “Queries: Selecting Data from a Table” [*ASA SQL User’s Guide*, page 207].

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.

> *Warning:* 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 conditions" [*ASA SQL Reference*, page 24].

- **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 conditions" [*ASA SQL Reference*, page 24].

- **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 SQL code for your query. 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 will work in all situations.

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 190.
- For an introduction to specifying tables, see “The FROM clause: specifying tables” [*ASA SQL User’s Guide*, page 218].
- For reference information about specifying tables, see “FROM clause” [*ASA SQL Reference*, page 445].
- For reference information about derived tables, see “FROM clause” [*ASA SQL Reference*, page 445].
- For an introduction to subqueries, see “Selecting Data Using Subqueries” [*ASA Getting Started*, page 125].
- For more information about subqueries, see “Subqueries in search conditions” [*ASA SQL Reference*, page 23].

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” [*ASA SQL User’s Guide*, page 261].

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” [*ASA SQL User’s Guide*, page 265].
- **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 Adaptive Server Anywhere.

☞ For information about ON conditions, see "Explicit join conditions (the ON phrase)" [*ASA SQL User's Guide*, page 269].

- **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 *sales_order*:

```
FROM ("DBA"."customer"
   JOIN "DBA"."sales_order")""
     JOIN "DBA"."sales_order_items"
```

More information

- For more information about the Query Editor, see "Introducing the Query Editor" on page 190.
- For an introduction to joins, see "Selecting Data from Multiple Tables" [*ASA Getting Started*, page 105].
- For more information about joins, see "Joins: Retrieving Data from Several Tables" [*ASA SQL User's Guide*, page 261].

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 scroll through 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 190.
- For an introduction to columns, see “Lesson 5: Design column properties” [*ASA Getting Started*, page 56].
- For information about selecting columns, see “The SELECT list: specifying columns” [*ASA SQL User’s Guide*, page 211].

- For more information about creating subqueries, see “Expression Editor” on page 203.

Into tab

Use this tab if you want to return results as procedure parameters.

Dialog components

- **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 190.
- For more information about INTO, see “Returning results as procedure parameters” [*ASA SQL User’s Guide*, page 640].

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 190.
- For an introduction to search conditions, see “Selecting rows from a table” [*ASA Getting Started*, page 98].
- For more information about search conditions, see “Search conditions” [*ASA SQL Reference*, page 22].

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.
- **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 on SQL 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 190.
- For an introduction to GROUP BY, see “Applying aggregate functions to grouped data” [*ASA Getting Started*, page 120].
- For more information about GROUP BY, see “The GROUP BY clause: organizing query results into groups” [*ASA SQL User’s Guide*, page 237].

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 190.
- For an introduction to HAVING, see “Applying aggregate functions to grouped data” [*ASA Getting Started*, page 120].
- For more information about HAVING, see “The HAVING clause: selecting groups of data” [*ASA SQL User’s Guide*, page 242].

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, double-click the arrow; or select the arrow and press F2.

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, Adaptive Server 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 190.
- For an introduction to ORDER BY, see “Ordering query results” [*ASA Getting Started*, page 95].
- For more information about ORDER BY, see “The ORDER BY clause: sorting query results” [*ASA SQL User’s Guide*, page 244] and “Sorting query results” [*ASA SQL User’s Guide*, page 184].

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 "SQL Functions" [*ASA SQL Reference,* page 83].
- **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" [*ASA SQL Reference,* page 10].
- **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" [*ASA SQL Reference,* page 11].
- **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 words Subquery are 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 190.
- For an introduction to search conditions, see "Selecting rows from a table" [*ASA Getting Started*, page 98].
- For more information about search conditions, see "Search conditions" [*ASA SQL Reference*, page 22].
- For an introduction to subqueries, see "Selecting Data Using Subqueries" [*ASA Getting Started*, page 125].
- For more information about subqueries, see "Subqueries in search conditions" [*ASA SQL Reference*, page 23].

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 190.
- For a complete list of error messages, see “Database Error Messages” [*ASA Error Messages*, page 1].

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 will work in all situations.

More information

- For more information about the Query Editor, see "Introducing the Query Editor" on page 190.

CHAPTER 7

Console Utility Help

About this chapter

This chapter contains help for the Console [dbconsole] utility.

Contents

Using the Console utility

The Console utility provides administration and monitoring facilities for database server connections. The Console utility is available on all operating systems.

☞ For more information about the Console utility, see “The Console utility” [*ASA Database Administration Guide*, page 471].

Options dialog

You can configure the Console utility using the Options dialog.

The Console utility Options dialog consists of five tabs: Console, Connection Viewer, Message Viewer, Property Viewer, and Check For Updates.

Console options

You can set the following options for the 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-level 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" [*ASA Database Administration Guide*, page 167].
- **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" [*ASA Database Administration Guide*, page 166].
- **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.
- **Browse** Click Browse to locate a file to which server messages are logged.

See also

“sa_server_option system procedure” [*ASA SQL Reference*, page 739]

“Server-level properties” [*ASA Database Administration Guide*, page 657]

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” [*ASA Database Administration Guide*, page 647].

- **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 Console utility, and the Design Details 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” [*ASA Database Administration Guide*, page 664].

- **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" [*ASA Database Administration Guide*, page 657].

- **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 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 9 ➤ 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 Console utility has the following components:

- **When to check for updates** Choose one of the following options to specify how often the Console utility should check for updates. By default, Never is selected.
  - **On application startup** Select this option if you want the Console utility to check for updates each time it is launched.
  - **Daily** Select this option if you want the Console utility to check for updates the first time it is started each day.
  - **Weekly** Select this option if you want SQL Anywhere Studio to check for updates the first time the Console utility is started each week.
  - **Monthly** Select this option if you want the Console utility to check for updates the first time it is started each month.
  - **Never** Select this option if you do not want the 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 Console utility should check for. By default, all of the following options are selected.

- **Express Bug Fix** Select this option if you want the 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 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 8

SQL Language Links

About this chapter

This chapter provides a list of SQL statements that are available to users of Adaptive Server Anywhere. It also includes links to the SQL language elements, data types, and functions supported by Adaptive Server Anywhere.

Contents

SQL syntax help

The following list provides links into the Adaptive Server Anywhere documentation for the following topics: SQL language elements, SQL statements, data types, and functions that are available to users of Adaptive Server Anywhere.

“Character data types” [*ASA SQL Reference*, page 52]

“Numeric data types” [*ASA SQL Reference*, page 56]

“Money data types” [*ASA SQL Reference*, page 63]

“BIT data type” [*ASA SQL Reference*, page 64]

“Date and time data types” [*ASA SQL Reference*, page 65]

“Binary data types” [*ASA SQL Reference*, page 72]

“Domains” [*ASA SQL Reference*, page 74]

“Data type conversions” [*ASA SQL Reference*, page 76]

“Year 2000 compliance” [*ASA SQL Reference*, page 78]

“Function types” [*ASA SQL Reference*, page 84]

“Alphabetical list of functions” [*ASA SQL Reference*, page 97]

“Keywords” [*ASA SQL Reference*, page 4]

“Identifiers” [*ASA SQL Reference*, page 7]

“Strings” [*ASA SQL Reference*, page 8]

“Operators” [*ASA SQL Reference*, page 10]

“Expressions” [*ASA SQL Reference*, page 15]

“Search conditions” [*ASA SQL Reference*, page 22]

“Special values” [*ASA SQL Reference*, page 32]

“Variables” [*ASA SQL Reference*, page 37]

“Comments” [*ASA SQL Reference*, page 47]

“NULL value” [*ASA SQL Reference*, page 48]

“Using the SQL statement reference” [*ASA SQL Reference*, page 220]

“ALLOCATE DESCRIPTOR statement [ESQL]” [*ASA SQL Reference*, page 223]

“ALTER DATABASE statement” [*ASA SQL Reference*, page 225]

“CONNECT statement [ESQL] [Interactive SQL]” [*ASA SQL Reference*, page 287]

“CREATE COMPRESSED DATABASE statement” [*ASA SQL Reference*, page 290]

“CREATE DATABASE statement” [*ASA SQL Reference*, page 292]

“CREATE DBSPACE statement” [*ASA SQL Reference*, page 297]

“CREATE DECRYPTED FILE statement” [*ASA SQL Reference*, page 299]

“CREATE DOMAIN statement” [*ASA SQL Reference*, page 300]

“CREATE ENCRYPTED FILE statement” [*ASA SQL Reference*, page 302]

“CREATE EVENT statement” [*ASA SQL Reference*, page 304]

“CREATE EXISTING TABLE statement” [*ASA SQL Reference*, page 310]

“CREATE EXTERNLOGIN statement” [*ASA SQL Reference*, page 313]

“CREATE FUNCTION statement” [*ASA SQL Reference*, page 315]

“CREATE INDEX statement” [*ASA SQL Reference*, page 319]

“CREATE MESSAGE statement [T-SQL]” [*ASA SQL Reference*, page 323]

“CREATE PROCEDURE statement” [*ASA SQL Reference*, page 324]

“CREATE PROCEDURE statement [T-SQL]” [*ASA SQL Reference*, page 332]

“CREATE PUBLICATION statement” [*ASA SQL Reference*, page 334]

“CREATE REMOTE MESSAGE TYPE statement [SQL Remote]” [*ASA SQL Reference*, page 337]

“CREATE SCHEMA statement” [*ASA SQL Reference*, page 339]

“CREATE SERVER statement” [*ASA SQL Reference*, page 341]

“CREATE SERVICE statement” [*ASA SQL Reference*, page 343]

“CREATE STATISTICS statement” [*ASA SQL Reference*, page 346]

“CREATE SUBSCRIPTION statement [SQL Remote]” [*ASA SQL Reference*, page 347]

“CREATE SYNCHRONIZATION SUBSCRIPTION statement [MobiLink]” [*ASA SQL Reference*, page 349]

“CREATE SYNCHRONIZATION USER statement [MobiLink]” [*ASA SQL Reference*, page 351]

“CREATE TABLE statement” [*ASA SQL Reference*, page 361]

“DROP SERVICE statement” [*ASA SQL Reference*, page 416]

“DROP STATEMENT statement [ESQL]” [*ASA SQL Reference*, page 417]

“DROP STATISTICS statement” [*ASA SQL Reference*, page 418]

“DROP SUBSCRIPTION statement [SQL Remote]” [*ASA SQL Reference*, page 419]

“DROP SYNCHRONIZATION SUBSCRIPTION statement [MobiLink]” [*ASA SQL Reference*, page 420]

“DROP SYNCHRONIZATION USER statement [MobiLink]” [*ASA SQL Reference*, page 421]

“DROP VARIABLE statement” [*ASA SQL Reference*, page 422]

“EXCEPT operation” [*ASA SQL Reference*, page 423]

“EXECUTE statement [ESQL]” [*ASA SQL Reference*, page 425]

“EXECUTE statement [T-SQL]” [*ASA SQL Reference*, page 427]

“EXECUTE IMMEDIATE statement [SP]” [*ASA SQL Reference*, page 429]

“EXIT statement [Interactive SQL]” [*ASA SQL Reference*, page 432]

“EXPLAIN statement [ESQL]” [*ASA SQL Reference*, page 434]

“FETCH statement [ESQL] [SP]” [*ASA SQL Reference*, page 436]

“FOR statement” [*ASA SQL Reference*, page 441]

“FORWARD TO statement” [*ASA SQL Reference*, page 443]

“FROM clause” [*ASA SQL Reference*, page 445]

“GET DATA statement [ESQL]” [*ASA SQL Reference*, page 450]

“GET DESCRIPTOR statement [ESQL]” [*ASA SQL Reference*, page 452]

“GET OPTION statement [ESQL]” [*ASA SQL Reference*, page 454]

“GOTO statement [T-SQL]” [*ASA SQL Reference*, page 455]

“GRANT statement” [*ASA SQL Reference*, page 456]

“GRANT CONSOLIDATE statement [SQL Remote]” [*ASA SQL Reference*, page 460]

“GRANT PUBLISH statement [SQL Remote]” [*ASA SQL Reference*, page 462]

“GRANT REMOTE statement [SQL Remote]” [*ASA SQL Reference*, page 463]

“GRANT REMOTE DBA statement [SQL Remote]” [*ASA SQL Reference*, page 465]

“WAITFOR statement” [*ASA SQL Reference*, page 605]

“WHENEVER statement [ESQL]” [*ASA SQL Reference*, page 606]

“WHILE statement [T-SQL]” [*ASA SQL Reference*, page 607]

“WRITETEXT statement [T-SQL]” [*ASA SQL Reference*, page 608]

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