Symantec™ Packager Implementation Guide

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Chapter 1

Introducing Symantec Packager

This chapter includes the following topics:

About Symantec Packager

Symantec Packager lets you create, modify, and build custom installation packages that you distribute to target systems. Using Symantec Packager, you can tailor installations to fit your corporate environment, building packages that contain only the features and settings that your users need.

Symantec products included in installation packages are protected by copyright law and the Symantec license agreement. Distribution of packages requires a license for each user who installs the package.

Note: Symantec Packager runs on Windows NT, Windows 2000, and Windows XP Professional platforms only. However, installation packages created with Symantec Packager can be installed on all Microsoft 32-bit platforms except for Windows NT 3.51.

What you can do with Symantec Packager

Symantec Packager gives you the flexibility to select only the features that you require, letting you reduce the deployment size and the installation footprint. It also lets you tailor products to adhere to your security policy, giving users full access to all features, or limiting access where appropriate.

Customizing standard product installations

Typically a product installation lets you select standard options, such as the user and company name, installation directory, and whether the installation is compact or complete. Although these options offer some flexibility, they can hardly be considered custom installations.

Symantec Packager allows you to select only the features and options that you want your users to have, letting you create a true custom installation.

Table 1-1 Examples of product customization options

Goal	How Symantec Packager helps
Reduce deployment bandwidth and application footprint.	Symantec Packager lists optional and required features so that you can select minimal features for low-bandwidth deployments. Fewer features also decreases application footprint and memory usage on the target system.

Table 1-1 Examples of product customization options

Goal	How Symantec Packager helps
Tailor installation to specific users.	Once you import a product in Symantec Packager, you can customize that product into as many different installations as you need. For example, for your Administrator users, you can include all features. For temporary personnel or other users who should have limited access, you can exclude the features that you do not want them to have.
Reduce installation complexity.	Relying on end users to configure product options can result in lost productivity and increased costs for support personnel. Symantec Packager lets you include preconfigured data files so that you do not have to configure the product manually after deployment.

See "Configuring custom products" on page 35.

Including custom commands with product installations

If a product that you want to deploy is not supported by Symantec Packager, you can create a custom command that contains the product installation and include that custom command in a package installation.

Examples of custom commands include running executable files, Microsoft software installer files, batch files, and so on. If you can run a command from the command line, you can create a custom command for it.

In addition to running programs from the command line, you can also create a custom command that copies files to the end user's system.

Table 1-2 Examples of custom commands

Goal	How Symantec Packager helps
Execute a command on the target system.	If the file or command that you want to execute is already on the target system, you specify the command-line argument to execute it. For example, you want to uninstall a program on the target system before installing a new version. You enter the command-line argument and switches that execute the uninstall for that program.

Table 1-2 Examples of custom commands

Goal	How Symantec Packager helps
Copy files to the target system.	Symantec Packager lets you include files of any type in a custom command. You can also specify where to copy those files on the target system. For example, you want to roll out an updated file for an application that you use. You include the file in a custom command and specify the destination on the target system.
Copy a file and execute it on the target system.	If the file that you want to execute is not already on the target system, you include the file in the custom command, the destination location on the target system, and the command-line argument to execute that file on the target system. For example, you want to include a text file in a package so that it displays at the end of the installation. You include the text file in a custom command and specify a command-line argument that opens that text file in Notepad.

See "Configuring custom commands" on page 47.

Installing multiple products at once

Symantec Packager allows you to combine multiple product installations into one installation package, reducing installation complexity and minimizing deployment costs.

Not only does Symantec Packager let you combine multiple Symantec product installations in one package, you can also include third-party programs, command-line arguments, batch files, and so on with those Symantec product installations.

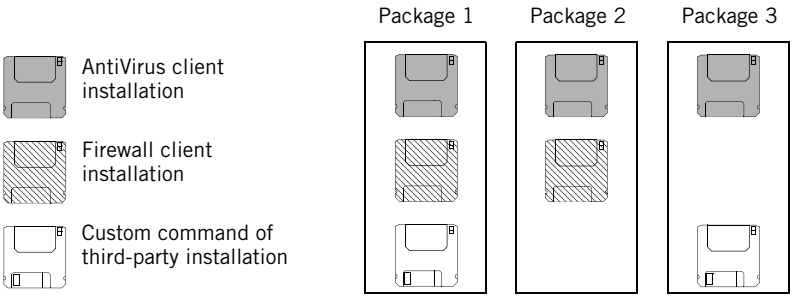
See "Configuring installation packages" on page 59.

Reusing product installs in different packages

Symantec Packager makes it possible to customize a product installation once to be used in multiple installation packages. For example, you might want to deploy the Antivirus client to all of your users. A subset of your client systems require the Firewall client, and a different group of users requires that a third-party program be installed.

Symantec Packager lets you customize the AntiVirus client and Firewall client installs, and create a custom command for the third-party program. You can create them once and include them in as many different installation packages as you require.

Figure 1-1 Reusing product installs in different packages

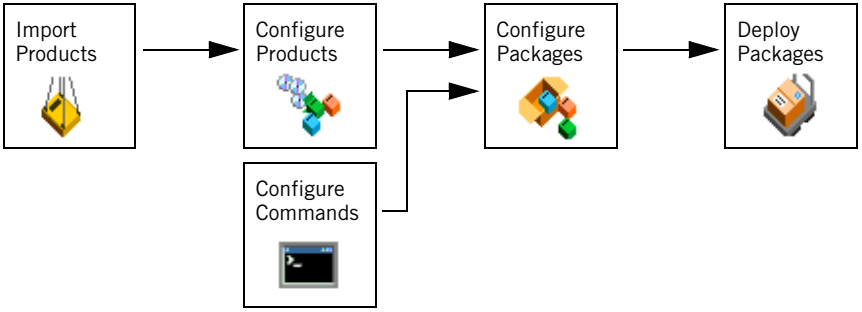


See "Configuring installation packages" on page 59.

How Symantec Packager works

Symantec Packager uses a phased approach for creating custom installation packages. Each phase depends on the output of the previous phase.

Figure 1-2 Overview of Symantec Packager phases



This process outlines how the Symantec Packager phases build upon one another to help you create custom installation packages:

- Import product modules into Symantec Packager.

  In the Import Products phase, you import product modules into Symantec Packager. Symantec Packager extracts the product installation binary files and the product template from the product module. The product template details the feature requirements and conflicts, making it possible to create custom installations of the product.

When you install Symantec Packager, it automatically installs any product modules it finds on the installation CD, so it might not be necessary to import any product modules.

See "About the Import Products phase" on page 12.

- Configure products and commands.

  In the Configure Products phase, you select the features that you want your users to have, as well as setting default installation options for each product.

  You also have the option to create custom commands to include in a package. For example, if you want to include a third-party program or batch file in a package, you create a custom command for that program.

  See "About the Configure Products phase" on page 13.

- Configure the installation package.

  In the Configure Packages phase, you use the product configurations and custom commands that you created in the Product Configuration phase and add them to a package. You further customize the package by setting package installation options, product installation order, and other settings.

  When you build a package in the Configure Packages phase, Symantec Packager creates an installation file that incorporates the product, command, and package options that you specified.

  See "About the Configure Packages phase" on page 15.

- Deploy the package.

  The Deploy Packages tab holds the packages that you create. You can use your current deployment tools to deploy these packages to your users.

  See "About the Deploy Packages phase" on page 16.

About the Import Products phase

The Import Products phase sets up Symantec products so that you can configure them using Symantec Packager.

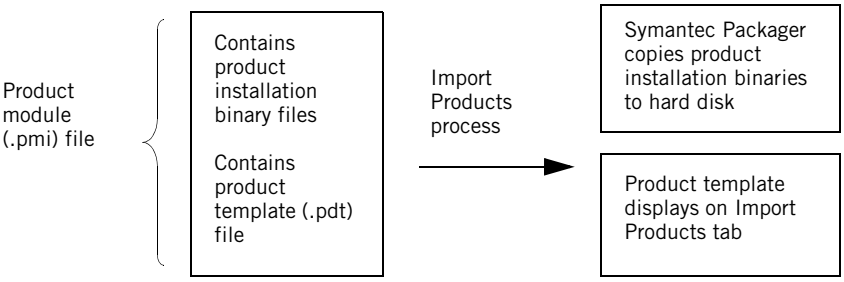
Symantec releases product module (.pmi) files for products that take advantage of Symantec Packager functionality. Product module files are comprised of all of the files that are required to recreate a product installation. These files include a product template (.pdt) file and the installation binary files for the Symantec product. The product template contains all of the rules about product feature conflicts and dependencies. It also tracks the location of the installation binary files on your computer.

When you import a product module, Symantec Packager extracts the product template from the product module file and displays the template file on the Import Products tab. It also copies the product's installation binary files to your

hard disk. The product template files are the building blocks that all other phases reference. They make it possible to customize products, and eventually build installation packages.

After you import a product in Symantec Packager, you customize that product in the Configure Products phase so that you can include it in an installation package.

Figure 1-3 Import Products process



See "Importing products in Symantec Packager" on page 31.

About the Configure Products phase

When a product is designed to take advantage of Symantec Packager, it gives you the flexibility to select the features that you want your users to have. It also lets you preconfigure installations with the settings that best match your software deployment needs.

If you want to install a product that was not designed to be used with Symantec Packager, you can still include that product in an installation package by creating a custom command. You create custom products and custom commands in the Configure Products phase.

After completing the Configure Products phase, the products and commands that you customize are available to be included in installation packages. You configure installation packages in the Configure Packages phase.

Overview of custom products

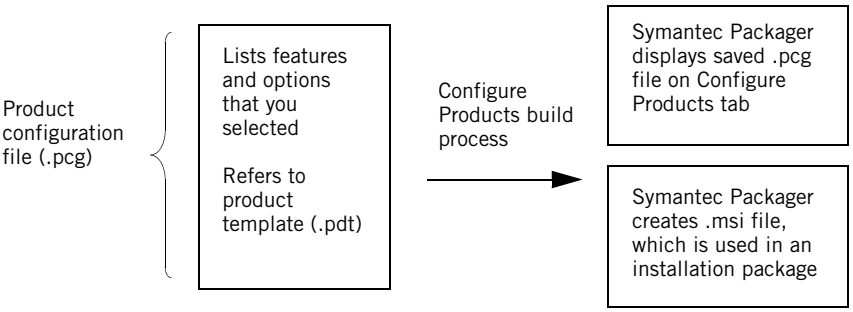
During the Configure Products phase, you customize a product so that it contains only the features and options that you want to include. To do this, you create product configuration (.pcg) files.

On the Configure Products tab, you create a new product configuration file that is based on a product that you imported in the Import Products phase. After you select the product features and options that you want to include and specify a file

name, Symantec Packager saves this file as a product configuration file. The product configuration file, which displays on the Configure Products tab, references its corresponding product template file on the Import Products tab.

When you build the product configuration file, Symantec Packager creates a Microsoft software installer (.msi) file, which is used in an installation package. Unlike the product configuration file, the product .msi file does not reference and is not dependent upon any Symantec Packager files.

Figure 1-4 Configure Products process for custom products



See "Configuring custom products" on page 35.

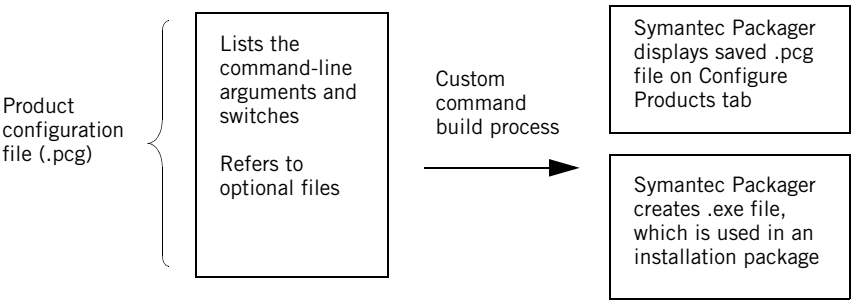
Overview of custom commands

During the Configure Products phase, you can create custom commands that let you further customize your installation packages. To do this, you create command configuration files. A command configuration file is the same as a product configuration file (.pcg) except that the command configuration file does not reference a product template (.pdt) file.

On the Configure Products tab, you create a new custom command and specify its parameters. Like a product configuration file, Symantec Packager saves this file with a .pcg extension. The command configuration file, which displays on the Configure Products tab, lists the command-line arguments for the custom command and references the locations of any files that you included in the custom command.

When you build the command configuration file, Symantec Packager creates a self-extracting executable (.exe) file, which is used in an installation package. Unlike the command configuration file, the command .exe file does not reference and is not dependent upon any Symantec Packager files.

Figure 1-5 Configure Products process for custom commands



See "Configuring custom commands" on page 47.

About the Configure Packages phase

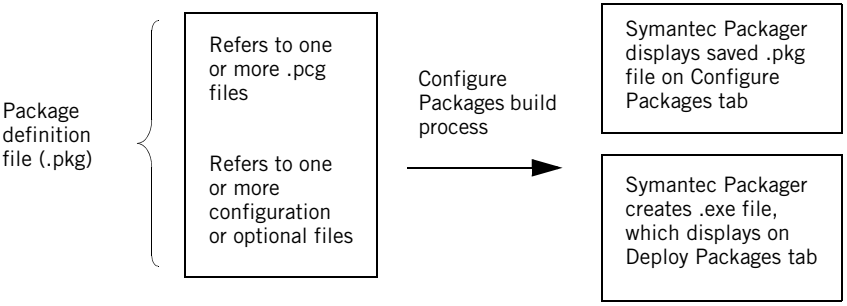
During the Configure Packages phase, you select the products and custom commands that you want to include in an installation package. To do this, you create package definition (.pkg) files.

On the Configure Packages tab, you create a new package definition file by selecting from the product configuration files and custom commands that you customized during the Configure Products phase.

After you select the products and custom commands that you want to include in the installation package and specify a file name, Symantec Packager saves this file as a package definition (.pkg) file. The .pkg file, which displays on the Configure Packages tab, references the .pcg files that it contains.

When you build the .pkg file, Symantec Packager creates an .exe file, which is stored in the deployment folder that is specified in Symantec Packager Preferences. It also displays the .exe file on the Deploy Packages tab. Unlike the package definition file, the package .exe file does not reference and is not dependent upon any Symantec Packager files.

Figure 1-6 Configure Packages process



See "Configuring installation packages" on page 59.

About the Deploy Packages phase

During the Deploy Packages phase, you select the installation packages that you want to deploy to your users. To do this, you copy the necessary files from the Deploy Packages tab for use with deployment tools that you already use. You can also deploy installation packages directly from the Deploy Packages tab using a Symantec-supplied deployment tool.

Only the package .exe files built during the Configure Packages phase appear on the Deploy Packages tab. The product .msi files and the command .exe files that Symantec Packager creates as part of the Configure Products build process are not supported for deployment and therefore do not appear on the Deploy Packages tab. They are provided for testing purposes only.

The package .exe files that appear on the Deploy Packages tab do not reference and are not dependent upon any Symantec Packager files.

See "Deploying installation packages" on page 77.

Where to find more information

If you need more information about Symantec Packager, you can access the online Help. In addition, more information about Symantec Packager may be available on the Symantec Web site.

Accessing online Help

The Symantec Packager online Help system has general information and step-by-step procedures to help you create installation packages.

To get help using Symantec Packager

- Do one of the following:
  - In the Symantec Packager main window, on the Help menu, click **Help Topics**.
  - Anywhere in Symantec Packager, press **F1**.

Accessing the Symantec technical support Web site

If you are connected to the Internet, you can visit the Symantec technical support Web site for additional information about Symantec Packager.

To access the Symantec technical support Web site

- In your Internet browser, type the following Web address:
  http://www.symantec.com/techsupp

Chapter 2

Installing Symantec Packager

This chapter includes the following topics:

System requirements

Before you install Symantec Packager, ensure that your computer meets the system requirements. Review the Readme file on the installation CD for any last-minute changes.

System requirements for Symantec Packager

Symantec Packager runs only on Windows NT-based operating systems and requires the following system requirements:

- Supported operating systems:
  - Windows NT Workstation 4.0/Server 4.0 with Service Pack 6a
  - Windows 2000 Professional/Server with Service Pack 2
  - Windows XP Professional
- Microsoft Internet Explorer 5.5 or later
- Windows Installer 2.0
  If Windows Installer 2.0 is not present, Symantec Packager installs it during installation.
- Pentium II 300 processor (or faster)
- 64 MB RAM (128 MB recommended)
- 60 MB disk space
- CD-ROM or DVD-ROM drive

System requirements for installation packages

Although Symantec Packager runs only on Windows NT-based operating systems, packages that you create using Symantec Packager can be installed on the following operating systems:

- Windows NT 4.0 with Service Pack 6a
- Windows 98
- Windows Millennium Edition (Me)
- Windows 2000
- Windows XP Home Edition/Professional Edition

Packages that contain only custom commands might run on additional operating systems. The specific system requirements for packages depend on the package contents and options.

The hardware requirements for installation packages vary depending on the package contents.

User rights requirements

Symantec Packager does not require administrator rights for installation on Windows NT/2000.

Windows XP restricts users who are assigned to limited user or guest accounts from installing or uninstalling software, changing system-wide settings, or adding, editing, or deleting user accounts. For optimal performance, log on as a user with administrator rights when you run Symantec Packager on Windows XP.

Installing Symantec Packager

The Symantec Packager installation program checks for the required software and hardware resources, lets you select the installation folder, updates registry settings, and copies the required files to your hard disk. The installation program also checks for Windows Installer 2.0. If Windows Installer 2.0 is not installed, the Symantec Packager installation program installs it.

When the installation is complete, Symantec Packager automatically imports any product modules that it finds on the installation CD.

Installing Symantec Packager from the installation CD

When you insert the CD that contains the Symantec Packager installation program into your CD-ROM drive, an installation window displays the products that you can install.

If the installation screen does not appear automatically after you insert the installation CD, run the setup program manually, then continue with the installation process.

See "Starting the installation program manually" on page 23.

You should close any applications that are open before you start the installation process.

To install Symantec Packager from the installation CD

1. Insert the installation CD into the CD-ROM drive.
2. Do one of the following:
   - In the installation window that appears, click **Install Symantec Packager**.
   - If Install Symantec Packager is not in the main window, click **Install Administrator Tools**, then click **Install Symantec Packager**.
3. In the Welcome window, click **Next**.
4. In the Customer Information window, type a user name and organization name, then click **Next**.
5. In the License Agreement window, click **I accept the terms in the license agreement**, then click **Next**.
6. In the Destination Folder window, do one of the following:
   - To use the default destination folder, click **Next**.
   - To change the destination folder, click **Change**, specify a new location, click **OK**, then click **Next**.
7. In the Ready to Install the Program window, click **Install**.
   Symantec Packager copies files to the destination folder that you specified.
8. In the LiveUpdate window, do one of the following:
   - To check for Symantec Packager updates, click **Next**. Click **Finish** when LiveUpdate finishes scanning for updates.
   - Click **Cancel** to skip LiveUpdate.
     You can run LiveUpdate later on the Symantec Packager Help menu.
9. In the Installation Complete window, click **Finish**.
   The installation program automatically imports any product modules that it finds.
10. If you do not want to import product modules at this time, click **Cancel**.
    You can import product modules manually at any time.
    See "Importing product modules" on page 32.

Starting the installation program manually

Start the installation program manually if the installation window does not appear automatically after you insert the installation CD.

To start the Symantec Packager installation program manually

1. Insert the installation CD into the CD-ROM drive.
2. On the Windows taskbar, click **Start** > **Run**.
3. In the Run dialog box, type the letter that designates your CD-ROM drive, followed by **:\Packager\setup.exe**

   For example:

   D:\Packager\setup.exe
4. Click **OK**.
5. Install Symantec Packager.

   See "Installing Symantec Packager" on page 21.

Uninstalling Symantec Packager

The Symantec Packager uninstall program removes the files and registry settings that it copied to your hard disk during installation. You uninstall Symantec Packager using the Add/Remove Programs option in the Windows Control Panel. Once the removal process begins, you cannot cancel it.

Symantec Packager automatically deletes the product template files on the Import Products tab. Symantec Packager prompts you to remove the files in the Symantec Packager data folders. This includes all product configuration files, custom command files, package definition files, and installation packages. If you want to keep these files, click No when prompted to delete Symantec Packager data files.

To uninstall Symantec Packager

1. Close Symantec Packager if it is open.
2. On the Windows taskbar, click **Start** > **Settings** > **Control Panel**.
3. In the Control Panel window, double-click **Add/Remove Programs**.
4. In the Add/Remove Programs window, in the Currently installed programs list, click **Symantec Packager**.
5. Click **Remove**.

6. When you are prompted to remove Symantec Packager data files, do one of the following:
   - Click **Yes** to remove all Symantec Packager data files from the listed locations.
   - Click **No** to leave the data files on your computer. Note the file location so that you can delete the data files at a later time.
7. In the Add/Remove Programs window, click **Close**.

Chapter 3

Symantec Packager basics

This chapter includes the following topics:

Opening Symantec Packager after installation

Symantec Packager is installed in the Windows Program Files folder by default. During installation, Symantec Packager automatically places a program icon on the Windows Start menu from which you can open the program.

During installation, Symantec Packager automatically imports any product module (.pmi) files that it finds. If no products appear on the Import Products tab when you open Symantec Packager, you need to import product modules manually.

See "Importing product modules" on page 32.

To open Symantec Packager

- On the Windows taskbar, click **Start** > **Program Files** > **Symantec Packager**.

Updating Symantec Packager

You can receive software updates associated with your version of Symantec Packager by connecting to the Symantec LiveUpdate server and selecting the updates that you want to install.

To update Symantec Packager

1. On the Windows taskbar, click **Start** > **Program Files** > **Symantec Packager**.
2. On the Help menu, click **LiveUpdate**.
3. Follow the on-screen instructions.

Changing Symantec Packager preferences and view options

Symantec Packager lets you configure its data folders and view options.

The following options are configurable in Symantec Packager preferences:

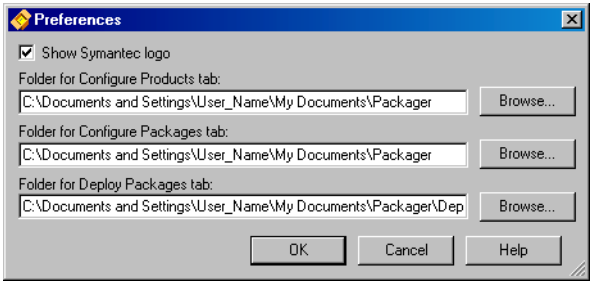
- Specify the folder locations in which Symantec Packager stores its data files.
- Show or hide the Symantec logo on the Symantec Packager tabs.

You can also specify the size and layout of the information that appears on the tabs in the Symantec Packager main window.

Changing Symantec Packager data folders

Symantec Packager saves its data in the folders that are specified in Symantec Packager Preferences. You can use the default folders or specify new folder locations in the Preferences dialog box.

Figure 3-1 Preferences dialog box



To change Symantec Packager data folders

1. Open Symantec Packager.
2. On the Edit menu, click **Preferences**.
3. Do any of the following:
   - Under Folder for Configure Products tab, type a new path or click **Browse** to navigate to a new folder.

     Symantec Packager stores product configuration files, command configuration files, and testable product .msi and command .exe files in this folder.
   - Under Folder for Configure Packages tab, type a new path or click **Browse** to navigate to a new folder.

     Symantec Packager stores package definition files in this folder.
   - Under Folder for Deploy Packages tab, type a new path or click **Browse** to navigate to a new folder.

     Symantec Packager stores deployable installation packages in this folder.
4. Click **OK**.
5. If you are prompted that the folder does not exist, click **Yes** to create it.

Showing or hiding the Symantec logo

Symantec Packager lets you customize your display by showing or hiding the Symantec logo that appears on each tab.

To show or hide the Symantec logo

1. Open Symantec Packager.
2. On the Edit menu, click **Preferences**.
3. In the Preferences dialog box, check or uncheck **Show Symantec logo**.

   If you uncheck Show Symantec logo, the logo does not display on the Symantec Packager tabs. This option is checked by default.
4. Click **OK**.

Changing the appearance of icons in Symantec Packager

You can change the appearance of the icons that appear in Symantec Packager by changing the view setting. When you change the view setting, it affects the appearance of all tabs.

These options are also available on the toolbar and on the right-click menu.

The graphics included in this document use the Details view to provide as much information as possible.

To change the appearance of icons in Symantec Packager

- In the Symantec Packager window, on the View menu, click one of the following:
  - Large Icons: Displays file names and 32 x 32 pixel icons in rows from left to right.
  - Small Icons: Displays file names and 16 x 16 pixel icons in rows from left to right.
  - List: Displays file names and 16 x 16 pixels icons in columns from top to bottom.
  - Details: Displays file names and 16 x 16 icons in columns from top to bottom. Also displays additional details when details are available. These details include the date that the file was last modified, when the file was built, the description, and so on. The details vary by tab.

Accessing commands in Symantec Packager

Most Symantec Packager commands are accessible in multiple ways to suit your computing style.

You can access commands using the following:

- Toolbar
- Menu structure
- Right-click menu

The toolbar, menu, and right-click menu options change depending on which tab is selected.

When there are multiple ways to complete a step or procedure, this document details the menu structure.

Chapter 4

Importing products in Symantec Packager

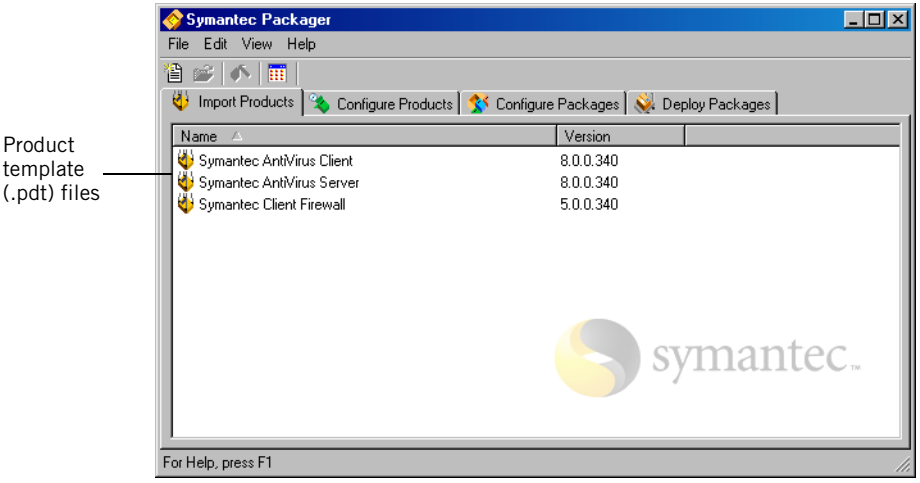
This chapter includes the following topics:

About importing products

During the Import Products phase, Symantec Packager extracts the product template and the production installation binaries from the product module (.pmi) file. Product templates outline the required and optional features and options that are available for each product. The installation binary files are used by Symantec Packager to create custom installation packages.

The products that appear on the Import Products tab may vary. If no products appear on the Import Products tab, you need to import product modules manually.

Figure 4-1 Import Products tab



Importing product modules

Product modules are the building blocks for creating packages. They contain all of the files that you need to build custom installations.

During installation, Symantec Packager automatically imports any product modules that it finds. If no products appear on the Import Products tab when you open Symantec Packager, you need to import product modules manually.

To import a product module in Symantec Packager

1. In the Symantec Packager window, click the **Import Products** tab.
2. On the File menu, click **Import New Product**.

3 In the Open dialog box, navigate to the folder that contains the product module that you want to import.

Product modules are stored in the Packager\Products folder on the installation CD. If you copied the product modules to your hard drive, navigate to that folder location.

4 Select the product module, then click **Open**.

Symantec Packager imports the product module and returns you to the Import Products tab. Depending on the size and complexity of the product module, the registration process may be lengthy.

Symantec Packager creates a default product configuration file that you can customize on the Configure Products tab, and a default package definition file that you can customize on the Configure Packages tab.

See "Configuring custom products" on page 35.

See "Configuring installation packages" on page 59.

Deleting products from Symantec Packager

When you delete a product from the Import Products tab, Symantec Packager removes the product template (.pdt) file from the Import Products tab and the product installation binary files from your system. The Configure Products and the Configure Packages phases reference these files, so all product configuration files and package definition files related to the product that you delete will not function. However, packages that have been built and stored on the Deploy Packages tab are not affected.

To delete product modules

1 In the Symantec Packager window, on the Import Products tab, select the product that you want to delete.

2 On the Edit menu, click **Delete**.

3 When you are prompted to delete the product module, click **Yes**.

Chapter 5

Configuring custom products

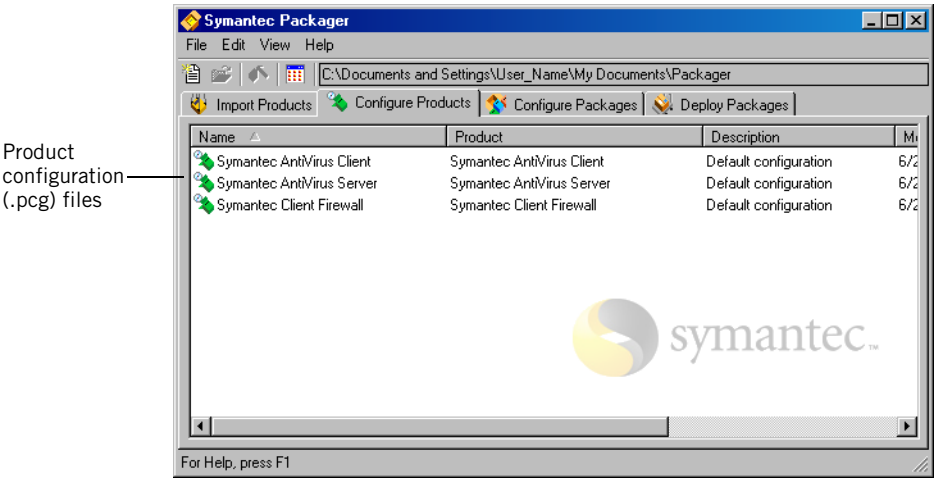
This chapter includes the following topics:

About configuring custom products

During the Configure Products phase, you create product configuration (.pcg) files. You begin this process by selecting the features and options that you want to include for each product. This information is saved in a product configuration file, which is used in the Configure Packages phase to create packages.

The Configure Products phase depends on the successful completion of the Import Products phase. You can only create custom products for which a product definition (.pdt) file exists. The build process for custom products creates a Microsoft Software Installer (.msi) file, which can be tested prior to inclusion in a package.

Figure 5-1 Configure Products tab



Creating a custom product involves the following process:

- Creating a new custom product
  See "Creating custom products" on page 37.
- Specifying the product features that you want to include in the installation
  See "Selecting product features" on page 39.
- Configuring the installation options for the product
  See "Setting product installation options" on page 41.
- Including additional configuration files, if necessary
  See "Including configuration files" on page 43.

- Building the custom product
  See "Building custom products" on page 45.
- Testing the product before deploying it
  See "Testing custom products" on page 46.

The Configure Products phase also lets you create custom commands to further customize your packages.

See "Configuring custom commands" on page 47.

Working with custom products

In the Symantec Packager main window, the Configure Products tab lists the product configuration files that you have created and provides information about when they were last modified and built. In this window, you can create, edit, and delete product configuration files and view details. This tab displays the product and command configuration files that are stored in the Configure Products data folder that is specified in Symantec Packager Preferences.

The Configure Products tab might be empty because you have not imported any product modules. When you import a product module, Symantec Packager creates a default product configuration file and places it on the Configure Products tab.

See "Importing product modules" on page 32.

Creating custom products

The first step in creating a custom product is to create a product configuration file. This opens the Product Editor, which lets you configure and build the custom product.

This procedure details the minimum steps required to create a product configuration file. You can customize the product configuration file when you first create it or at a later time.

Each phase of Symantec Packager relies on the output from previous phases. If you edit a custom product, all built packages that include the product do not change until you rebuild them.

Table 5-1 Overview of Product Editor tab

Tab	Explanation	For more information
Features	Lets you customize product installations by including the features that you want and removing the features that you do not need.	See "Selecting product features" on page 39.
Installation Options	Lets you specify product installation options, such as the target installation location, product shortcuts, and other installation options that vary by product.	See "Setting product installation options" on page 41.
Configuration Files	Lets you preconfigure data or configuration files so that your users do not have to make configuration changes during or after installation.	See "Including configuration files" on page 43.

To create a custom product

1. In the Symantec Packager window, click the **Configure Products** tab.
2. On the File menu, click **New Product Configuration**.
3. In the Product Selection dialog box, select the product that you want to configure, then click **OK**.

   If no products appear in the Product Selection dialog box, you need to import a product module in Symantec Packager. Click **Cancel** and return to the Import Products tab.

   See "Importing product modules" on page 32.
4. In the Product Editor dialog box, click **OK**.
5. In the Save As dialog box, type a name for the custom product, then click **Save**.

   The product configuration file appears on the Configure Products tab.

Viewing product details

Symantec Packager lets you view the details of a product configuration file without opening the file. A summary of all product configuration details is available using the Display Details option.

To view product details

1. In the Symantec Packager window, on the Configure Products tab, select the product configuration file whose details you want to view.
2. On the File menu, click **Display Details**.
3. Click **OK** to close the Details window.

Deleting custom products

The Configure Packages phase relies on the output from the Configure Products phase. If you delete a product configuration that is referenced in a package definition file, that package definition file will not work. However, built packages that are stored on the Deploy Packages tab are not affected.

To delete a custom product

1. In the Symantec Packager window, on the Configure Products tab, select the custom product that you want to delete.
2. On the Edit menu, click **Delete**.
3. When you are prompted to delete the file, click **Yes**.
   Symantec Packager removes the product configuration file from the Configure Products tab.

Configuring custom products

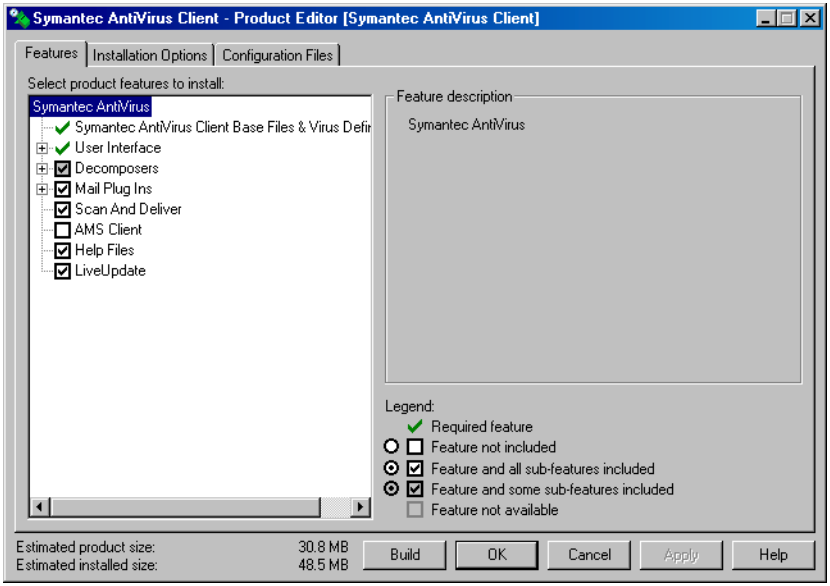
You create a custom product by creating a product configuration file, customizing product settings, then building the product configuration file. The product configuration file contains information about the features and installation options that Symantec Packager requires to build a custom product. Symantec Packager uses this information to construct installation packages.

Selecting product features

Symantec Packager lets you customize product installations by including the features that you want and removing the features that you do not need. The product size and installed size change depending on the features that you choose.

If your goal is to reduce the product and installed size by as much as possible, include as few features as possible.

Figure 5-2 Product Editor: Features tab



To select product features

1. In the Symantec Packager window, on the Configure Products tab, do one of the following:
   - Create a new product configuration.
   - Double-click an existing product to edit it.
2. In the Product Editor dialog box, on the Features tab, do any of the following:
   - Check the product features that you want to include in the custom product.
   - Uncheck the features that you do not want to include.
   - Click the plus sign next to a feature to select or remove its subfeatures.
3. Do one of the following:
   - Click **OK** to save your changes and close the Product Editor dialog box.
   - Click **Apply** to save your changes and continue configuring the product configuration.
4. If prompted, type a file name, then click **Save**.

Setting product installation options

Symantec Packager lets you specify product installation options, such as the target installation location, product shortcuts, and other installation options that vary by product.

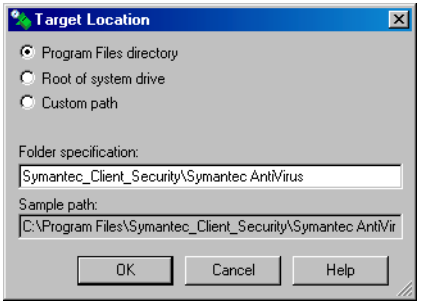
There are other installation options that you can control at the package level. These include restart, logging, roll back, and other installation options.

See "Setting package installation options" on page 65.

Setting product installation location

Symantec Packager lets you configure the installation folder on the target system. This includes the directory location, such as the Windows Program Files directory or the root of the system drive, as well as the folder in which the product is installed.

Figure 5-3 Target Location dialog box



To set the product installation location

1. In the Symantec Packager window, on the Configure Products tab, do one of the following:
   - Create a new product configuration.
   - Double-click an existing product to edit it.
2. In the Product Editor dialog box, on the Installation Options tab, double-click **Target location**.
3. In the Target Location dialog box, select one of the following:
   - Program Files directory: Installs the product in the Windows Program Files directory.
   - Root of system drive: Installs the product at the root of the system drive.
   - Custom path: Installs the product in the specified path.

4 Under Folder specification, type a folder name to use in conjunction with the selection you choose in step 3.

Symantec Packager previews the target location under Sample path.

5 Click **OK**.

6 In the Product Editor dialog box, do one of the following:

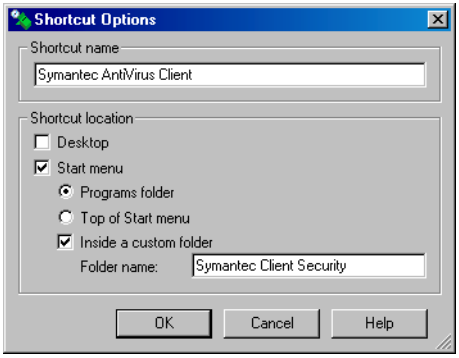
- Click **OK** to save your changes and close the Product Editor dialog box.
- Click **Apply** to save your changes and continue configuring the product configuration.

7 If prompted, type a file name, then click **Save**.

Setting product shortcut options

Symantec Packager lets you configure whether you place a product shortcut on the Windows Desktop or Windows Start menu. The shortcut name and location are configurable.

Figure 5-4 Shortcut Options dialog box



To set product shortcut options

1 In the Symantec Packager window, on the Configure Products tab, do one of the following:

- Create a new product configuration.
- Double-click an existing product to edit it.

2 In the Product Editor dialog box, on the Installation Options tab, double-click **Shortcut name**.

3 In the Shortcut Options dialog box, in the Shortcut name field, type a name for the shortcut.

4. Under Shortcut location, do any of the following:
   - Check **Desktop** to add a program shortcut to the Windows desktop.
   - Check **Start menu** to add a program shortcut to the Windows Start menu.
5. If you checked Start menu, configure where in the Start menu that you want the shortcut to appear:
   - Programs folder: Places a product shortcut in the Programs folder on the Windows Start menu.
   - Top of Start menu: Places a product shortcut at the top of the Windows Start menu.
   - Inside a custom folder: Lets you specify a custom folder to be used in conjunction with the Windows Start menu location.
   - Folder name: Specifies the name of the custom folder.
6. Click **OK**.
7. In the Product Editor dialog box, do one of the following:
   - Click **OK** to save your changes and close the Product Editor dialog box.
   - Click **Apply** to save your changes and continue configuring the product configuration.
8. If prompted, type a file name, then click **Save**.

Setting product-specific installation options

Installation options can vary widely by product. For example, the Antivirus client has additional installation options, such as specifying the server from which it receives virus definitions. These options vary by product. Consult the documentation for the specific Symantec product for more information about configuring these installation options.

Including configuration files

Symantec Packager lets you preconfigure data or configuration files so that your users do not have to make configuration changes during or after installation.

The Configuration Files tab lists required files. You cannot remove these files, but you can replace them with configuration files that you edit. Symantec Packager does not supply a means to edit configuration files. Refer to the documentation for the product that you are customizing for more information about editing its configuration files.

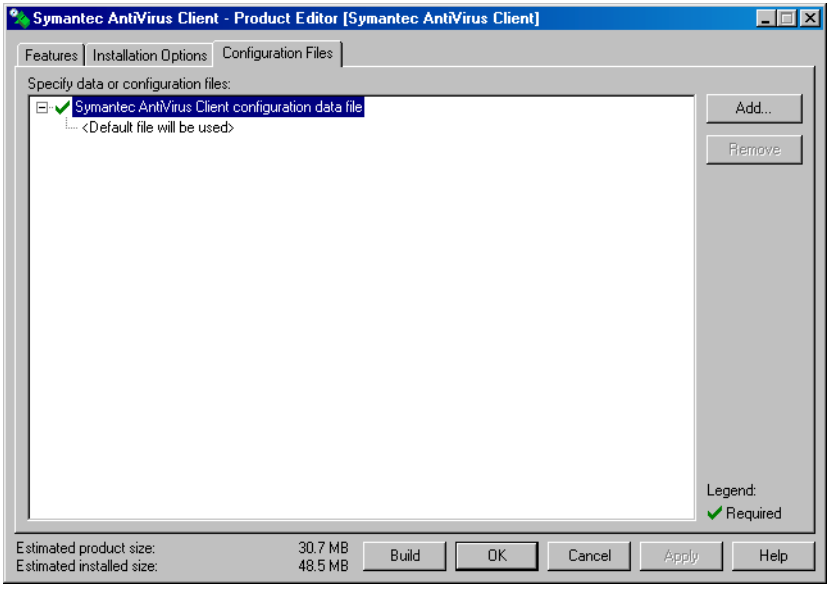
If the Configuration Files tab lists a required file and you choose not to preconfigure the file, the product configuration file uses a default data file provided by Symantec.

Symantec Packager references configuration files in their original location. If you move or rename the configuration file prior to building a package, Symantec Packager will not be able to locate the file, which will result in a build failure.

The configuration files that can be included are limited to what the product supports. If you want to distribute files along with the product, create a custom command that includes those files.

See "About configuring custom commands" on page 48.

Figure 5-5 Product Editor: Configuration Files tab



To add or remove configuration files

1 In the Symantec Packager window, on the Configure Products tab, do one of the following:

- Create a new product configuration.
- Double-click an existing product to edit it.

2 In the Product Editor dialog box, on the Configuration Files tab, do one of the following:

- Click **Add**, browse to the configuration file that you want to include, then click **Open**.

  This replaces the default file with your preconfigured file.
- Select the file that you want to remove, then click **Remove**.

  This removes your preconfigured file and replaces it with the default file provided by Symantec.

3 In the Product Editor dialog box, do one of the following:

- Click **OK** to save your changes and close the Product Editor dialog box.
- Click **Apply** to save your changes and continue configuring the product configuration.

4 If prompted, type a file name, then click **Save**.

Building and testing custom products

After you select the product features, installation options, and optional files to be included with your custom product, you can build it so that you can test it before including it in an installation package. Symantec Packager stores testable Microsoft Software Installer (.msi) files in the Symantec Packager data directory.

Building custom products

During the build process, Symantec Packager retrieves information from the product configuration file to determine what files to include in the custom product, as well as the command-line parameters, installation options, and custom settings. Symantec Packager then checks the contents of the custom product for conflicts and errors. If Symantec Packager encounters a conflict, the build process stops. You must resolve the conflict and repeat the build process.

After completing the validation process, Symantec Packager creates a Microsoft Software Installer (.msi) file and places it in the data folder that is specified for the Configure Products tab. The product .msi file is supplied for testing purposes and is not supported for deployment.

To build a custom product

1 In the Symantec Packager window, on the Configure Products tab, select the custom product that you want to build.

2 On the File menu, click **Build**.

A Build Status window appears, which provides information about the progress of the build and logs any problems that have occurred. If the build is successful, the last line in the Build Status window reads Product was built successfully.

3 In the Build Status dialog box, click **Close**.

Testing custom products

The product module files and product configuration files provided by Symantec are designed to help you create a buildable, installable product. However, it is your responsibility to test whether your feature selections and installation options are appropriate for your users. It is important that you test your custom products on all supported platforms before including them in a package or deploying them to end users.

The following applications must be installed on the test system or error messages will appear when you attempt to run the product .msi file:

- ISScript.msi
- Windows Installer 2.0

To test a custom product

1 On the Windows taskbar, click **Start** > **Run**.

2 In the Run dialog box, type the following:

explorer.exe

This opens Windows Explorer.

3 Navigate to the Configure Products data folder.

Data folders are listed in Symantec Packager Preferences.

See "Changing Symantec Packager data folders" on page 27.

4 Double-click the product .msi file that you want to test.

If you encounter error messages when you double-click a product .msi file, verify that ISScript.msi and Windows Installer 2.0 are installed on the test computer.

5 Follow the on-screen installation instructions to complete testing the product.

6 After installation, use the product to verify that your feature selections meet your user's needs.

Chapter 6

Configuring custom commands

This chapter includes the following topics:

About configuring custom commands

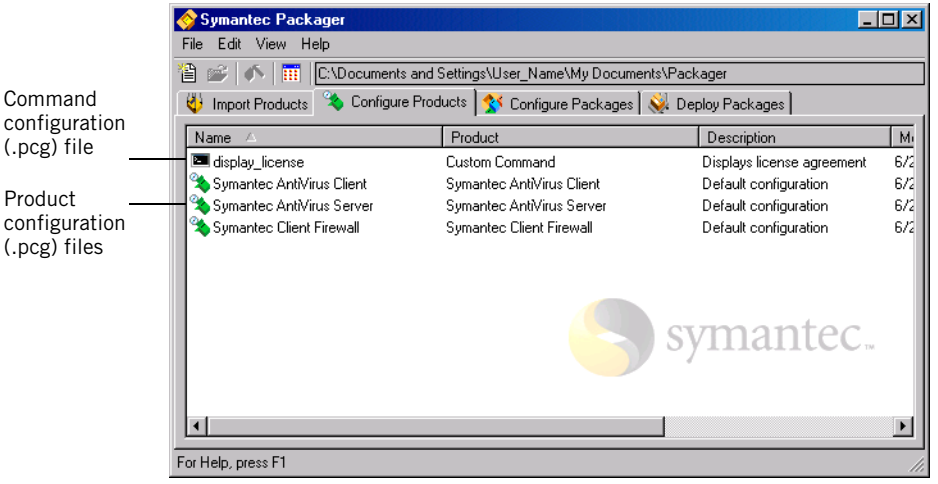
In addition to creating custom products, the Configure Products tab also lets you create custom commands to include in your packages. Examples of custom commands include batch files, third-party executables, command-line arguments, or simple file copies. Custom commands let you simplify application deployment by including multiple tasks in one package. Once defined, you can reuse custom commands in different packages.

When you create a custom command, Symantec Packager creates a command configuration file. A command configuration file is a generic product configuration file that does not reference a product template file. Therefore, custom commands do not depend on the Import Products phase. The build process for custom commands creates a self-extracting executable (.exe) file, which can be tested prior to inclusion in a package.

There are three basic things that you can do with custom commands:

- Execute a command on the target computer.
- Copy files to the target computer.
- Combine these two so that you copy files to the target computer and execute a command on the target computer.

Figure 6-1 Configure Products tab showing a custom command



Creating a custom command involves the following process:

- Creating a custom command file
  See "Creating custom commands" on page 49.
- Specifying command-line parameters and switches
  See "Specifying command-line parameters and switches" on page 52.
- Including optional files
  See "Including files in a command" on page 54.
- Selecting an operating system platform
  See "Specifying operating system support" on page 55.
- Building the custom command
  See "Building custom commands" on page 57.
- Testing the custom command
  See "Testing custom commands" on page 57.

Working with custom commands

In the Symantec Packager main window, the Configure Products tab lists the custom commands that you have created and provides information about when they were last modified and built. In this window, you can create, edit, and delete custom commands and view details.

This tab displays the product and command configuration files that are stored in the Configure Products data folder that is specified in Symantec Packager Preferences.

Creating custom commands

The first step in configuring a custom command is to create a custom command file. This opens the Command Editor, which lets you configure and build the custom command. Like product configuration files, custom command files are saved with a .pcg file extension.

This procedure details the minimum steps required to create a custom command file. You can customize the command configuration file when you first create it or at a later time.

Table 6-1 Overview of Command Editor tabs

Tab	Explanation	For more information
Parameters	Lets you configure a custom command that includes a command-line argument and the required and optional switches to use when the command runs. Also lets you include additional files, such as batch files, scripts, or executable files, in a custom command.	See "Specifying command-line parameters and switches" on page 52. See "Including files in a command" on page 54.
Operating Systems	Lets you specify operating system support for the custom command.	See "Specifying operating system support" on page 55.

To create a custom command file

1. In the Symantec Packager window, click the **Configure Products** tab.
2. On the File menu, click **New Custom Command**.
3. In the Command Editor dialog box, on the Parameters tab, do one or both of the following:
   - Enter the command-line parameters for your custom command, then click **OK**.
   - Include files and specify their target location.
4. In the Command Editor dialog box, click **OK**.
5. In the Save As dialog box, type a file name for the custom command, then click **Save**.

   The command configuration file appears on the Configure Products tab.

Viewing custom command details

Symantec Packager lets you view the details of a custom command file without opening the file. A summary of the custom command specifications is available using the Display Details option.

To view custom command details

1. In the Symantec Packager window, on the Configure Products tab, select the custom command file that you want to view.
2. On the File menu, click **Display Details**.
3. Click **OK** to close the Details window.

Deleting custom commands

Deleting a custom command removes its configuration file, which contains the configuration settings needed to build the custom command. Deleting the command configuration file that is included in a package definition file breaks the package definition file. However, deleting a command configuration file does not affect installation packages were previously built and stored on the Deploy Packages tab.

To delete a custom command

1. In the Symantec Packager window, on the Configure Products tab, select the custom command that you want to delete.
2. On the Edit menu, click **Delete**.
3. When you are prompted to delete the file, click **Yes**.
   Symantec Packager removes the custom command from the Configure Products tab.

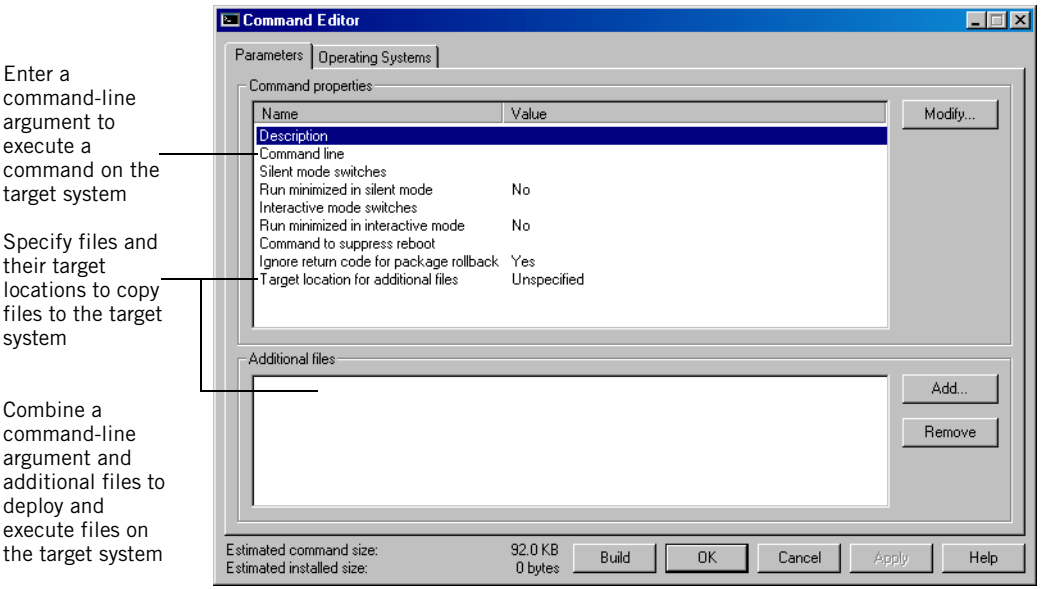
Configuring custom commands

Custom commands let you perform virtually any installation task that you could run from a command line. Example uses include adding third-party or other unsupported products to a package, adding product updates or patches (such as updated virus definitions), removing conflicting software programs, or running a clean-up utility. Symantec Packager lets you enter a specific command or add a script file that contains a series of commands.

Like custom products, the configuration information for custom commands are saved in product configuration files. However, unlike custom products, custom

commands are not imported and do not have an associated product template file. You must specify the information that Symantec Packager requires to install and run the command. This information might include command-line switches or executable files.

Figure 6-2 Command Editor: Parameters tab

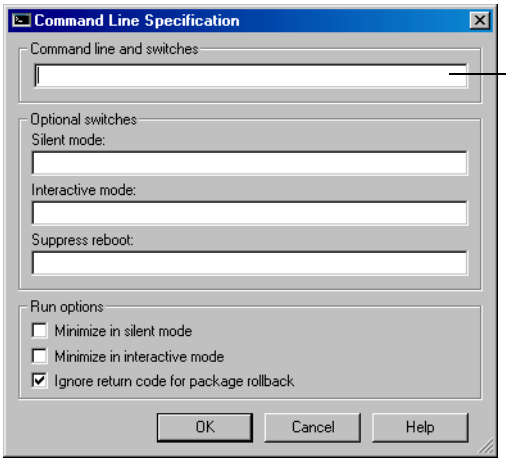


Specifying command-line parameters and switches

Symantec Packager lets you configure a custom command that includes a command-line argument and the additional switches to use when the command runs.

Symantec Packager also lets you define optional switches that can be used during a silent, passive, or interactive package installation. You must specify the information that Symantec Packager needs to install and run the command and whatever variables that you want to use.

Figure 6-3 Command Line Specification dialog box



To specify command-line parameters and switches

1. In the Symantec Packager window, on the Configure Products tab, do one of the following:
   - Create a new custom command.
   - Double-click an existing command to edit it.
2. In the Command Editor dialog box, on the Parameters tab, click **Command line**, then click **Add**.
3. In the Command Line Specification dialog box, under Command line and switches, type the command-line argument and switches that are required to execute the command.
4. Under Optional switches, type the optional switches for installation behavior.

   The package installation uses these switches to make the command installation mimic the package installation.
   - Silent mode: Specify the switch that suppresses all user interaction.
   - Interactive mode: Specify the switch that suppresses user interaction while still displaying status messages.
   - Suppress reboot: Specify the switch that suppresses a restart after the custom command.
5. Under Run options, select how the command installation should appear to the user.
   - Minimize in silent mode: Lets you run the command in the background.

- Minimize in interactive mode: Lets you run the command in the background.
- Ignore return code for package rollback: Lets you exclude custom commands from package rollbacks. This ensures that the custom command is installed and not removed if the package fails to install properly and the rollback option is enabled.

6. Click **OK**.
7. In the Command Editor dialog box, do one of the following:
   - Click **OK** to save your changes and close the Command Editor dialog box.
   - Click **Apply** to save your changes and continue configuring the command.
8. If prompted, type a file name, then click **Save**.

Including files in a command

Symantec Packager lets you include additional files, such as batch files, scripts, or executable files, in a custom command. Examples include updated virus definitions, software patches, registry keys, self-extracting executable files, or .msi files. To include additional files, you must add the file to the custom command and specify a target location. During package installation, Symantec Packager copies the file to the specified folder on the target computer.

Symantec Packager lets you copy files in the Program Files folder, the root of the system drive, or a custom path. If you select the Program Files folder or the root of the system drive, Symantec Packager automatically completes the full path. You only have to type the subfolder name to place the files in a subfolder of the Program Files or root directory. If you select a custom path, you must type the full path.

To include files in a command

1. In the Symantec Packager window, on the Configure Products tab, do one of the following:
   - Create a new custom command.
   - Double-click an existing command to edit it.
2. In the Command Editor dialog box, on the Parameters tab, click **Add**.
3. Browse to the files that you want to add to the custom command, then click **Open**.
   Hold down the Ctrl key to add multiple files at once.

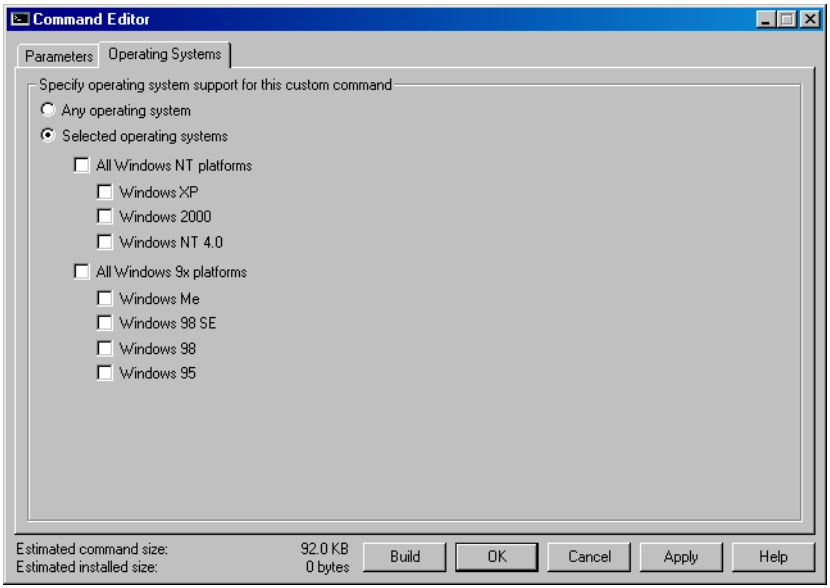
4. In the Command Editor dialog box, on the Parameters tab, click **Target path for additional files**, then click **Modify**.
5. In the Target path for additional files dialog box, select the location on the target computer to which you want to copy the optional files.
   - Program Files directory: Copies the files to the Windows Program Files directory.
   - Root of system drive: Copies the files to the root of the system drive.
   - Custom path: Copies the files to the specified path.
   - Unspecified target location: Copies the files to the user's temp directory.
6. Under Folder specification, type a folder name to use in conjunction with the selection you choose in step 5.

   Symantec Packager previews the target location under Sample path.
7. Click **OK**.
8. In the Command Editor dialog box, do one of the following:
   - Click **OK** to save your changes and close the Command Editor dialog box.
   - Click **Apply** to save your changes and continue configuring the command.
9. If prompted, type a file name, then click **Save**.

Specifying operating system support

Custom installation packages created with Symantec Packager can be installed on any Microsoft 32-bit platform except for Windows NT 3.51. Unless you specify otherwise, Symantec Packager installs the custom commands that you include in a package on all supported operating systems. If the custom command is limited to specific platforms, you must specify this information when configuring the custom command.

Figure 6-4 Command Editor: Operating Systems tab



To specify operating system support

1. In the Symantec Packager window, on the Configure Products tab, do one of the following:
   - Create a new custom command.
   - Double-click an existing command to edit it.
2. In the Command Editor dialog box, on the Operating Systems tab, select the operating systems on which the custom command can run.

   The default selection is Any operating system. You can limit the installation by category, (for example, all Windows NT platforms), by specific operating system (for example, Windows 2000 and Windows XP), or by any combination (for example, all Windows NT platforms plus Windows 98 and Windows 98 SE).
3. In the Command Editor dialog box, do one of the following:
   - Click **OK** to save your changes and close the Command Editor dialog box.
   - Click **Apply** to save your changes and continue configuring the command.
4. If prompted, type a file name, then click **Save**.

Building and testing custom commands

After you define the command-line parameters and optional files for a custom command, you must build it. When the custom command build process is complete, it is crucial that you test the custom command before you include it in an installation package. Symantec Packager stores testable self-extracting executable files in the Symantec Packager data directory.

Building custom commands

During the build process, Symantec Packager retrieves information from the custom command .pcg file to determine which files to include in the custom command as well as the command-line parameters, installation options, and custom settings. Symantec Packager then performs basic error checking. If Symantec Packager encounters an error, the build process stops. You must resolve the conflict and repeat the build process.

After completing the validation process, Symantec Packager creates a self-extracting executable (.exe) file and places it in the data folder that is specified for the Configure Products tab. The command .exe file is supplied for testing purposes and is not supported for deployment.

To build a custom command

1. In the Symantec Packager window, on the Configure Products tab, select the custom command that you want to build.
2. On the File menu, click **Build**.

   A Build Status window appears, which provides information about the progress of the build and logs any problems that have occurred. If the build is successful, the last line in the Build Status window reads Command was built successfully.
3. In the Build Status dialog box, click **Close**.

Testing custom commands

Custom commands are powerful tools that let you customize a product installation beyond the confines of what a product template allows. However, with custom commands, the responsibility for defining the information that Symantec Packager requires to install and run the custom command falls on you. Because of the unlimited possibilities for which you can use a custom command, Symantec Packager does not ensure that you have typed a command correctly and does not perform error checking during the build or installation processes.

Therefore, it is important that you test your custom commands on all supported platforms before including them in a package or deploying them to end users.

Note: If your custom command requires user interaction and you include that custom command in a package, the installation will halt until the user interacts with the custom command.

To test a custom command

1. On the Windows taskbar, click **Start** > **Run**.
2. In the Run dialog box, type **explorer.exe**.
   This opens Windows Explorer.
3. Navigate to the Configure Products data folder.
   Data folders are listed in Symantec Packager Preferences.
   See "Changing Symantec Packager data folders" on page 27.
4. Double-click the command .exe file that you want to test.

Chapter 7

Configuring installation packages

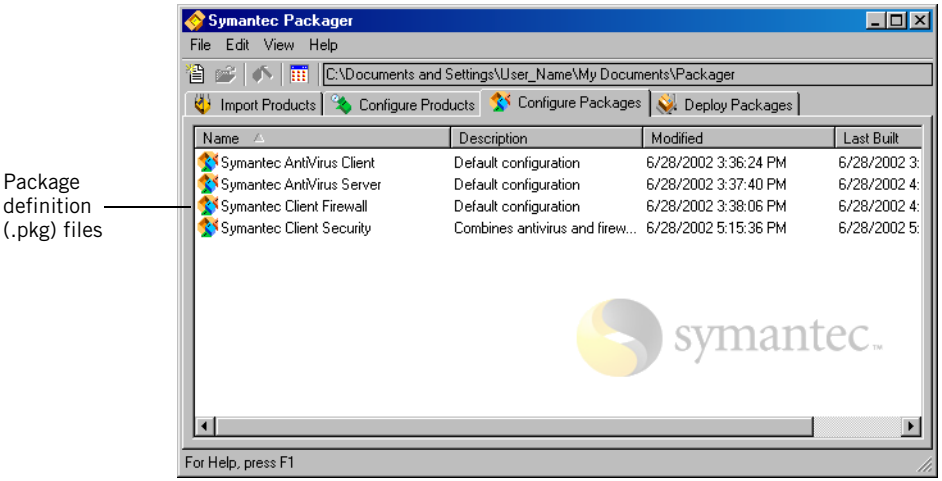
This chapter includes the following topics:

About configuring packages

During the Configure Packages phase, you create a package, which is a single installation file that contains one or more products or custom commands. You begin this process by selecting the products and custom commands that you want to include. You then specify package installation options and other custom settings. This information is saved in a package definition (.pkg) file.

The Configure Packages phase depends on the successful completion of the Import Products and Configure Products phases. You can add only products or custom commands for which a product configuration (.pcg) file exists. Symantec Packager uses the information from the product configuration and package definition files to build the package. The build process creates a self-extracting executable file, which can be tested and deployed to end users.

Figure 7-1 Configure Packages tab



The Configure Packages phase involves the following process:

- Creating a package definition
  See "Creating package definitions" on page 61.
- Adding one or more products and custom commands
  See "Adding products and commands to a package definition" on page 63.
- Specifying the installation sequence for packages that contain multiple products or custom commands
  See "Changing installation sequence" on page 65.

- Specifying package installation and logging options
  See "Setting package installation options" on page 65.
- Building the package
  See "Building and testing packages" on page 75.
- Testing the package before deployment
  See "Testing packages" on page 76.

Working with package definitions

In the Symantec Packager main window, the Configure Packages tab lists the package definition files that you have created and provides information about when they were last modified and built. In this window, you can add, edit, rename, and delete package definition files. This tab displays the package definition files that are stored in the Configure Packages data folder that is specified in Symantec Packager Preferences.

The Configure Packages tab might be empty for one of the following reasons:

- You have not imported any product modules.
  When you import a product module, Symantec Packager creates a default package definition file and places it on the Configure Packages tab.
  See "Importing product modules" on page 32.
- You have not built any product configuration files or command configuration files.
  See "Building custom products" on page 45.
  See "Building custom commands" on page 57.

Creating package definitions

The first step in creating a package is to create a package definition file. This opens the Package Editor dialog box, which lets you configure and build the package. As you add or remove products or custom commands, the bottom left portion of the dialog box displays the approximate size of the installation package and its installation footprint.

This procedure creates a generic package definition file. You can customize the package definition file by adding products and custom commands to it, setting installation options, and adding your own graphics to the installation.

Table 7-1 Overview of Package Editor tabs

Tab	Explanation	For more information
Product Selection	Lets you add or remove products or custom commands, change installation sequence, view product properties and requirements, and bundle the appropriate version of Windows Installer in a package.	See "Adding products and commands to a package definition" on page 63. See "Changing installation sequence" on page 65.
Installation Options	Lets you set package installation, logging, and branding options and optionally specify technical support information.	See "Setting package installation options" on page 65.

To create a package definition

1. In the Symantec Packager window, click **Configure Packages**.
2. On the File menu, click **New Package Definition**.
   The new package definition file opens in the Package Editor dialog box. You can customize the package definition file now or edit it later.
3. You can configure the package now or edit it later.
4. In the Package Editor dialog box, click **OK** to save the file.
5. In the Save As dialog box, type a file name for the package definition file, then click **Save**.
   The package definition file appears on the Configure Packages tab.

Viewing package definition details

Symantec Packager lets you view the details of a package definition file without opening the file. A summary of the package definition specifications is available using the Display Details option.

To view package definition details

1. In the Symantec Packager window, on the Configure Packages tab, select the package definition file that you want to view.

2 On the File menu, click **Display Details**.

3 Click **OK** to close the Details window.

Deleting package definitions

Deleting a package definition removes the package definition file, which contains the configuration settings and installation instructions needed to build a package. Deleting a package definition does not affect installation packages that are on the Deploy Packages tab.

To delete a package definition

1 In the Symantec Packager window, on the Configure Packages tab, select the package definition file that you want to delete.

2 On the Edit menu, click **Delete**.

3 When you are prompted to delete the file, click **Yes**.

Configuring package definitions

You create a custom installation package by creating a package definition file and then building the package. The package definition file contains the configuration information and installation instructions that Symantec Packager requires to build the package. Within the package definition file, you choose the products or custom commands that you want to include, installation sequences, and package installation and logging options. Optionally, a package definition file can include technical support information.

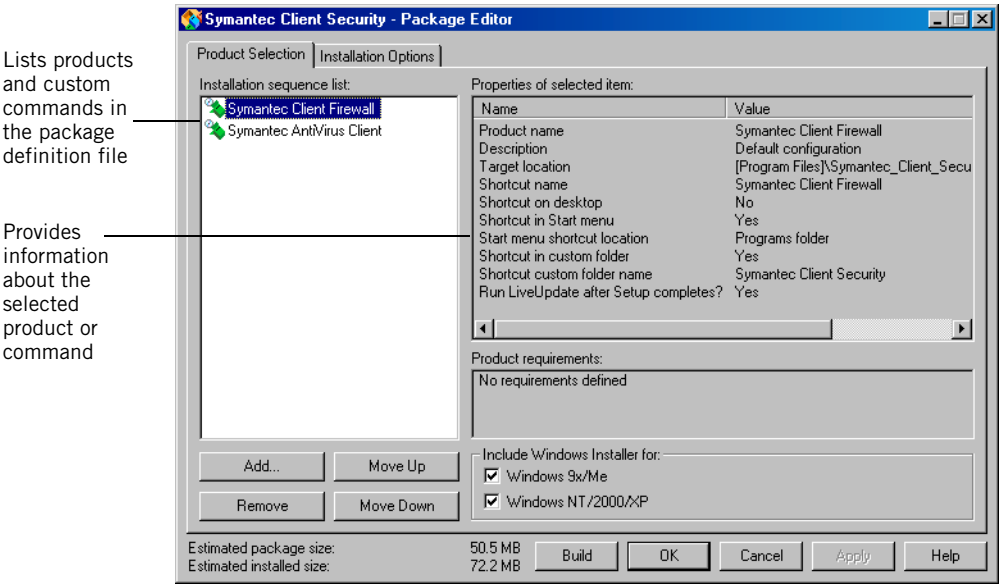
Adding products and commands to a package definition

Symantec Packager lets you create a custom installation package that includes one or more products or custom commands. As you add an item to a package definition file, its properties, as defined in the product configuration file, are displayed in the Package Editor dialog box, as well as any product requirements or conflicts. For example, to avoid product conflicts, Symantec AntiVirus restricts you from including both the client and server versions in the same package. A product configuration file is required for each product or custom command that you want to include.

See "Configuring custom products" on page 35.

See "Configuring custom commands" on page 47.

Figure 7-2 Product Editor: Product Selection tab



To add products to a package definition

1. In the Symantec Packager window, on the Configure Packages tab, do one of the following:
   - Create a new package definition.
   - Double-click a package definition to edit an existing one.
2. In the Package Editor dialog box, on the Product Selection tab, click **Add**.
3. In the Open window, select the product or custom command (.pcg) file that you want to add.
4. Click **Open**.

   The Estimated package size changes to reflect the product or command that you include.
5. Repeat step 2 through step 4 to add more products or custom commands.
6. In the Package Editor dialog box, do one of the following:
   - Click **OK** to save your changes and close the Package Editor dialog box.
   - Click **Apply** to save your changes and continue configuring the package definition.
7. If prompted, type a file name, then click **Save**.

Changing installation sequence

The products included in a package definition file are installed in the order in which they appear on the Product Selection tab. By default, each product that you add to a package definition is automatically added to the end of the installation sequence. Some products require other products to install and function properly. If a product in your package definition requires another product, ensure that the products are listed in the correct sequence. You can change the order in which a product is installed by moving it up or down in the installation sequence list.

To change installation sequence

1. In the Symantec Packager window, on the Configure Packages tab, do one of the following:
   - Create a new package definition.
   - Double-click a package definition to edit an existing one.
2. In the Package Editor dialog box, on the Product Selection tab, under Installation sequence list, select the product for which you want to change the installation sequence.
3. Select one of the following to move the product or command to the desired location in the list:
   - Move Up: Moves the selected product or command to an earlier position in the installation sequence.
   - Move Down: Moves the selected product or command to a later position in the installation sequence.
4. In the Package Editor dialog box, do one of the following:
   - Click **OK** to save your changes and close the Package Editor dialog box.
   - Click **Apply** to save your changes and continue configuring the package definition.
5. If prompted, type a file name, then click **Save**.

Setting package installation options

Symantec Packager lets you specify installation options at the product and package level. Package installation options let you control the level of user interaction required during installation, specify restart and logging options, and include user or company-specific information such as a technical support Web address. Optionally, your package can include the appropriate version of Windows Installer for users who need it. If there is a discrepancy between installation settings, package installation options override product settings.

Including Windows Installer

Many products require Windows Installer 2.0 for installation. If the computer to which you are deploying a package does not have Windows Installer or has an older version, you can include it in your package. When users install the package, Windows Installer is installed first. During installation, Symantec Packager checks the target computer to determine if Windows Installer is already installed. Symantec Packager installs Windows Installer only if the target computer does not have Windows Installer or has an older version.

If you want to create a package that contains an older version of Windows Installer, you can create a custom command that includes that version.

To include Windows Installer

1. In the Symantec Packager window, on the Configure Packages tab, do one of the following:
   - Create a new package definition.
   - Double-click a package definition to edit an existing one.
2. In the Package Editor dialog box, on the Product Selection tab, under Include Windows Installer for, select any of the following:
   - Windows 9x/Me: Includes the version of Windows Installer that is appropriate for Windows 9x/Me computers.
   - Windows NT/2000/XP: Includes the version of Windows Installer that is appropriate for Windows NT/2000/XP computers.
3. In the Package Editor dialog box, do one of the following:
   - Click **OK** to save your changes and close the Package Editor dialog box.
   - Click **Apply** to save your changes and continue configuring the package definition.
4. If prompted, type a file name, then click **Save**.

Selecting an installation mode

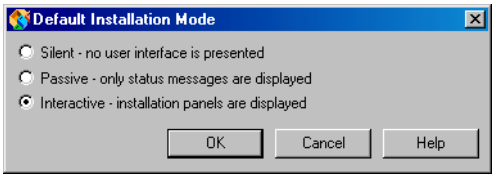
Symantec Packager lets you control the level of user interaction required for installations. Silent installations provide no user interface or status information. Passive installations provide progress indicators and other status information, but do not provide a way to accept or cancel an action. When choosing either of these installation options, ensure that the package installation automatically handles situations that might require user interaction, such as required computer restarts and handling unclosed applications.

See "Setting reboot options" on page 67.

Interactive installations provide a user interface that steps users through the installation. You can further customize an installation by adding a brand name or replacing product-specific installation graphics with custom graphics.

See "Customizing optional installation panels" on page 73.

Figure 7-3 Default Installation Mode dialog box



To select an installation mode

1. In the Symantec Packager window, on the Configure Packages tab, do one of the following:
   - Create a new package definition.
   - Double-click a package definition to edit an existing one.
2. In the Package Editor dialog box, on the Installation Options tab, double-click **Default Installation Mode**.
3. In the Default Installation Mode dialog box, select one of the following:
   - Silent: Package installs with no user interface.
   - Passive: User sees only status messages during installation.
   - Interactive: Package installation includes installation screens, which require user interaction.
4. Click **OK**.
5. In the Package Editor dialog box, do one of the following:
   - Click **OK** to save your changes and close the Package Editor dialog box.
   - Click **Apply** to save your changes and continue configuring the package definition.
6. If prompted, type a file name, then click **Save**.

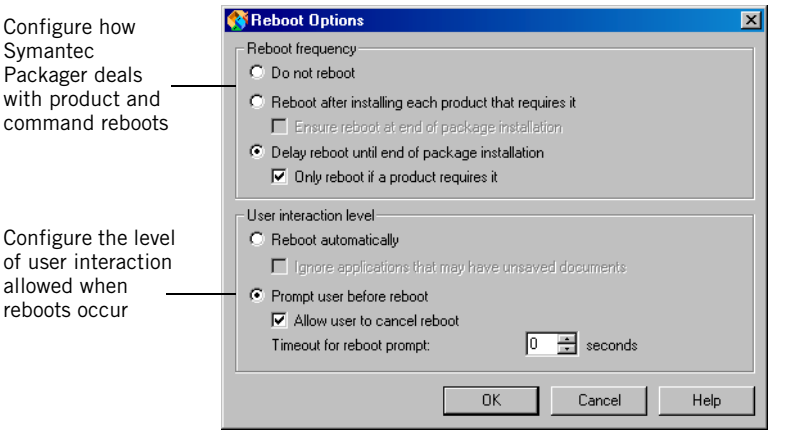
Setting reboot options

Products that include changes to operating system files might require users to restart their computers so that the changes are written to the appropriate areas of the system. Product restart requirements are specified in the product modules. If a package contains multiple products that require a restart, Symantec Packager

lets you choose a restart option for the entire package. This suppresses individual product settings and custom command switches.

You can configure a package to not restart the computer, to restart after installing each product that requires it, or to delay the restart until the entire package is installed. You can also configure the package to restart the computer automatically or to prompt the user. The option you choose depends on how interactive you want the installation to be. If you want to let users cancel the restart, specify a timeout period for responding to the prompt.

Figure 7-4 Reboot Options dialog box



To set restart options

1. In the Symantec Packager window, on the Configure Packages tab, do one of the following:
   - Create a new package definition.
   - Double-click a package definition to edit an existing one.
2. In the Package Editor dialog box, on the Installation Options tab, double-click **Perform reboot(s)**.
3. In the Reboot Options dialog box, under Reboot frequency, select one of the following:
   - Do not reboot: Package installs without restarting the computer or prompting the user to restart. This option overrides product restart settings and custom command switches.
   - Reboot after installing each product that requires it: Restarts the computer upon installation of each product that requires a restart. This option preserves product restart settings and custom command

switches. If you select this option, also specify whether the computer restarts automatically or prompts the user.

You can optionally click **Ensure reboot at end of package install** to add a restart at the end of the package installation if one does not already exist.

- Delay reboot until end of package installation: Overrides product restart settings and saves the restart until the end of the package installation.

  You can optionally click **Only reboot if a product requires it** to restart at the end of the package installation only if a product or command in the package requires it.

4 In the Reboot Options dialog box, under User interaction level, select one of the following:

- Reboot automatically: Restarts the computer, but first displays messages if applications have files open.

  You can optionally click **Ignore applications that may have unsaved documents** to force a reboot.

- Prompt user before reboot: Displays a message that informs the user that a reboot is going to occur.

  You can optionally click **Allow user to cancel reboot** and specify the amount of time that the user has to respond to the message.

5 Click **OK**.

6 In the Package Editor dialog box, do one of the following:

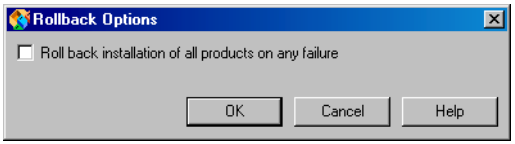
- Click **OK** to save your changes and close the Package Editor dialog box.
- Click **Apply** to save your changes and continue configuring the package definition.

7 If prompted, type a file name, then click **Save**.

Setting installation rollback options

Symantec Packager lets you restore, or roll back, a target computer to its original, preinstallation configuration if any part of the package installation fails. During the rollback, Symantec Packager removes the files that were installed, including drivers and configuration files, and restores registry settings.

Figure 7-5 Rollback Options dialog box



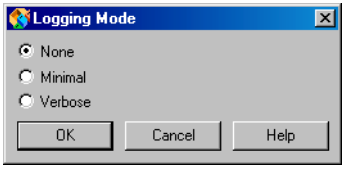
To preserve preinstallation settings

1. In the Symantec Packager window, on the Configure Packages tab, do one of the following:
   - Create a new package definition.
   - Double-click a package definition to edit an existing one.
2. In the Rollback Options dialog box, check **Roll back installation of all products on any failure**.
3. Click **OK**.
4. In the Package Editor dialog box, do one of the following:
   - Click **OK** to save your changes and close the Package Editor dialog box.
   - Click **Apply** to save your changes and continue configuring the package definition.
5. If prompted, type a file name, then click **Save**.

Logging installation information

Symantec Packager lets you record information about the installation in a log file. This information helps you determine whether the package installed successfully or identify errors during installation. The log file is generated at the end of the package installation and is saved as a text file on the target computer in the user's temp directory.

Figure 7-6 Logging Mode dialog box



To log installation information

1. In the Symantec Packager window, on the Configure Packages tab, do one of the following:
   - Create a new package definition.
   - Double-click a package definition to edit an existing one.
2. In the Package Editor dialog box, on the Installation Options tab, double-click **Logging mode**.

3 In the Logging Options dialog box, select one of the following:

- None: Disables logging on the target computer.
- Minimal: Captures errors only.
- Verbose: Captures all log information.

4 Click **OK**.

5 In the Package Editor dialog box, do one of the following:

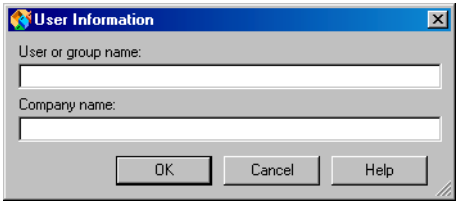
- Click **OK** to save your changes and close the Package Editor dialog box.
- Click **Apply** to save your changes and continue configuring the package definition.

6 If prompted, type a file name, then click **Save**.

Preconfiguring user information

During an interactive package installation, users are prompted for a user or group name and a company name. Symantec Packager lets you preconfigure this information in the package definition file so that it automatically appears on the Customer Information installation screen.

Figure 7-7 User Information dialog box



To preconfigure user information

1 In the Symantec Packager window, on the Configure Packages tab, do one of the following:

- Create a new package definition.
- Double-click a package definition to edit an existing one.

2 In the Package Editor dialog box, on the Installation Options tab, double-click **User or group name**.

3 In the User Information dialog box, under User or group name, type the user name or group name that will appear on the Customer Information screen during installation.

4 Under Company name, type the company name that will appear on the Customer Information screen during installation.

5 Click **OK**.

6 In the Package Editor dialog box, do one of the following:

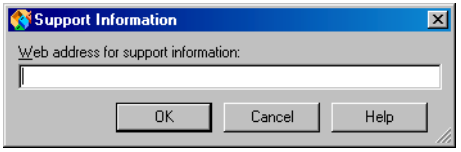
- Click **OK** to save your changes and close the Package Editor dialog box.
- Click **Apply** to save your changes and continue configuring the package definition.

7 If prompted, type a file name, then click **Save**.

Including custom support information

Symantec Packager lets you specify a Web address for custom support information. This feature, for example, lets value-added resellers (VAR) and original equipment manufacturers (OEM) create custom installation packages that include their own Web addresses. This information is displayed during the package installation; therefore, the package definition must use Interactive installation mode.

Figure 7-8 Support Information dialog box



To include custom support information

1 In the Symantec Packager window, on the Configure Packages tab, do one of the following:

- Create a new package definition.
- Double-click a package definition to edit an existing one.

2 In the Package Editor dialog box, on the Installation Options tab, double-click **Support web address**.

3 In the Support Information dialog box, type the URL as you would like it to appear on screen. For example:

www.symantec.com

http://www.symantec.com

4 Click **OK**.

5 In the Package Editor dialog box, do one of the following:

- Click **OK** to save your changes and close the Package Editor dialog box.
- Click **Apply** to save your changes and continue configuring the package definition.

6 If prompted, type a file name, then click **Save**.

Customizing optional installation panels

Symantec Packager lets you customize the optional installation panels that the user sees during an interactive installation. This only applies to generic installation panels, such as the Welcome and Installation Complete screens, not the installation panels that are associated with specific Symantec products. The package must be configured to install in Interactive mode to use custom installation graphics.

You can customize the following settings on optional installation panels:

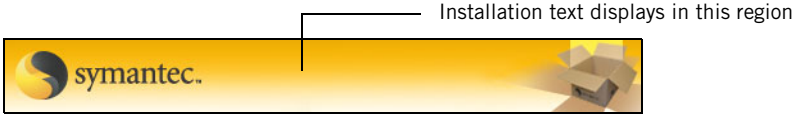
- Whether optional installation panels display during a package installation.
- The package title that appears on the Welcome and Installation Complete panels.
- The graphics that display on the Welcome and Installation Complete panels.

Symantec Packager provides installation graphics or you can use your own custom graphics. If you use a custom bitmap that does not adhere to the size and color specifications, the installation program will stretch or shrink the bitmap to the appropriate size. This does not affect how the package installation functions, but it does impact the look of the panels.

Use these specifications if you create your own custom graphics:

- The top and background bitmaps are limited to 256 colors.
- The top bitmap measures 500 pixels wide by 58 pixels high. However, installation text is configured to appear in the middle of the top graphic, so you should use a similar layout.

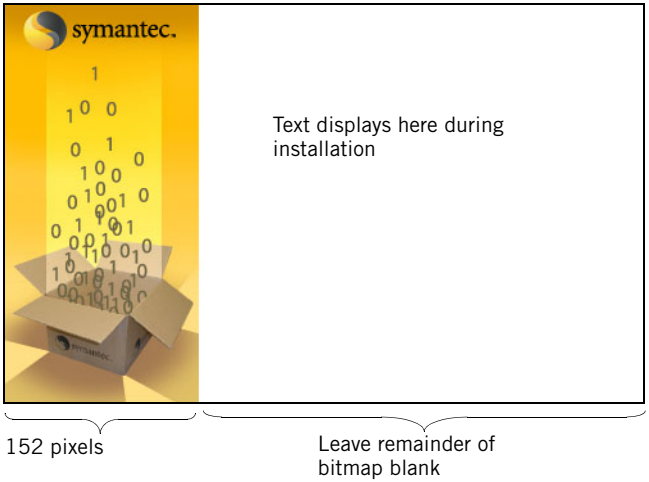
Figure 7-9 Example of a top bitmap



- The background bitmap measures 500 wide by 312 pixels high. However, the graphic is limited to the first 152 pixels going from left to right. Leave the

remainder of the bitmap blank so that the graphic does not obscure installation text.

Figure 7-10 Example of a background bitmap



To customize optional installation panels

1. In the Symantec Packager window, on the Configure Packages tab, do one of the following:
   - Create a new package definition.
   - Double-click a package definition to edit an existing one.
2. In the Package Editor dialog box, on the Installation Panels tab, double-click **Display optional installation panels in interactive mode**.
3. In the Installation Panel Options dialog box, check **Display optional installation panels in interactive mode**.

   A preview of the Symantec Packager graphics appears in the top bitmap and background bitmap preview areas. If this option is unchecked, optional installation panels do not display during installation.
4. In the Package title field, type a package title.

   The package title appears on the optional installation panels during package installation.
5. To replace the graphic that appears at the top of the optional installation panels, check **Use custom top bitmap**.

6 Click **Browse**, select the custom top bitmap, then click **Open**.

A preview of the graphic appears in the Installation Panel Options dialog box.

7 To replace the background bitmap for the optional installation panels, check **Use custom background bitmap**.

8 Click **Browse**, select the custom background bitmap, then click **Open**.

A preview of the graphic appears in the Installation Panel Options dialog box.

9 Click **OK**.

10 In the Package Editor dialog box, do one of the following:

- Click **OK** to save your changes and close the Package Editor dialog box.
- Click **Apply** to save your changes and continue configuring the package definition.

11 If prompted, type a file name, then click **Save**.

Building and testing packages

After you define the contents and installation options for a package, you must build it. This is the final step in creating the installation package. The build process uses the information from the package definition file and product configuration files to create an installation file that can be deployed to end users. As the package builds, Symantec Packager provides status information, so you can determine whether the package was built successfully.

Building packages

During the build process, Symantec Packager retrieves information from the package definition file and product configuration files to determine what products to include in the installation file as well as the product features, installation instructions, and custom settings. Symantec Packager then checks the contents of the package for product conflicts. If Symantec Packager encounters a product conflict, the build process stops. You must resolve the conflict, and then repeat the build process.

After checking for product conflicts, Symantec Packager verifies that product requirements are met. This includes verification that all required products are included in the package definition file and that they are listed in the correct installation sequence. If Symantec Packager encounters an error, the user receives an error message; however, the build process continues.

After completing the validation phases, Symantec Packager creates a self-extracting executable file and places it on the Deploy Packages tab for testing and distribution to licensed users.

See "Deploying installation packages" on page 77.

To build a package

1. In the Symantec Packager window, on the Configure Packages tab, select the package definition file that you want to build.
2. On the File menu, click **Build**.

   The Package Build Status window appears, which provides information about the progress of the build and logs any problems that have occurred. If the package build is successful, the last line in the Build Status window reads Package was built successfully.
3. In the Build Status dialog box, click **Close**.

Testing packages

It is important to test packages before deploying them to end users to ensure proper functionality. Although some error checking occurs during the build process, some errors cannot be detected until installation. This is especially true if the package includes a product that requires a third-party product or if the package includes a custom command.

During installation, Symantec Packager checks for product conflicts and verifies that required products are present on the target computer. The installation fails if Symantec Packager encounters a conflict that it cannot resolve. Test packages to verify that product requirements are met and that the installation sequence is correct.

You should open each installed program to ensure that it functions correctly. Ensure that the features that you want are present. This step is especially important if you customized a product to reduce the installation footprint. Product testing ensures that you have not overlooked an important feature. Once you thoroughly test the package, you can deploy it to end users.

See "Deploying installation packages" on page 77.

Chapter 8

Deploying installation packages

This chapter includes the following topics:

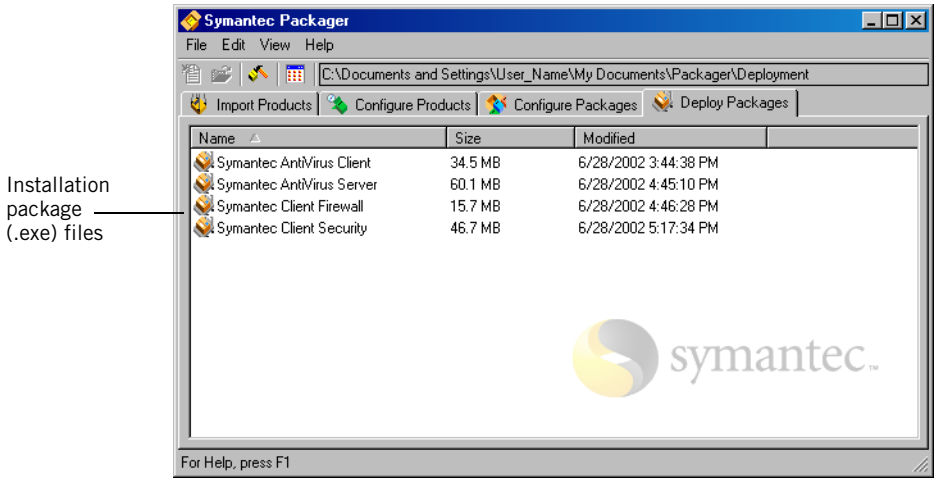
About deploying packages

When you are ready to deploy packages to your users, the self-extracting executable (.exe) files that you created using Symantec Packager are stored on the Deploy Packages tab.

The Deploy Packages tab lets you do the following:

- Install a package on the local computer.
  See "Installing packages on the local computer" on page 79.
- Deploy one or more packages to one or more computers using the Symantec Packager deployment tool.
  The Symantec Packager deployment tool supports deployment to NT-based computers. To deploy to other operating systems, use another Symantec deployment tool or a third-party deployment tool.
  See "Using the Package Deployment Tool" on page 79.
- Copy deployable files from the Deploy Packages tab for use with other deployment programs.
  See "Deploying packages with other programs" on page 89.

Figure 8-1 Deploy Packages tab



Installing packages on the local computer

When you deploy a package locally, you open the self-extracting executable (.exe) file on the Deploy Packages tab. This installs the package on the local computer.

To install a package on the local computer

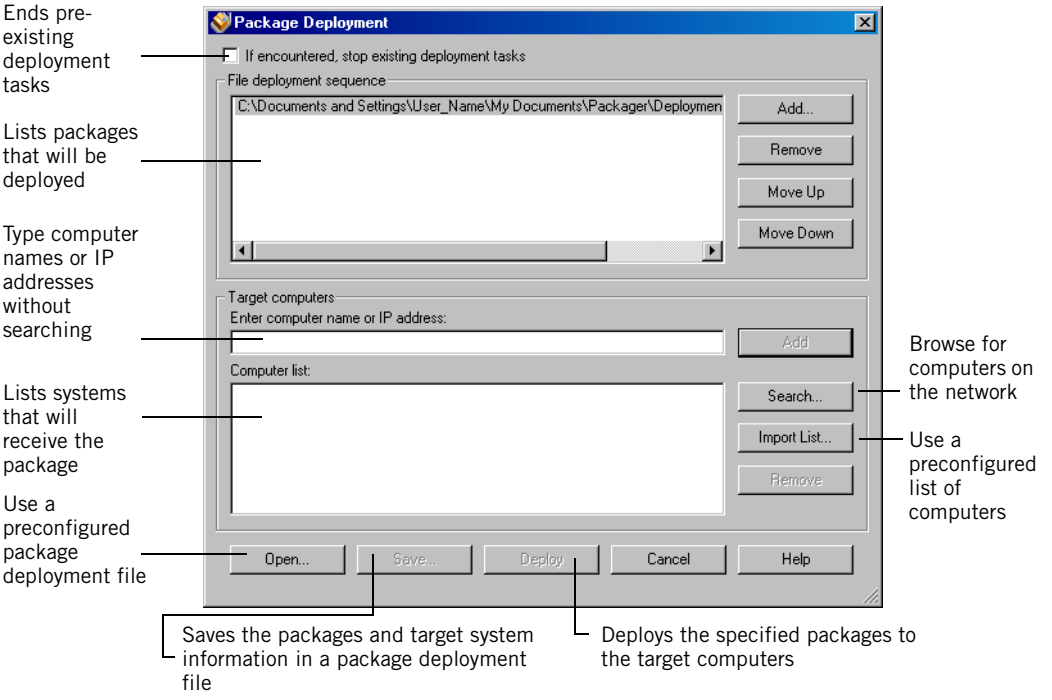
1. In the Symantec Packager window, on the Deploy Packages tab, click the package that you want to deploy on the local computer.
2. On the File menu, click **Install**.
   The package installation begins on the local computer.

Using the Package Deployment Tool

The Package Deployment Tool makes it possible to deploy one or more packages to one or more NT-based computers on your network.

You can deploy packages to multiple computers by browsing for computers from the user interface, using a preconfigured list of target computers, or using a preconfigured package deployment (.dpl) file.

Figure 8-2 Package Deployment Tool



The process of deploying packages through Symantec Packager involves these steps:

- Specifying the packages that you want to deploy
  See "Specifying packages that you want to deploy" on page 81.
- Selecting the target computers that will receive the package
  See "Selecting target computers" on page 81.
- Entering the deployment authentication information
  See "Entering deployment authentication information" on page 84.
- Viewing deployment status information
  See "Viewing deployment status information" on page 85.

Package Deployment Tool requirements

The Package Deployment Tool requires the following before you test a deployment or perform an actual deployment:

- Ensure that you are in a networked environment with the target computers.
- All target computers must run Windows NT-based operating systems.
- The Package Deployment Tool requires that you have an administrator username and password on the target computers, and that the administrator username and password is the same for all target computers.

  The easiest way to accomplish this is for all target computers to be in the same domain and for you to use a domain administrator username and password.
- An administrator share must be enabled on the target computers.

See "Entering deployment authentication information" on page 84.

Specifying packages that you want to deploy

The Symantec Packager deployment tool lets you deploy one or more packages to one or more computers at a time.

To specify the packages that you want to deploy

1. In the Symantec Packager window, click the **Deploy Packages** tab.
2. On the File menu, click **Deploy**.
3. In the Package Deployment Tool window, under File deployment sequence, click **Add**.
4. Browse to the package that you want to deploy, then click **Open**.
5. Repeat steps 3 and 4 if you would like to add other packages.
6. Under target computers, select the target computers that will receive the package.

   See "Selecting target computers" on page 81.

Selecting target computers

The Symantec Packager deployment tool lets you select the target computers in the following ways:

- Selecting the target computers in the user interface, either by typing the computer names and IP address or by browsing for computers

- Using a preconfigured list of target computers
- Using a preconfigured package deployment file

Selecting target computers in the user interface

If you know the computer names or IP addresses of the computers to which you want to deploy packages, you enter the information in the Package Deployment Tool window. You can also search across domains.

Note: All computers in your Network Neighborhood appear in the browse list regardless of their operating systems. This deployment tool only supports NT-based operating systems. If you inadvertently select a computer that has another operating system, deployment to that computer will fail.

To select target computers in the user interface

1. In the Package Deployment Tool window, add the package or packages that you want to deploy.
2. In the Target computers list, do one of the following:
   - In the Enter computer name or IP address field, type the computer name or IP address for the target computer, then click **Add**.
   - Click **Search** to browse for computers, select them, then click **OK**.

     It may take a few moments for the Select Computers dialog box to appear.
3. In the Package Deployment Tool window, click **Deploy**.
4. In the Deployment Authentication dialog box, type the authentication credentials required to access the target computers.

   See "Entering deployment authentication information" on page 84.

Importing a preconfigured list of target computers

If you have a preconfigured list of target computers, you import that list in the Package Deployment Tool window. The preconfigured list can include either the computer name or the IP address of the target computers. Each computer must be listed on its own line.

To import a preconfigured list of target computers

1. In the Package Deployment Tool window, add the package or packages that you want to deploy.

2 In the Target computers list, click **Import List**.

3 Browse to the preconfigured target computer list, then click **Open**.

4 In the Package Deployment Tool window, click **Deploy**.

5 In the Deployment Authentication dialog box, type the authentication credentials required to access the target computers.
See "Entering deployment authentication information" on page 84.

Using package deployment files

Symantec Packager lets you deploy packages using a preconfigured package deployment (.dpl) file. You can create this file yourself or set it up through the Symantec Packager deployment tool.

The package deployment file tracks the domain, computer name or IP address, the package that will be deployed and its location on the local computer, the command-line argument to execute the package installation, and the status of the deployment.

Figure 8-3 Package deployment file data

```
{
Domain=TESTSERVER
Machine=TESTUSER1210
Package=SAV CLIENT.EXE
LocalPath=C:\Documents and Settings\User_Name\My Documents\Packager\Deployment
CommandLine="SAV CLIENT.EXE"
Status=Not Started
}
```

Saving a package deployment file

You can save the information in the Package Deployment Tool window as a package deployment file at any time by clicking Save.

To save a package deployment file

1 In the Deployment Status dialog box, click **Save**.

2 Type a file name for the package deployment file, then click **Save**.

Importing a preconfigured package deployment file

If you preconfigure a package deployment file, you can import that file into the Symantec Packager deployment tool. If you deploy to the same set of computers

on a regular basis, you can edit the package deployment file to reflect the appropriate package file name and path instead of browsing for the computers through the user interface.

To import a preconfigured package deployment file

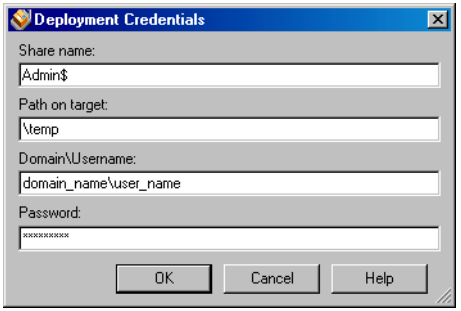
1. In the Package Deployment Tool window, click **Open**.
2. Browse to the package deployment file, then click **Open**.
   The details of the package deployment file populate the fields in the Package Deployment Tool window.
3. In the Package Deployment Tool window, click **Deploy**.
4. In the Deployment Authentication dialog box, type the authentication credentials required to access the target computers.
   See "Entering deployment authentication information" on page 84.

Entering deployment authentication information

The Package Deployment Tool requires that you to authenticate to the target computer or the domain in which the target computers are located. You must have administrator rights on the target computers to deploy packages using the Package Deployment Tool.

See "Package Deployment Tool requirements" on page 81.

Figure 8-4 Deployment Credentials dialog box



To enter deployment authentication information

1. In the Package Deployment Tool window, add the package or packages that you want to deploy.
2. Under target computers, select the target computers that will receive the package.

3 In the Package Deployment Tool window, click **Deploy**.

4 In the Deployment Credentials dialog box, in the Share name field, type the drive letter for the administrator share on the target computer.

The default share is Admin$.

5 In the Path on target field, type a temporary location to which the deployment tool saves the package before installation.

The default folder is \temp on the specified share.

6 In the Domain\Username field, type the domain to which the target computer authenticates and the administrator username for the target computer.

You can leave this field blank if your current credentials satisfy the authentication requirements.

7 In the Password field, type the administrator password for the target computer.

You can leave this field blank if your current credentials satisfy the authentication requirements.

8 Click **OK**.

Deployment status information displays.

See "Viewing deployment status information" on page 85.

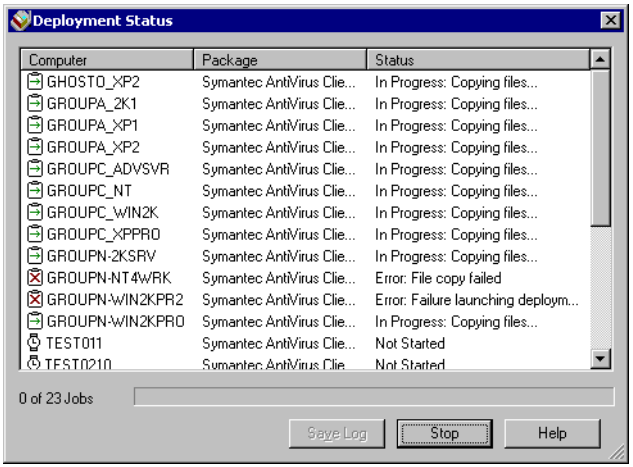
Viewing deployment status information

In the Deployment Status dialog box, the Package Deployment Tool displays the computer name, the name of the package being deployed, and the status of the deployment task.

In the Deployment Status dialog box, you can:

- View the status of deployment tasks and interpret the results.
- Skip the processing of status information for a deployment task.
- Stop a deployment task.
- Save deployment status information in a log file.

Figure 8-5 Deployment Status dialog box



Interpreting deployment status information

The Package Deployment Tool displays status information as it processes deployment tasks.

Table 8-1 details the status messages that the Package Deployment Tool displays.

Table 8-1 Deployment status messages

Status	Details
Pending	The package deployment has not started.
In Progress	The package deployment is in progress. Additional details include: ■ Authenticating ■ Copying files ■ Executing

Table 8-1 Deployment status messages

Status	Details
Error	The deployment task experienced an error. When possible, the tool displays details about the error. Additional details include: ■ Failure launching deployment mechanism ■ Authentication failure ■ File copy failed ■ Unable to install remote service ■ Unable to start remote service ■ Failure executing ■ User interrupted
Unknown	The status of the package deployment is unknown. If you skip the status on a deployment task, the tool displays Unknown: User interrupted. This means that the status was interrupted, not the deployment task.
Complete	The package deployment completed successfully. If a product or command in the package is configured to display a return code, the deployment tool displays that code. Refer to the documentation for the product or command for more information about specific return codes.

Skipping deployment tasks

The Package Deployment Tool displays status information about each deployment task as it is processed. The tool tracks the file copy to the target computer and the progress of the package installation.

By default, the Package Deployment Tool processes ten threads at once. If a deployment task is taking a long time and you want to free up the thread so that another deployment task can start, you can skip viewing the status information without ending the task.

When you skip a deployment task, the Package Deployment Tool continues processing the task on the target computer, but stops displaying status information in the Deployment Status dialog box.

The Package Deployment Tool also lets you cancel deployment tasks.

See "Stopping deployment tasks" on page 88.

To skip a deployment task

- In the Deployment Status window, right-click the deployment task that you want to skip, then click **Skip Status**.

  The Package Deployment Tool updates the Deployment Status dialog box to reflect that the status of the deployment task is unknown.

Stopping deployment tasks

The Package Deployment Tool lets you configure a deployment so that it ends any pre-existing deployment tasks that it encounters. It also lets you stop a specific task or stop all pending tasks.

Stopping pre-existing deployment tasks

When you deploy packages to target computers, some deployment tasks might not process the way that you expected them to. For example, if the package is set up to install in interactive mode, the deployment task stays open until a user interacts with it.

The Package Deployment Tools lets you preconfigure deployments to end pre-existing deployment tasks that it encounters.

To end pre-existing deployment tasks

1. In the Package Deployment Tool window, check **If encountered, stop existing deployment tasks**.
2. Configure the remaining deployment details, then click **Deploy**.

Stopping a specific deployment task

If a deployment task cannot continue, the Package Deployment Tool lets you stop or cancel the task. When you stop a deployment task, the task ends immediately on the target computer.

To stop a specific deployment task

- In the Deployment Status window, right-click the deployment task that you want to stop, then click **End Task**.

  The Package Deployment Tool stops the task on the target computer and displays an error in the Deployment Status dialog box.

Stopping pending deployment tasks

The Package Deployment Tool lets you stop all pending tasks before they start. All open threads continue to process until the deployment tasks are complete.

To stop pending deployment tasks

1. In the Deployment Status window, click **Stop**.
   The Stop button changes to a Close button when the tasks are complete.
2. Click **Close**.

Saving deployment status information

The Symantec Packager deployment tool lets you save the deployment log as a package deployment (.dpl) file. You can edit the package deployment file to remove the successful deployments and import the file to redeploy packages.

See "Using package deployment files" on page 83.

To save deployment status information

1. In the Deployment Status dialog box, click **Save Log**.
2. Type a file name for the log, then click **Save**.

Deploying packages with other programs

The Deploy Packages tab displays the packages created with Symantec Packager. These files are self-extracting executable (.exe) files that can be deployed through Symantec Packager or other deployment tools that support deploying .exe files.

Refer to the documentation for your deployment tool for explicit deployment instructions.

Glossary

command configuration file (.pcg)	A file that tracks the details of a custom command. It is the same as a product configuration file except that it does not reference a product template. See also, product configuration file (.pcg), product template (.pdt).
deployment	The process of installing packages on target computers.
installation package	See package.
installed size	The estimated disk footprint of an installed package. See also, packaged size.
interactive installation	An installation that prompts for input from the user by displaying options in installation panels. See also, passive installation, silent installation.
Microsoft software installer file (.msi)	A file that you install using Windows Installer. See also, Windows Installer.
package	An installation file that contains one or more Symantec products or custom commands.
packaged size	The estimated file size of a deployable package. See also, installed size.
package deployment file (.dpl)	A file that can be imported into the Symantec Packager deployment tool to aide in package deployment. The file details the domain, computer name or IP address, the package to be deployed and its location on the local computer, the command-line argument to execute the package installation, and the status of the deployment.
package definition file (.pkg)	A file that tracks the contents of an installation package. The package definition file references product configuration files and command configuration files. See also, command configuration file (.pcg), product configuration file (.pcg).
passive installation	An installation that displays only status messages. See also, interactive installation, silent installation.
product configuration file (.pcg)	A file that details the features and components of a customized product. The product configuration file references the product template. See also, product template (.pdt).
product template (.pdt)	A file that dictates the selectable features, components, and installation options for a Symantec product that is supported by Symantec Packager. See also, product configuration file (.pcg).

product module file (.pmi) A file that contains all of the files required to customize a Symantec product installation. When you import a product module, Symantec Packager extracts the product template and creates a default product configuration file and package definition file based on that product. See also, package definition file (.pkg), product configuration file (.pcg), product template (.pdt).

silent installation An installation in which the user sees no indication that the installation is occurring. The user is not prompted to enter any information and the user does not see status messages.

switch A command, that when applied to a command-line argument or executable, changes the behavior of the command-line argument or executable.

Windows Installer A program that processes Microsoft software installer (.msi) files. See also, Microsoft software installer file (.msi).

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