Telelogic
Statemate®

Installation Guide

Statemate®

Installation Guide

Before using the information in this manual, be sure to read the "Notices" section of the Help or the PDF file available from **Help > List of Books**.

Contents

Preparing to Install Statemate

This section contains information on planning your Statemate installation. To support the development of large, complex systems, Statemate is designed to operate in a networked environment with multiple users sharing resources on one or more servers. In addition, Statemate can be configured to run stand-alone.

Before beginning the Statemate installation process, read the following documentation:

- Statemate *Release Notes* for your version of the software
- *Telelogic Lifecycle Solutions Licensing Guide*

Depending on the platform and configuration, the Statemate installation includes various other components, all of which are provided in the Statemate distribution kit:

- **MKS's** XServer for Windows systems
- **NuTCRACKER** - Operating environment for the XServer
- **VisSim**™ - Continuous Modeling tool
- **Acrobat**® **Reader**® - Documentation reader
- **HyperHelp**™ - Windows Help for UNIX™

Requesting a Statemate License

When you purchased Statemate, you should have received an email with instructions on how to request a license. If you did not receive an email, select the appropriate method of obtaining a license based on your location.

- If you are a customer in the United States, send an email requesting a new or upgraded license to `license.us@telelogic.com`. The message should include your Site ID/ Account number and a copy of your current `license.dat` file so that all of the host information is available to the support staff issuing the licenses.
- If you are not a customer in the United States, contact your local sales office. If you are not sure how to do this, you can find the nearest IBM sales office.

Refer to the *Telelogic Lifecycle Solutions Licensing Guide* for complete instructions.

Configuration Components

It is important to plan your configuration before installing Statemate. The installation procedure inputs the names of various site-specific locations and defines corresponding environment variables in `run_stmm.bat` (Windows) or `run_stmm` (Solaris™), the script used to launch Statemate.

Using shared directories, any or all of the following components can be located on one or more servers:

- ◆ Application software (Statemate, VisSim, and Acrobat Reader)
- ◆ Documentation
- ◆ Preferences data
- ◆ Project management daemon (`stmlockman`) and `pm.dat` file
- ◆ Project databanks

Individual project workareas can be located on client systems (recommended) or centralized on a server, according to your own policy.

On Windows systems, the following additional components must be located on the client:

- ◆ NuTCRACKER and XServer
- ◆ The Statemate `bin` directory, containing specific files necessary to run Statemate

The following sections describe how to configure each component.

Application Software (STM_ROOT)

The top-level, platform-specific directory within the Statemate file structure is defined in the environment variable `STM_ROOT`.

For example, on Windows systems, `STM_ROOT` could be defined as:

```
C:\Telelogic\stmm\4.5
```

For example, on Solaris systems, `$STM_ROOT` could be defined as:

```
/usr/tools/stmm4.5/SOL
```

`STM_ROOT` can be located on a read-only directory or device.

Documentation (STM_HELP)

By default, the documentation is located in STM_ROOT. You can locate it elsewhere using the environment variable STM_HELP. The distribution kit includes the Adobe Acrobat Reader, used to view the PDF versions of the Statemate manuals. You may also download the current version of the free Acrobat Reader from **http://www.adobe.com/products/reader.**

> ### Note
>
> You must use Adobe Acrobat Reader version 6.0 or greater when examining the PDF versions of the Statemate documentation.

Preferences (STM_PREFERENCES_DIR)

Three levels of preferences (system, project, and user) are stored in *.pref files in the preferences directory of the Statemate installation file structure. The file names can be user names, project names, or system.

Statemate requires the following permissions to the preferences files:

- ◆ **Windows systems** - Full control
- ◆ **Solaris systems** - Read/write access

During the installation, you can set the location for the preferences directory outside the main Statemate file structure. The environment variable STM_PREFERENCES_DIR is set based on the assigned location.

Project Management Data (PMDB_NAME)

The basic unit of work in Statemate is the project. Project definitions, including the location of shared data, individual workareas, lists of members, and other attributes, are stored in the pm.dat file. All users must be able to write to this file to set up individual working environments.

Statemate requires the following permissions for pm.dat:

- ◆ **Windows systems** - Full control
- ◆ **Solaris systems** - Read/write access

During the installation, you can set the location for pm.dat outside the main Statemate file structure. The environment variable PMDB_NAME is set based on the assigned location.

Project Management Daemon (stmlockman)

To control access to `pm.dat`, Statemate uses a Windows service or a UNIX daemon called `stmlockman`, that must be running at all times. The `stmlockman` daemon serializes access to `pm.dat` and prevents conflicting write requests from corrupting the file.

All Statemate hosts must be able to connect to `stmlockman` through a TCP/IP port. By default, `stmlockman` listens on port 54321.

The name of the server running `stmlockman` is stored in the text file `stmlockman.host`. By default, this file is located in the same directory that is assigned to the environment variable `PMDB_NAME`. You can point to an alternative location by setting the environment variable `STM_LOCKMAN_HOST_PATH`.

Project Databanks

Each project stores design specification data (such as charts) in a shared directory structure called a *databank*. Typically, all Statemate databanks are located on remote servers (along with other software repositories). You can choose a location for databanks after you install Statemate.

Note

If you locate databanks on a Windows server, you must use the same mapped drive letter on each client. The location of each project's databank is defined in `pm.dat` using a specific drive letter. For example, a databank might be defined as `G:\databanks\abc`, in which case, all members of project `abc` would access the databank on drive `G`.

It is recommended that you select a simple name for the databanks directory, such as:

```
statematedb
```

If the databank is on a drive formatted with NT File System (NTFS), you must set permissions:

- ◆ **All Statemate users** - Full control
- ◆ **Administrators** - Full control

Note

Do *not* add other groups with lesser permissions.

Project Workareas

In order to optimize performance, you should locate workareas on client workstations because Statemate graphical editors make frequent saves to the workarea. Therefore, if you locate workareas on clients' workstations, no network traffic is required to access them.

If you locate workareas on a file server, use the following guidelines (that are similar to those for setting up databanks):

- Map the drive on the client workstation.
- Set NTFS permissions to "full control" for the owner of the workarea.

XServer and NuTCRACKER on Windows Systems

Statemate is essentially a UNIX application that has been ported to Windows. Although part of the user interface is native to Windows, most of it is based on Motif (X Windows). XServer is an X Windows server that allows the Motif-based part of the Statemate user interface to run on Windows systems. The NuTCRACKER operating environment provides run-time support for XServer. Both XServer and NuTCRACKER must run on Windows client or stand-alone workstations.

Note

- XServer requires a valid IP address for installation and normal operation. If your system does not have an IP address, you should install the Microsoft Loopback Adapter. Refer to the *Statemate Administrator's Guide* for information on installing the Microsoft Loopback Adapter.
- Software products that use versions of NuTCRACKER older than 4.2 may not work after Statemate is installed.

Installing Statemate

This section describes how to install Statemate, perform an upgrade, and start Statemate on Windows and Solaris systems.

Installation Requirements and Restrictions

The following table lists the platforms on which you can install Statemate.

Platform	Window System	Software Language Compilers
Sparc Solaris 2.8/2.9/2.10	CDE * OpenWindows: 3 * Motif *	SunWorkshop C/C++ 4.2 GNAT Ada gcc 3.12
Windows 2000 (SP4) or Windows XP (SP2)	MKS's XServer or XVision	Microsoft Visual C/C++ V6.0, .Net

* These products are shipped in conjunction with the operating system. Statemate supports the version that is shipped with the related OS version that Statemate supports.

Updated Software

The MKS's XServer replaces the XVision server used in previous Statemate versions. Refer to the **XServer's Display on the Local Computer** section for more information.

Limitations

The following limitations apply to software and configurations available in the Statemate 4.5 version.

NuTCRACKER Versions Older than 4.2

Software products that use versions of NuTCRACKER older than 4.2, might not work after Statemate is installed.

XServer's Display on the Local Computer

MKS's XServer can only accept connections from the local computer that it is running on. This means that the DISPLAY environment variable cannot be set to a remote computer.

Therefore, when Statemate is running on a specific computer, it cannot be displayed on a different machine. In addition, the Analysis tools (simulation and generated code) cannot display panels on a remote computer.

Windows XP Firewall Settings

The following programs must be unblocked in the Windows XP firewall:

- Stm
- XServer
- XServer Audio Server
- XServer Communication

Note

In order to unblock these programs, you may use either of the following methods:

- During the first login after installation and running Statemate for the first time, the Windows firewall displays a dialog box asking whether or not you want to unblock the programs. Choose to "unblock."
- Add the programs to the firewall list as "allowed" programs.

Hardware Requirements

The recommended memory (RAM) for Windows is 256 MB. When working with large models on Windows platforms, you should allow more memory to enhance tool performance. When working with models that contain 200 or more charts and 2500 or more dictionary elements (textual elements), allow at least 1 GB of physical memory.

Installing Statemate on Windows Systems

Statemate can be installed on a Windows system in either of the following two configurations:

- ◆ Networked (client/server) - Supports the development of very large and complex system specifications with multiple users sharing resources
- ◆ Stand-alone workstation

Refer to the *Release Notes* for all of the hardware and software prerequisites.

Before Starting the Installation

You must have administrator-level permissions to install Statemate. Before you begin the installation program complete these steps:

- ◆ Check in and unlock all configuration items in all workareas.
- ◆ If you are upgrading from a previous Statemate version, stop all services (stmlockman and NuTCRACKER).
- ◆ Shut down any X Windows servers. If you plan to install MKS's XServer on a system that previously used XVision, you must uninstall XVision. This is necessary because MKS's XServer does not install correctly if there is another X Windows server running.
- ◆ Read through the following installation instructions to determine if you need to perform a Typical, Custom, or Client installation.

Starting the Installation

To begin the installation, complete the following steps:

1. If installing Statemate from a CD, insert the disk into the CD-ROM drive.

   If installing Statemate from a Web download, run setup.exe from the unzipped folder.

   The installation program starts and opens a window welcoming you to the InstallShield® Wizard. The Wizard guides you through the installation process.

2. Click **Next**. The License Agreement screen opens. You must accept the license agreement to continue with the installation.

3. Select **I accept the terms of the license agreement**. Click **Next**. The Choose Software to Install screen opens.

4. Select whether to install **Acrobat Reader** and **Xserver** along with the Statemate version checked on this screen. If Statemate does not detect existing installations of Adobe's Acrobat Reader or MKS's XServer, it puts a check by the missing software and lists it to be installed with Statemate.
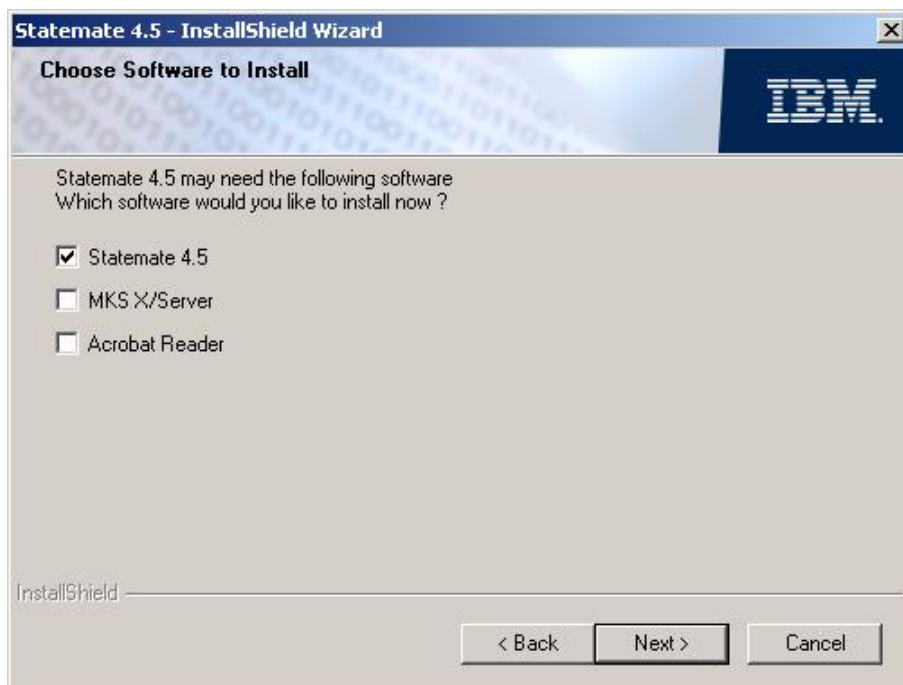
5. Click **Next**. The Choose Local Location screens opens.

6. Specify the destination location for the Statemate installation. Click **Browse** if you want to change the default location. Click **Next**. The Setup Type screen opens.
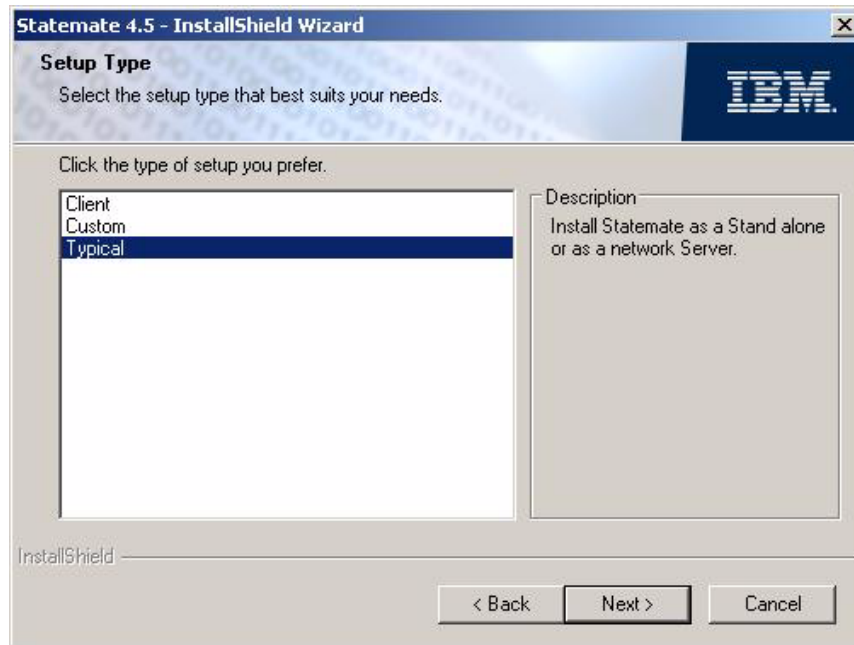
7. Select the installation type:

- **Client** - Select when installing on a local system running Statemate from a network. For instructions on a client installation, refer to **Completing a Client Installation.**

- **Custom** - Select when installing Statemate on a network server or stand-alone workstation when you need to customize DOORS, VisSim, `run_stmm.bat`, the reserved words file, or the method for receiving and setting user profiles. For instructions on a custom installation, refer to **Completing a Custom Installation**.

- **Typical** - Select when installing Statemate on a network server or stand-alone workstation without customizing the tool settings. This is the default setting. For instructions on a typical installation, refer to **Completing a Typical Installation.**

Completing a Typical Installation

To complete a typical installation, complete the following steps:

1. Select **Typical** as the installation type. Click **Next**. The Help directory screen opens.

2. Specify a location for the Statemate Help files. Click **Browse** if you want to change the default location. Click **Next**. The Select Program Folder screen opens.

3. Specify a name for the Statemate program folder or select a different folder from the **Existing Folders** list to change the default location. Click **Next**. The Preferences Directory location screen opens.

4. Specify a location for your preferences files. Click **Browse** if you want to change the default location. Click **Next**. The Project Management folder location screen opens.

5. Specify a location for your project management files. Click **Browse** if you want to change the default location. Click **Next**. The Select the type of license you want to configure screens opens.
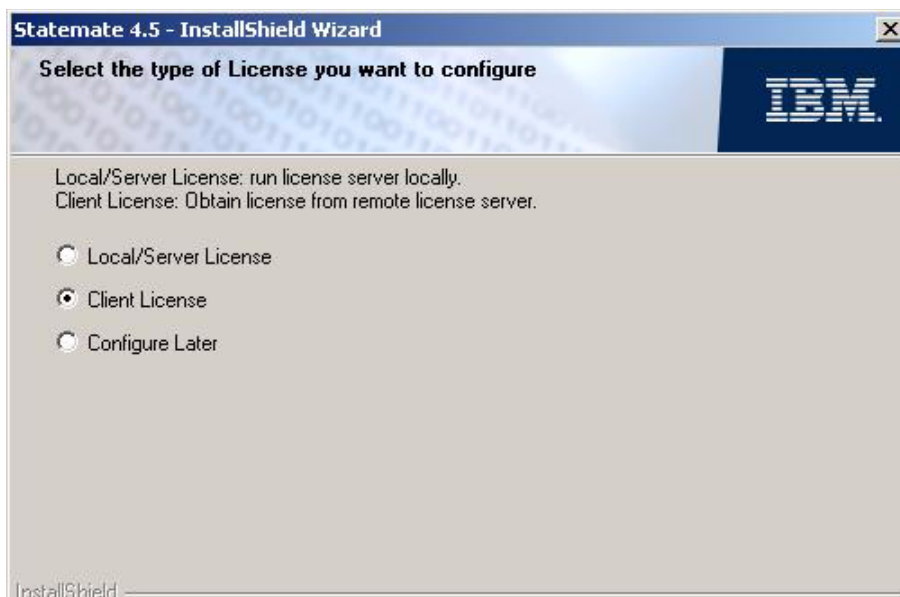
6. Select **one** of the following Statemate license configurations:

- ◆ **Local/Server License**—Use this option when running your license server on the system of the current installation or when using a node-locked/demo license.

  – Click **Next**. The License Management file location screen opens.

  – Specify a location for your license file. Click **Browse** if you want to change the default location. Click **Next**. The Enter Stmlockman Hostname screen opens. Continue to **Step7**.

- ◆ **Client License**—Use this option when the license server is running on a remote license system.

  – Click **Next**. The Enter License Details screen opens.

  – Enter the **HostName** of the license server for the current client. To specify a port number, use the format `port@servername`; otherwise, use the server name.

  – Click **Next**. The Enter Stmlockman Hostname screen opens. Continue to **Step7**.

- ◆ **Configure Later**—Use this option when configuring your license after installing Statemate. Click **Next**. The Enter Stmlockman Hostname screen opens. Continue to **Step7**.
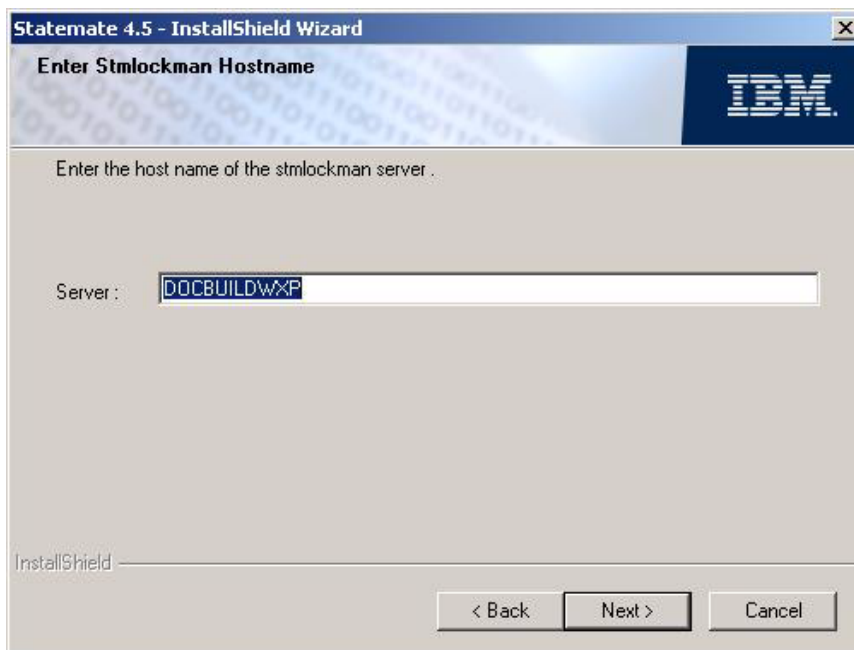
7. Enter the host name of the Stmlockman server. The Start Copying screen opens with the settings you specified earlier.

8. Click **Next** to confirm your selections. The installation wizard shows the status of the process while it installs Statemate and the third-party software you selected.

9. When the XServer installation begins, the wizard gives you the option to install XServer now (Yes) or install it manually later (No), as shown below.
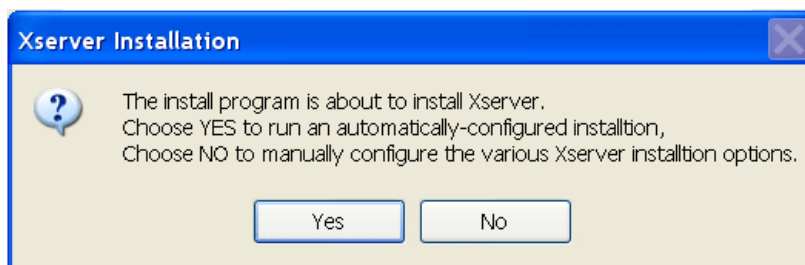
Installing XServer automatically (Yes) is recommended and is the appropriate selection for the "typical" installation type.

10. Select the path if you are prompted to select the NuTCRACKER installation directory. Click **Next**.

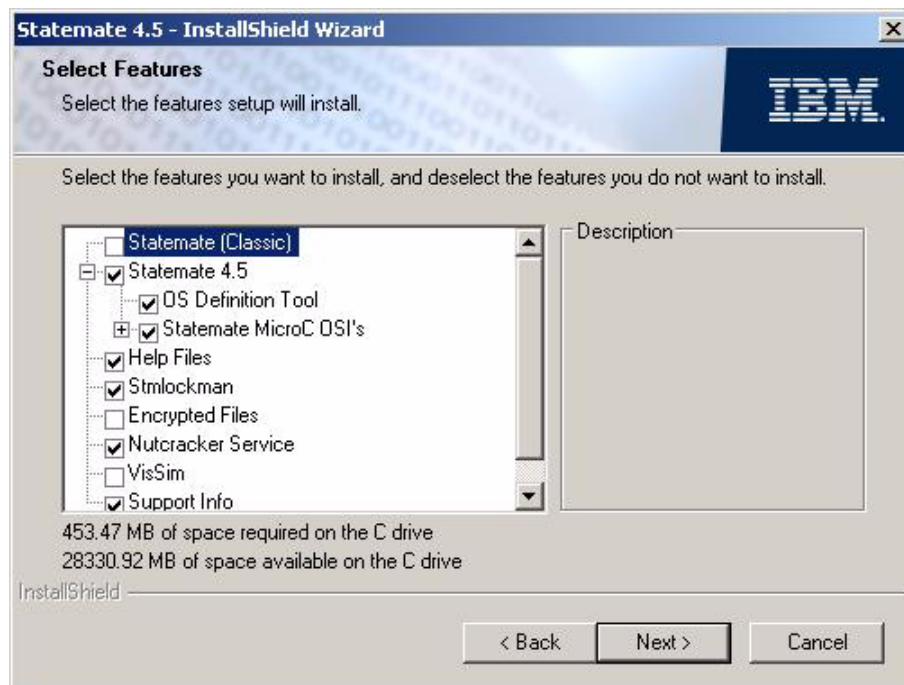11. Select **Restart** to reboot your system when the installation is complete.

Completing a Custom Installation

To complete a custom installation, complete the following steps:

> **Note**
>
> These steps may vary slightly, depending on what features are selected.

1. Select **Custom** as the installation type. Click **Next**.The Select Features screen opens

2. Select the components you want to install:

    ◆ **Statemate (Classic)** - Traditional Statemate. This version does not contain Micro C components.

    ◆ **Statemate 4.5**- Statemate plus Micro C components.

    – **OS Definition Tool** - Optional. Custom operating system configuration.

    – **Statemate MicroC OSI's** - Optional. Statemate MicroC operating system interface.

    ◆ **Help Files** - Recommended. These are the Statemate documentation and Help files.

- ◆ **Stmlockman -** Required if you want to run the stmlockman daemon on the current system. This Windows service serializes access to the file `pm.dat` and prevents conflicting write requests from corrupting the file.

- ◆ **Encrypted Files -** Optional. These are additional source files and libraries, some of which are encrypted and require an encryption key from Customer Support to extract them.

- ◆ **Nutcracker Service** - Required. This provides the porting environment from UNIX-based software to the Microsoft Windows operating system.

- ◆ **VisSim -** Optional. VisSim is a continuous modeling tool.

- ◆ **Support Info** - Recommended.

   Note: The amount of disk space required and available is displayed on this screen. A Statemate Setup message opens if there is not enough disk space on the selected disk.

3. Click **Next**. The Help directory screen opens.

4. Select a location for the Statemate Help files. Click **Browse** if you want to change the default location. Click **Next**. The Select Program Folder screen opens.

5. Choose a name for the Statemate program folder. Select a folder from the Existing Folders list or enter the name to change the default. Click **Next**. The Tool Settings File (run_stmm.bat) screen opens.

6. Select whether to use the pre-configured `run_stmm.bat` file or to configure it at this time.

The `run_stmm.bat` file contains several environment variables and is used to start Statemate.

- ◆ To configure the `run_stmm.bat` file manually, select **Configure the run_stmm.bat file now** and click **Next**. The Set Tools Flag screen opens. Continue to **Step7**.

- ◆ To use a pre-configured `run_stmm.bat` file, complete the following steps:
    - – Select **Use Pre-configured run_stmm.bat File**. Click **Next**. The Tool Settings File (run_stmm.bat) screen displays.
    - – Select the location where the `run_stmm.bat` file is located. Click **Browse** if necessary to locate the file. Click **Next**.

    If you choose to install Statemate plus Micro C components, the OSEK Path Setting screen displays.

   – Select **Define OSEK path** or **Use default OSEK path**. Click **Next**.

   If you select **Define OSEK path**, the Set OSEK Path (OSEK Application Only) screen displays. Select the OSEK path to be used when building an OSEK application. Click **Next**. The Start Copying screen displays. Continue to step **Step26**.

   If you select **Use default OSEK path,** the Start Copying screen displays. Continue to **Step26**.

7. Select the tool flags options you want for your Statemate system in this dialog box.

    Note: It is recommended that both options are selected.

8. Click **Next**. The Preferences Directory locations screen displays.

9. Specify a location for your preferences files. Click **Browse** if you want to change the default location. Click **Next**. The Project Management folder location screen opens.

10. Specify a location for your project management files. Click **Browse** if you want to change the default location. Click **Next**. The Configure C Code Generator Reserved Words file to use screen displays.
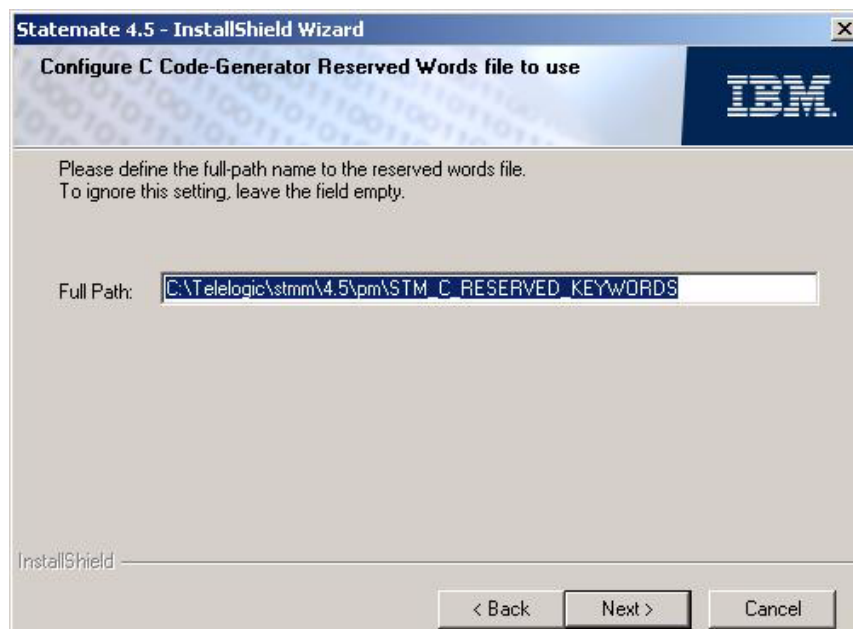
11. Specify the location to the reserved words file for code generation.

> **Note:** To ignore this setting, leave the field blank.

12. Click **Next**. The Configure DOORS Settings screen opens.

- ◆ To configure the DOORS interface later, select **Configure Later**, then click **Next**. The Select the type of License you want to configure screen opens. Continue to **Step20**.

- ◆ To configure the DOORS interface, select the **Configure Now** and click Next. The Configure DOORS Settings screen opens.
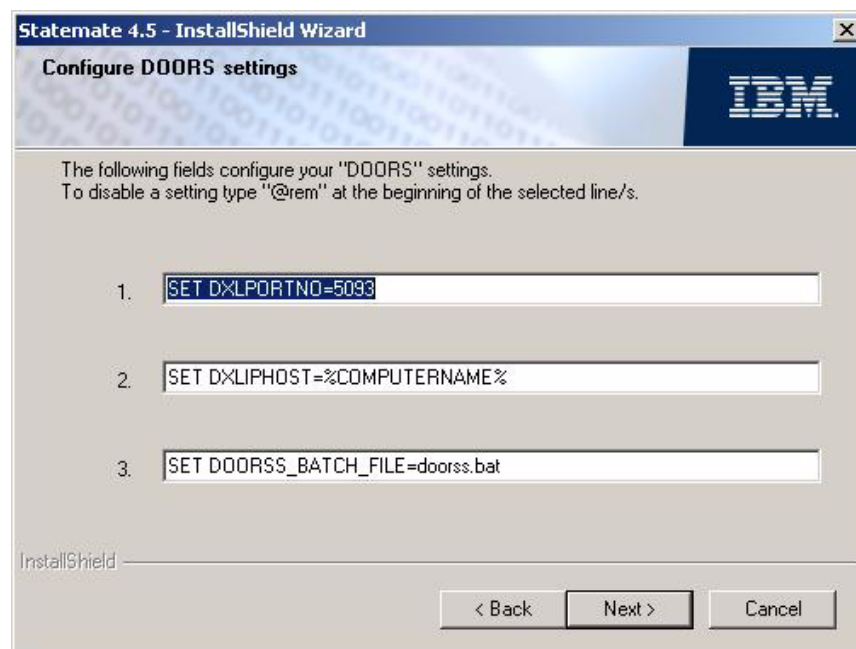

13. Edit the existing settings for the DOORS integration as desired. To disable a setting, add @REM before the value. The possible settings are:

- ◆ SET DXLPORTNO=5093 - Sets the port number for communication between the DOORS server and Statemate.

- ◆ SET DXLIPHOST=%COMPUTERNAME% - Specifies the name of the computer running the DOORS client.

- ◆ SET DOORSS_BATCH_FILE=doorss.bat - Sets the path to the batch file used by Statemate to run DOORS. By default, Statemate creates the file DOORS.bat.

14. Click **Next.** The second Configure Doors Settings screen opens.

15. Edit the existing settings for the DOORS integration as desired. To disable a setting, add `@REM` before the value. The possible settings are:

    ◆ `@REM SET RT_NO_OLE=ON`—When commented out, exports objects as OLE objects. By default, this line is commented out.

    ◆ `SET PATH=%PATH%;%DOORSHOME%\bin`—Specifies the path to the DOORS application.

16. Click **Next**. The DOORS Invocation File (run_doors.bat) screen opens.

17. Specify a location for the file `run_doors.bat`. Click **Browse** if you want to change the default location. Click **Next**. The DOORS Home Path Setting screen opens.

18. Specify the home path for DOORS. Click **Browse** if you want to change the default location. Click **Next**. The DOORS License File Path screen opens.

19. Specify the full path to your DOORS license file. Click **Next**. The Select the type of License you want to configure screen opens.

20. Select a Statemate license configuration:

    ◆ **Local/Server License** - Use this option when running your license server on the system of the current installation. Complete the following steps:

        – Click **Next**. The License Management file location screen opens.

        – Specify the default location for your license file. Click **Browse** if you want to change the default location. Click **Next**. The Enter Stmlockman Hostname screen displays.

        – Continue to **Step21**.

    ◆ **Client License** - Use this option when the license server is running on a remote license system. Complete the following steps:

        – Click **Next**. The Enter License Details screen opens.

        – Enter the name of the license server for the current client. To specify a port number, use the format port@servername; otherwise use the server name. Click **Next**. The Enter Stmlockman Hostname screen displays.

        – Continue to **Step21**.

    ◆ **Configure Later** - Use this option when configuring your license after installing Statemate. Click **Next**. The Enter Stmlockman Hostname screen displays. Continue to **Step21**.

21. Enter the host name of the Stmlockman server. Click Next. The OSEK Path Setting screen opens.

22. Specify a location for the OSEK (Operating System Embedded Kernel).

- **Define OSEK Path** - Complete the following steps:
  - Select Define OSEK Path. Click **Next**. The Set OSEK Path (OSEK Applications Only) screen opens.
  - Specify the OSEK path. Click **Browse** if you want to change the default location. Click **Next**. The Set Users-List Browse Information screen opens.
- **Use Default OSEK Path** - Select Default OSEK Path. Click **Next**. The Set Users-List Browse Information screen opens.

23. Specify the method to use when browsing for user names in a users list. You can select from the following three methods to provide the users list:

   ◆ **None** - No external user list extraction. The list of users is built from the defined users in the `pm.dat` file. Click **Next**. The Start Copying Files Screen opens. Continue to Step????

   ◆ **Windows domain users** - This is the standard Windows environment users management. The users list is built using the domain `users` and the defined users in the `pm.dat` file. Click **Next**. The Windows Domain Controller Setting screen opens. Continue to **Step24**.

   ◆ **From file** - The users list is built from the content of a text file, named `UsersList.txt`, in which each non-empty line is considered to be a username, and the defined users in the `pm.dat` file. Complete the following steps:

     – Click **Next**. The User-List File Name screen opens.

     – Specify the location of the text file listing the possible users. Click **Next**. The Start Copying Files screen opens. Continue to Step **Step26**.

24. Add the primary and secondary domain controller names beginning with double backslashes (\\). Click **Next**. The Group Type Information screen opens.
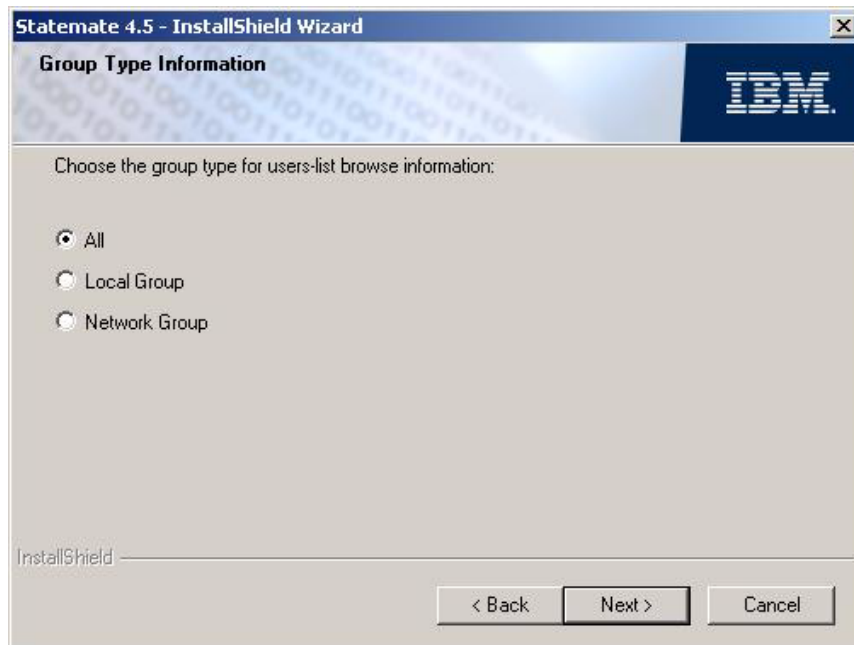
25. Select the group type for the User-List browse information:

  ◆ **All -** Select All to include all group types in the User-List browse information. Click Next. The Start Copying Files screen displays. Continue to **Step26**.

  ◆ **Local Group**

    – Select **Local Group**. Click **Next**. The Local Group Information screen opens.

    – Enter the name of the Local Group. Click **Next**. The Start Copying Files screen displays.

    – Continue to **Step26**.

  ◆ **Network Group**

    – Select **Networks Groups.** Click **Next**. The Network Group Information screen opens.

    – Enter the name of the Network Group. Click **Next**. The Start Copying Files screen displays.

    – Continue to **Step26**.

26. The Start Copying screen opens with the settings you specified. Click **Next** to confirm your selections. The installation wizard installs Statemate and the External Software (third-party) you selected.

27. If you chose to install the NuTCRACKER service, the Choose Destination Location screen displays allowing you to select the directory for the NuTCRACKER installation. You may accept the default location or click **Browse** to select an different directory. Click **Next**.

   The Setup Status screen opens and shows the files being copied to the selected directory.

28. When the XServer installation begins, the wizard gives you the option to install XServer now (Yes) or install it manually later (No), as shown below.

   Note: Installing XServer automatically now is recommended.
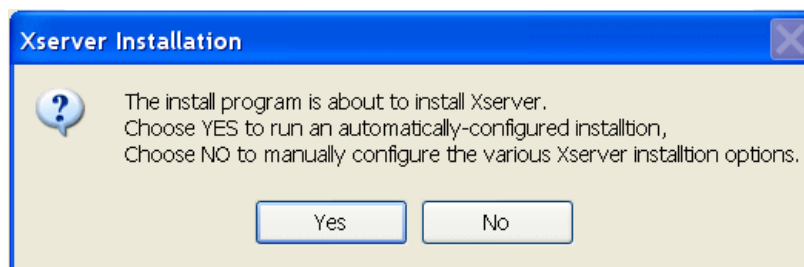
   Installing XServer automatically (Yes) is recommended and is the appropriate selection for the "typical" installation type.

29. Click **Yes**. However, if you must install XServer manually, click **No** and refer to the instructions in the **Manually Installing MKS's XServer** section.

30. Select the path if you are prompted to select the NuTCRACKER installation directory. Click **Next**.

31. Select **Restart** to reboot your system when the installation is complete.

Completing a Client Installation

For client installations only, map network drives as needed to the following locations on the server. Select **Reconnect at Logon** for each.

- ◆ STM_ROOT—Statemate root directory
- ◆ STM_HELP—Documentation and online Help
- ◆ PMDB_NAME—Project management data
- ◆ STM_PREFERENCES_DIR—Preferences directory

To complete a client installation, complete the following steps:

1. Select **Client** as the installation type. Click **Next**.

   The Statemate <version> Server Location screen opens.

2. Specify the location of the mapped drive path of the remote server where Statemate is installed. Click **Browse** if you want to change the default location. Click **Next**.
   The Get Help files directory screen opens.

   Note: The remote server should have the full installation of Statemate.

3. Select a location for the Statemate Help files. Click **Browse** if you want to change the default location. Click **Next**.

   The Select Program Folder screen opens.

4. Select a location for the Statemate program folder. Click **Next**.

   The Preferences Directory location screen opens.

5. Specify a location for your preferences files. Click **Browse** if you want to change the default location. Click **Next**.

   The Project Management Folder location screen opens.

6. Specify a location for your project management files. Click **Browse** if you want to change the default location. Click **Next**.

   The Select the Type of License screen opens.

7. Select a Statemate license configuration:

- ◆ **Local/Server License** - Use this option when running your license server on the system of the current installation or when using a node-locked/demo license. Complete the following steps

  – Click **Next**. The License Management file location screen opens.

  – Specify the location of your license file. Click **Browse** if you want to change the default location. Click **Next**.

- ◆ **Client License** - Use this option when the license server is running on a remote license system.

  – Enter the name of the license server for the current client. To specify a port number, use the format port@servername; otherwise, use the server name.

  – Click **Next**.

- ◆ **Configure Later**—Use this option when configuring your license after installing Statemate. Click Next to continue the install.

8. The Start Copying screen opens with the settings you specified. Click **Next** to confirm your selections. The installation wizard installs Statemate and any External Software (third-party) you selected.

9. If you selected XServer to install and when that installation begins, the wizard gives you the option to install XServer now (Yes) or install it manually later (No).
Installing XServer automatically now (Yes) is recommended. If you may want to install this software later, refer to the **Manually Installing MKS's XServer** instructions for more information.

10. If you selected to install NuTCRACKER, select the path when you are prompted to select the NuTCRACKER installation directory. Click **Next**.

11. Select **Restart** to reboot your computer when the installation is complete.

Manually Installing MKS's XServer

In order to install the XServer manually, see the **Before Starting the Installation** and **Starting the Installation** sections for more information about this installation type.

Launching the XServer Installation Separately

If you are returning to install XServer after completing the Statemate installation, follow these steps:

1. Locate the XServer directory and launch the `setup.exe` file.

2. The XServer installation program prepares files for the installation. Click **Next** to start the installation process and follow the instructions in the **Installing XServer during the Statemate Installation** section beginning with step 4.

Installing XServer during the Statemate Installation

If you want to install the XServer manually while you are installing the Statemate system, follow these steps during the Statemate External Software (third-party) installation:

1. When the XServer installation begins, click "No" in this dialog box.
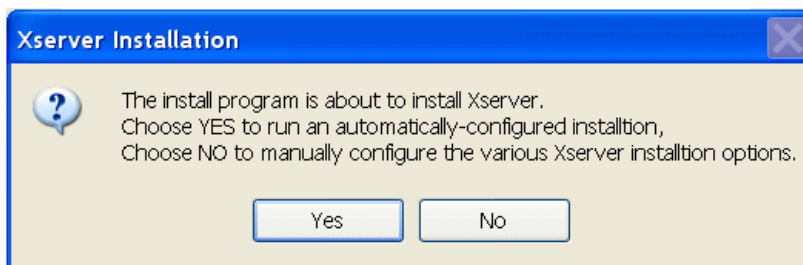
2. This warning message then instructs you to use the XServer Custom installation and to avoid restarting the computer during the installation process. Click **OK** to continue.

    The installation program prepares the installation.
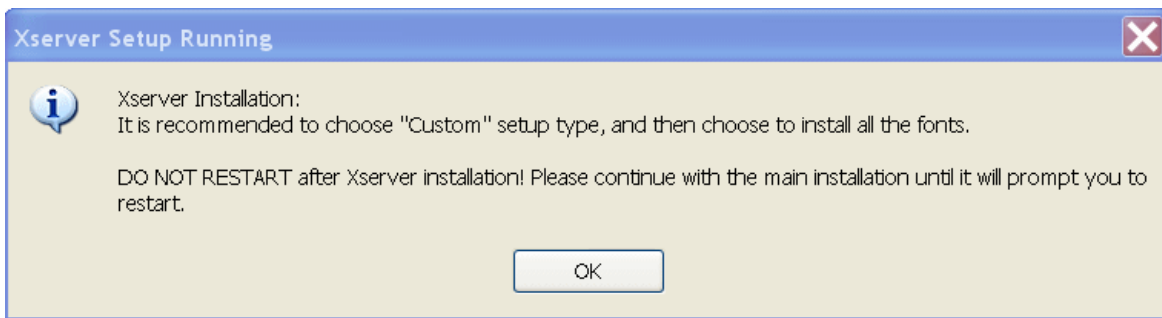
3. Click **Next** to start the manual software installation. The license agreement opens.

4. Select "I accept the terms in the license agreement" and click **Next**.

5. Click the **I have a PIN** button because the PIN is automatically supplied in this installation program.

6. Enter any **User Name** and **Organization** information that is not automatically entered on the next screen. Click **Next**. The Setup Type screen opens.

7. Select **Custom** (as recommended in the XServer Setup Running dialog box) and click **Next**.

8. The Custom Setup screen opens. Expand the X/Server tree in the window to show the **Fonts** directory. You must select all of the possible fonts in that directory, as shown in the example below, to install them. Click **Next** when you have selected all of the fonts.

    Note: No font directory should remain marked with the red "X" meaning "This feature will not be available" before you click Next.
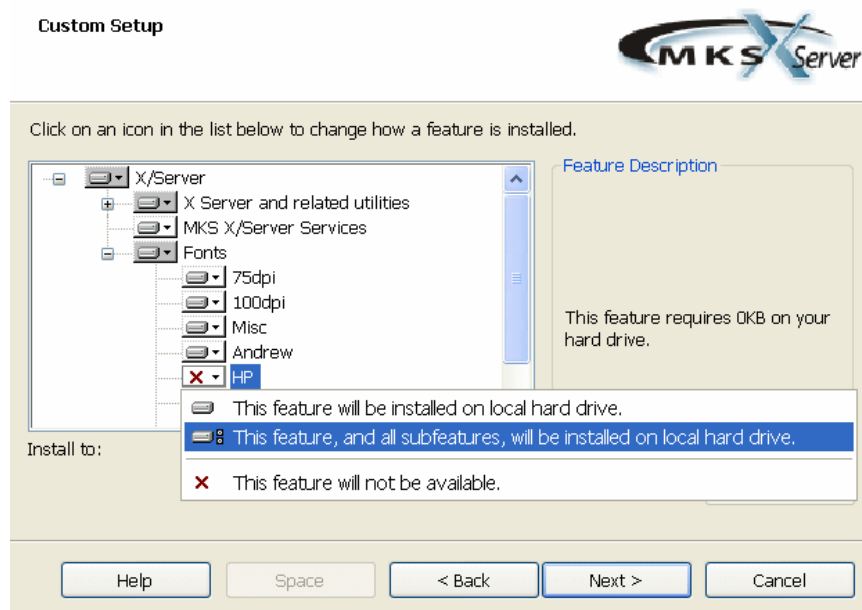
9. The Firewall Configuration screen opens, as shown here. Make the firewall selections appropriate for your environment and click **Next.**
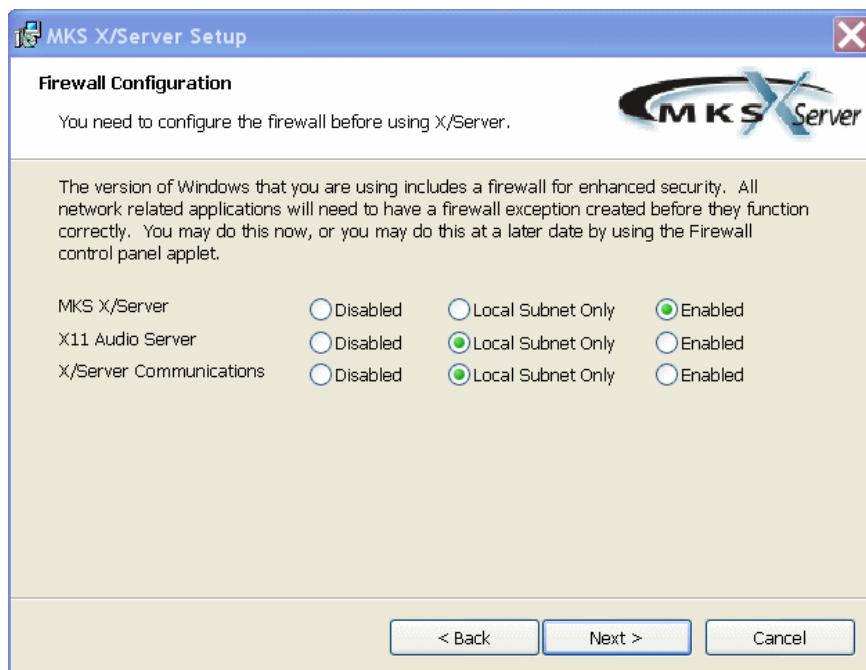
10. The XServer installation program prepares to install based on your selections. Click the **Install** button to begin the installation process. The Status of the installation displays as XServer is installed.

11. Click **Finish** when the installation is complete.

Installing Statemate on Solaris Systems

Before beginning the Statemate installation, refer to the *Release Notes* for any additional hardware and software prerequisites.

You must be logged in as a superuser to perform parts of the installation, such as:

- ◆ Mounting the CD–ROM
- ◆ Copying files to the installation directory
- ◆ Applying operating system patches (if necessary)

To install Statemate on Solaris systems, complete the following steps:

1. Log in as `root`.

2. If installing Statemate from a CD, insert the disk into the CD-ROM drive, and change to the directory `/cdrom/cdrom<number>/STMM`.

   or

   If installing Statemate from a Web download, navigate to the `STMM` directory.

3. Enter `./INSTALL`, and click **Enter**.

4. If installing from a CD, enter the path for the CD-ROM mount point at the prompt. Click **Enter**.

   If installing Statemate from Web download, enter the full path of STM_HOME directory.

5. Enter the directory where you want to install Statemate.

   The license agreement is displayed. You must accept the license agreement to continue with the installation.

6. Enter `accept`.

7. Enter the name or number of the kit you want to install.

8. Enter the name or number indicating your choice to install Adobe Acrobat Reader and HyperHelp.

9. Review your selections for the installation and continue by entering `y`. Otherwise enter **n**.

   Statemate starts installing the Statemate kit.

10. Enter the path of a new or existing preferences directory.

11. Enter the path of a new or existing `pm` file.

12. Read the license agreement for Acrobat Reader, and if you accept the conditions, enter **Accept**.

Statemate installs Acrobat Reader, platform-dependent files, and other software.

Statemate alerts you that you can install the Statemate online documentation from a second CD or from the web and prompts you for the name of the host system that serves the lock manager.

You can install the Statemate online documentation now or after completing the Statemate software installation. For instructions on installing the Statemate documentation, Refer to **Installing the Statemate Online Documentation on a Solaris System**.

The installation script alerts you that installation is complete and prompts you to run `allinstall` in the Statemate root directory.

13. Set the environment to `STM_ROOT`.

14. Change directory to `<stmm_root>/stmm<version>/SOL`.

15. Enter the following command to run the installation script:

```
./allinstall
```

This and all subsequent steps can be performed before or after installing the online documentation, but must be done *before* running Statemate.

16. Confirm that the `$STM_ROOT` environment variable is set by using the default directory, or enter a value for `STM_ROOT`.

17. Update the `setenv LM_LICENSE_FILE` command in the `run_stmm` script.

18. Add the `license.dat` file.

19. Add `STM_ROOT/bin/stmlockman` to the system startup script on your Statemate `stmlockman` host.

20. Start the `stmlockman` manually if you intend to run Statemate now.

Installing the Statemate Online Documentation on a Solaris System

To install the Statemate online documentation, complete the following steps:

1. Log in as `root`.

2. If installing Statemate from a CD, insert the disk into the CD-ROM drive, and change directory to:

   ```
   /cdrom/cdrom<number>/STMM
   ```

   If installing Statemate from a Web download, navigate to the `STMM` directory.

3. Enter `./INSTALL` and click **Enter**.

4. Specify how to install or access the online documentation:

   - ◆ **Local** - Install the online documentation on the local system at:

     ```
     <stm_root>STM_HELP.
     ```

   - ◆ **Remote** - Install the online documenation to another location.

   - ◆ **Other** - Access the online documentation from another location or from the distribution CD.

   - ◆ **None** - Do not install the online documentation.

5. Enter **y** to confirm the location you selected.

   The installation script copies the online documentation and alerts you that the installation process has successfully completed.

Upgrading Statemate

The following sections describe several issues to consider when upgrading a Statemate installation.

Software Prerequisites on Windows Systems

Statemate requires NuTCRACKER and MKS's XServer on Windows systems. The installation of these applications is started as part of the Statemate installation.

Hosting Multiple Versions of Statemate

You can install and host multiple versions of Statemate on the same system. You do *not* need to uninstall previous versions of Statemate before installing a new version. For example, if you currently have Statemate 3.3 and/or 4.0 installed, you can host that version on your system and install Statemate. By default, Statemate creates a new directory with the name of the current release number when you upgrade.

Project Data

If you want all of your previous project information available in Statemate, you must point to the location of your existing project management directory (pm) during installation. Otherwise, you can copy the pm.dat file from your previous project management directory to the new project management directory location after the installation.

> **Note**
>
> Once you convert data to a newer version, you cannot return it to an earlier version.

Upgrading Workarea Data from an Earlier Statemate Version

Workarea data formats are not carried over from version to version of Statemate. The following sections describe how to convert existing workareas to your new Statemate version.

Upgrading from Version 3.3.1 or Higher

When you open a workarea of Statemate 3.3.1 (DB Version 31) or a higher version with Statemate, you are prompted for an automatic conversion of the DB format. The conversion changes the existing workarea to the new DB format, so you can use the workarea with the new Statemate version.

Once the workarea DB format conversion is complete, previous versions of Statemate will not be able to read the workarea format.

The automatic workarea DB conversion steps are:

1. The existing workarea is copied "as is" with the existing DB version number as an extension to its name (for example, `P:\work\wa_1`, using DB version 31, is copied to `P:\work\wa_1_31`).

   Note: You can skip step 1 by setting the following environment variable:

   ```
   STM_CONVERT_DB_DO_NOT_COPY_WA=ON)
   ```

2. The data is extracted from the existing workarea to a temporary subdirectory below the workarea: `<workarea>\tmp\convert_util_dir\`.

3. The binary file `charts.data` in the existing workarea is renamed to include the existing DB version number as an extension to its name (for example, `charts.data` using DB version 31 is renamed to: `charts.data_31`).

4. Data is restored from the temporary directory created in step 2.

Refer to the *Statemate Administrator's Guide* for more information on upgrading workarea data.

Starting Statemate

Before you can start Statemate, you must obtain and install Statemate licenses. Refer to the *Telelogic Lifecycle Solutions Licensing Guide* for information on obtaining and installing software licenses.

Running Statemate on Windows Systems

To start Statemate on a Windows system, select **Start** > **Programs** > **Telelogic** > **Statemate** <Version> > **Statemate** <Version>.

Running Statemate on Solaris Systems

On Solaris systems, use the script `run_stmm`, to start Statemate. To start Statemate, complete the following steps:

1. Set the permissions on `run_stmm` to read and execute.

2. Execute the following shell:

   ```
   <stm_root>/run_stmm
   ```

Technical Support and Documentation

Statemate software continues to be supported by the Telelogic support group for customers who licensed Statemate before November 1, 2008. If you are one of these "heritage" customers, you may use the familiar support procedures described in **Contacting Telelogic Statemate Support**.

After November 1, 2008, all Telelogic Statemate customers also have access to the IBM technical support team and resources, as described in **Contacting IBM Rational Software Support**.

Contacting Telelogic Statemate Support

The Telelogic Statemate technical support group assists heritage Statemate customers through the online problem report form, direct contact by **Calling Telelogic Statemate Technical Support** or contacting them through IBM's Support site, as described in **Contacting IBM Rational Software Support**.

Note

Assistance from the technical support staff for purchased products is only available to companies that have paid for ongoing maintenance.

Sending a Detailed Problem Report

For all problem reports and questions, send a detailed report using the Statemate online form.

To send an automated problem report to the Technical Support staff, follow these steps:

1. In Statemate, from the menu bar, select **Help > Email Technical Support**.

2. The following dialog box appears with some of your product information filled in. Review the product information to be sure it is accurate.

3. From the **Impact** drop-down list box, select the severity of the problem.

4. In the **Summary** box, summarize the problem.

5. In the **Problem** box, type a detailed description of the problem.

6. If available, attach a snapshot. Click the **Screen Snapshot** button, whichever is applicable, and select the snapshot wherever you have it on your machine.

7. If possible, add the workarea, files, and/or a video capture by using the buttons in the **Attachment Information** area.

8. Add any additional items or information to help the Technical Support staff resolve the problem.

9. Click **Preview and Send** to submit the report.

The problem is recorded in the Statemate case tracking system and put into a queue to be assigned to a support representative. This representative works with you to be certain that your problem is resolved.

Calling Telelogic Statemate Technical Support

If your company has a current Statemate maintenance agreement purchased before November 1, 2008, you may call the Telelogic Technical Support staff directly using the appropriate telephone number for your region listed below.

Support Location	Telephone Number	Availability
United States	(800) 577-8449	8:30 a.m. to 8:00 p.m. EST
Europe	00800 57784499	8:00 a.m. to 5:00 p.m. GMT
Europe (alternative number)	+353 1 2090154	8:00 a.m. to 5:00 p.m. GMT

Contacting IBM Rational Software Support

The IBM Rational Software Support team provides the following resources for your assistance:

- For contact information and guidelines or reference materials that you need for support, read the **IBM Software Support Handbook**.

- For FAQs, lists of known problems and fixes, documentation, and other support information, visit the **Telelogic Statemate Support Site**.

- Voice support is available to all current contract holders by dialing a telephone number in your country (where available). For specific country phone numbers, go to **http://www.ibm.com/planetwide/**.

Before you contact IBM Rational Software Support, gather the background information that you will need to describe your problem. When describing a problem to an IBM software support specialist, be as specific as possible and include all relevant background information so that the specialist can help you solve the problem efficiently. To save time, know the answers to these questions:

- What software versions were you running when the problem occurred?

- Do you have logs, traces, or messages that are related to the problem?

- Can you reproduce the problem? If so, what steps do you take to reproduce it?

- Is there a work-around for the problem? If so, be prepared to describe the work-around.

For Rational software product news, events, and other information, visit the **IBM Rational Software Web site**.

Accessing the Statemate Documentation

Statemate documentation is accessible from three locations:

- ◆ Web site at **Telelogic Statemate Support Site**.
- ◆ Windows **Start > Programs > Telelogic > Statemate <version #> > Statemate Help**.
- ◆ Statemate interface Help menu

The documentation is available in two formats: PDF and online. The online documentation displays in a Web browser. The PDF format displays using the Adobe® Acrobat Reader™.

Help Menu Options

The Statemate Help menu, shown here, lists all of the available documentation for the product.

```
List of Books...
Index...
Contents...                    F1
On Help...
On Window...
Email Technical Support
About Statemate
```
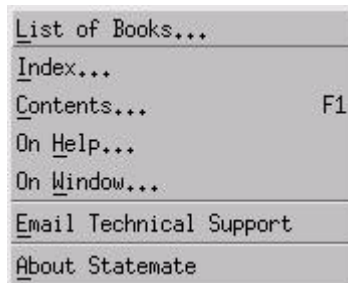
Help Topics

The **Help Topics** is the Help system version of the *Statemate User Guide*.

You can navigate the Help system using Contents or Index.

Search Facility

To search for information, type a word or words into the search field, select which manuals to search, and click **Go**. The system searches specified books and lists all of the items that match the search items. The facility locates the text that contains any of the words entered for the search and prioritizes the results with a percentage probability that it is the desired information.

To find a specific instance of the search term in any of the search results, you can perform a "find in browser," which is unique to every browser, but usually accomplished by pushing Ctrl+F.

1. Type the search term in the search box that appears in your browser window and click "Find" to find the first instance of the search term in the window.

2. Clicking "Find Next," brings up the next instance of the term, if there is one.

If no instance of the search term can be found, open another document from the search results in the left pane and repeat steps 1 and 2.

List of Books

The **List of Books** contains links to the Statemate manuals, primarily reference manuals, that are available as PDF files for easy printing. The User Guide is included on that list.

You may search all of the PDF files available on the List of Books using the browser Adobe Search facility. This facility includes a Boolean search capability.

Statemate Reference Documentation

The following reference manuals are available as PDF files with the Statemate software on the **Help > List of Books**, from IBM, or from third-party product suppliers:

- *Installation Guide* - Describes how to install, launch, and upgrade Statemate. Licensing information is provided in the separate *Telelogic Lifecycles Solutions Licensing Guide*.

- *Statemate Administrator's Guide* - Provides installation, upgrade, configuration, printing, and troubleshooting information.

- *CG Builder API Reference Manual* - Provides information about the code generator builder APIs.

- *Continuous Modeling* - Provides information about Statemate's continuous time modeling capability, using Visual Solutions' VisSim.

- *Command Line Interface Guide* - Provides a list of commands that can be entered into the CLI.

- *Date Import API Reference Manual* - Provides details on how to import information into the Statemate database from a C++ language program.

- *Methodology and Style Guidelines* - Explains the V-process model for system development and style guidelines for creating Activity charts.

- *MicroC Programming Style Guide* - Provides information about generating code with MicroC, a graphical software design and implementation tool that supports the development of embedded real-time software for micro-controllers.

- *MicroC Tutorial* - Walks through the process of creating MicroC code using Statemate

- *Porting Embedded RTL* - White paper that describes how to integrate ERP run-time libraries into new embedded environments.

- *Software Code Generator Interface Manual* - documents the pre-Statemate 1.2 method for supplementing user code to the generated code.

- *Statemate Modeling Tutorial* - Teaches the Statemate design fundamentals.

- *Standard Template* - Provides information about the standard template provided with the Statemate Documentor that generates a Rich Text Format (RTF) report and RTF plots.

- *Check Model Guide* - Provides information on the error-handling tool that enables system engineers to check for errors and warnings in Statemate models.

- *Documentor Reference Guide* - Provides information on using Documentor to design and produce documentation for the system you are designing.

- *Code Generation Reference Manual* - Provides information on generating code. it includes information about compiling, adding, and debugging code. An example is also provided.

- *Dataport Reference Manual* - Provides information on the Dataport library. It also includes a sample program.

◆ *MicroC Code Generator* - Provides information for developing embedded real-time software for micro-controllers. In addition to generating the code, tools are provided for debugging and testing the software.

◆ *Simulation Reference Manual* - Provides information on using the Simulation tool. It takes you through the different stages of simulation by using a simple example.

◆ *Quick Reference Guide* - Provides a list of reserved words and expressions, and information about functions, operators, switch cases, and truth tables.

Statemate Version Release Documents

Each new release of the product includes information specific to that release. These documents are available in the release kit, from the Telelogic Web site, and from the Statemate **Help** menu.

◆ **Release Notes** documents what is new in a release, the supported environments for Statemate, known restrictions, and any additional information for a specific release of the product. This information is available in the readme.htm file installed with Statemate.

◆ **Notices** provides detailed IBM copyright, licensing, and trademark information.

Index