



MaintScape Installation Instructions (Build 132)

Table of Contents

Table of Contents.....	1
Introduction to the Installation Process.....	3
Use the Correct Instructions Document Version.....	3
Installing the Server Component.....	3
Introduction.....	3
Install the Server Component – SQL Anywhere Version 11.....	4
Step 1: Install Sybase SQL Anywhere Database Software.....	4
Step 2: Configure Sybase SQL Anywhere Database Software	4
Option A: Configure for Stand-alone Configuration.....	4
Option B: Configure for Network Configuration.....	4
Install the Server Component – SQL Anywhere Version 9.....	6
Step 1: Install Sybase SQL Anywhere Database Software.....	6
Step 2: Configure Sybase SQL Anywhere Database Software	7
Option A: Configure for Stand-alone Configuration.....	7
Option B: Configure for Network Configuration.....	7
Installing the Client Component	9
Running the MaintScape Batch Processing Program (MaintScapeBatch)	11
Introduction.....	11
Password Security Note	12
Usage Instructions.....	12
Installation Process is now Complete.....	13
Appendices	14
Appendix A) Database Server Parameters.....	14
Appendix B) Connecting the MaintScape Client Program to the Database Server.....	15
Successfully Connecting to the Database.....	16
Connecting to one of multiple MaintScape Databases.....	17
SQL Anywhere Documentation on Connection Issues	17
Appendix C) Advanced TCP/IP Connections: Connecting from Client to Server over the Internet.....	18
Appendix D) Running multiple MaintScape Databases from a SQL Anywhere Server	19
Appendix E) Configuring Data Sources using the ODBC Data Source Administrator.....	20
Selecting which ODBC Data Source to use to connect to the Database	21
Appendix F) Troubleshooting.....	21

Cannot Connect from Client to Server21

Client install program reports error with “c:\winnt\system32\autoexec.nt”22

Troubleshooting Resources.....22

Novell Network Server - Database Server runs but MaintScape cannot connect.....22

Appendix G) Starting/Stopping or modifying the SQL Anywhere Windows Service23

 SQL Anywhere 1123

 SQL Anywhere 923

Appendix H) Modifying Sybase SQL Anywhere Licensing Information23

Appendix I) MaintScape Client Program Runtime Parameters.....23

Introduction to the Installation Process

MaintScape is a client/server computer system. Therefore one component of MaintScape is installed on a server computer and a separate component is installed on one or more end-user client computers.

MaintScape may run in either a network or stand-alone configuration. In stand-alone configuration, the client and server components run on the same physical computer. MaintScape will then only run on that one computer.

A MaintScape release is identified by its *Build Number*. Select menu item Help/About within MaintScape to see what build number you are running.

The appendices of this document contain valuable information, including troubleshooting suggestions, in depth background information and documentation on installation variations.

Use the Correct Instructions Document Version

Please be sure to use the version of this document that matches the version (Build number) of MaintScape that you are upgrading to. If in doubt, the correct version is available as document “install.doc” in the “Document” folder of your MaintScape CD-ROM.

Installing the Server Component

Introduction

Installing the server component comprises the following steps, each of which are described in more detail further below.

1. Install a licensed copy of the SQL Anywhere relational database server by Sybase Inc.
2. Install an empty database file: “maintscp.db”.
3. Configure the database server (required for network configuration only).

GrandRavine Software will ship you the SQL Anywhere relational database software in its original packaging. MaintScape supports Sybase SQL Anywhere database versions 9 and 11. Version 11 is the current version shipped. The license to this software belongs to you - be sure to register your license with Sybase Inc.

Stand-alone configuration You will install SQL Anywhere onto the computer that will run MaintScape.

Network configuration You will install SQL Anywhere onto a network server.

The instructions below apply to Microsoft Windows and Novell Netware servers. In the case of Netware, the Sybase installation program must be run on a Microsoft Windows computer connected to the Netware server. Please consult the Sybase installation instructions if you are installing SQL Anywhere onto a Unix server.

The MaintScape database file, “maintscp.db”, will contain ALL your production data. You **MUST** back it up regularly. Backup and other data safety issues are discussed in detail in the MaintScape document, “MaintScape Database Backup and Recovery”. This document is shipped with MaintScape and is also available as document “dbsafety.doc” in the “Document” folder of your MaintScape CD-ROM.

IMPORTANT DATABASE BACKUP NOTICE:

DO NOT assume your normal backup procedures will backup MaintScape database files. Be sure to read the “MaintScape Database Backup and Recovery” document referred to above.

IMPORTANT WARRANTY AND SUPPORT NOTICE:

In order to preserve your warranty, your ability to upgrade to new MaintScape versions, and the terms of your support agreement:

- Data in the MaintScape database may only be created, updated or deleted using MaintScape interfaces provided by GrandRavine Software.

- The internal structure of your MaintScape database may only be modified using upgrade programs and scripts provided by GrandRavine Software.

Please follow the installation instructions that apply to the SQL Anywhere version you are installing.

Install the Server Component – SQL Anywhere Version 11

Step 1: Install Sybase SQL Anywhere Database Software

Insert the SQL Anywhere version 11 CD-ROM. The installation program should run automatically. If not, run SETUP.EXE from the CD-ROM.

The SQL Anywhere 11 installation program requires the Microsoft .NET framework version 2.0. This Microsoft software will be downloaded and installed if not found (subject to your approval).

Navigate through the following initial installation wizard screens:

- Choose a language for the setup program (e.g. English).
- Click “Install SQL Anywhere 11” at the top of the list of installation options.
- Click past the “Welcome” screen.
- Review and accept the SQL Anywhere 11 license agreement.
- Enter your product registration number. Be sure to enter the registration number from the CD jacket within the shrink-wrapped base package. Do not enter the registration number from one of your additional user license envelopes (not shipped for stand-alone configuration).
- Next, the SQL Anywhere install wizard will ask you to enter license information. Specify a contact name and your company name as requested. Select one of the following 2 options - please contact MaintScape technical support if you need help:
 - Select the “CPU-based model” option if GrandRavine Software procured a CPU SQL Anywhere license for you.
 - Otherwise select the “Networked seat (per-seat) model” option and enter the number of “licensed units” as is specified by your MaintScape license. You can look up this number in your MaintScape license file if necessary: Open file “maintscp.lic” from your MaintScape CD-ROM in a text editor such as ‘notepad’. The number of licensed units is equal to the ‘User Limit’ parameter.
- Select setup type “Complete”.
- Click “Install” to begin the installation.
- Installation is now done. View the “ReadMe” file or online resources if you are interested, however this is not necessary.

Step 2: Configure Sybase SQL Anywhere Database Software

Option A: Configure for Stand-alone Configuration

1. Create a folder (directory) on your MaintScape computer to hold the MaintScape database file.
2. Install the initial database file (maintscp.db) into the folder you just created by running “setup initial database.exe” from the MaintScape CD-ROM. Be sure to select the SQL Anywhere 11 database version.

Option B: Configure for Network Configuration

1. Create a folder (directory) on your Server computer to hold the MaintScape database file.
2. Install the initial database file (maintscp.db) into the folder you just created by running “setup initial database.exe” from the MaintScape CD-ROM. Be sure to select the SQL Anywhere 11 database version.
3. Perform **only one** of the options below:

Option B-1: Configure the database server to run as a Windows Service

The SQL Anywhere service must be set up using the Sybase program “Sybase Central”:

- Run ‘Sybase Central’ by clicking the ‘Start’ button, then selecting menu item ‘Programs’ / ‘SQL Anywhere 11’ / ‘Sybase Central’.
- Double-click plug-in “SQL Anywhere 11” in the right pane of Sybase Central.
- Click on the “Services” tab in the right pane of Sybase Central.
- Right-click in blank space in the right pane of Sybase Central. Highlight action “New”, then click cascading action “Service...”. Perform the following steps within the ‘Create New Service’ wizard:

Wizard Window	Action
Welcome	Suggested name of new service is 'mscp_db'.
Select a Type	Select option 'Network Database Server'.
Specify executable for the service	The path name to the database server program will be as follows if you installed Sybase SQL Anywhere to the default location: C:\Program Files\SQL Anywhere 11\Bin32\dsrv11.exe Do not check option 'Save this executable as the custom default'.
Specify Parameters	Specify the following substituting an appropriate path to your database file if necessary: -n maintscp "c:\mscp_db\maintscp.db" -n maintscp Do not press <enter> to create a carriage return between parameters. Keep typing and let the text wrap to a new line. Additional database server parameters may be necessary or useful - see Appendix A.
Choose Account	'Local system account' should be acceptable in most cases. Most users will prefer to uncheck 'Allow service to interact with desktop' option ¹ .
Choose startup type	Select ‘Automatic’ to ensure the SQL Anywhere database service runs when your server starts up.
Start Service now?	Leave “Start the service now” unchecked. We will start the service after this wizard finishes. Click 'Finish'.

- You should now see the name of your service listed in the right pane of Sybase Central with status 'Stopped'. Right-click on the service name and select 'Start'. The SQL Anywhere server should start and open the MaintScape database (this may take 1 or 2 minutes). If successful, the service status should now read 'Started'. Contact GrandRavine Software technical support if any errors occur which you cannot resolve.

Option B-2: Configure the database server to run as a Windows Program

Most users of MaintScape will prefer to run the database server as a Windows Service (option B-1). To run the database server as a regular Windows program, create a shortcut for the following command **substituting** an appropriate path to your database file if necessary:

¹ The ‘Allow service to interact with desktop’ option results in the service icon being visible in your system tray, however also results in an ‘OK to shut down server?’ query on system shutdown. Uncheck this option if you do not want this interference with the normal system shutdown process.

```
" C:\Program Files\SQL Anywhere 11\Bin32\dbsrv11.exe" -n maintscp
"c:\mscp_db\maintscp.db" -n maintscp
```

The above command assumes SQL Anywhere was installed in its default install directory.

Additional database server parameters may be necessary or useful - see Appendix A.

Continue with *Installing the Client Component*, page 9.

Install the Server Component – SQL Anywhere Version 9

Step 1: Install Sybase SQL Anywhere Database Software

Insert the SQL Anywhere Studio 9 CD-ROM. The installation program should run automatically. If not, run SETUP.EXE from the CD-ROM.

Navigate through the following initial installation wizard screens:

- Welcome screen.
- Select your country of operation, then review and agree to the corresponding software license.
- Enter your product registration number. Be sure to enter the registration number from the CD jacket within the shrink-wrapped base package. Do not enter the registration number from one of your additional user license envelopes (not shipped for stand-alone configuration).
- We recommend accepting the default product and shared files installation directories.

At this point you should be at the “Select Components” screen. Most customers will want to disable the following options that are selected by default:

SQL Anywhere 9 Component	Notes
Tools	
PowerDesigner 9	Not needed for MaintScape. This is a technical tool for database designers.
InfoMaker 9	This is a tool for creating custom reports, similar in purpose to Crystal Reports or Microsoft Access. You could consider installing this tool, however most MaintScape customers do not use it.

The quickest and safest way to continue is to leave the rest of the selections at their default value. However the table below identifies components that you can omit if you wish to reduce the size of your install. The table also contains some notes on components that you should or may want to install.

SQL Anywhere 9 Component	Required?	Notes
Databases		
Adaptive Server Anywhere	YES	Not all of the child components are required, however it is just as well to install as defaulted.
Adaptive Server Anywhere for Netware	?	Select this option if you will be installing SQL Anywhere on a Netware server.
UltraLite	NO	Not needed for MaintScape.
Synchronization and Messaging	NO	Not needed for MaintScape.
Tools		
Sybase Central	YES	Sybase Central is required to configure the database server to run as a Windows Service.
Samples	NO	Not needed for MaintScape.
PowerDesigner 9	NO	Generally should not be installed (see table above).
InfoMaker 9	NO	Generally should not be installed (see table above).

Next, the SQL Anywhere install wizard will ask you to enter license information. Specify a contact name and your company name as requested. Select the “Networked Seat (per-seat) model” and enter the number of “licensed units” as is specified by your MaintScape license. You can look up this number in your MaintScape license file if necessary: Open file “maintscp.lic”

from your MaintScape CD-ROM in a text editor such as 'notepad'. The number of licensed units is equal to the 'User Limit' parameter.

If you do not enter an appropriate number of "licensed seats" when prompted, SQL Anywhere may refuse database connections which would otherwise be permitted. You may change license information after SQL Anywhere has been installed - see Appendix H for instructions.

Click 'Next' through the last wizard information screens until software installation begins.

Depending on your operating system and configuration, Windows Firewall may ask you if it should keep blocking programs "Sybase Central" or "Adaptive Server Anywhere ISQL". In both cases you can select, "Unblock".

You will then be presented with a screen for installing SQL Anywhere documentation. You should install the online documentation (HTML) component. Most customers will not need the "English Printable Books (PDF) component".

After documentation is installed, you will be presented with a final screen to view the "read me" file or perform online registration with Sybase. We recommend registering your SQL Anywhere software with Sybase as you will get notification of updates. Registration will also facilitate getting a replacement CD-ROM from Sybase if necessary.

Step 2: Configure Sybase SQL Anywhere Database Software

Option A: Configure for Stand-alone Configuration

3. Create a folder (directory) on your MaintScape computer to hold the MaintScape database file.
4. Install the initial database file (maintscp.db) into the folder you just created by running "setup initial database.exe" from the MaintScape CD-ROM. Be sure to select the SQL Anywhere 9 database version.

Option B: Configure for Network Configuration

4. Create a folder (directory) on your Server computer to hold the MaintScape database file.
For Netware installations, the database file and the transaction log file must be on a NetWare volume.
5. Install the initial database file (maintscp.db) into the folder you just created by running "setup initial database.exe" from the MaintScape CD-ROM. Be sure to select the SQL Anywhere 9 database version.
6. Perform **only one** of the options below:

Option B-1: Configure the database server to run as a Windows Service

The SQL Anywhere service must be set up using the Sybase program "Sybase Central":

- Run 'Sybase Central' by clicking the 'Start' button, then selecting menu item 'Programs' / 'SQL Anywhere 9' / 'Sybase Central'.
- Select tree node "Adaptive Server Anywhere 9" in the left pane of Sybase Central.
- Click on the "Services" tab in the right pane of Sybase Central.
- Right-click in blank space in the right pane of Sybase Central. Highlight action "New", then click cascading action "Service...". Perform the following steps within the 'Create New Service' wizard:

Wizard Window	Action
Welcome	Suggested name of new service is 'mscp_db'.
Select Service Type	Select option 'Network Database Server'.
Specify executable for the service	The path name to the database server program will be as follows if you installed Sybase SQL Anywhere to the default location: C:\Program Files\Sybase\SQL Anywhere 9\win32\dbsrv9.exe Do not check option 'Save this executable as the custom default'.

Specify Parameters	Specify the following substituting an appropriate path to your database file if necessary: <pre>-c 32M -n maintscp "c:\mscp_db\maintscp.db" -n maintscp</pre> <p>Do not press <enter> to create a carriage return between parameters. Keep typing and let the text wrap to a new line.</p> <p>Additional database server parameters may be necessary or useful - see Appendix A.</p>
Choose Account	'Local system account' should be acceptable in most cases. Most users will prefer to uncheck 'Allow service to interact with desktop' option ² .
Choose startup type	Select 'Automatic' to ensure the SQL Anywhere database service runs when your server starts up.
Start Service now?	Leave "Start the service now" unchecked. We will start the service after this wizard finishes. Click 'Finish'.

- You should now see the name of your service listed in the right pane of Sybase Central with status 'Stopped'. Right-click on the service name and select 'Start'. The SQL Anywhere server should start and open the MaintScape database (this may take 1 or 2 minutes). If successful, the service status should now read 'Started'. Contact GrandRavine Software technical support if any errors occur which you cannot resolve.

Option B-2: Configure the database server to run as a Windows Program

Most users of MaintScape will prefer to run the database server as a Windows Service (option B-1). To run the database server as a regular Windows program, create a shortcut for the following command **substituting** an appropriate path to your database file if necessary:

```
"c:\Program Files\Sybase\SQL Anywhere 9\win32\dbsrv9.exe" -c 32M -n maintscp "c:\mscp_db\maintscp.db" -n maintscp
```

The above command assumes SQL Anywhere was installed in its default install directory.

Additional database server parameters may be necessary or useful - see Appendix A.

Option B-3: Starting the version 9 database server on Netware

Use the following command **substituting** an appropriate path to your database file if necessary:

```
load dbsrv9.nlm -c 32M -n maintscp vol1:\mscp_db\maintscp.db -n maintscp
```

The database file and the transaction log file must be on a NetWare volume, and the paths must be fully specified.

You will probably want to place the above command in a server start-up script file to ensure the database server comes up when the server reboots.

Additional database server parameters may be necessary or useful - see Appendix A.

Continue with *Installing the Client Component*, page 9.

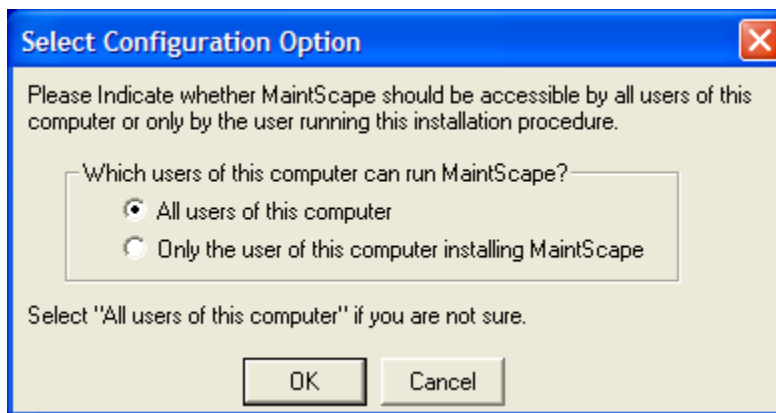
² The 'Allow service to interact with desktop' option results in the service icon being visible in your system tray, however also results in an 'OK to shut down server?' query on system shutdown. Uncheck this option if you do not want this interference with the normal system shutdown process.

Installing the Client Component

You must install the client component of MaintScape on any computer that should run MaintScape. There will be only one such computer if you are installing MaintScape for stand-alone configuration. If you are installing MaintScape for network configuration, you may install the client component of MaintScape on as many computers as you like, however the number of computers that can be logged in at any one time is limited to your licensed number of concurrent users.

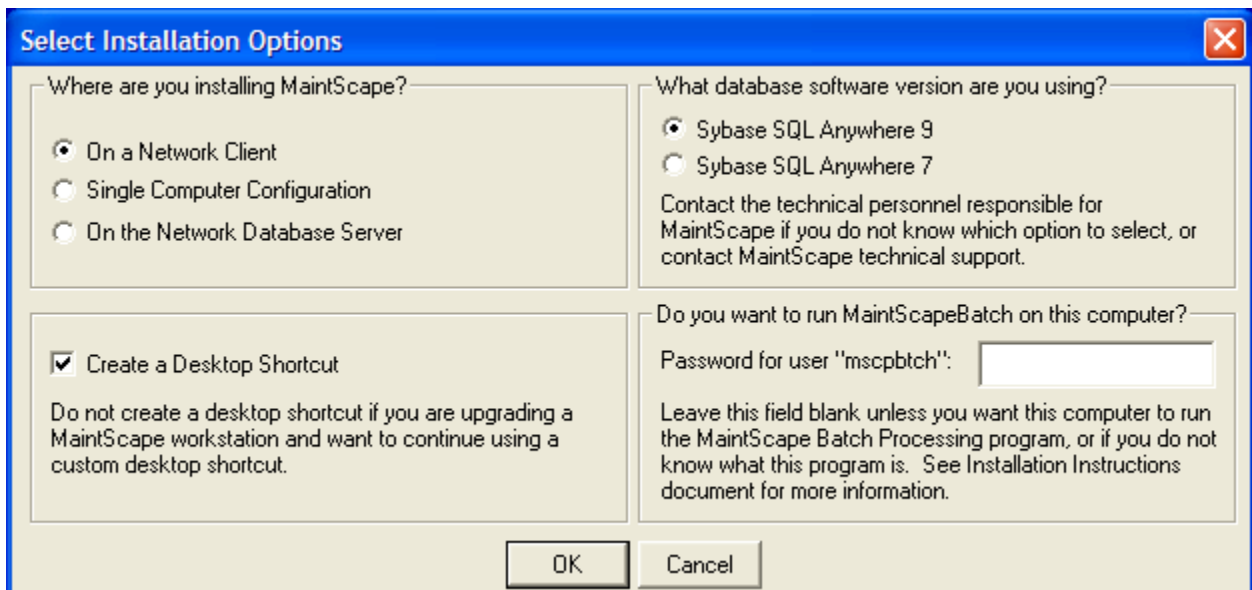
If you are installing the MaintScape client component onto computers without a CD-ROM or onto many computers, you may find it more convenient to copy the entire MaintScape CD-ROM into a network directory and then run "setup.exe" from the network directory from each computer.

To install the MaintScape client component on a particular computer, run SETUP.EXE from the MaintScape CD-ROM (or directory containing the MaintScape CD-ROM image). You will see the following Configuration Option screen after the welcome message:



Typically you will select "All users of this computer". It is best to select this option if you are installing to the computer that will run MaintScapeBatch (see above).

You will next be presented with the Select Installation Options screen:



The installation options are as follows:

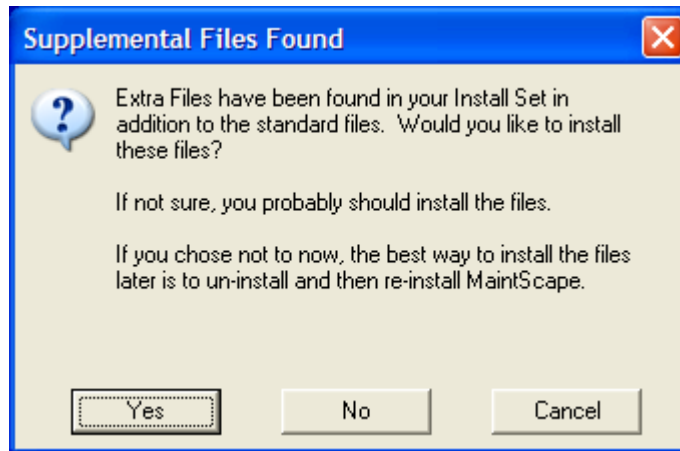
<p>Where are you installing MaintScape?</p>	<p>Options “On a Network Client” and “On the Network Database Server” only apply when installing MaintScape for network configuration.</p> <p>If you are installing MaintScape for network configuration on the SAME Windows computer that is running the Sybase SQL Anywhere server, then select ‘On the Network Database Server’.</p>
<p>What database software version are you using?</p>	<p>Ask you technical personnel if you do not know which SQL Anywhere version you are running.</p>
<p>Create a Desktop Shortcut</p>	<p>You typically want to create a desktop shortcut when installing MaintScape for the first time on a computer.</p> <p>Alternatively, you may be running this install program when upgrading a computer that runs a prior version of MaintScape (see the “MaintScape Upgrade Instructions” document in the “Documents” folder of your MaintScape CD-ROM). This computer may have a custom shortcut to run MaintScape as described in Appendix B of this document – for example to identify the IP address of the database server. In this case, you may not want to create a new default desktop shortcut, and just continue to use your custom shortcut.</p> <p>Although unlikely, it is possible that an old shortcut may not properly run a newer version of MaintScape. GrandRavine Software will advise when this is the case.</p>
<p>Do you want to run MaintScapeBatch on this computer?</p>	<p>The MaintScape Batch Processing Program (MaintScapeBatch) performs background operations such as sending email notifications of work orders.</p> <p>MaintScapeBatch should be configured on exactly one computer if its processes are required. Note that MaintScapeBatch does not apply when MaintScape is running in single computer configuration, and it uses up one concurrent license when running for MaintScape set up for network configuration.</p> <p>You configure MaintScapeBatch to run on the designated computer by entering here the password of the special MaintScape logon id “mscpbtch”. The default password is “mscpbtch”, however it may have been changed it at your site.</p> <p>Configuring MaintScapeBatch to run on a computer creates a launch shortcut on the computer’s Desktop, and it adds a launch shortcut to the Startup group ensuring MaintScapeBatch runs when the computer logs on. Note that MaintScapeBatch is an interactive program.</p> <p>You may want to run MaintScapeBatch on the same server that runs the SQL Anywhere database engine.</p> <p>See documentation section <i>Running the MaintScape Batch Processing Program (MaintScapeBatch)</i>, below.</p>

If you are installing MaintScape for stand-alone configuration, the installer will then ask you to identify the folder containing the database file (see instructions for “setup initial database.exe”, above).

The MaintScape installer will then ask for an installation directory, which defaults to your standard Program Files directory. You will typically accept this default.

At this point, MaintScape should install.

It is possible you may see the following window after files have been copied to your computer:



You will see this window if your MaintScape supplier has added extra files to install above and beyond the usual ones. For example, the files could support custom functionality. Click ‘Yes’ if you are expecting such files. Please contact your MaintScape supplier or GrandRavine Software if you have questions regarding the “extra files”.

Running the MaintScape Batch Processing Program (MaintScapeBatch)

Introduction

The MaintScape Batch Processing Program (MaintScapeBatch) should be configured to run on exactly one computer if its processes are required. See documentation section *Installing the Client Component*, above, regarding how this is done.

Note that MaintScapeBatch does not apply when MaintScape is running in single computer configuration, and it uses up one concurrent license when running for MaintScape set up for network configuration.

The batch operations performed by MaintScapeBatch are as follows:

Batch Operation	Background
Send Email notification of work orders	<p>MaintScape Procedures are template work orders, and are used when automatically generating work orders through processes such as Preventive Maintenance. A MaintScape procedure can indicate parties to notify when the Planning Date of a work order created from the procedure is reached.</p> <p>MaintScapeBatch sends these email notifications for a work order when the planning date is reached.</p>

MaintScapeBatch is an interactive program. Configuring MaintScapeBatch to run on a computer creates a launch shortcut on the computer’s Desktop, **and** it adds a launch shortcut to the Startup group ensuring MaintScapeBatch runs when the computer logs on.

Please ensure MaintScapeBatch runs at all times. If MaintScapeBatch does not start up properly on computer re-boot, please dismiss any error message that may appear and attempt to start it using the desktop icon. Contact GrandRavine Software technical support if problems persist.

You may want to run MaintScapeBatch on the same server that runs the SQL Anywhere database engine.

Password Security Note

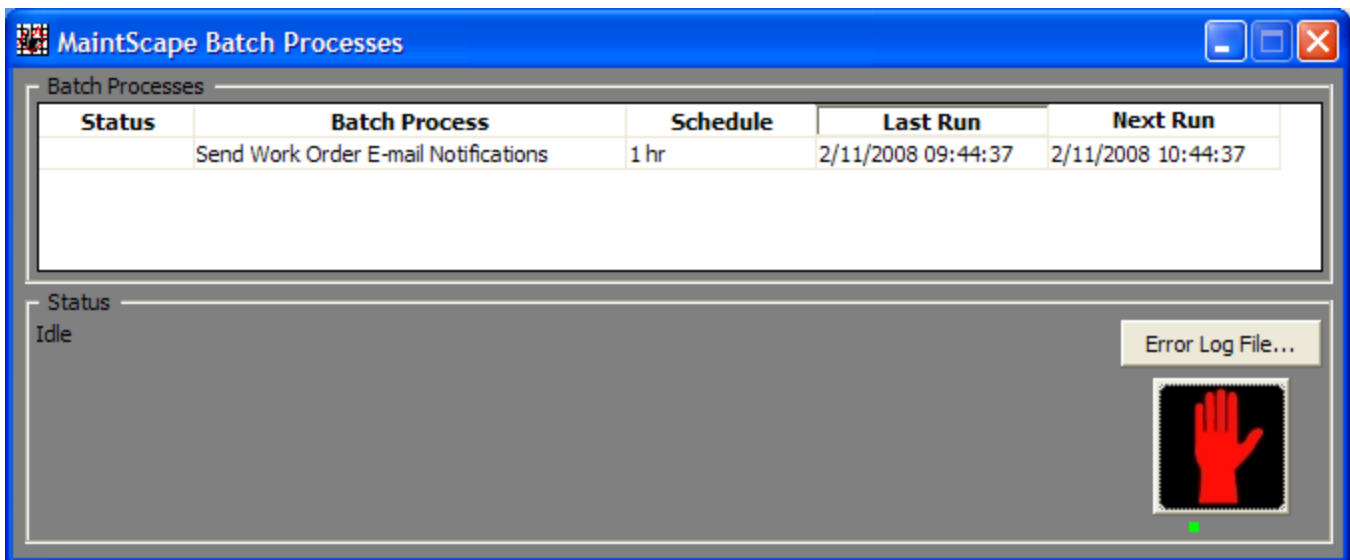
The MaintScape client installation program creates an ODBC data source for MaintScapeBatch when you configure a computer to run MaintScapeBatch. This ODBC data source contains the password you specify for the special MaintScape logon ID “mscpbth”. This password value can be seen as text in the registry editor. You can encrypt the password value if this is of concern to you.

To encrypt the password, use the ODBC data source editor to edit data source “MaintScapeBatch”. Within the ODBC configuration window – flip to the “Login” tab and click the check box labeled “Encrypt Password”. See Appendix E for more information on ODBC data sources.

Usage Instructions

MaintScapeBatch runs when you log on to MaintScape using the special logon ID “mscpbth”. The default password is “mscpbth”, however it may have been changed it at your site. The shortcuts created to run MaintScapeBatch start MaintScape, logging on as “mscpbth”.

The MaintScapeBatch interactive console window appears as follows:



- The batch processes that are available to run are listed in the “Batch Processes” list at the top of the window. Note that the “last run” and “next run” date and time is displayed for each.
- The Status window indicates “Idle” if MaintScapeBatch is waiting for a batch process to reach its “Next Run” date. Process messages replace this text when a process is running.
- Batch process errors are written to the MaintScape error log file. Click the “Error Log File...” button to either view the error log, or delete the error log. Please ensure errors have been addressed before deleting the error log file.
- The red-hand “Stop” icon is used to stop MaintScapeBatch. If MaintScapeBatch is idle, this button will prevent a batch process from running – even when its “next run” time is reached. This button will also stop a batch process in progress. This button’s icon will change to a green “Go” icon when waiting or processing is stopped.
- The green dot moves back and forth when MaintScapeBatch is idle, indicating that MaintScapeBatch is functioning properly.

Installation Process is now Complete

The initial MaintScape database is set up with a single user with user id 'dba' and password 'sql'. This user id has special privileges and should not be used for day-to-day MaintScape usage. One of your first tasks should be to set up users. Please consult the MaintScape documentation for details.

Network configuration note:

The MaintScape client program finds the database by issuing a network broadcast. This may not succeed if you are connecting across a WAN. See Appendix B if you are having connection difficulties. You may also follow the suggestions of this documentation if you want to minimize connect time and/or optimize network usage.

Appendices

Appendix A) Database Server Parameters

The server configuration instructions specify the following default database server parameters:

```
-c 32M -n maintscp "c:\mscp_db\maintscp.db" -n maintscp
```

These parameters are specified either in the Microsoft Windows service setup (see Appendix G), or in the command used to run the database server.

These parameters are described below:

Parameter	Notes
-c 32M	Identifies the amount of memory to initially use for data caching. This parameter is no longer encouraged for SQL Anywhere 11 since SQL Anywhere will allocate a reasonable default and dynamically adjust it based on needs and availability. In general, the more cache, the better the performance. Of course, as cache size approaches or exceeds the size of the database itself, no extra performance is gained.
-n maintscp	Identifies the database server instance name as 'maintscp'. By default, the MaintScape client program looks for a database server instance with this name. Appendix B describes connecting to a database server instance with another name.
"c:\mscp_db\maintscp.db"	Identifies the MaintScape database file. You can list several database files for the database server to open – see Appendix D for an example. Parameters for a particular database file follow the file path name up to the end of the configuration string or the next database file path name.
-n maintscp	Identifies the database name as 'maintscp' within the database server instance. By default, the MaintScape client program looks for a database with this name. Appendix B describes connecting to a database with another name.

Other server parameters which may be useful are listed below. These parameters should appear before the database file name: "c:\mscp_db\maintscp.db" in the example above.

Parameter	Notes
-x list	Identifies communication links to use. The database server will load faster if only the required links are loaded. More importantly, this parameter permits link-specific parameters. You can find an example of this in Appendix C.
-ti minutes	Clients which have not communicated with the database server for the specified number of minutes will be disconnected. Default is 240 minutes, or 4 hours. Set option value to 0 if you want MaintScape client programs to idle for an indeterminate time without ever being disconnected.
-tl seconds	'Liveness packets' are sent between client and server to confirm a

	<p>connection remains intact. If the server does not receive a packet from a client for the specified number of seconds, the connection is dropped. Default is 120 seconds, or 2 minutes.</p> <p>If you find MaintScape is frequently losing its connection with the database server, you may try increasing this value or setting to 0 to disable liveness checking.</p>
<code>-o filename</code>	<p>Output server messages to a file. This parameter is useful in conjunction with the <code>-z</code> parameter for debugging connection errors.</p>
<code>-z</code>	<p>Displays communication/connection diagnostic information on the server console. This parameter is useful in conjunction with the <code>-o</code> parameter for debugging connection errors.</p>

SQL Anywhere online documentation provides clear and comprehensive documentation on these and all other server and database parameters:

SQL Anywhere 11 Access the online documentation by clicking the ‘Start’ button, then selecting menu item ‘Programs’ / ‘SQL Anywhere 11’ / ‘Documentation’ / ‘Online Books’.

Expand the ‘contents’ page as follows and select the bottom topic:

- SQL Anywhere Server – Database Administration
 - Starting and Connecting to Your Database
 - The database server
 - The SQL Anywhere database server

SQL Anywhere 9 Access the online documentation by clicking the ‘Start’ button, then selecting menu item ‘Programs’ / ‘SQL Anywhere 9’ / ‘Online Books’.

Expand the ‘contents’ page as follows and select the bottom topic:

- ASA Database Administration Guide
 - The Database Server
 - The database server

Appendix B) Connecting the MaintScape Client Program to the Database Server

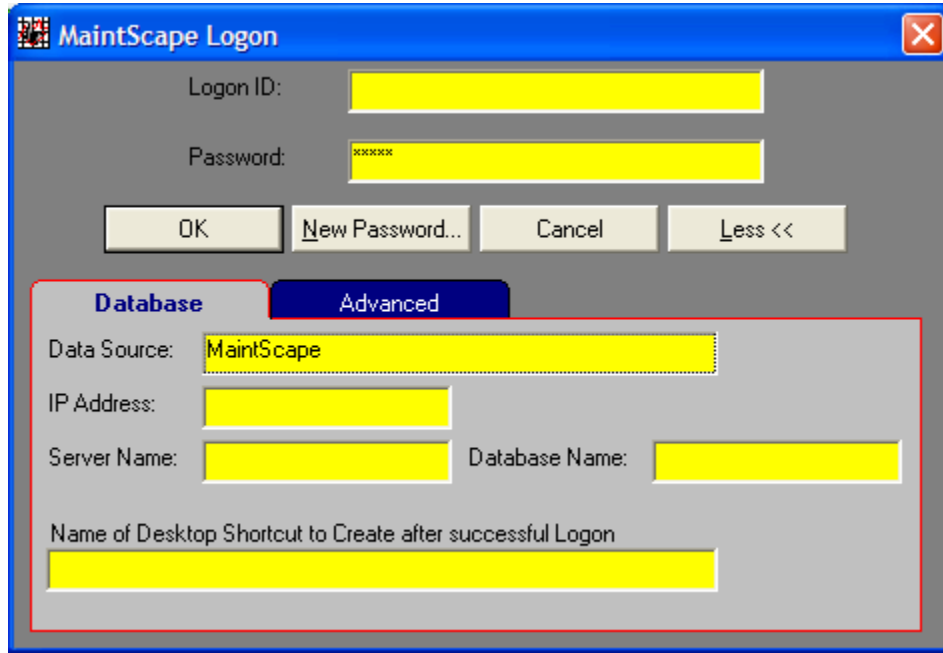
These instructions are generally useful only when you are running MaintScape in network configuration.

The MaintScape client program connects to a MaintScape database on the database server using Microsoft ODBC technology. This is the case for both single computer and network configurations. Accordingly, the MaintScape client component installation program creates an ODBC data source named “MaintScape”. See Appendix E for more information on ODBC data sources.

The MaintScape client program usually finds the database server by itself if the two computers are on the same subnet (by sending a UDP broadcast). If not successful, the most common adjustments necessary for successful connections are described below. If these are not successful, you will likely have to specify additional communication parameters as per the example in Appendix C.

Successfully Connecting to the Database

If the client broadcast does not find the server, or if you are trying to connect to one of multiple MaintScape databases possibly running on multiple server computers, you will have to help the MaintScape client find the server. The most common ways to do this use fields in the MaintScape logon window made visible by clicking the button labeled “More >>”:



The connection helper fields displayed above are described as follows:

Field	Notes
Data Source	Identifies the ODBC data source to use when connecting to the database server. The default value “MaintScape” is the name of the ODBC data source created by the MaintScape client installation program. Specify a value for this field to identify a different ODBC data source that you have created. See Appendix E for more information on ODBC data sources.
IP Address	Specifying the IP address of the MaintScape database server computer in this field corrects most connection failures. Advanced note: You should not specify an IP address here if you have modified the ODBC data source to specify TCP/IP parameters. In this case, you should specify the IP address within those TCP/IP parameters. See Appendix C for an example of this, and Appendix E for more information on ODBC data sources.
Server Name (I.e. SQL Anywhere server instance name)	The default SQL Anywhere server name for the MaintScape database server is “maintscp”. This is set by the first occurrence of “-n maintscp” in the server configuration string explained in Appendix A. If the SQL Anywhere server you wish to connect to has another name, enter that name into this field. You do not need to enter the default value “maintscp” if you use the default ODBC data source “MaintScape” because “maintscp” is specified in this data source. Any value you enter here overrides the value specified in the identified ODBC data source.

<p>Database Name</p>	<p>The default SQL Anywhere database name for the MaintScape database is “maintscp”. This is set by the second occurrence of “-n maintscp” in the server configuration string explained in Appendix A. If the MaintScape database you wish to connect to has another name, enter that name into this field.</p> <p>You do not need to enter the default value “maintscp” if you use the default ODBC data source “MaintScape” because “maintscp” is specified in this data source. Any value you enter here overrides the value specified in the identified ODBC data source.</p>
<p>Name of Desktop Shortcut to Create after successful Logon</p>	<p>Values for the above fields can be encoded into a shortcut command to run MaintScape. I.e. You can have several shortcuts, each running MaintScape connecting to different database servers and/or databases.</p> <p>Specify in this field the name of a shortcut you would like to create should your logon succeed. This shortcut is created on your desktop. You can subsequently move or rename the shortcut as you see fit.</p>

Connecting to one of multiple MaintScape Databases

Note that MaintScape can only connect to one database at a time. If you wish to connect to another database, you will have to exit MaintScape and then restart it.

Caution: It may not be obvious what database you are connected to when you are running MaintScape. The SQL Anywhere Server and Database names are displayed in the “About” window accessible using menu bar action “Help” / “About” from any MaintScape window.

To connect to one of multiple MaintScape databases, you will need to know the database server instance name, the database name, and possibly the server computer IP address. The server instance name and database name values are specified in the database server configuration string as described in Appendix A. Appendix D describes configuration strings that run multiple databases from a single database server.

When logging on to MaintScape, specify the above pieces of information in the expanded section of the logon window as illustrated above within this appendix.

If you will connect to a non-default database on a regular basis, take advantage of the “Name of Desktop Shortcut...” field, described above, to create a shortcut to connect to a particular MaintScape database. You can then avoid retyping the database identifying parameters.

Important: The MaintScape client build number (i.e. version) must match the build number of any MaintScape database it connects to.

SQL Anywhere Documentation on Connection Issues

You can find full background and documentation on database connection issues from the following sources:

SQL Anywhere 11 Access the online documentation by clicking the ‘Start’ button, then selecting menu item ‘Programs’ / ‘SQL Anywhere 11’ / ‘Documentation’ / ‘Online Books’.

Please refer to the ‘contents’ page chapter, “SQL Anywhere Server – Database Administration”.

SQL Anywhere 9 Access the online documentation by clicking the ‘Start’ button, then selecting menu item ‘Programs’ / ‘SQL Anywhere 9’ / ‘Online Books’.

Expand the ‘contents’ page as follows and select the bottom topic for each of the following:

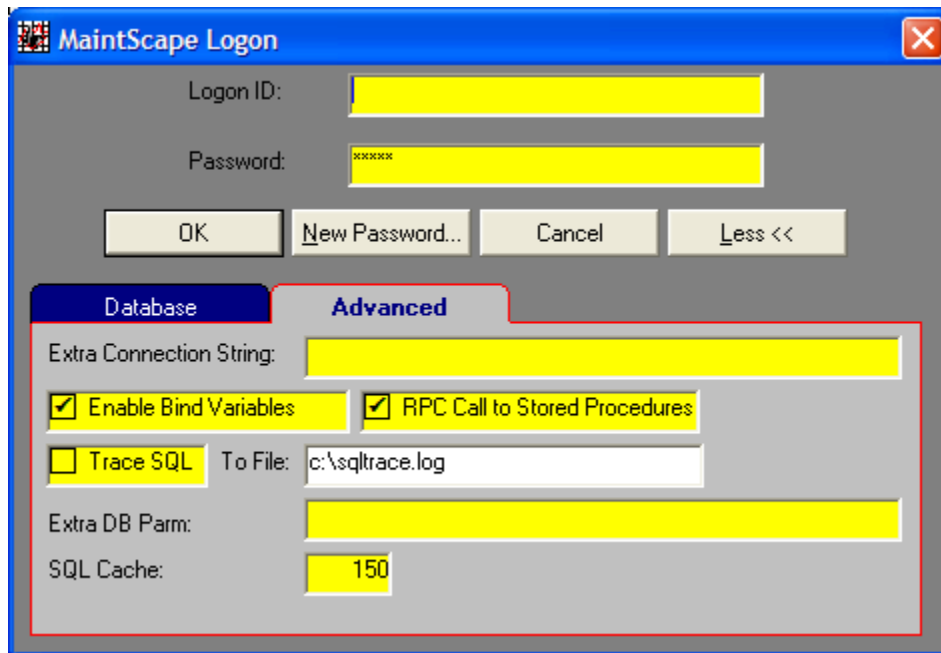
- ASA Database Administration Guide
 - The Database Server
 - The database server

- ASA Database Administration Guide
 - Connection Parameters and Network Protocol Options
 - Network Protocol Options
- ASA Database Administration Guide
 - Connecting to a Database
 - Troubleshooting Connections
 - Client/Server Communication

Appendix C) Advanced TCP/IP Connections: Connecting from Client to Server over the Internet

These instructions generally demonstrate more sophisticated control over TCP/IP connection parameters. The example used is one that permits connections from a MaintScape client to a MaintScape database over the Internet.

First, install the MaintScape client program on the client computer. Specify install option ‘Install on a Network Client’. When logging on to MaintScape, click the button labeled “More >>” and switch to tab “Advanced” in the newly visible tab control. The logon window should look similar to the following:



Next, enter a value for “Extra Connection String” based on:

```
-x tcpip(DOBROADCAST=DIRECT;ClientPort=5050-5060;HOST=999.999.9.999:2638;MyIP=NONE;TO=40)
```

You will have to customize the above string as follows:

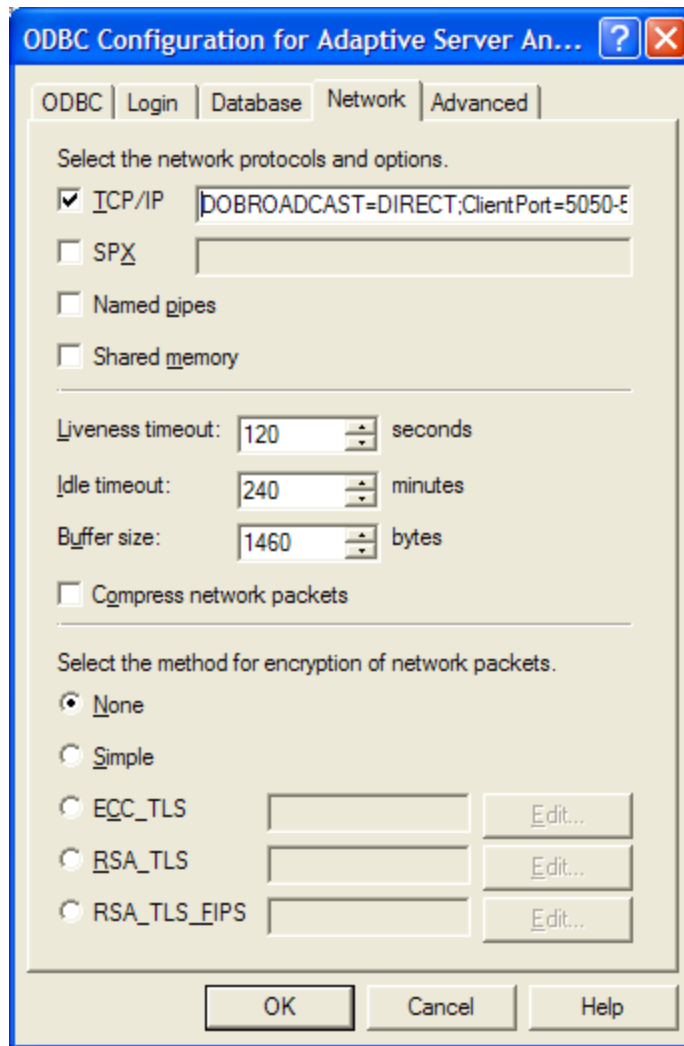
- ClientPort Use this parameter only when connecting across a firewall. This parameter identifies the port number(s) on which the client application may communicate using TCP/IP.
- IP Specify the server's IP address. Value '999.999.9.999', above, is a placeholder only.
 By default, SQL Anywhere listens on server port 2638. The server port value is specified in the sample above after the IP address preceded by ‘:’.

Consult the Sybase SQL Anywhere documentation sections identified within Appendix B for full detail on the illustrated (and other) extra connection string components.

Important:

- If you specify TCP/IP parameters in the Extra Connection String field (i.e. “-x tcpip(...)”), do not also specify the server IP address in the “Database” tab as described in Appendix B. This is not necessary since you can specify the server IP address as part of the TCP/IP parameters (i.e. “HOST=”).
- Parameters specified in the Extra Connection String field override their counterparts specified in the ODBC data source (see Appendix E).

Note that the “Extra Connection String” values cannot be specified in a shortcut to start MaintScape. You can avoid retyping a value at each logon by entering it into the ODBC data source (see Appendix E). The above example would be entered in the “network” tab of the ODBC configuration as follows:



If necessary, please contact GrandRavine Software technical support for assistance with advanced connection parameters.

Appendix D) Running multiple MaintScape Databases from a SQL Anywhere Server

These instructions only apply when you are running MaintScape in network configuration.

The SQL Anywhere database server software may only be installed once on a computer, however it can run several databases at once. The instructions below describe how this is done.

As described in Appendix A, the standard SQL Anywhere startup parameters are:

```
-c 32M -n maintscp "c:\mscp_db\maintscp.db" -n maintscp
```

The following example configures a SQL Anywhere server to run more than one database. The example code splits onto 2 lines because of line wrap, not because of a 'carriage return'. Directories 'c:\mscp_db\...' are examples only.

```
-c 32M -n maintscp "c:\mscp_db\db_1\maintscp.db" -n maintscp_1
"c:\mscp_db\db_2\maintscp.db" -n maintscp_2
```

In the above example, the first '-n maintscp' identifies the server instance name, '-n maintscp_1' names the first database within that instance, and '-n maintscp_2' names the second database.

We recommend you not use the default database name 'maintscp' for any of the multiple databases so as to avoid a situation where a MaintScape client connects to an unintended database because its configuration was not changed from the default.

The MaintScape logon screen has fields for both the server and database names identifying the MaintScape database you wish to connect to. See Appendix B for details.

Please note that MaintScape requires a license for each production database that you use. Contact GrandRavine Software for clarification as necessary.

Appendix E) Configuring Data Sources using the ODBC Data Source Administrator

The MaintScape client program connects to a MaintScape database on the database server using Microsoft ODBC technology. This is the case for both single computer and network configurations. Accordingly, the MaintScape client component installation program creates an ODBC data source named "MaintScape".

ODBC data sources are viewed and edited using the ODBC Data Source Administrator program. This appendix shows you how to run this program to inspect, modify or add an ODBC data source connecting to a MaintScape database.

First, ensure the MaintScape client program is properly installed following instructions in documentation section *Installing the Client Component*, above.

Next, run the ODBC Data Source Administrator by either:

- Double-click 'ODBC Data Sources' within the 'Administrative Tools' folder of Control Panel.
- Click the 'Start' button, select 'Run...', then type "odbcad32.exe" (no quotes), then click 'OK'.

An ODBC data source may appear on either the 'User DSN' or 'System DSN' tab page. Data sources on the 'User DSN' tab page are only available when the computer user who created the data source is logged on (i.e. MS Windows logon). Data sources on the 'System DSN' tab page are available to any logged on user of the computer.

To modify an existing ODBC data source:

- Find the data source on either the 'User DSN' or 'System DSN' tab page. Click on the name to highlight it, then click the 'Configure...' button.

To create a new ODBC data source:

- Navigate to either the 'User DSN' or 'System DSN' tab page, then click the 'Add...' button. Create the data source in the 'System DSN' page if in doubt. In the resulting pop-up, select driver 'SQL Anywhere 11' or the driver for the version of Sybase SQL Anywhere you are using. Drivers for SQL Anywhere versions prior to 11 normally begin with, "Adaptive Server Anywhere".

You should now be in the 'ODBC Data Source Configuration' window for either an existing or newly created data source. The important fields are described below.

ODBC Tab Page	
Data Source Name	This value names the ODBC Data Source. It can be referenced in the MaintScape logon window (see Appendix B), or in a shortcut to run MaintScape (see Appendix I). When referenced, its connection parameters (described within this table) are used to connect the MaintScape client to a MaintScape database. See documentation section <i>Selecting which ODBC Data Source to use to</i>

	<i>connect to the Database</i> following this table for further details.
Description	This value is purely descriptive.
Login Tab Page	Leave as default: ‘Supply user ID and password’ should be checked. Typically you will not specify user ID and password values, however you must do so if you want to start MaintScape without a logon screen (see Appendix I, shortcut parameter “noprompt”).
Database Tab Page	
Server Name	This is the name of the SQL Anywhere server instance that you wish to connect to. The server startup command identifies its server name (see Appendix A).
Start Line	This value should be blank when connecting to a server across a network.
Database Name	This is the name of the SQL Anywhere database which you wish to connect to. The server startup command identifies the name of each database it runs (see Appendix A, D).
Database file	This value should be blank when connecting to a server across a network.
Automatically Start the database if it isn’t running.	This field should be disabled when connecting to a server across a network.
Automatically shut down database after last disconnect.	This field should be unchecked.
Network Tab Page	For optimal performance, only check the communication protocol(s) which you will use to connect over your network. This page is also used to specify communication parameters – e.g. the database server IP address. See Appendix B and C for examples.
Advanced Tab Page	Leave as default.

Selecting which ODBC Data Source to use to connect to the Database

Appendix B illustrates how an ODBC data source can be specified when logging on to MaintScape. MaintScape will use the data source connection parameters (described above) to connect to a MaintScape database. Note that the logon window’s data source field default value is ‘MaintScape’, which is the ODBC data source created by the MaintScape client installation program.

Appendix B also illustrates how the ODBC data source Server Name and Database Name values (Database tab page) are overridden using values specified when logging on to MaintScape.

Finally, Appendix B describes how you can create a Desktop shortcut to run MaintScape that specifies custom ODBC data source, server name, and database name values. You may use this technique to set up multiple icons (shortcuts) to run MaintScape each connecting to a different MaintScape database.

Appendix F) Troubleshooting

Most of the troubleshooting items listed here reflect actual issues encountered by customers.

Cannot Connect from Client to Server

Suggestions for establishing connections from MaintScape clients to the SQL Anywhere server are as follows:

- If you are running TCP/IP protocol, try to ‘ping’ your server from a command prompt using command: “ping <server IP address>”. If your client cannot ‘ping’ the server, MaintScape client/server communication using TCP/IP will not succeed. The command “tracert <server IP address>” (trace route) may provide useful information as it displays the route taken by the attempt to find the server.

- Ensure port 2638 is open for TCP and UDP on your server running Sybase SQL Anywhere. This is the default port which SQL Anywhere listens on. Ensure port 2638 is open anywhere else between your MaintScape client and server – e.g. routers.
- If you are running TCP/IP protocol, try specifying the database server IP address as described in Appendix B.
If this is not successful, you may also try the “Extra Connection String” value described in Appendix C. Be sure to first clear the IP address specified per Appendix B as you cannot specify both values.
- If you are running the Sybase SQL Anywhere Server on a Windows server which also runs Microsoft Proxy Server, you may try using NETBios protocol. To do this, add database server parameter ‘-x NETBios’ (see Appendix A).
- If you have run out of ‘options’, you can produce a diagnostics file for SQL Anywhere’s attempts to connect from client to server.

Client debug file:

Modify the ODBC data source that you use to connect to the server (default “MaintScape”) as described in Appendix E. In particular, flip to the configuration window ‘Advanced’ tab, enable checkbox ‘Display debugging information in a log file’, and provide a file name where specified - example ‘c:\sa_debug.txt’.

Server debug file

Use database server parameters ‘-z’ and ‘-o’ (see Appendix A).

Client install program reports error with “c:\winnt\system32\autoexec.nt”

This problem is usually rectified by installing an updated version of the Windows Installer. Try running a “Windows Update” operation on the affected computer.

Troubleshooting Resources

1. Sybase document, ‘Troubleshooting Adaptive Server Anywhere Connections’ is available on-line at:

<http://my.sybase.com/detail?id=1011225>

GrandRavine Software technical support can e-mail a PDF copy of this document if the above link is not accessible.

2. Sybase online documentation:

SQL Anywhere 11 Access the online documentation by clicking the ‘Start’ button, then selecting menu item ‘Programs’ / ‘SQL Anywhere 11’ / ‘Documentation’ / ‘Online Books’.

11 Expand the ‘contents’ page as follows and select the bottom topic for each of the following:

- SQL Anywhere Server – Database Administration
 - Starting and Connecting to Your Database
 - SQL Anywhere database connections
 - Troubleshooting connections

SQL Anywhere 9 Access the online documentation by clicking the ‘Start’ button, then selecting menu item ‘Programs’ / ‘SQL Anywhere 9’ / ‘Online Books’.

Expand the ‘contents’ page as follows and select the bottom topic for each of the following:

- ASA Database Administration Guide
 - Connecting to a Database
 - Troubleshooting Connections

Novell Network Server - Database Server runs but MaintScape cannot connect

Anti-virus software such as Innoculan may be interfering with connections. First, ensure SQL Anywhere loads before the Anti-virus software. If this does not resolve the problem, try starting the Novell Server without loading the Anti-virus software

Appendix G) Starting/Stopping or modifying the SQL Anywhere Windows Service

This appendix applies when the SQL Anywhere server running the MaintScape database is set up as a service on a Windows server. The server component install instructions, above, describe how this is done.

SQL Anywhere 11

- Run 'Sybase Central' by clicking the 'Start' button, then selecting menu item 'Programs' / 'SQL Anywhere 11' / 'Sybase Central'.
- Double-click plug-in "SQL Anywhere 11" in the right pane of Sybase Central.
- Click on the "Services" tab in the right pane of Sybase Central.
- You should now see the SQL Anywhere service for the MaintScape database listed in the right pane of Sybase Central. Its current Started/Stopped status is displayed as well. To change status or modify the service properties, right-click on the service name and select an appropriate action from the pop-up menu.

SQL Anywhere 9

- Run 'Sybase Central' by clicking the 'Start' button, then selecting menu item 'Programs' / 'SQL Anywhere 9' / 'Sybase Central'.
- Select tree node "Adaptive Server Anywhere 9" in the left pane of Sybase Central.
- Click on the "Services" tab in the right pane of Sybase Central.
- You should now see the SQL Anywhere service for the MaintScape database listed in the right pane of Sybase Central. Its current Started/Stopped status is displayed as well. To change status or modify the service properties, right-click on the service name and select an appropriate action from the pop-up menu.

Appendix H) Modifying Sybase SQL Anywhere Licensing Information

SQL Anywhere install instructions, above, described how to program license information into SQL Anywhere at time of installation. Use the following instructions to program license information if you did not do this at time of install, or if you need to change license information.

IMPORTANT: You must be properly licensed by Sybase for the license information which you specify. Contact GrandRavine Software if you are unsure of your Sybase licensing.

Copy file 'ms_salic.bat' from the 'dbmisc' folder of your MaintScape CD-ROM into a folder on your server computer. Go to a command prompt and set your current directory to this folder. Stop your Sybase SQL Anywhere server if it is running (see Appendix G if it is running as a Windows service), then enter a command line based on the following:

```
ms_salic.bat 11 8 "Acme Manufacturing Inc."
```

The example above programs a user limit of '8' and your company name into the database server software. The number '11', above, indicates SQL Anywhere version 11. Run 'ms_salic.bat' without parameters to see more documentation.

Appendix I) MaintScape Client Program Runtime Parameters

The following parameters can be added to the shortcut command used to run the MaintScape client program. The parameters are expressed in the form <parameter name>=<value>. The <value> string should be embedded in double-quotes (") if it contains an embedded space.

Parameter	Description
datasource	A value for this parameter populates MaintScape logon window field "Data Source". See Appendix B documentation for this logon window field for details, including how to automatically create a shortcut that includes this parameter.
dbipaddr	A value for this parameter populates MaintScape logon window field "IP Address".

	See Appendix B documentation for this logon window field for details, including how to automatically create a shortcut that includes this parameter.
dbname	A value for this parameter populates MaintScape logon window field "Database Name". See Appendix B documentation for this logon window field for details, including how to automatically create a shortcut that includes this parameter.
dbservername	A value for this parameter populates MaintScape logon window field "Server Name". See Appendix B documentation for this logon window field for details, including how to automatically create a shortcut that includes this parameter.
appinifile	Identifies the MaintScape application configuration file that MaintScape should use. The application configuration file contains application-specific configuration parameters, and is created or updated when MaintScape is installed. When MaintScape is installed for "All users of this computer", the default location for this file is the Common Application Data directory, which varies according to the version of Microsoft Windows. Examples: "C:\Documents and Settings\All Users\Application Data\GrandRavine\MaintScape\maintscp_app.ini" "C:\Program Data\GrandRavine\MaintScape\maintscp_app.ini" When MaintScape is installed for "Only the user of this computer installing MaintScape", the default location for this file is the user's roaming Application Data directory, which varies according to the version of Microsoft Windows. Examples: "C:\Documents and Settings\John Blake\Application Data\GrandRavine\MaintScape\maintscp_app.ini" "C:\Users\John Blake\AppData\Roaming\GrandRavine\MaintScape\maintscp_app.ini"
userinifile	Identifies the MaintScape user-specific configuration file that MaintScape should use. The user-specific configuration file contains user preference configuration parameters which are recorded as the user uses MaintScape. The default location for this file is the user's roaming Application Data directory, which varies according to the version of Microsoft Windows. Examples: "C:\Documents and Settings\John Blake\Application Data\GrandRavine\MaintScape" "C:\Users\John Blake\AppData\Roaming\GrandRavine\MaintScape" This runtime parameter could be used if you want several users to share preferences.
licfile	Identifies the MaintScape license file that MaintScape should use. The default license file that MaintScape uses is: "C:\Program Files\GrandRavine\MaintScape\maintscp.lic" The MaintScape license file identifies the capabilities of MaintScape as per your license agreement. You would use this parameter if you had more than one licensed MaintScape database, and wanted to configure a workstation to connect to any one of them. In this case, you would also use appropriate database selection parameters (described above).
noprompt	Value "true" indicates the MaintScape logon window should not appear. In order for MaintScape to start successfully, the logon ID and password must then be embedded in the ODBC data source used to log on. This data source may be specified using shortcut command parameter "datasource" (see above), or the default data source "MaintScape" will be used. See Appendix E for more information on ODBC data sources.
toolbarcolor	Identifies the color to use for toolbars in all MaintScape windows, regardless of the preferences set by a user.

	<p>This is useful, for example, when a user could run one of several MaintScape shortcuts, each connecting to a different database. The user would then readily know which database they are working with, and thus avoid errors due to confusion.</p>			
	<p>A value specified for this parameter should be a “hexadecimal web color”. You are not limited to the 16 colors currently supported in the MaintScape “Select Colors” preferences window. You can readily find example colors by doing a web search on “hexadecimal web colors”.</p>			
	<p>If you wish to use the 16 colors currently available in MaintScape, the hexadecimal color codes are as follows:</p>			
	<p>White #FFFFFF</p>	<p>Silver #C0C0C0</p>		
	<p>Gray #808080</p>	<p>Black #000000</p>		
	<p>Red #FF0000</p>	<p>Maroon #800000</p>		
	<p>Yellow #FFFF00</p>	<p>Olive #808000</p>		
	<p>Lime #00FF00</p>	<p>Green #008000</p>		
	<p>Aqua #00FFFF</p>	<p>Teal #008080</p>		
	<p>Blue #0000FF</p>	<p>Navy #000080</p>		
	<p>Fuchsia #FF00FF</p>	<p>Purple #800080</p>		