

AdminStudio 9.5 Automated Application Converter

User Guide

Legal Information

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Using the AdminStudio Automated Application Converter

When converting a Windows Installer package to a virtual package, you often need to repackage it prior to being able to successfully convert it. The reason for this is that it is not possible to determine the run-time behavior of certain Windows Installer package elements—such as custom actions, conditional components, and launch conditions—without actually installing the package.

You can use the Automated Application Converter to:

- Examine a group of selected setups.
- Perform automated virtualization of setups that can be cleanly virtualized.
- Perform automated repackaging of those setups that cannot be cleanly virtualized (due to custom actions, etc.), and then perform automated virtualization those repackaged MSIs.

Information about using the Automated Application Converter is presented in the following sections:

Table 1-1 • AdminStudio Automated Application Converter Help Library

Section	Description
About the Automated Application Converter	Describes the benefits of using the Automated Application Converter to perform automated repackaging and virtualization, and provides an overview of its workflow.
Getting Started With the Automated Application Converter	Explains how to use the Application Conversion Project Wizard to get started using the Automated Application Converter to perform automated repackaging and virtualization.
Managing Virtual Machines	Explains how to use the Virtual Machine Import wizard to add new virtual images to the Automated Application Converter and how to manage virtual machines on the Machines tab.

Table 1-1 • AdminStudio Automated Application Converter Help Library

Section	Description
Managing Packages to Convert	Explains how to use the Package Import Wizard to add packages to the Automated Application Converter, and how to manage packages on the Packages tab.
Using the Application Conversion Wizard to Perform Automated Package Conversion	Explains how to use the Application Conversion Wizard to perform a conversion run using the selected packages and virtual machines, and how to view conversion run log report information.
Reference	Describes each of the user interface elements and Wizard panels that you might encounter when using the Automated Application Converter. The help topics in this Reference section are the same detailed documentation that is displayed when you press the F1 key or click the Help button while working in a dialog box.
Troubleshooting	Includes information to help you resolve typical problems that you might encounter when using the Automated Application Converter.

About the Automated Application Converter

The AdminStudio Automated Application Converter combines the functionality of the Windows Installer Batch Converter with the additional capability to automatically repackage and convert Windows Installer packages, as well as setups in other formats, into virtual applications. You can also choose to automatically repackage setups into Windows Installer packages.

Information about the Automated Application Converter is presented in the following sections:

- [Benefits of Using the Automated Application Converter](#)
- [Automated Application Converter Workflow Diagram](#)
- [Supported Operating Systems](#)
- [Supported Virtual Machines](#)

Benefits of Using the Automated Application Converter

Previously, when converting a Windows Installer package to a virtual application, there were cases when you needed to capture its installation prior to being able to perform a successful conversion. Repackaging is sometimes required because it is not possible to determine the run-time behavior of certain Windows Installer package elements—such as conditional components and custom actions—without actually running the install. While converting a Windows Installer package to a virtual application is automated and is a batch process, repackaging setups is a manual process requiring a packager to individually repackage each setup on clean machines and then to convert them into virtual applications—which is a time consuming task requiring several hours of a packager's time.

The Automated Application Converter examines a group of setups to automatically determine which need to be repackaged and which can be virtualized without repackaging. It converts the setups that can be directly converted and then automatically repackages the others by launching virtual machines, running the setups, and capturing them prior to converting them into the target virtual formats.

The Automated Application Converter provides the following benefits:

- **Automated repackaging on virtual machines**—The Automated Application Converter provides an interface to provision and manage virtual machines, silently repackage installs on them, and create virtual packages for the resulting MSIs.
- **Ability to repackage non-MSI setups**—You can use the Automated Application Converter to repackage legacy (non-MSI) setups to create an MSI package that can be converted to a virtual package.



Note • *These setups must support silent install mode.*

- **Conversion of packages from multiple sources**—Using the Automated Application Converter, you can convert setups from multiple sources:
 - AdminStudio Application Catalog
 - Microsoft System Center Configuration Manager (SCCM)
 - Specified directory or file
- **Efficiently manages repackaging queue on multiple virtual machines**—The Automated Application Converter efficiently manages the virtual machine queue, allowing setups to be packaged simultaneously on multiple machines.
- **Easy-to-understand reports**—The Automated Application Converter generates easy-to-understand HTML reports for each conversion run, providing detailed information on each package.
- **Easy-to-read progress indicators with one-click access to virtual machines**—The Automated Application Converter provides dashboard-type progress indicators with one-click access to open a virtual machine in a Remote Desktop session, enabling you to view the progress of a repackaging session and to quickly perform troubleshooting.

Automated Application Converter Workflow Diagram

You can use the Automated Application Converter to examine a group of setups to automatically determine which need to be repackaged and which can be virtualized without repackaging. It converts the setups that can be directly converted and then automatically repackages the others by launching virtual machines, running the setups, and capturing them prior to converting them into the target virtual formats.

The following diagram provides an overview of the AdminStudio Automated Application Converter workflow including:

- Input sources
- Virtualization readiness check
- Automated repackaging on virtual machines
- Conversion to virtual packages
- Output types

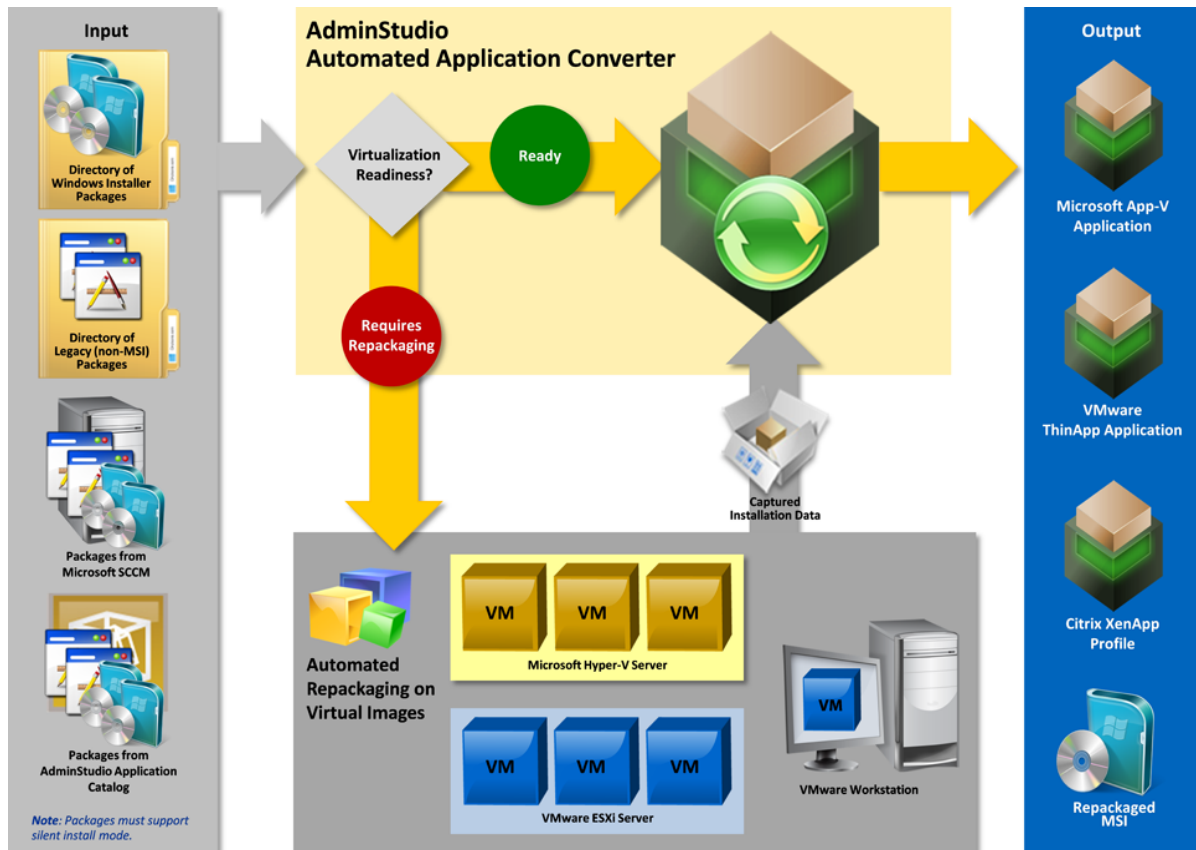


Figure 1-1: AdminStudio Automated Application Converter Workflow Diagram

Supported Operating Systems

The Automated Application Converter supports the following operating systems:

- Windows XP (32-bit)
- Windows Vista (32-bit and 64-bit)
- Windows 7 (32-bit and 64-bit)
- Windows Server 2008 (32-bit and 64-bit)
- Windows Server 2003 (32-bit and 64-bit)
- Windows Server 2008 R2

Supported Virtual Machines

The Automated Application Converter supports automated repackaging on virtual machines from the following platforms:

- Microsoft Hyper-V Server
- VMware ESX or ESXi Server
- VMware Workstation 6.5 or later

Launching the Automated Application Converter

The Automated Application Converter can be launched by doing either of the following:

- On the Windows Start Menu, point to **All Programs, AdminStudio, AdminStudio 9.5 Tools**, and click **Automated Application Converter**.
- Launch **Repackager**, and then click the **Automatically Repackage Installations on Your Virtual Machines** link on the Repackager Home Page.

The **Open Project** panel of the Application Conversion Project Wizard opens.

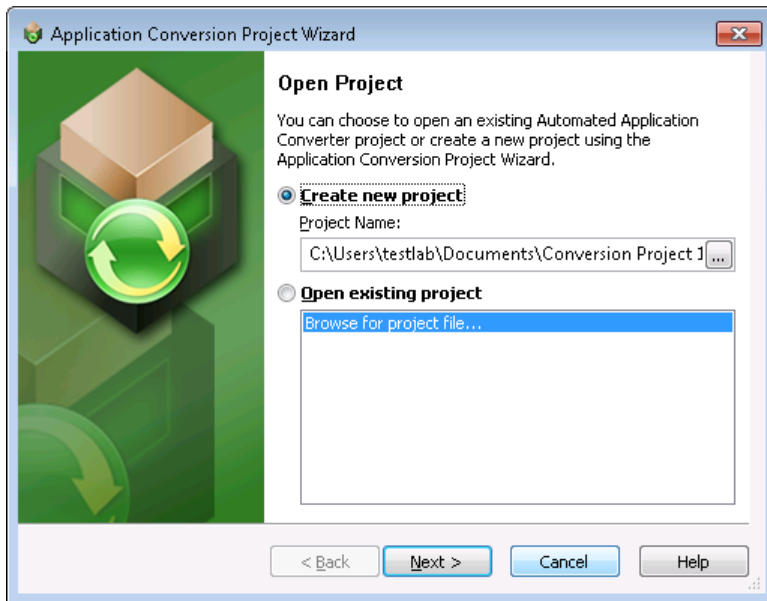


Figure 1-2: Open Project Panel of Application Conversion Project Wizard

On the **Open Project** dialog box, you can choose to create a new project or open an existing project. For more information, see [Opening a Project](#).

Contacting Us

You may contact us from anywhere in the world by visiting our Web site at:

<http://www.flexerasoftware.com>

Getting Started With the Automated Application Converter

The quickest way to get started using the Automated Application Converter is to use the end-to-end **Application Conversion Project Wizard**, which takes you through the three main steps in automated batch virtualization: selecting the packages to convert, selecting the virtual machines to use for repackaging, and converting the selected packages. See [Using the Application Conversion Project Wizard](#) for instructions.

You can also choose to perform each of these tasks separately by using one of the other three wizards that are provided:

Table 1-2 • Automated Application Converter Wizards

If you want to ...	Use this wizard ...	Description and Purpose
Add virtual machines	Virtual Machine Import Wizard	Add virtual machines to use to perform automated repackaging to Windows Installer packages. See Adding Virtual Machines Using the Virtual Machine Import Wizard .
Add packages	Package Import Wizard	Add packages from an AdminStudio Application Catalog, a Microsoft SCCM server, or from a local or network file system. See Selecting Packages from an AdminStudio Application Catalog or Microsoft SCCM Server and Selecting Packages from a Local Machine or Network .
Virtualize or repackage packages	Application Conversion Wizard	Virtualize packages to the virtual formats you specify. You can also perform repackaging. See Using the Application Conversion Wizard to Perform Automated Package Conversion .

Opening a Project

When you launch the Automated Application Converter, the **Open Project** dialog box opens, prompting you to either create a new project or open an existing project.

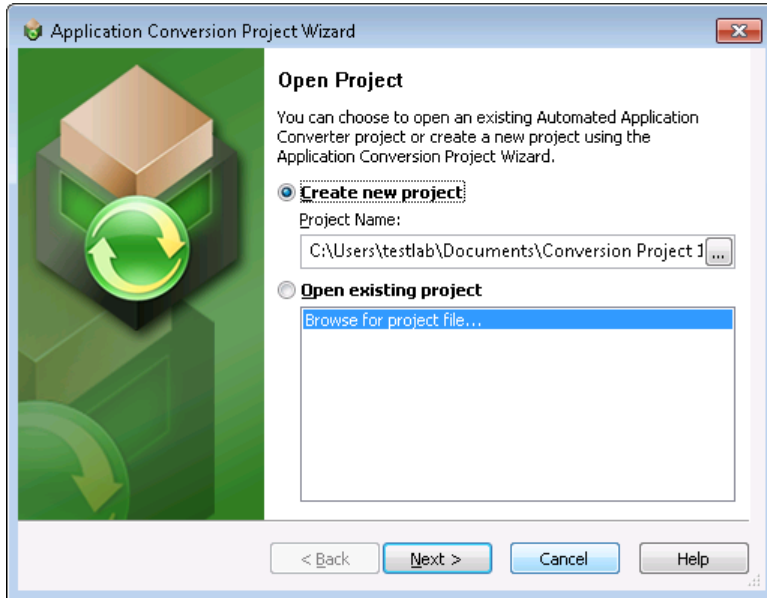


Figure 1-3: Open Project Dialog Box

The following procedures explain how to create a new project or open an existing project.

- [Creating a New Project](#)
- [Opening an Existing Project](#)

Creating a New Project

To create a new project, perform the following steps.



Task: *To create a new project:*

1. Do one of the following depending upon whether the Automated Application Converter is open:
 - **Not open**—Launch the Automated Application Converter.
 - **Open**—On the **File** menu, click **New Project**.

The **Open Project** dialog box opens.

2. Select **Create new project**.
3. Click the Browse button next to the **Project Name** field. The **Save As** dialog box opens.

4. Enter a name (with an .aacx extension) and location for the new project file and click **Save**. The new project name is now listed in the **Project Name** box.
5. Click **Next**. The **Select Package Source** panel of the Application Conversion Project Wizard opens.
6. Continue with the steps in [Using the Application Conversion Project Wizard](#).

Opening an Existing Project

To open an existing project, perform the following steps.



Task: *To open an existing project:*

1. If the Automated Application Converter is not open, perform the following steps:
 - a. Launch the Automated Application Converter. The **Open Project** dialog box opens.
 - b. Select **Open existing project**.
 - c. From the list, either select a project name or select **Browse for project file**.
 - d. Click **Finish**. One of the following occurs:
 - **If you selected an existing project** from the list, the project opens in the Automated Application Converter interface.
 - **If you selected Browse for project file**, the **Open** dialog box opens. Select a project file and click **Open**. The project opens in the Automated Application Converter interface.
2. If the Automated Application Converter is open, perform the following steps:
 - a. On the **File** menu, click **Open**. The **Open** dialog box opens.
 - b. Browse to the project file you want to open and click **Open**. The project opens in the Automated Application Converter interface.



Note • *If you had unsaved changes in the project file that was already open, you will be prompted to save those changes prior to opening the new project file.*

Using the Application Conversion Project Wizard

To get started using the Application Conversion Project Wizard, perform the following steps:




Task: *To get started using the Application Conversion Project Wizard:*

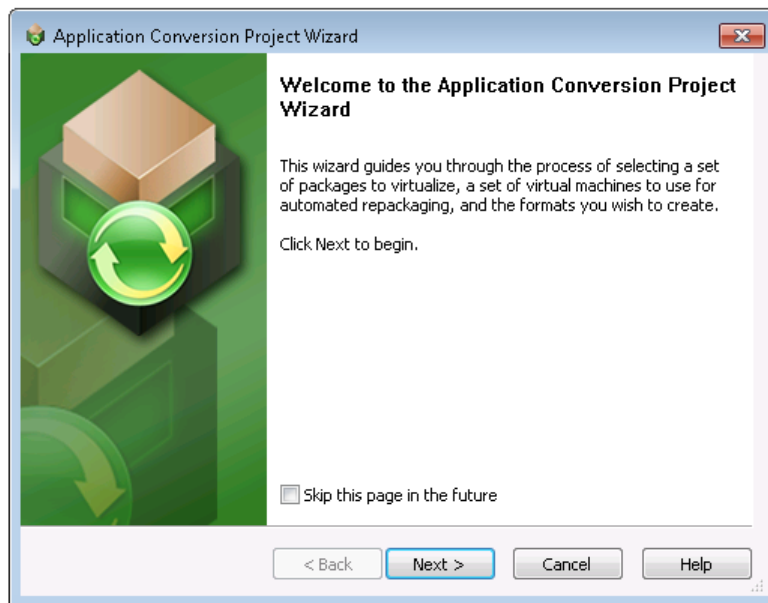
1. Perform the steps in [Preparing Your Virtual Machines for Use With the Automated Application Converter](#) to prepare your virtual machines to use for automated repackaging.
2. Launch the Automated Application Converter by doing one of the following:
 - On the Windows Start Menu, point to **All Programs, AdminStudio, AdminStudio 9.5 Tools**, and click **Automated Application Converter**.
 - Launch **Repackager**, and then click the **Automatically Repackage Installations on Your Virtual Machines** link on the Repackager Home Page.

The Automated Application Converter opens.

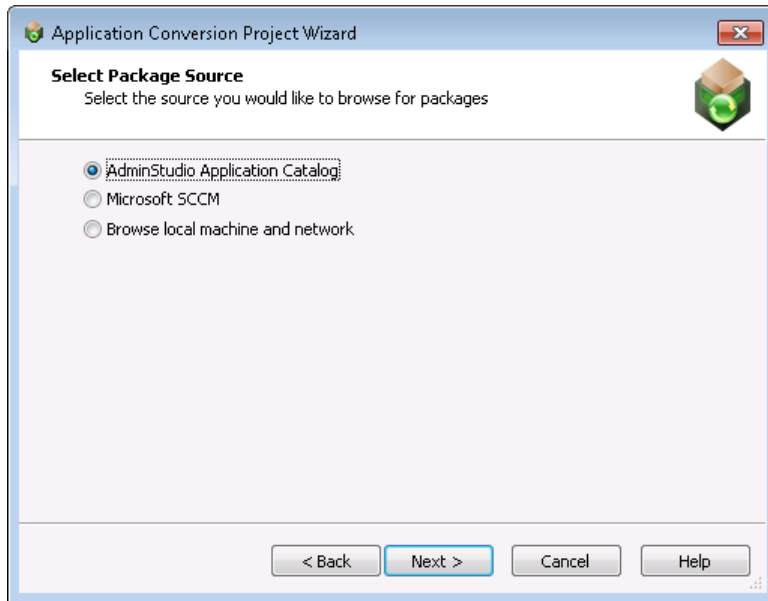


Note • See [Automated Application Converter User Interface](#) for more information.

3. On the **Tools** menu, click **Project Wizard** (or click the  icon in the toolbar). The **Welcome to the Application Conversion Project Wizard** panel opens.



4. Click **Next**. The **Select Package Source** panel opens, prompting you to select the source that contains the packages you want to convert.




5. Select one of the following options:

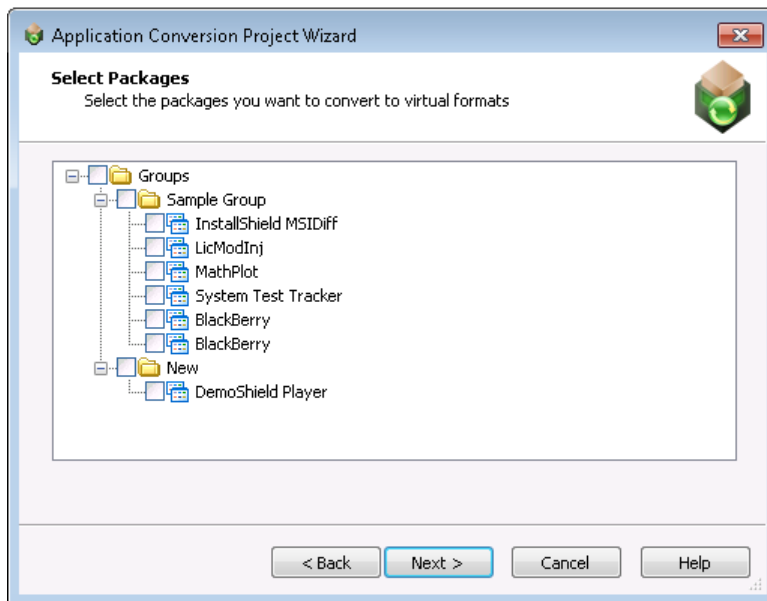
Option	Description
AdminStudio Application Catalog	Select this option to connect to an AdminStudio Application Catalog and add all of the installations in that catalog to the list of packages to convert. If you select this option, the Connect to an AdminStudio Application Catalog panel opens, prompting you to login to an Application Catalog.
Microsoft SCCM	Select this option to connect to a Microsoft System Center Configuration Manager Server and add all of the installations on this server to the list of packages to convert. If you select this option, the Connect to a Microsoft SCCM Server panel opens, prompting you to login to a Microsoft SCCM Server.

Chapter 1: Using the AdminStudio Automated Application Converter

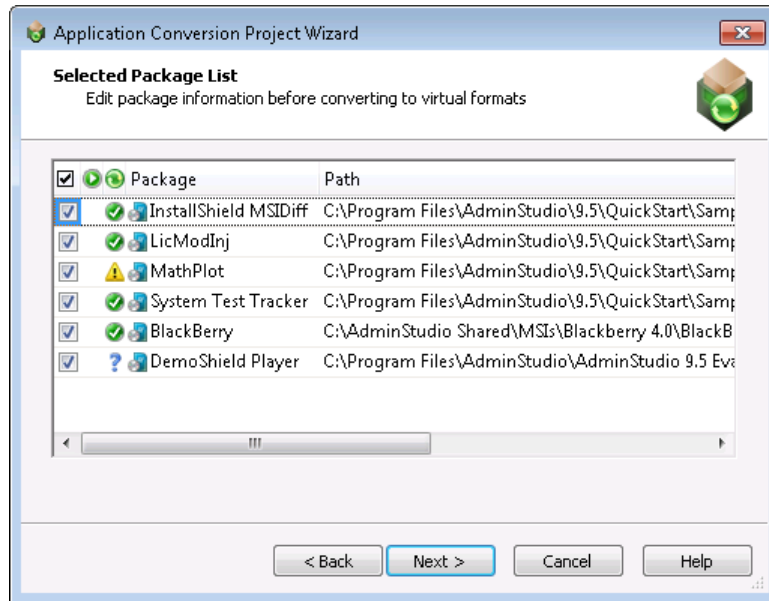
Getting Started With the Automated Application Converter

Option	Description
Browse local machine and network	<p>Select this option to browse a local or network machine to add installations to the list of packages to convert.</p> <p>If you select this option, the Select Packages panel opens, where you are prompted to select an installation file or a directory of installation files to add to the list of packages to convert.</p> <p></p> <p>Note • For information on the rules that the Automated Application Converter uses to determine which packages in the selected directory's subdirectories would be added to the list on the Selected Package List panel, see Automated Application Converter's Selection Rules When Adding Packages from a Directory.</p>

If you connected to an Application Catalog or Microsoft SCCM Server, the **Select Packages** panel opens.



When you have finished this step, packages will be listed and selected on the **Selected Package List** panel, and an icon indicates each package's virtualization readiness status.



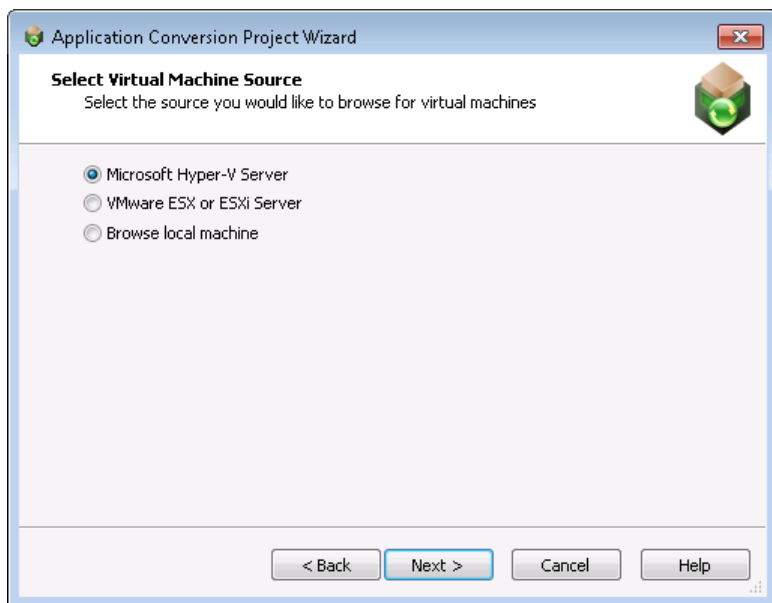
One of the following icons is listed in each package's Virtualization Readiness (🟢) column:

Icon	Meaning	Description
	Ready	Package is ready to virtualize; no repackaging is required. Note • If a Windows Installer package does not contain any custom actions, conditional components, or unsupported tables, repackaging prior to virtualization is not required. An example of an unsupported table is the <i>In1File</i> table, which changes files on the target machine in ways that cannot be statically determined.
	Requires repackaging	Package must be repackaged before it can be successfully virtualized.
	Unknown	The Automated Application Converter was unable to determine whether this package is ready to be virtualized directly or whether it requires repackaging.

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Getting Started With the Automated Application Converter

- Click **Next**. The **Select Virtual Machine Source** panel opens, prompting you to select the type of virtual machine that you are going to use for automated repackaging.

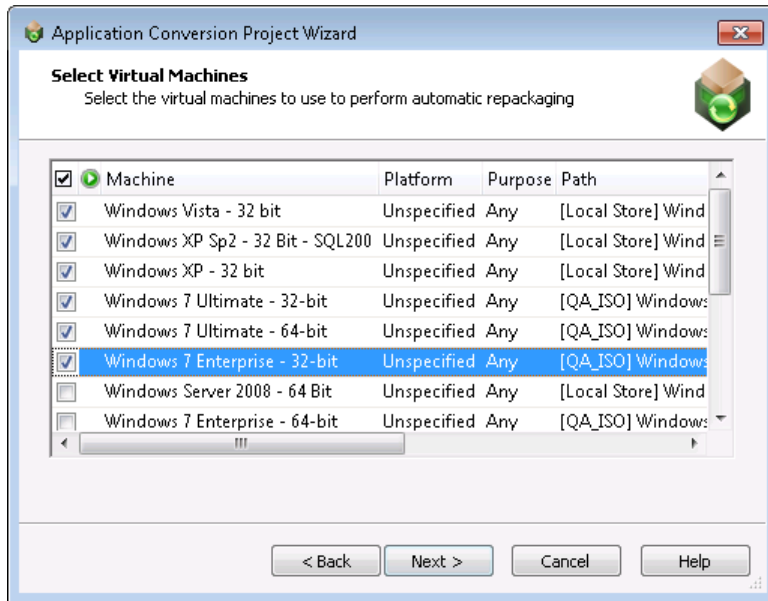


Note • If none of the packages selected on the **Selected Package List** panel require repackaging in order to be converted into a virtual package, the **Select Virtual Machine Source** panel will not be displayed. Instead, the **Initial Configuration Complete** panel will open.

Select one of the following options and click **Next**:

Option	Description
Microsoft Hyper-V Server	Select this option to connect to a Microsoft Hyper-V Server. You will then be prompted for login information on the Select Virtual Machines from a Microsoft Hyper-V Server panel.
VMware ESX or ESXi Server	Select this option to connect to a VMware ESX or ESXi Server. You will then be prompted for login information on the Select Virtual Machines from a VMware ESX or ESXi Server panel.
Browse local machine	Select this option to connect to a VMware Workstation virtual image installed locally. The Select Virtual Machines opens, where will be prompted to select either a VMware Workstation image or directory of images.

When you have finished this step, the virtual machines will be listed (but not selected) on the **Select Virtual Machines** panel.

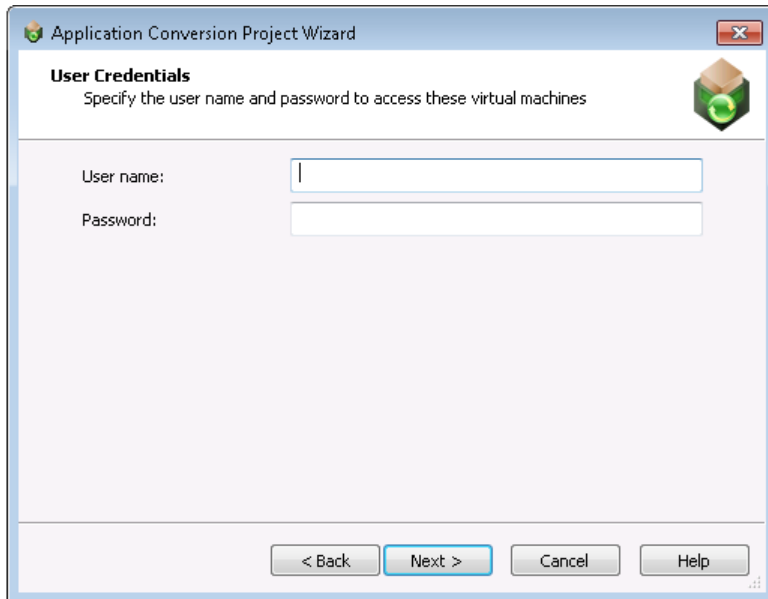


7. On the **Select Virtual Machines** panel, select the virtual machine images that you want to use to perform automated repackaging.
8. For each selected image, click in the **Platform** column and identify its platform.
9. Optionally, if you want to limit the use of a virtual machine to either repackaging only or testing only, click in the **Purpose** column and select **Repackaging** or **Testing** from the list. The default value is **Any**.

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Getting Started With the Automated Application Converter

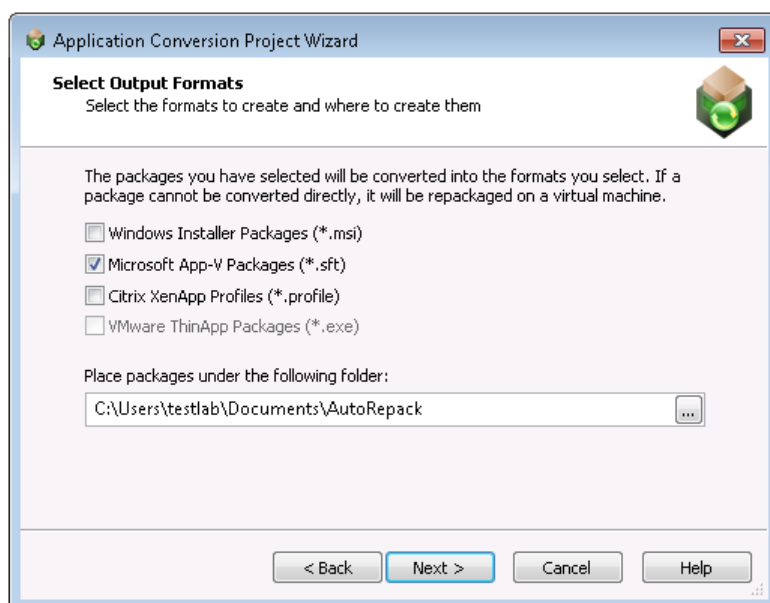
10. Click **Next**. The **User Credentials** panel opens, prompting you to specify the login credentials to use to access the selected virtual machines.



11. Enter login credentials and click **Next**. The **Initial Configuration Complete** panel opens, listing a summary of your selections, and prompting you to select whether you want to begin to **Virtualize packages with detected settings** or to **Close wizard to configure packages and machines**.



12. Select **Virtualize packages with detected settings** and click **Next**. The **Select Output Formats** panel opens, prompting you to select one or more output formats:



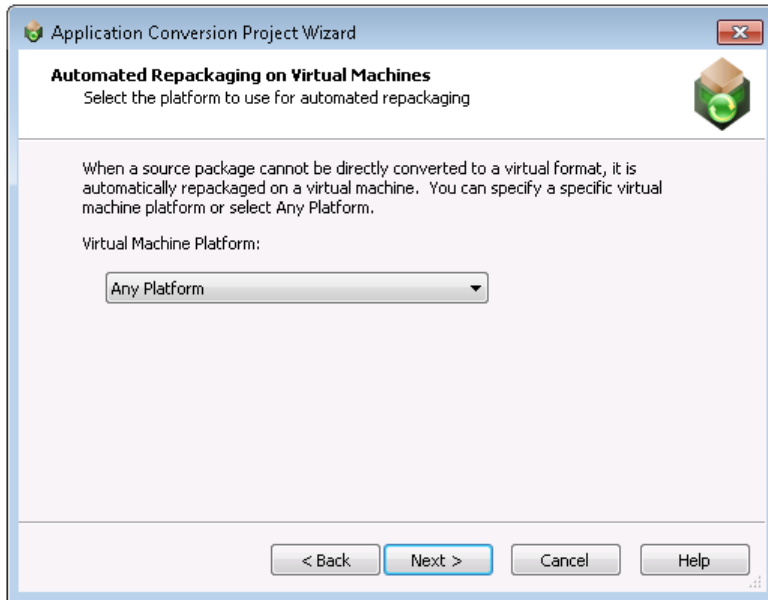
Note • If you have selected Windows Installer packages on the **Selected Package List** panel, but those packages do not require repackaging prior to virtualization, the **Windows Installer Package (*.msi)** option on the **Select Output Formats** panel will be disabled. If you want to force the Automated Application Converter to repackage that package, return to the **Selected Package List**, click in that package's **Virtualization Readiness** column and select **Requires repackaging** from the list.

13. On the **Select Output Formats** panel, select one or more of the following formats:

Option	Description
Windows Installer Packages (*.msi)	Select this option to repackage the selected packages into Windows Installer packages (.msi).
Microsoft App-V Packages (*.sft)	Select this option to convert the selected packages to Microsoft App-V virtual applications.
Citrix XenApp Profiles (*.profile)	Select this option to convert the selected packages to Citrix XenApp profiles.
VMware ThinApp Packages (*.exe)	Select this option to convert the selected packages to VMware ThinApp virtual applications.

14. Under **Place packages under the following folder**, select the output location where you want to store the packages.

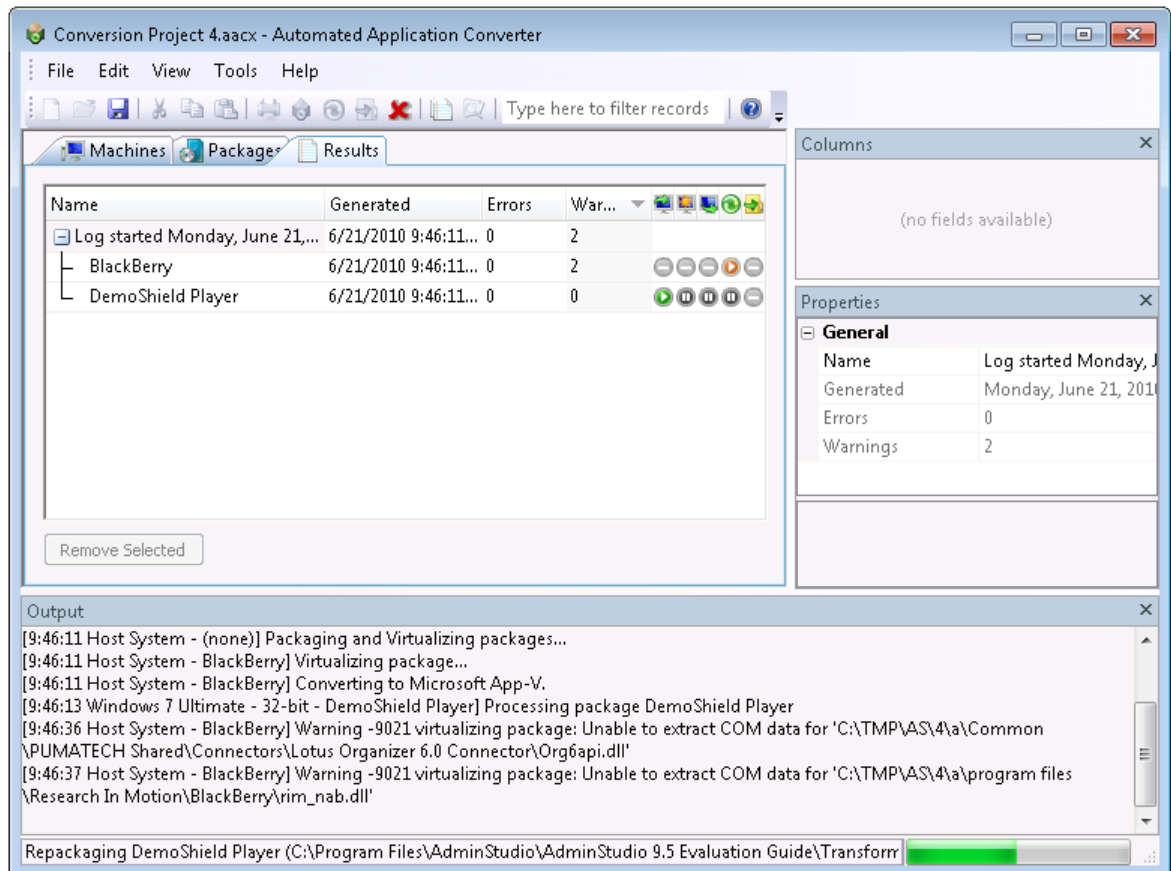
15. Click **Next**. The **Automated Repackaging on Virtual Machines** panel opens, prompting you to select the platform of the virtual machines that you want to use to perform automated repackaging during this conversion process.



16. From the **Virtual Machine Platform** list, select a platform, or leave **Any Platform** selected, and click **Next**. The **Application Conversion Project Wizard Complete** panel opens.













17. Click **Finish** to close the wizard and begin converting the selected packages. The conversion process begins. The **Results** tab opens and messages are displayed in the **Output** window.












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







Getting Started With the Automated Application Converter

Icons displayed on the **Results** tab indicate each package’s progress:


Column	Icon	Description
Copy In 		Operation (copying to virtual machine, repackaging, or copying from virtual machine back to source location) was successfully performed.
Repackage 		Operation (copying to virtual machine, repackaging, or copying from virtual machine back to source location) was successfully performed, but warnings were encountered. View the results AdminStudio Automated Application Converter Log Report for detailed information on these warnings.
Copy Out 		<p>Operation (copying to virtual machine, repackaging, or copying from virtual machine back to source location) failed.</p> <ul style="list-style-type: none"> ● Copy In—Error could have been caused by not being able to connect to the virtual machine. ● Repackage—Error means that repackaging has failed. ● Copy Out—Error could mean that you ran out of hard drive space at the package source location or that there is a permission problem preventing you from writing to the selected directory. <p>View the results AdminStudio Automated Application Converter Log Report for detailed information on the errors encountered.</p>
		<p>Operation (copying to virtual machine, repackaging, or copying from virtual machine back to source location) was skipped. Possible reasons that the operation was skipped could be:</p> <ul style="list-style-type: none"> ● Repackaging not required—Because repackaging was not required, these three operations were not required. ● Could not connect to virtual machine—The Automated Application Converter could not successfully connect to the virtual machine, so therefore the Repackage and Copy Out operations were skipped.
		Operation (copying to virtual machine, repackaging, or copying from virtual machine back to source location) is currently being performed.
		Operation (copying to virtual machine, repackaging, or copying from virtual machine back to source location) is still being performed even though a warning was generated. View the results AdminStudio Automated Application Converter Log Report for detailed information on the errors encountered.
		Operation was cancelled

Column	Icon	Description
Conversion Column 		Package was converted to a virtual application successfully.
		Package was converted to a virtual application, but warnings were generated. View the results AdminStudio Automated Application Converter Log Report for detailed information on the errors encountered.
		Package was converted to a virtual application, but errors were generated. View the results AdminStudio Automated Application Converter Log Report for detailed information on the errors encountered.
		The Automated Application Converter was unable to convert this package to a virtual application.
		Conversion is in progress.
		Conversion is in progress, but a warning has been generated. View the results AdminStudio Automated Application Converter Log Report for detailed information on the errors encountered.
		An error was generated when converting one of the virtual formats which caused it to fail. However, the conversion to another one of the selected virtual formats continues.
		Conversion was cancelled

18. When conversion is complete, the virtual packages will be listed in a tree structure under the original package on the **Packages** tab.

<input checked="" type="checkbox"/>					Package	Path	Command Line
<input checked="" type="checkbox"/>					BlackBerry	C:\AdminStudio Shared\MSSIs\Black...	/qbl-
<input type="checkbox"/>			<input type="checkbox"/>		BlackBerry.sft	C:\Users\testlab\Documents\AutoR...	

19. To view the **AdminStudio Automated Application Converter Log** report, select the top level node of the conversion run log (such as [Log started Monday, June 21, 2010...](#)) on the **Results** tab and do one of the following:

- Click the **Results**  button on the toolbar.
- Select **View Report** from the context menu.
- Select **View Report** on the **Tools** menu.
- Press Ctrl+R.

See [AdminStudio Automated Application Converter Log Report](#) for more information.

20. Continue with the steps in [Launching Packages for Testing](#) and [Publishing Converted Packages](#).

About Automated Application Converter Project Files

All of the selections that you make on wizard panels or in the Automated Application Converter interface are saved in an XML-based project file: ProjectName.aacx. You can also choose to modify project settings by editing this XML file.

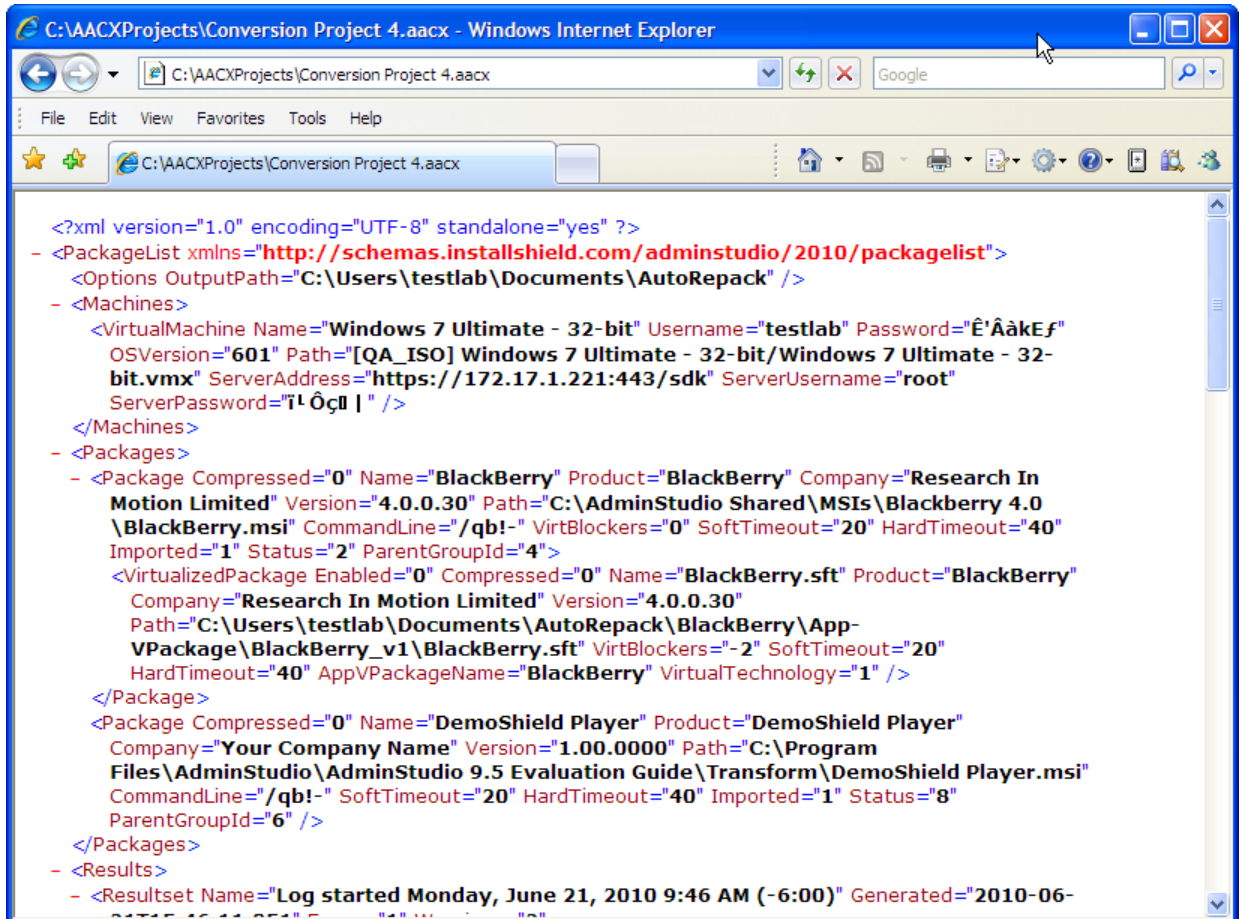


Figure 1-4: Sample Project File



Note • To both launch the Automated Application Converter and open a project, you can double-click a project file in Windows Explorer.

As shown in the following example, each project file is enclosed within a <PackageList> element, and the major sub-elements of a project file are <Options>, <Machines>, <Packages>, and <Results>. All of the settings specified in the Automated Application Converter interface appear in this file.

Table 1-3 • Elements Comprising an Automated Application Converter Project File

Elements
<pre><PackageList> <Options /> <Machines> <VirtualMachine /> <VirtualMachine /> </Machines> <Packages> <Package> <VirtualizedPackage /> </Package> <Package> <RepackagedPackage /> </Package> </Packages> <Results> <Resultset> <Machines> <UseMachine /> <UseMachine /> </Machines> <Packages> <UsePackage /> <UsePackage /> </Packages> <Messages> <LogItem /> <LogItem /> </Messages> <Result> <Messages> <LogItem /> <LogItem /> </Messages> </Result> </Resultset> </Results> </PackageList></pre>

The following table describes the major elements of a project file:

Table 1-4 • Major Elements of an Automated Application Converter Project File

Element	Description
<p>PackageList</p>	<p>The root element of an Automated Application Converter project file is the <PackageList> element:</p> <pre data-bbox="483 506 1344 531"><PackageList xmlns="http://schemas.installshield.com/adminstudio/2010/packageList"></pre> <p>The PackageList element identifies the location of the XML namespace used by the application. XML namespaces provide a method to avoid element name conflicts.</p>
<p>Options</p>	<p>The <Options> element of a project file identifies the output location of the converted packages and identifies the currently selected output formats:</p> <pre data-bbox="483 751 1328 777"><Options OutputPath="C:\Users\testlab\Documents\AutoRepack" Msi="1" Citrix="1" /></pre>
<p>Machines</p>	<p>The <Machines> element contains multiple <VirtualMachine> elements, which identify the virtual machines that you have added to the project:</p> <pre data-bbox="483 919 1401 1010"><Machines> <VirtualMachine Name="Windows 7 Enterprise - 32-bit" Username="testlab" Password="Éè <VirtualMachine Name="Windows XP" Username="testlab" Password="É&apos;Å&Egrave;" Path="{ </Machines></pre>
<p>Packages</p>	<p>The <Packages> element contains multiple <Package> elements, which identify the packages that you have added to the project:</p> <pre data-bbox="483 1150 1312 1392"><Packages> <Package Compressed="0" Name="LicModInj" Product="LicModInj" Company="Your <VirtualizedPackage Enabled="0" Compressed="0" Name="LicModInj.sft" Pro <ErrorVirtualizedPackage Enabled="0" Compressed="0" Name="LicModInj.pro </Package> <Package Compressed="0" Name="MathPlot" Product="MathPlot" Company="Install: <Package Compressed="0" Name="BlackBerry" Product="BlackBerry" Company="Res <VirtualizedPackage Enabled="0" Compressed="0" Name="BlackBerry.sft" Pro <VirtualizedPackage Enabled="0" Compressed="0" Name="BlackBerry.profile' </Package> </Packages></pre> <p>Each <Package> element can have multiple <RepackagedPackage>, <VirtualizedPackage>, and <ErrorVirtualizedPackage> elements.</p>

Table 1-4 • Major Elements of an Automated Application Converter Project File

Element	Description
Results	<p>The <Results> element contains multiple <Resultset> elements, each of which contains information on a conversion run:</p> <pre data-bbox="488 443 1349 1146"> <Results> <Resultset Name="Log started Friday, June 11, 2010 2:56 PM (-6:00)" Generated=" <Machines> <UseMachine Name="Windows 7 Ultimate - 32-bit" Path="[QA_ISO] Windows 7 <UseMachine Name="Windows 7 Ultimate - 64-bit" Path="[QA_ISO] Windows 7 </Machines> <Packages> <UsePackage Name="InstallShield MSIDiff" Path="C:\Program Files\AdminSt <UsePackage Name="LicModInj" Path="C:\Program Files\AdminStudio\9.5\Qui <UsePackage Name="MathPlot" Path="C:\Program Files\AdminStudio\9.5\Quic </Packages> <Messages> <LogItem Id="4300" Flags="4" Message="Processing packages..." Time="201 <LogItem Id="4301" Message="Using virtual machine Windows 7 Ultimate - <LogItem Id="4301" Message="Using virtual machine Windows 7 Ultimate - </Messages> <Result Name="InstallShield MSIDiff" Generated="2010-06-11T20:56:02.284" Er <Messages> <LogItem Id="4336" Flags="2" Message="Package InstallShield MSIDiff <LogItem Id="4345" Message="Virtualizing package..." Time="2010-06- <LogItem Id="4347" Message="Converting to Microsoft App-V." Time="2 </Messages> </Result> </Resultset> <Result Name="LicModInj" Generated="2010-06-11T20:56:02.285" warnings="7" C <Messages> <LogItem Id="4336" Flags="2" Message="Package LicModInj will be dir <LogItem Id="4345" Message="Virtualizing package..." Time="2010-06- <LogItem Id="4347" Message="Converting to Microsoft App-V." Time="2 </Messages> </Result> </Resultset> </Results> </pre> <ul data-bbox="483 1186 1469 1318" style="list-style-type: none"> • Each <Resultset> element of a <Results> element includes information on <Machines>, <Packages>, <Messages>, and multiple <Result> elements for that run. • Each <Result> element of a <Resultset> element contains information on the conversion run for an individual package.

Using Automated Application Converter in Evaluation Mode

When using the Automated Application Converter in Evaluation mode, you can only use one virtual machine and convert up to three packages during one repackaging/virtualization conversion run. Even if more than one virtual machine is selected, only one will be used, and even if more than three packages are selected, only three will be processed.

Managing Virtual Machines

The Automated Application Converter supports automated repackaging on virtual machines from the following platforms:

- Microsoft Hyper-V Server
- VMware ESX or ESXi Server
- VMware Workstation 6.5 or later

You can use the [Virtual Machine Import Wizard](#) to add “clean” virtual machines to the **Machines** tab of the Automated Application Converter, making them available for use during automated repackaging.

Information about managing virtual machines is presented in the following sections:

- [Preparing Your Virtual Machines for Use With the Automated Application Converter](#)
- [VMware VIX API Requirement](#)
- [Adding Virtual Machines Using the Virtual Machine Import Wizard](#)
- [Editing Virtual Machine Properties on the Machines Tab](#)

Preparing Your Virtual Machines for Use With the Automated Application Converter

You need to prepare each virtual machine that you are going to use with the Automated Application Converter to perform automated repackaging by performing the following steps:



Task: *To prepare a virtual machine:*

1. On each virtual machine you are going to use with the Automated Application Converter, run the Virtual Machine Preparation setup, as described in [Running the Virtual Machine Preparation Setup](#).
2. At the end of the Virtual Machine Preparation setup, you will be prompted to restart the virtual machine. Restart the virtual machine and verify that you are automatically logged in and that GuestAgent.exe is launched:





Note • The Guest Agent (*GuestAgent.exe*) is a tool that is launched on a virtual image that enables the Automated Application Converter to manipulate the virtual machine in ways that may be unsupported by its automation APIs. In particular, this enables launching and monitoring the AdminStudio Repackager in an automated fashion.

3. Shut down the virtual machine.
4. Take a snapshot, as described in [Taking a Snapshot](#). If your virtualization technology supports named snapshots, name the snapshot `AutoRepack_Base`, which is the default name that the Automated Application Converter will be looking for. If you assign a snapshot name other than `AutoRepack_Base`, after you add the virtual machine to the Automated Application Converter, you need to enter that snapshot name in the **Snapshot Name** field in the **Properties** window of the **Machines** tab for that virtual machine.

Running the Virtual Machine Preparation Setup

On each virtual machine that you are going to use to perform automated repackaging, you need to run the Virtual Machine Preparation setup, an application that will enable automatic login. When you install AdminStudio 9.5 Service Pack 2, you will find the Virtual Machine Preparation setup in the following location:

`C:\Program Files\AdminStudio\9.5\Repackager\VirtualMachinePrep\VMCfg.exe`

You need to run this application one time on all of the virtual machines that you are going to use with the Automated Application Converter.



Note • If you do not run the Virtual Machine Preparation setup on the virtual machines you want to use, the Automated Application Converter will be unable to connect to them.

Taking a Snapshot




After you have run the Virtual Machine Preparation setup on a virtual machine, you need to shut it down and create a snapshot. This enables the Automated Application Converter to revert the virtual image to a clean state after each repackaging run.



Note • If you do not take a snapshot of the virtual image, the Automated Application Converter will be unable to revert the image to a clean state after completing a repackaging run. Therefore, while the first repackaging on the virtual machine would be on a clean image, all subsequent repackaging runs would be run on a “dirty” virtual image.

Links to instructions on how to create a snapshot of a virtual machine are presented in the following table:

Table 1-5 • Instructions for Taking a Snapshot of a Virtual Machine

Platform	Link
<p>VMware Workstation</p>	<p></p> <hr/> <p>To take a snapshot:</p> <ol style="list-style-type: none"> 1. Open VMware Workstation. 2. On the VM menu, point to Snapshot and click Take Snapshot. 3. Name the snapshot AutoRepack_Base. 4. You can optionally add a description to record notes about the virtual machine state captured in the snapshot. 5. Click OK.
<p>VMware ESX or ESXi Server</p>	<p>To take a snapshot on the VMware ESX or ESXi server, perform the following steps:</p> <p></p> <hr/> <p>To take a snapshot:</p> <ol style="list-style-type: none"> 1. Open the VMware infrastructure client. 2. On the Inventory menu, point to Virtual Machine and Snapshot, and then click Take Snapshot. 3. Name the snapshot AutoRepack_Base. 4. You can optionally add a description to record notes about the virtual machine state captured in the snapshot. 5. Click OK. <p></p> <p>Note • For more information, see the VMware Knowledge Base article entitled Understanding virtual machine snapshots in VMware ESX:</p> <p>http://kb.vmware.com/selfservice/microsites/search.do?language=en_US&cmd=displayKC&externalId=1015180</p>

VMware VIX API Requirement

In order for the Automated Application Converter to perform automated repackaging, it needs to communicate with the virtualization technology that you are using. If you are using VMware virtualization technology (VMware ESX or ESXi Server or a local VMware Workstation 6.5 or later), you need to have the VMware VIX API installed on the same machine as the Automated Application Converter. You can do this by either installing VMware Workstation on that machine or by downloading and installing the VMware VIX API from the following location:

<http://www.vmware.com/support/developer/vix-api>

Adding Virtual Machines Using the Virtual Machine Import Wizard

You can add one or multiple virtual machines to the Automated Application Converter to use to perform automated repackaging during conversion to virtual packages.

You have the option of selecting just one virtual machine to use for all repackaging, or selecting an operating system group of multiple virtual machines that can be used simultaneously to speed up the repackaging of multiple setups.

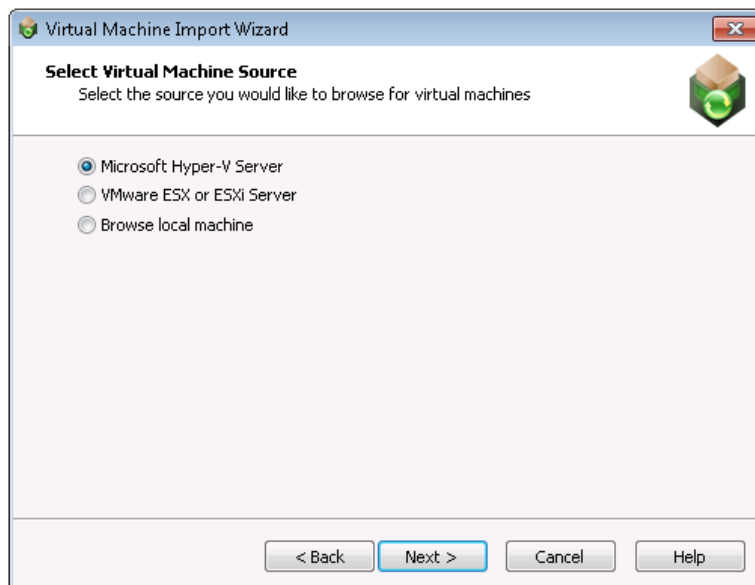
If you have specified a group of multiple virtual machines, a package in the conversion list is assigned to each virtual machine. Then, when a virtual machine finishes repackaging a package, it is reverted to its clean snapshot image, and then starts repackaging the next package in the list.

To add virtual machines to the **Machines** tab using the Virtual Machine Import Wizard, perform the following steps.





Task: *To add virtual machines:*

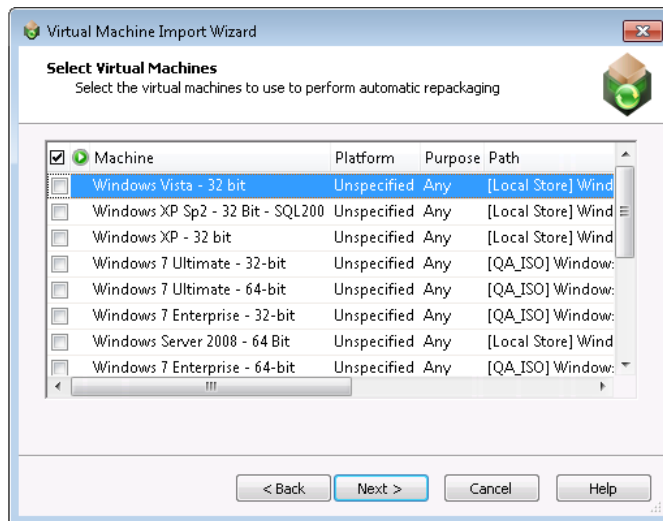
1. Open the **Machines** tab of the Automated Application Converter.
2. Click **Add Machine**. The **Welcome** panel of the **Virtual Machine Import Wizard** opens.
3. Click **Next**. The **Select Virtual Machine Source** panel opens, prompting you to select the type of virtual machine that you are adding.



4. Select one of the following options and click **Next**.
 - **Microsoft Hyper-V Server**—Select this option to add a virtual image from a Microsoft Hyper-V Server.
 - **VMware ESX or ESXi Server**—Select this option to add a virtual image from a VMware ESX or ESXi Server.
 - **Browse local machine**—Select this option to add a virtual image from a local installation of VMware Workstation
5. Based upon your selection on the **Select Virtual Machine Source** panel, enter the following information:

Virtual Machine Source	Steps to Take
Microsoft Hyper-V Server	On the Select Virtual Machines from a Microsoft Hyper-V Server panel, enter the following information: <ul style="list-style-type: none"> ● Server Name—Enter the server name of the Microsoft Hyper-V Server that you want to connect to. ● Authentication—Select Windows Authentication if you want to use the credentials of the logged in user to login to the Hyper-V Server. Select Server Authentication if you want to connect to the Hyper-V Server using the specified User name and Password.
VMware ESX or ESXi Server	On the Select Virtual Machines from VMware ESX or ESXi Server panel, enter the following information: <ul style="list-style-type: none"> ● Server Name—Enter the name of the VMware ESX or ESXi server. ● User name—Enter the login ID for the VMware ESX or ESXi server. ● Password—Enter the password for the VMware ESX or ESXi server.
Browse local machine	On the Select Virtual Machines panel, do one of the following:  <hr/> <p><i>To add an individual virtual machine:</i></p> <ol style="list-style-type: none"> 1. Click Browse Files. The Select Virtual Machine Image File dialog box opens. 2. Select the virtual machine image you want to add to the project and click Open.  <hr/> <p><i>To add all of the virtual machines in a specific directory:</i></p> <ol style="list-style-type: none"> 1. Click Browse Folders. The Browse for Folder dialog box opens. 2. Select a directory that contains the virtual machine images that you want to add to your project and click OK.

When you have finished this step, the virtual machines will be listed (but not selected) on the **Select Virtual Machines** panel.

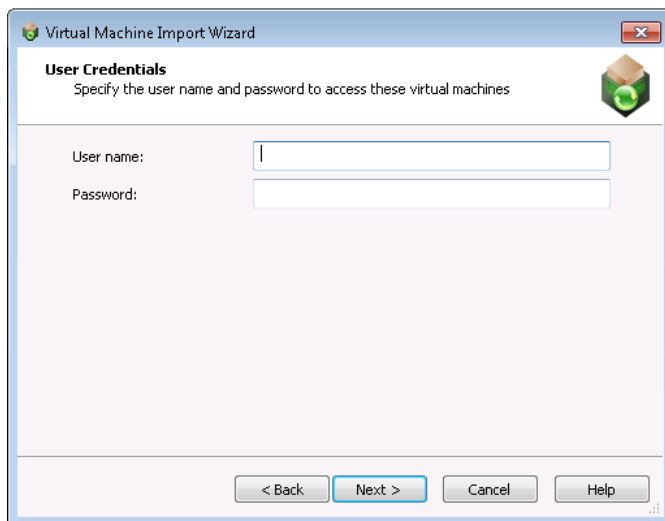


6. On the **Select Virtual Machines** panel, select the virtual machine images that you want to use to perform automated repackaging.
7. For each selected image, click in the **Platform** column and identify its platform.
8. By default, virtual machines that you add to the **Machines** tab will be available for use for both automated repackaging of packages and for testing packages. However, if you want to specify that a virtual machine should be used for only repackaging or for only testing, click in the **Purpose** column of that virtual machine and select one of the following options:
 - **Repackaging**—Virtual machine will only be used to perform automated repackaging.
 - **Testing**—Virtual machine will only be used to test packages. You test a package by selecting it on the **Packages** tab and selecting **Launch Package for Testing** from the context menu. You will then be prompted to install and run that package on a virtual machine.
 - **Any**—Make this virtual machine available for use during both automated repackaging and package testing.



Note • The **Launch Package for Testing** functionality will primarily be useful to test converted packages. However, if a problem occurs during conversion, it is also possible to use this function to install and launch the source package for testing.

9. Click **Next**. The **User Credentials** panel opens, prompting you to specify the login credentials to use to access the selected virtual machines.



10. Enter the user credentials and click **Next**. The Virtual Machine Import Wizard Complete panel opens.
11. Click **Finish** to close the wizard and add the selected virtual machines to your project.

Editing Virtual Machine Properties on the Machines Tab

By default, the list of machines on the **Machines** tab lists the **Machine**, **Platform**, **Purpose**, and **Path** columns. Additional properties can be viewed and edited in the **Properties** window.

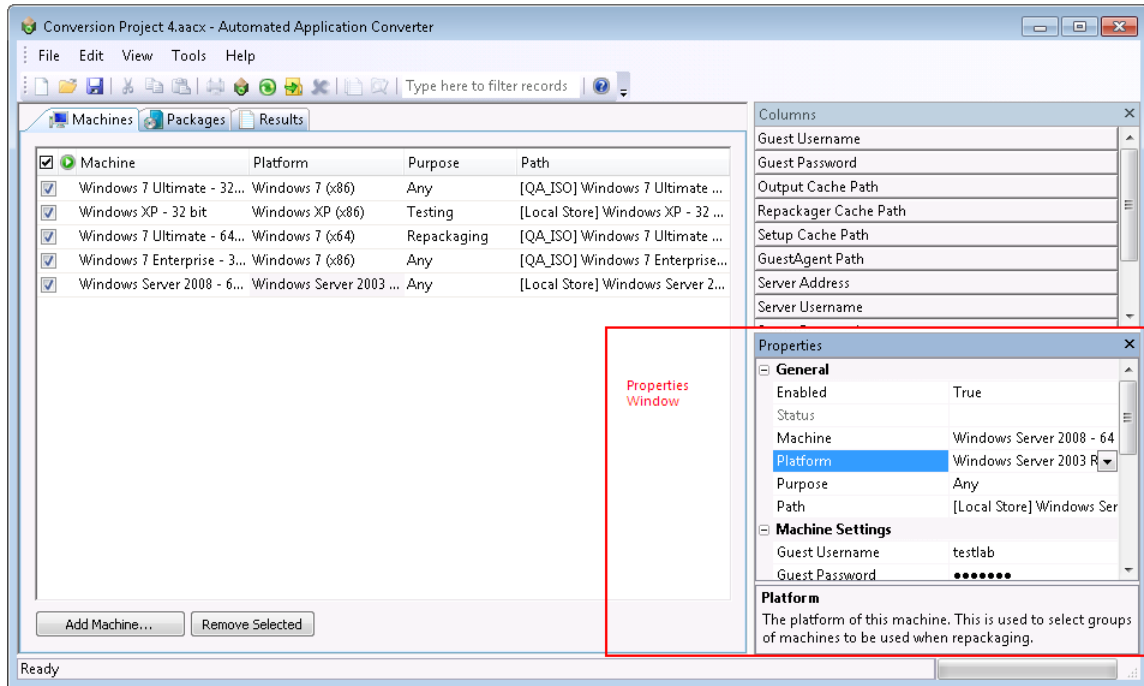




Figure 1-5: Properties Window on the Machines Tab


To edit the properties of a virtual machine, perform the following steps:



Task: *To edit a virtual machine's properties:*

1. Open the **Machines** tab.
2. Select a virtual machine in the list.
3. Click in the list or in the Properties window to edit the following properties:

Property	Description
Machine	Name of the virtual machine image.
Platform	<p>Field that identifies the operating system platform of the virtual machine. When you select a virtual machine to add to the Automated Application Converter, you need to manually identify the operating system platform either on the Select Virtual Machines panel or by clicking in this field on the Machines tab and making a selection from the list.</p> <p>When you perform a conversion run, you are given the opportunity (on the Automated Repackaging on Virtual Machines panel) to either select a specific platform to use for the repackaging of the selected packages, or to select Any Platform, meaning that all of the selected virtual machines will be used for repackaging.</p>
Purpose	<p>By default, virtual machines that you add to the Packages tab will be available for use for both automated repackaging of packages and for testing packages. However, if you want to specify that a virtual machine should be used for only repackaging or for only testing, click in the Purpose column of that virtual machine and select one of the following options:</p> <ul style="list-style-type: none"> • Repackaging—Virtual machine will only be used to perform automated repackaging. • Testing—Virtual machine will only be used to test packages. You test a package by selecting it on the Packages tab and selecting Launch Package for Testing from the context menu. You will then be prompted to install and run that package on a virtual machine. • Any—Make this virtual machine available for use during both automated repackaging and package testing. This is the default value. <p> Important • If the Purpose column is not listed in the Machines list, you can edit the Purpose value in the Properties window.</p> <p> Note • The Launch Package for Testing functionality will primarily be useful to test converted packages. However, if a problem occurs during conversion, it is also possible to use this function to install and launch the source package for testing.</p>

Property	Description
Path	Path on the server or file system to the virtual machine image file.
Guest Username	The user name to use to login to this virtual machine.
Guest Password	The password to use to login to this virtual machine.
Output Cache Path	Specify the location for the repackaged output on the virtual machine. By default, this value is C:\AutoRepack.
Repackager Cache Path	Specify the location where Repackager will be installed on the virtual machine. By default, this value is C:\Repackager.
Setup Cache Path	Specify the location where the package will be copied to on the virtual machine. By default, this value is C:\AppSetup.
GuestAgent Path	Specify the location where the GuestAgent.exe file will be installed on the virtual machine. By default, this value is C:\GuestAgent.exe.
Server Address	The address of the virtual machine server on which this virtual machine is found. This may be a host name or a URL.
Server Username	The user name of the account used to access the virtual machine server.
Server Password	The password of the account used to access the virtual machine server.
Snapshot Name	Name of the snapshot to revert to before starting an automated repackaging session. This is only used if the virtualization technology supports named snapshots. If this value is not specified, but named snapshots are supported on the virtualization technology, the default name of AutoRepack_Base will be used.
Virtualization Technology	The virtualization technology powering this virtual machine.
Add Machine	Click to launch the Virtual Machine Import Wizard , which you can use to add virtual machines to the Machines tab.
Remove Selected	Click to remove the selected virtual machine from this list.  Note • A virtual machine is selected for removal when you click on it and it becomes highlighted, not by selecting the virtual machine's check box. Use the Ctrl key to select multiple machines.

Connecting to Active Virtual Machines

When the Automated Application Converter is connected to a virtual machine and it is performing repackaging, you can use Remote Desktop to open that virtual machine directly from the Automated Application Converter interface to check on the progress of the repackaging run.



Task: *To open a virtual machine from the Automated Application Converter interface:*

1. Add virtual machines to your project file, as described in [Adding Virtual Machines Using the Virtual Machine Import Wizard](#).
2. Begin a conversion as described in [Using the Application Conversion Project Wizard](#) or [Performing a Conversion Using the Application Conversion Wizard](#).
3. Open the **Machines** tab or the **Packages** tab.
 - On the **Machines** tab, select a machine that is currently performing repackaging. The machine will have a status of Running (🟢), which means that the Automated Application Converter has connected to the virtual machine and the GuestAgent.exe is running.
 - On the **Packages** tab, select a package that is currently being repackaged on a virtual machine. The package will have a status of Running (🟢).
4. On the context menu, select **Connect to Machine**. The virtual machine opens in a Remote Desktop window.



Tip • *If you have selected a package that has a status of Running but which does not require repackaging, the **Connect to Machine** selection will be disabled.*

Managing Packages to Convert

You can use the **Package Import Wizard** to add packages to your Automated Application Converter project for conversion.

You can also modify package properties on the **Packages** tab.

- [Selecting Packages from an AdminStudio Application Catalog or Microsoft SCCM Server](#)
- [Selecting Packages from a Local Machine or Network](#)
- [Editing Package Properties on the Packages Tab](#)

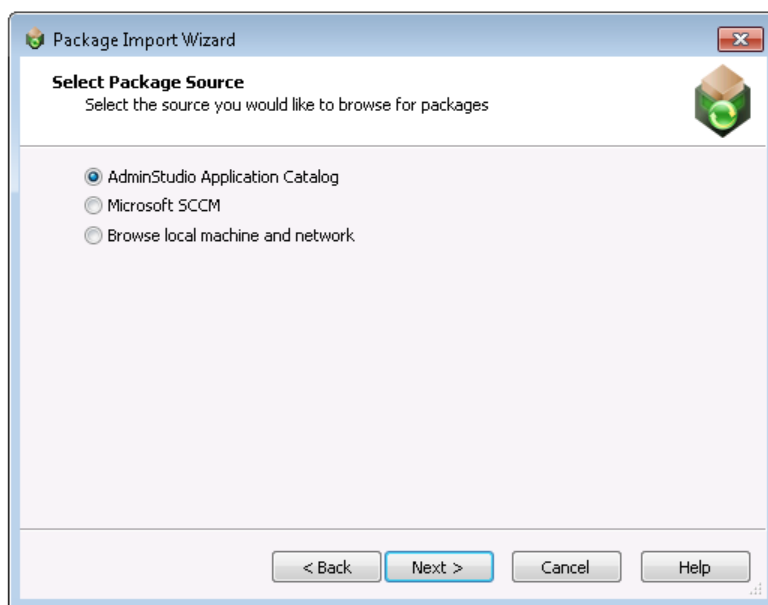
Selecting Packages from an AdminStudio Application Catalog or Microsoft SCCM Server

To select packages from an AdminStudio Application Catalog or Microsoft SCCM Server to convert to virtual applications, perform the following steps:

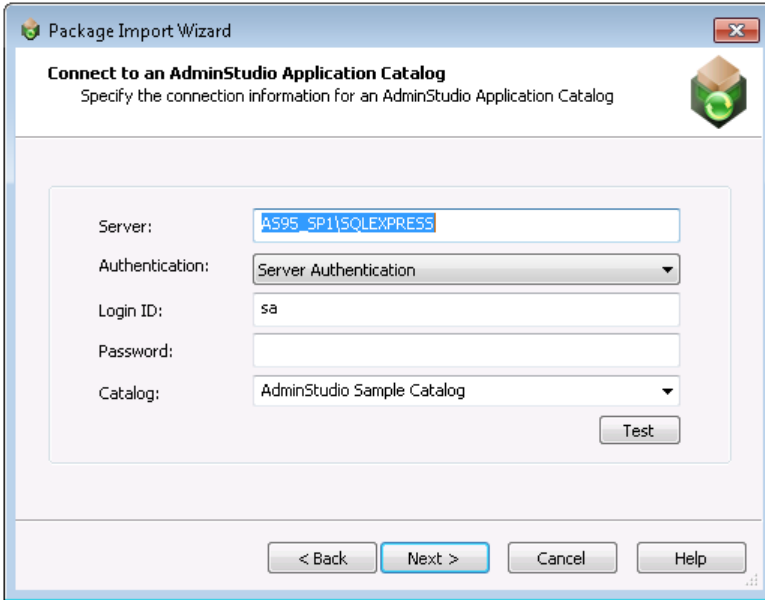


Task: *To select packages from an AdminStudio Application Catalog:*

1. Launch the Automated Application Converter.
2. Add one or more virtual machines, as described in [Adding Virtual Machines Using the Virtual Machine Import Wizard](#).
3. Open the **Packages** tab.
4. Click **Add Packages**. The **Package Import Wizard** opens.
5. Click **Next**. The **Select Package Source** panel opens.



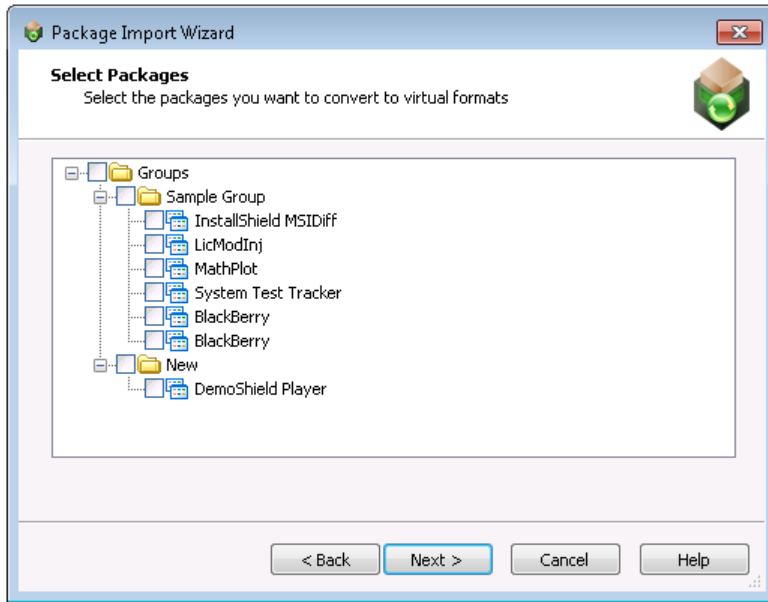
6. Select **AdminStudio Application Catalog** or **Microsoft SCCM** and click **Next**. The **Connect to an AdminStudio Application Catalog** or **Connect to a Microsoft SCCM Server** panel opens.



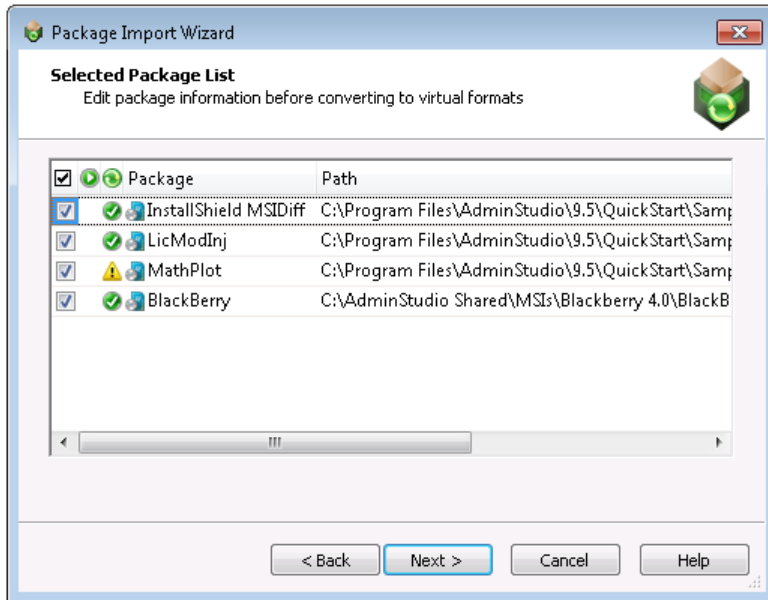
The screenshot shows the 'Package Import Wizard' dialog box. The title bar reads 'Package Import Wizard'. The main heading is 'Connect to an AdminStudio Application Catalog' with a sub-heading 'Specify the connection information for an AdminStudio Application Catalog'. The dialog contains several input fields: 'Server:' with the text 'AS95_SPI\SQLEXPRESS', 'Authentication:' with a dropdown menu set to 'Server Authentication', 'Login ID:' with the text 'sa', 'Password:' (empty), and 'Catalog:' with a dropdown menu set to 'AdminStudio Sample Catalog'. A 'Test' button is located below the 'Catalog' field. At the bottom of the dialog are four buttons: '< Back', 'Next >', 'Cancel', and 'Help'.

7. In the **Server** field, enter the name of the Server that you want to connect to.
8. From the **Authentication** list, select one of the following options:
 - **Windows Authentication**—Choose this option if you want to use Windows network authentication (your network login ID) to log into this Application Catalog/Microsoft SCCM Server.
 - **Server Authentication**—Choose this option if you want to use server login identification to log into this Application Catalog/Microsoft SCCM Server. Then enter the appropriate **Login ID/User name** and **Password**.
9. If you are connecting to an AdminStudio Application Catalog, enter the name of the existing AdminStudio Application Catalog database that you want to connect to in the **Catalog** field.


10. Click **Next**. The **Select Packages** panel opens, listing all of the packages found in the Application Catalog/ Microsoft SCCM Server, but with none of them selected.



11. Select the packages that you want to add to this project and click **Next**. The **Selected Package List** panel opens.





An icon in the Virtualization Readiness column identifies whether the package requires repackaging prior to conversion to a virtual application:

- **Ready** —Package is ready to virtualize; no repackaging is required.



Note • If a Windows Installer package does not contain any custom actions, conditional components, or unsupported tables, repackaging prior to virtualization is not required. An example of an unsupported table is the *IniFile* table, which changes files on the target machine in ways that cannot be statically determined.

- **Requires repackaging**  —Package must be repackaged before it can be successfully virtualized.
- **Unknown** —The Automated Application Converter was unable to determine whether this package is ready to be virtualized directly or whether it requires repackaging.



Note • If you want to override this setting, click in the Virtualization Readiness column and make a selection from the list.

12. Make sure that the packages that you want to convert are selected and click **Next**. The **Package Import Wizard Complete** panel opens.
13. Click **Finish** to close the wizard and add the selected packages to your project.

Selecting Packages from a Local Machine or Network

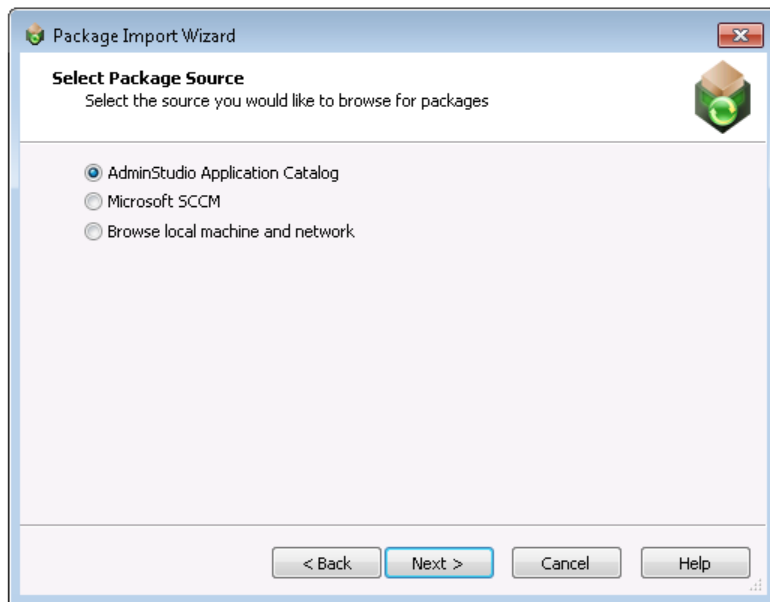
To select packages from a local machine or network to convert to virtual applications, perform the following steps:



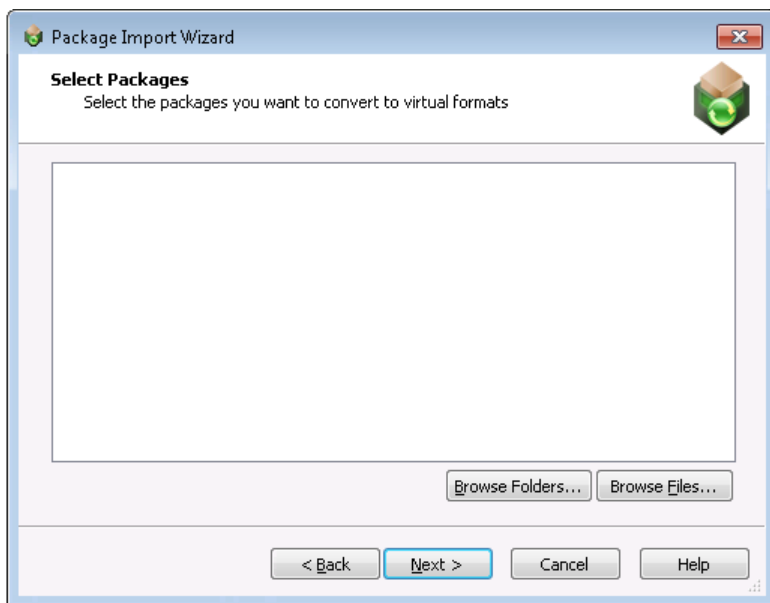
Task: *To select packages from a local machine or network:*

1. Launch the Automated Application Converter.
2. Add one or more virtual machines, as described in [Adding Virtual Machines Using the Virtual Machine Import Wizard](#).
3. Open the **Packages** tab.
4. Click **Add Packages**. The **Package Import Wizard** opens.

5. Click **Next**. The **Select Package Source** panel opens.



6. Select **Browse local machine and network** and click **Next**. The **Select Packages** panel opens with no packages listed.



Chapter 1: Using the AdminStudio Automated Application Converter

Managing Packages to Convert

7. If you want to select one package to add, perform the following steps:
 - a. Click **Browse Files**. The **Select Package Installation File** dialog box opens, prompting you to select the package you want to convert.
 - b. Select the installation file (.msi or .exe) or installation script (*.vbs, *.bat, *.cmd, or *.ps1) you want to convert and click **Open**. The Automated Application Converter adds the selected package to the list on the **Select Packages** panel.



Note • You can use installation scripts to run more complex installation scenarios.

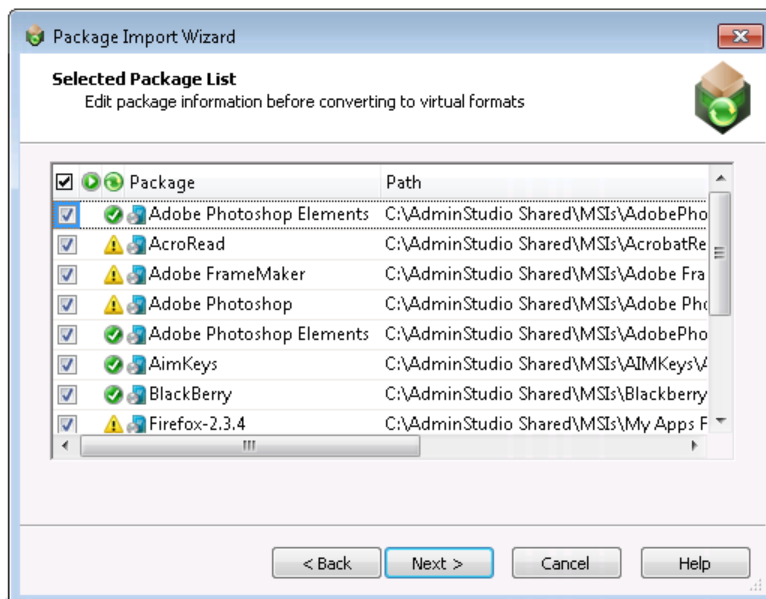
If you want to select a directory of packages to add, perform the following steps:

- a. Click **Browse Folders**. The **Browse for Folder** dialog box opens, prompting you to select the directory containing the packages you want to convert.
- b. Select the directory that contains the installation files (.msi or .exe) and/or installation scripts (*.vbs, *.bat, *.cmd, or *.ps1) you want to convert and click **Open**. The Automated Application Converter searches the selected directory and its subdirectories to locate the installation files and/or scripts and adds them to the list on the **Select Packages** panel.




Important • The Automated Application Converter uses specific rules to determine which packages in the selected directory and its subdirectories would be added to the list on the **Select Packages** panel, and which of those files are automatically selected. See [Automated Application Converter's Selection Rules When Adding Packages from a Directory](#) for more information.

8. On the **Select Packages** panel, click **Next**. The **Selected Package List** panel opens.





9. On the **Selected Package List** panel, an icon in the Virtualization Readiness column identifies whether the package requires repackaging prior to conversion to a virtual application:

- **Ready** —Package is ready to virtualize; no repackaging is required.



Note • If a Windows Installer package does not contain any custom actions, conditional components, or unsupported tables, repackaging prior to virtualization is not required. An example of an unsupported table is the *IniFile* table, which changes files on the target machine in ways that cannot be statically determined.

- **Requires repackaging** —Package must be repackaged before it can be successfully virtualized.
- **Unknown** —The Automated Application Converter was unable to determine whether this package is ready to be virtualized directly or whether it requires repackaging.



Note • If you want to override this setting, click in the Virtualization Readiness column and make a selection from the list.

10. Make sure that the packages that you want to convert are selected and click **Next**. The **Package Import Wizard Complete** panel opens.
11. Click **Finish** to close the wizard and add the selected packages to the project.

Editing Package Properties on the Packages Tab

By default, the list of packages on the **Packages** tab lists the **Package**, **Path**, and **Command Line** properties. Additional properties can be viewed and edited in the **Properties** window.

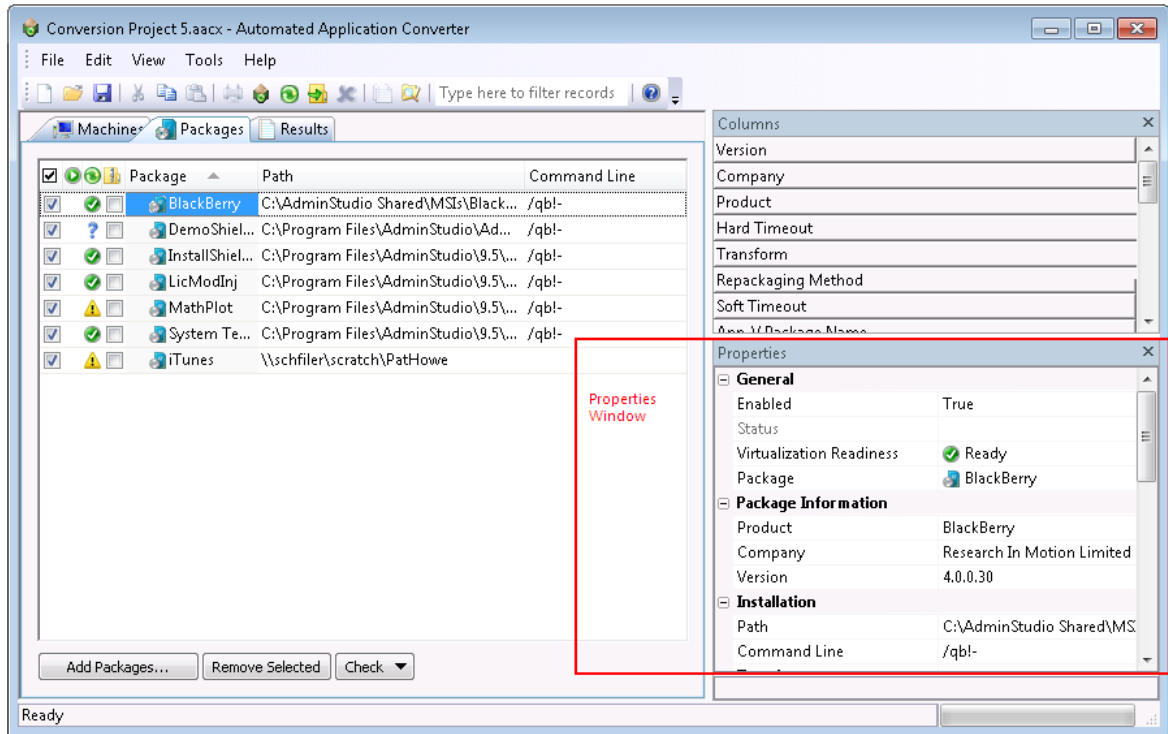






Figure 1-6: Properties Window on the Packages Tab





To edit the properties of a package, perform the following steps:



Task: *To edit package properties:*

1. Open the **Packages** tab.
2. Click in the list or in the Properties window to edit the following properties:

Property	Description
Virtualization Readiness 	<p>When you add a package to the Packages tab, the Automated Application Converter does a quick check to identify that package's virtualization readiness status and assigns it one of the following icons:</p> <ul style="list-style-type: none"> • Ready —Package is ready to virtualize; no repackaging is required. <p>If a Windows Installer package does not contain any custom actions, conditional components, or unsupported tables, repackaging prior to virtualization is not required. An example of an unsupported table is the IniFile table, which changes files on the target machine in ways that cannot be statically determined.</p> <ul style="list-style-type: none"> • Requires repackaging —Package must be repackaged before it can be successfully virtualized. • Unknown —The Automated Application Converter was unable to determine whether this package is ready to be virtualized directly or whether it requires repackaging. <p>You can click on the icon in this column to override the Virtualization Readiness status that was automatically assigned to this package by the Automated Application Converter.</p>
Packages	<p>Lists the name of the package. This is used as part of the output path for repackaged or virtualized results. It is also used in reports to refer to this package.</p> <p>If the package has been repackaged or converted to a virtual application, those output files are also listed below the source file in a tree structure, with an icon identifying the file type. See Icons Used on the Packages Tab.</p>

Property	Description
Path	<p>Lists the location from where the package was selected locally or from where it was originally imported into the AdminStudio Application Catalog or Microsoft SCCM Server.</p>  <p>Note • It is recommended that you use UNC path when importing packages into the Application Catalog or publishing packages to Microsoft SCCM Server.</p>  <p>Note • If you are adding packages from an AdminStudio Application Catalog or a Microsoft SCCM Server installed on a machine other than the machine where the Automated Application Converter is installed, make sure that the package source path listed here is accessible to the Automated Application Converter machine.</p>
Transform	<p>This field can contain a semicolon-delimited list of transforms used to modify or install a Windows Installer package silently.</p> <p>To add a transform to this list, click the Browse  button and select a transform (.mst) file, or enter the transform name and location in the box.</p>
Command Line	<p>Editable field that lists the command line parameters that will be used to run this installation silently during repackaging.</p>
Product	<p>Name of the application as provided by the company who manufactured it.</p>
Company	<p>Name of the company who manufactured this application.</p>
Version	<p>Version of the application.</p>
Compressed 	<p>Indicates the compressed status of the package:</p> <ul style="list-style-type: none"> • False—Indicates that the source .msi or .exe file is uncompressed. If this package is repackaged, the Automated Application Converter will copy all of the files in the same folder as the installation file to the virtual machine. • True—Indicates that the source .msi or .exe file is compressed. If this package is repackaged, the Automated Application Converter will copy only this single installation file to the virtual machine.
Repackaging Method	<p>Indicates the repackaging method that will be used to repackage this package:</p> <ul style="list-style-type: none"> • Installation monitoring—Repackager monitors system changes as a package is installed, and that data is converted into a Windows Installer package. • Single-step snapshot—Repackager first takes an initial system snapshot, then runs the installation, and then takes a second snapshot to create the script file that can be converted into a Windows Installer package.

Property	Description
Soft Timeout	Number of minutes allotted for the package to install before the user would be notified. After this time period elapses, the user will be notified, just in case there are pending dialogs for the user to dismiss or if some other user interaction is required. The default value is 20.
Hard Timeout	Number of minutes allotted for the package to install before it is considered a failure. If this time period elapses, the Automated Application Converter would consider the installation a failure and would move to the next package. The default value is 40.
Virtualization Technology	Indicates the virtualization format of the virtual package. Options are: <ul style="list-style-type: none">• Microsoft App-V• Citrix XenApp• VMware ThinApp

3. Save the project.

About Repackaging Windows Installer Packages

As a general rule, Windows Installer setups should not be repackaged. Instead, they should either be edited in InstallShield Editor, or, as Microsoft recommends, by creating a transform.

However, some IT organizations may elect to repackage Windows Installer packages in order to simplify them, which should make them more reliable and less likely to violate the organization's and Microsoft's recommended best practices. You can use the Automated Application Converter to automatically repackage a group of Windows Installer packages by selecting the **Windows Installer Packages (*.msi)** option on the **Select Output Formats** panel of the Application Conversion Project Wizard and the Application Conversion Wizard.

If you choose to repackage a Windows Installer package, you need to keep in mind that you may no longer be able to:

- Directly deploy vendor-provided patches for this package, OR
- Use any vendor-provided automatic updating service for this package.

Therefore, you should only consider repackaging a Windows Installer package if your IT staff is also willing to invest resources into periodically repackaging that application's vendor patches into an updated Windows Installer package.



Note • *Tightly-controlled organizations probably would not want to have automatically-updating software, so the inability to use an automatic updating service may not be of concern to them.*

Using the Application Conversion Wizard to Perform Automated Package Conversion

You can use the Application Conversion Wizard to perform a conversion run using the selected packages and virtual machines. You can also view conversion run log report information.

- [Performing a Conversion Using the Application Conversion Wizard](#)
- [Viewing Conversion Results](#)

Performing a Conversion Using the Application Conversion Wizard

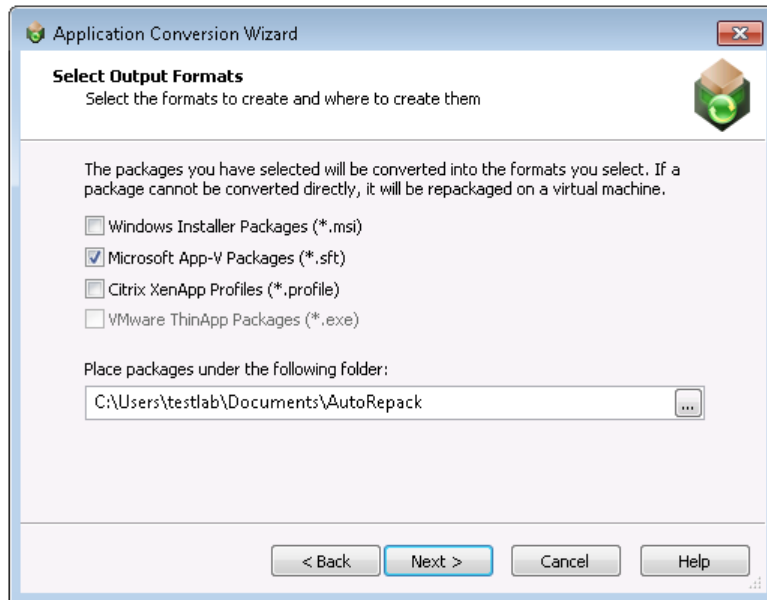
To use the Application Conversion Wizard to perform a conversion run using the selected packages and virtual machines, perform the following steps.



Task: *To perform a conversion using the Application Conversion Wizard:*

1. Select virtual machines to use for automated repackaging, as described in [Adding Virtual Machines Using the Virtual Machine Import Wizard](#).
2. Select packages to convert to virtual applications, as described in [Selecting Packages from an AdminStudio Application Catalog or Microsoft SCCM Server](#) or [Selecting Packages from a Local Machine or Network](#).
3. On the **Tools** menu, select **Application Conversion Wizard**. The **Application Conversion Wizard Welcome** panel opens.

4. Click **Next**. The **Select Output Formats** panel opens.

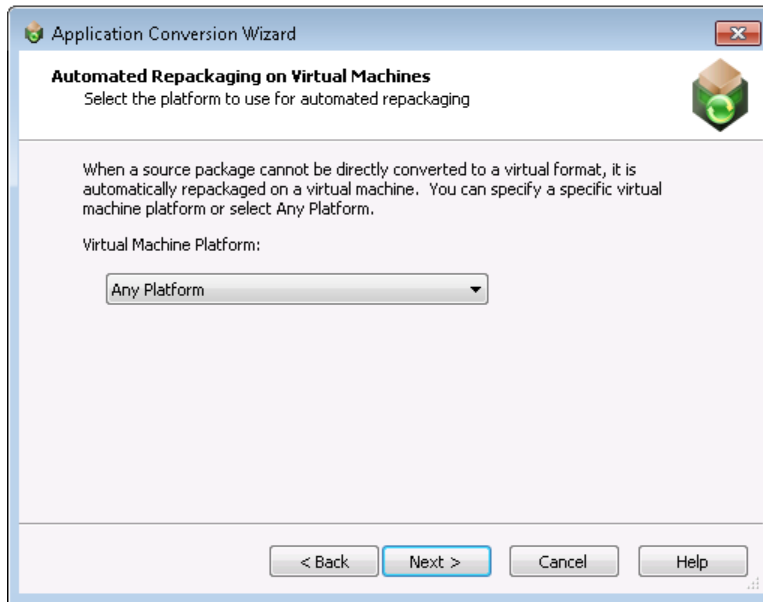


5. Select one or more of the following output formats:
- **Windows Installer Packages (*.msi)**
 - **Microsoft App-V Packages (*.sft)**
 - **Citrix XenApp Profiles (*.profile)**
 - **VMware ThinApp Packages (*.exe)**
6. In the **Place packages under the following folder** field, specify the directory where you want to save the output packages.

Chapter 1: Using the AdminStudio Automated Application Converter

Using the Application Conversion Wizard to Perform Automated Package Conversion

- Click **Next**. The **Automated Repackaging on Virtual Machines** panel opens.



- From the **Virtual Machine Platform** list, select one of the following:

- **Any Platform**—The Automated Application Converter will use any of the virtual machines that you have selected on the **Machines** tab to perform automated repackaging, regardless of platform.
- **OS Platform**—If you select a specific operating system, the Automated Application Converter will use only those virtual machines that you have selected on the **Machines** tab that are of the selected operating system to perform automated repackaging.



Important • When you select a virtual machine to add to the Automated Application Converter, you need to manually identify the operating system platform either on the **Select Virtual Machines** panel or by clicking in the **Platform** field on the **Machines** tab and making a selection from the list.

- Click **Next**. The **Application Conversion Wizard Complete** panel opens.
- Click **Finish** to close the wizard and begin converting the selected packages using the selected virtual machines.





Note • If you have selected multiple virtual machines, the Automated Application Converter will attempt to connect to the first virtual machine in the list. If it successfully connects, conversion will proceed on that machine. If it fails to connect, it will move on to the next machine in the list.

Viewing Conversion Results

To view the conversion results on the **Results** tab and in the AdminStudio Automated Application Converter Log report, perform the following steps:



Task: *To view conversion results:*

1. Perform conversion as described in [Using the Application Conversion Project Wizard](#) or [Performing a Conversion Using the Application Conversion Wizard](#).
2. Open the **Results** tab.
3. For each listed package, view the information in the **Errors**, **Warnings**, and Results Icons () columns, as described in [Results Tab](#).
4. Select the top level node of a conversion run log (such as [Log started Monday, June 21, 2010...](#)).
5. Do one of the following:
 - Click the **Results**  button on the toolbar.
 - Select **View Report** from the context menu.
 - Select **View Report** on the **Tools** menu.
 - Press Ctrl+R.

The AdminStudio Automated Application Converter Log report opens. See [AdminStudio Automated Application Converter Log Report](#) for more information.

6. Open the **Packages** tab.
7. In the tree, locate one of the source packages that you converted and click the plus sign to expand the listing. The converted packages in the formats you selected are listed.
8. Continue with the steps in [Launching Packages for Testing](#) and [Publishing Converted Packages](#).

Launching Packages for Testing

You can quickly launch a package for testing by selecting a package on the **Packages** tab and selecting **Launch Package for Testing** from the context menu. You can test any of the following package types:

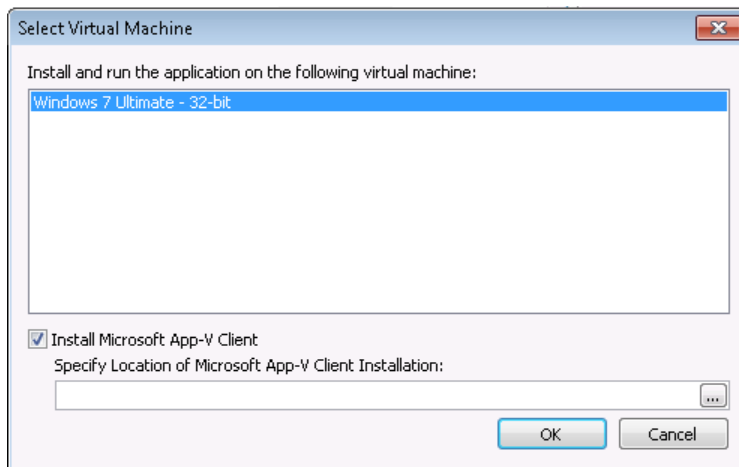
- **Virtual package**—A virtual package that was converted from a Windows Installer package using the Automated Application Converter.
- **Repackaged MSI package**—A repackaged Windows Installer package that was converted from a source Windows Installer package using the Automated Application Converter.
- **Source package**—A source Windows Installer package that you have added to the **Packages** tab.

To launch packages for testing, perform the following steps:



Task: *To launch packages for testing:*

1. Perform package conversion as described in [Using the Application Conversion Project Wizard](#) or [Performing a Conversion Using the Application Conversion Wizard](#). Converted packages are listed under their source package.
2. On the **Packages** tab, select a package and select **Launch Package for Testing** from the context menu. The **Select Virtual Machine** dialog box opens, prompting you to select the virtual machine that you want to use to test the selected package.



3. Select a virtual machine from the list.
4. If you are testing an App-V package and the Microsoft App-V client is not yet installed on the selected virtual image, select the **Install Microsoft App-V Client** option and browse to Microsoft App-V Client installation file. Make sure that it is in a location that is accessible to the virtual machine.
5. Click **OK**. The Automated Application Converter will connect to the selected virtual machine, install the App-V client (if selected), and launch the selected package.

Publishing Converted Packages

After converting packages to virtual packages or repackaged Windows Installer packages, you can publish them to a Microsoft SCCM Server or AdminStudio Application Catalog using the **Package Publish Wizard**.



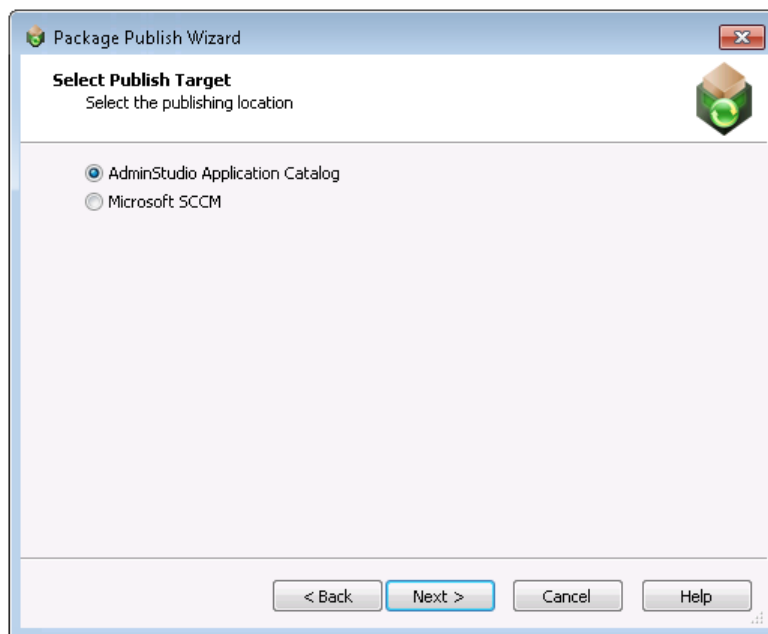
Task: *To publish converted packages:*

1. On the **Packages** tab, select the packages that you want to publish.
2. On the **Tools** menu, select **Package Publish Wizard**. The **Package Publish Wizard Welcome** panel opens.



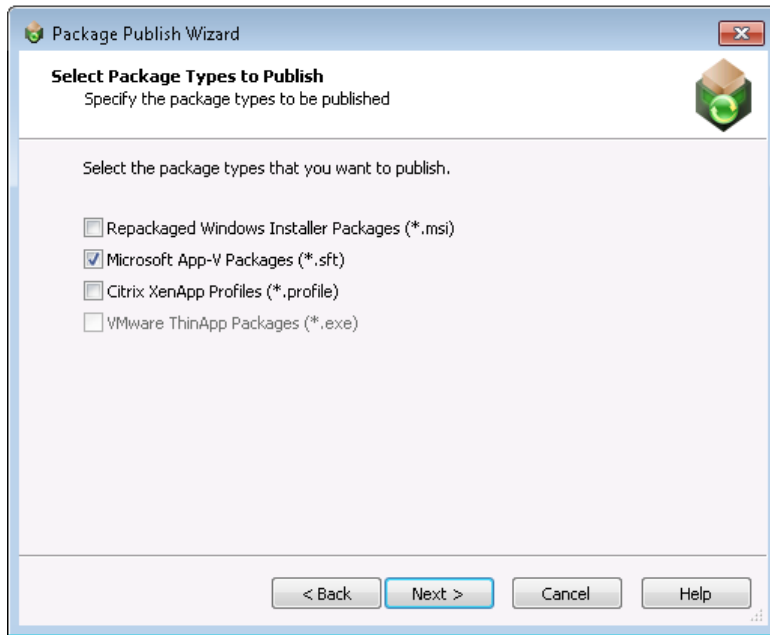
Note • You can also open the **Package Publish Wizard** by clicking the Package Publish Wizard icon in the toolbar or by selecting a package on the **Packages** tab and selecting **Package Publish Wizard** from the context menu.

3. Click **Next**. The **Select Publish Target** panel opens.



4. Select **AdminStudio Application Catalog** or **Microsoft SCCM** and click **Next**. The **Connect to an AdminStudio Application Catalog** panel or the **Connect to a Microsoft SCCM Server** panel opens.

5. Enter the login credentials, as described in [Connect to an AdminStudio Application Catalog](#) or [Connect to a Microsoft SCCM Server](#) and click **Next**. One of the following panels open
 - **AdminStudio Application Catalog**—The [Select Group](#) panel opens, prompting you to specify the Application Catalog group where you want to publish the selected packages.
 - **Microsoft SCCM Server**—The [Select Destination Folder](#) panel opens, prompting you to select a location that the Microsoft SCCM Server has access to where you want to publish the selected packages.
6. Specify the location where you want to publish the packages and click **Next**. The **Select Package Types to Publish** panel opens, prompting you to select the package formats that you want to publish (**Repackaged MSI, Microsoft App-V Packages, Citrix XenApp Profiles, and VMware ThinApp Packages**).



7. Select the package formats that you want to publish and click **Next**. The **Package Publish Wizard Complete** panel opens.
8. Click **Finish** to close the wizard and publish the selected packages.

Setting Automated Application Converter Options

On the **Project Options** dialog box, which is opened by selecting **Options** on the **Tools** menu, you can specify project-wide default options.

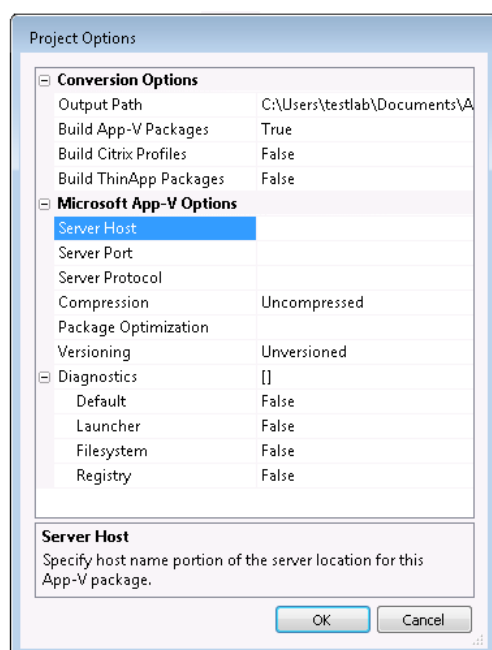


Figure 1-7: Project Options Dialog Box

To set project-wide default options, perform the following steps:



Task: *To set project-wide default options.*

1. On the **Tools** menu, select **Options**. The **Project Options** dialog box opens.
2. Set project options as described in [Project Options Dialog Box](#).
3. Click **OK** to save your selections.



Tip • You can also specify global default settings for any App-V virtual setting in the **ISVirtualPackage** table by editing the `settings.xml` file. For more information, see [Specifying Global Default Virtual Conversion Settings](#).

Reference

This section describes each of the user interface elements and Wizard panels that you might encounter when using the Automated Application Converter. The help topics in this Reference section are the same detailed documentation that is displayed when you press the F1 key or click the **Help** button while working in a dialog box.

Reference information is organized into the following sections:

Table 1-6 • Organization of Automated Application Converter Reference Section

Section	Description
Automated Application Converter User Interface	Contains information about the main Automated Application Converter interface, including tabs, menus, and the toolbar.
Wizards	Contains a panel-by-panel reference for each Wizard in the Automated Application Converter.
Dialog Boxes	Provides specific help for each dialog box in the Automated Application Converter.
Command Line Support	Explains how to run the Automated Application Converter project file via command line.
Specifying Global Default Virtual Conversion Settings	Explains how to set global default settings for any App-V virtual setting in the ISVirtualPackage table by editing the <code>settings.xml</code> file.

Automated Application Converter User Interface

Information on the Automated Application Converter user interface is presented in the following sections:

- [Packages Tab](#)
- [Machines Tab](#)
- [Results Tab](#)
- [Menus & Toolbar Buttons](#)
- [Output Window](#)
- [Column Selector and Properties Windows](#)
- [AdminStudio Automated Application Converter Log Report](#)
- [Using List Features](#)

Packages Tab

On the **Packages** tab, you select the packages that you want to virtualize/repackage. On this tab, you can also set package properties and view package status.

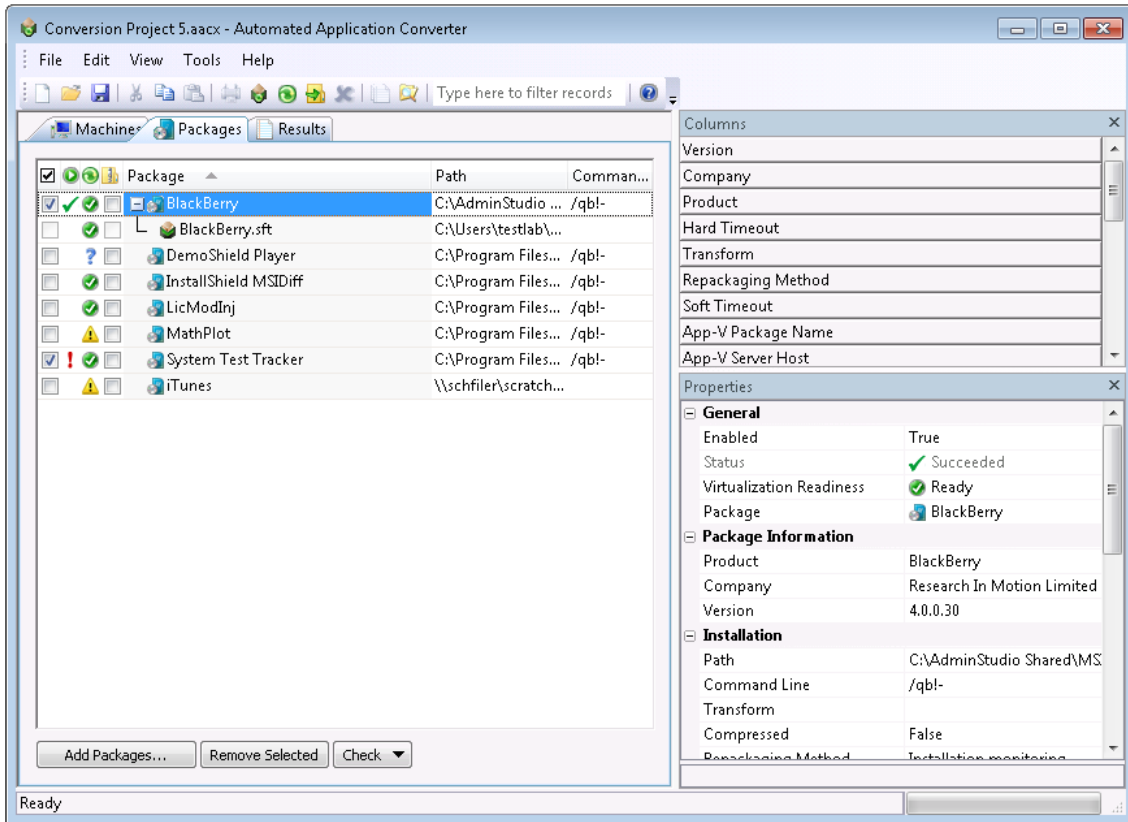


Figure 1-8: Packages Tab

This section includes the following information about the **Packages** tab:

- [Adding Packages to the List](#)
- [Viewing Package Information on the Packages Tab](#)
- [Packages Tab Properties](#)
- [Icons Used on the Packages Tab](#)
- [Context Menu Commands on Packages Tab](#)

Adding Packages to the List

You add packages to this list using the [Package Import Wizard](#) or the [Application Conversion Project Wizard](#). For instructions, see the following topics:

- [Selecting Packages from an AdminStudio Application Catalog or Microsoft SCCM Server](#)
- [Selecting Packages from a Local Machine or Network](#)

Viewing Package Information on the Packages Tab

By default, the **Packages** tab lists the **Status**, **Virtualization Readiness**, **Path**, and **Command Line** columns for each selected package. Additional columns of information can be viewed by selecting one of the fields in the Column Selector area and dragging it onto the list. Also, the values for these fields for the selected package can be viewed in the **Properties** window.

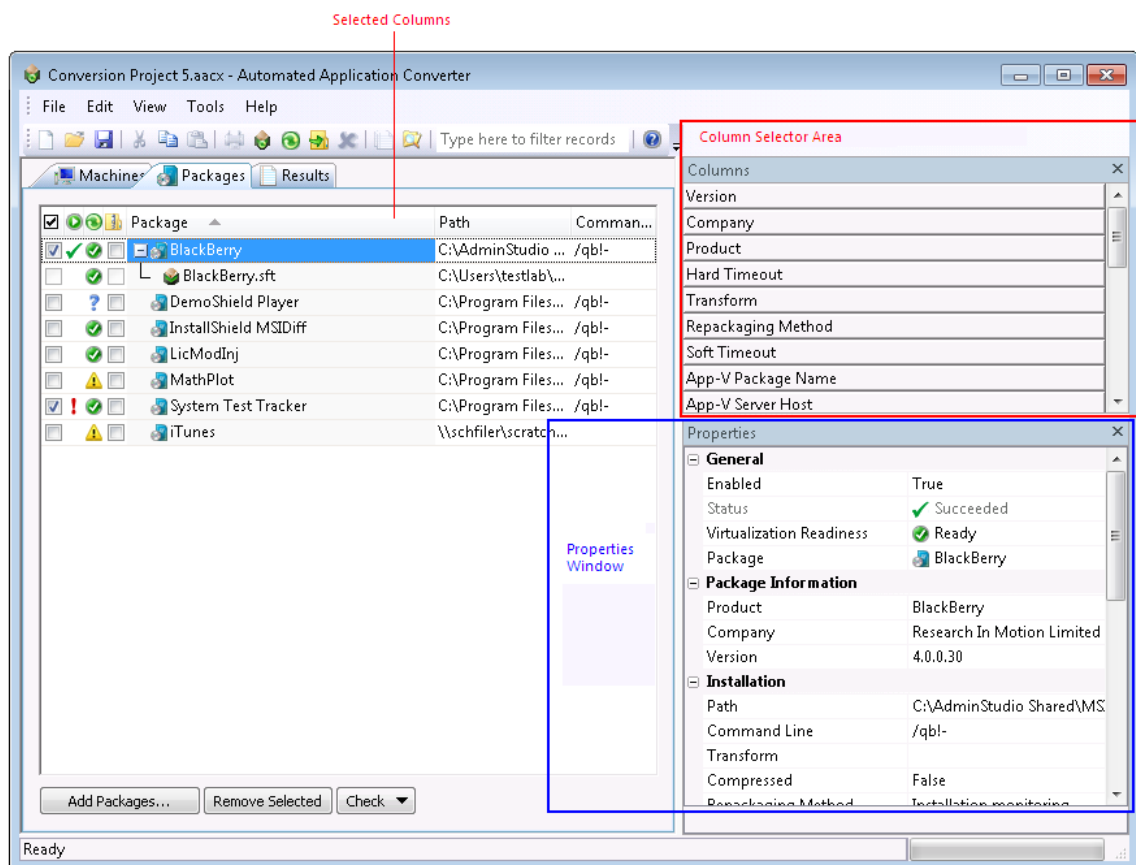


Figure 1-9: Column Selector Area on the Packages Tab



Note • You can sort these lists, change the columns that are displayed, change the column order, resize the columns, and group these lists by a specific column. See [Using List Features](#) for more information.

Packages Tab Properties

The **Packages** tab includes the following properties, many of which can be edited in the Package list or in the Properties Window.

Table 1-7 • Packages Tab








Property	Description
	<p>Selection column. To select a package for conversion, click the check box in this column.</p>  <hr/> <p>Note • This field corresponds with the Enabled field under General in the Properties window, which can be set to either True or False.</p>
<p>Status</p> 	<p>Displays an icon to indicate the status of the package when it is being repackaged or virtualized, that the process has completed, or that the Automated Application Converter encountered an error during the process. See Icons Used on the Packages Tab.</p>
<p>Virtualization Readiness</p> 	<p>When you add a package to the Packages tab, the Automated Application Converter does a quick check to identify that package’s virtualization readiness status and assigns it one of the following icons:</p> <ul style="list-style-type: none"> • Ready —Package is ready to virtualize; no repackaging is required. If a Windows Installer package does not contain any custom actions, conditional components, or unsupported tables, repackaging prior to virtualization is not required. An example of an unsupported table is the IniFile table, which changes files on the target machine in ways that cannot be statically determined. • Requires repackaging —Package must be repackaged before it can be successfully virtualized. • Unknown —The Automated Application Converter was unable to determine whether this package is ready to be virtualized directly or whether it requires repackaging. <p>You can click on the icon in this column to override the Virtualization Readiness status that was automatically assigned to this package by the Automated Application Converter.</p>
<p>Package</p>	<p>Lists the name of the package, as determined by the value in the Product property under Package Information. This is used as part of the output path for repackaged or virtualized results. It is also used in reports to refer to this package.</p> <p>If the package has been repackaged or converted to a virtual package, those output files are also listed below the source file in a tree structure, with an icon identifying the file type. See Icons Used on the Packages Tab.</p>

Table 1-7 • Packages Tab (cont.)





Property	Description
Product	Name of the package as provided by the company who manufactured it.
Company	Name of the company who manufactured this package.
Version	Version of the package.
Path	<p>Lists the location from where the package was selected locally or from where it was originally imported into the AdminStudio Application Catalog or Microsoft SCCM Server.</p>  <p>Note • It is recommended that you use UNC path when importing packages into the Application Catalog or publishing packages to Microsoft SCCM Server.</p>  <p>Note • If you are adding packages from an AdminStudio Application Catalog or a Microsoft SCCM Server installed on a machine other than the machine where the Automated Application Converter is installed, make sure that the package source path listed here is accessible to the Automated Application Converter machine. If it is also accessible to the virtual machines, repackaging can be performed more quickly.</p>
Command Line	Editable field that lists the command line parameters that will be used to run this installation silently during repackaging.
Transform	<p>This field can contain a semicolon-delimited list of transforms used to modify or install a Windows Installer package silently.</p> <p>To add a transform to this list, click the Browse  button and select a transform (.mst) file, or enter the transform name and location in the box.</p>
Compressed 	<p>Indicates the compressed status of the package:</p> <ul style="list-style-type: none"> • False—Indicates that the source .msi or .exe file is uncompressed. If this package is repackaged, the Automated Application Converter will copy all of the files in the same folder as the installation file to the virtual machine. • True—Indicates that the source .msi or .exe file is compressed. If this package is repackaged, the Automated Application Converter will copy only this single installation file to the virtual machine.
Repackaging Method	<p>Indicates the repackaging method that will be used to repackage this package:</p> <ul style="list-style-type: none"> • Installation monitoring—Repackager monitors system changes as a package is installed, and that data is converted into a Windows Installer package. • Single-step snapshot—Repackager first takes an initial system snapshot, then runs the installation, and then takes a second snapshot to create the script file that can be converted into a Windows Installer package.

Table 1-7 • Packages Tab (cont.)



Property	Description
Soft Timeout	Number of minutes allotted for the package to install before the user would be notified. After this time period elapses, the user will be notified, just in case there are pending dialogs for the user to dismiss or if some other user interaction is required. The default value is 20.
Hard Timeout	Number of minutes allotted for the package to install before it is considered a failure. If this time period elapses, the Automated Application Converter would consider the installation a failure and would move to the next package. The default value is 40.
Virtualization Technology	Indicates the virtualization format of the virtual package. Options are: <ul style="list-style-type: none"> • Microsoft App-V • Citrix XenApp • VMware ThinApp • Windows Installer Package
App-V Package Name	Enter a name (a maximum of 64 characters) to override the name of the App-V package. By default, this matches the value of the Product property under Package Information . <div style="text-align: center; margin: 10px 0;"></div> <p>Note • In this field, you can specify the single name to use for an App-V application package that contains multiple applications. For example, Microsoft Office could be used to label a package that contains Microsoft Word and Microsoft Excel applications that run in the same virtual environment.</p>
App-V Server Host	Specify the virtual application server or the load balancer in front of a group of virtual application servers that will stream the software package to an Application Virtualization Desktop Client. <p>You must complete this item to create a sequenced application package, but you can change from the default %SFT_SOFTGRIDSERVER% environment variable to the actual hostname or IP address of a virtual application server.</p> <div style="text-align: center; margin: 10px 0;"></div> <p>Note • If you choose not to specify a static hostname or IP address, on each Application Virtualization Desktop Client you must set up an environment variable called SFT_SOFTGRIDSERVER.</p> <ul style="list-style-type: none"> • Its value must be the hostname or IP address of the virtual application server or load balancer that is this client's source of applications. • You should make this environment variable a system variable rather than a user variable. • Any Application Virtualization Desktop Client session that is running on this computer during your assignment of this variable must be closed and then opened so that the resumed session will be aware of its new application source.

Table 1-7 • Packages Tab (cont.)


Property	Description
App-V Server Port	<p>Specify the port on which the virtual application server or the load balancer will listen for an Application Virtualization Desktop Client's request for the package.</p> <ul style="list-style-type: none"> • This information is required to create a package, but you can change it. • The default port is 554.
App-V Server Path	<p>Specify the relative path on the virtual application server where the software package is stored and from which it will be streamed.</p>  <p>Note • This information is required to create a package if the .sft file will be stored in a subdirectory of CONTENT; otherwise, this information is not required.</p>
App-V Server Protocol	<p>Enables you to select the protocol that will stream the sequenced application package from a virtual application server to an Application Virtualization Desktop Client. The following protocols are available:</p> <ul style="list-style-type: none"> • RTSP—The default, it specifies that the Real-Time Streaming Protocol controls the exchange of virtualization-enabled applications. • RTSPS—Specifies that the Real-Time Streaming Protocol with Transport Layer Security controls the exchange of a sequenced application package. • FILE—Specifies that the sequenced application will be streamed from a file share. • HTTP—Specifies that Hypertext Transport Protocol controls the exchange of a package. • HTTPS—Specifies that Secure Hypertext Transport Protocol controls the exchange of a package.
App-V Root Folder Name	<p>Enter a name to identify the directory that will contain the App-V application's .sft file. When an App-V application is configured on a client machine, it is mounted on the computer's Q:\ drive in the folder you specify in this setting.</p> <p>The default value for the Root Folder Name setting is based on the [ProductName] and [ProductVersion] properties of the App-V application's associated Windows Installer file using the 8.3 file naming convention. For example:</p> <ul style="list-style-type: none"> • If [ProductName] is MyApplication and [ProductVersion] is 1.12.3.1, the Default Folder Name will be MyApplic.112. • If [ProductName] is MyApp and [ProductVersion] is 1, then the Default Folder Name will be MyApp.1. • If [ProductName] is MyBlueApp and [ProductVersion] is 1.2.3.4, then the Default Folder Name will be MyBlueAp.123. <p>If you happen to have another App-V application that has identical values for the [ProductName] and [ProductVersion] properties, you can avoid conflicts by entering a unique value in the Root Folder Name setting.</p>

Table 1-7 • Packages Tab (cont.)



Property	Description
<p>App-V Comments</p>	<p>Enter a short description of the purpose of this App-V application and any special information that you wish to document.</p>  <hr/> <p>Note • The description you enter in this text box will appear in the OSD file ABSTRACT element.</p>
<p>App-V Supported OS</p>	<p>Specify versions of Windows supported by this App-V package by selecting True or False next to the OS name. If none are selected, the package is OS independent, and will run on any version of Windows.</p>
<p>App-V Dynamic Suites</p>	<p>Enter a semicolon delimited list of OSD or SFT files to be dynamically suited with this package, or click the browse button and select the OSD or SFT files to be suited. Append :MANDATORY to the file if it must be present for this package to function.</p>
<p>App-V Compression</p>	<p>Specify whether to compress this App-V package by selecting Default, Compressed, or Uncompressed.</p>
<p>App-V Package Optimization</p>	<p>Specify whether to optimize package for offline use (entire package is included in Feature Block 1) by selecting Offline, or streaming use (only shortcut targets are included in Feature Block 1) by selecting Stream.</p>
<p>App-V Upgrade Package</p>	<p>Click the Browse button and specify the previous package of this package. When specified, this package will be built as an upgrade to the previous package.</p>
<p>App-V Versioning</p>	<p>Select Versioned to append the package version to the SFT file name. Select Unversioned to leave the package version off of the SFT file name. Select Default to use the setting that is defined on the Project Options dialog box.</p>

Table 1-7 • Packages Tab (cont.)

Property	Description
App-V Diagnostics	<p>Specify the tools to include in this App-V package by selecting True or False.</p> <ul style="list-style-type: none"> • Launcher—Select this option to include the App-V Application Launcher with each App-V application that you build. You can use the App-V Application Launcher to test a newly built App-V application before moving it to a deployment server. • Filesystem—Select this option if you want to include the Windows Command Prompt application with your App-V application so that you can browse the virtual file system at runtime from within the virtual environment. If this option is selected, a file named <code>Virtual File System.osd</code> will be created in the App-V Package folder, which can be used to display the files and folders within the virtual environment. You can use <code>Virtual File System.osd</code> to view the existing files and folders on the computer plus the files and folders for the virtual package. • Registry—Select this option if you want to include the Registry Editor (<code>regedit.exe</code>) with your App-V application so that you can browse the registry at runtime from within the virtual environment. If this option is selected, a file named <code>Virtual Registry.osd</code> will be created in the App-V Package folder, which can be used to display the registry within the virtual environment. You can use <code>Virtual Registry.osd</code> to view the existing registry on the computer plus the registry for the virtual package.
App-V Runtime Drive	Specify the App-V client runtime drive.
Add Packages	Click to launch the Package Import Wizard , which you can use to add packages to the Packages tab.
Remove Selected	<p>Click to remove the selected package from this list. You can also click the Delete key.</p>  <p>Note • A package is selected for removal when you click on it and it becomes highlighted, not by selecting the package's check box. Use the Ctrl key to select multiple packages.</p>

Icons Used on the Packages Tab

The following icons are used to display package status on the **Packages** tab:





Table 1-8 • Select Packages Panel

Column	Icon	Description
Status 		Package is in the process of being repackaged.
		Package has been successfully repackaged.
		Repackaging has failed.
		Package is waiting in line to be repackaged or to be virtualized.
		A soft timeout has occurred, meaning that the package's Soft Timeout time period has elapsed. This could occur because the package is very large and is taking an unusually long time to repackage, or because you have set the Soft Timeout value too low, or because the installer is waiting for some kind of user input (meaning that the installation was not silent).
		The last conversion run of this package was cancelled.
Package		Identifies the source package (.msi or .exe file).
		Identifies the repackaged .msi file.
		Identifies the virtual application that was successfully created.
Virtualization Readiness 		Package is ready to virtualize; no repackaging is required.
		Package must be repackaged before it can be successfully virtualized.
		The Automated Application Converter was unable to determine whether this package is ready to be virtualized directly or whether it requires repackaging.

Context Menu Commands on Packages Tab

When you make a selection in the **Package** list on the **Packages** tab, the following commands are available on the context menu:

Table 1-9 • Context Menu Commands on Packages Tab

Command	Description
Explore	Open the directory that contains the selected file.
Remove	Permanently removed the selected packages from the project.
Test Virtualization Readiness	<p>Select to test the selected package for virtualization readiness. The possible results are:</p> <ul style="list-style-type: none"> —Package is ready to virtualize; no repackaging is required. If a Windows Installer package does not contain any custom actions, conditional components, or unsupported tables, repackaging prior to virtualization is not required. An example of an unsupported table is the IniFile table, which changes files on the target machine in ways that cannot be statically determined. —Package must be repackaged before it can be successfully virtualized. —The Automated Application Converter was unable to determine whether this package is ready to be virtualized directly or whether it requires repackaging.
Launch Package for Testing	Select to install and run the selected application on a virtual machine. See Launching Packages for Testing .
Connect to Machine	When the Running  icon is displayed in the Status column, indicating that the package is in the process of being repackaged, you can select Connect to Machine from the context menu to connect to the virtual machine via Remote Desktop on which this package is being repackaged.
Package Import Wizard	Select this option to launch the Package Import Wizard to import packages to this project.
Package Publish Wizard	Select this option to launch the Package Publish Wizard to publish virtual/repackaged packages to a Microsoft SCCM Server or AdminStudio Application Catalog.

Machines Tab

On the **Machines** tab of the Automated Application Converter, you add a list of clean virtual machine images to use during automated repackaging.

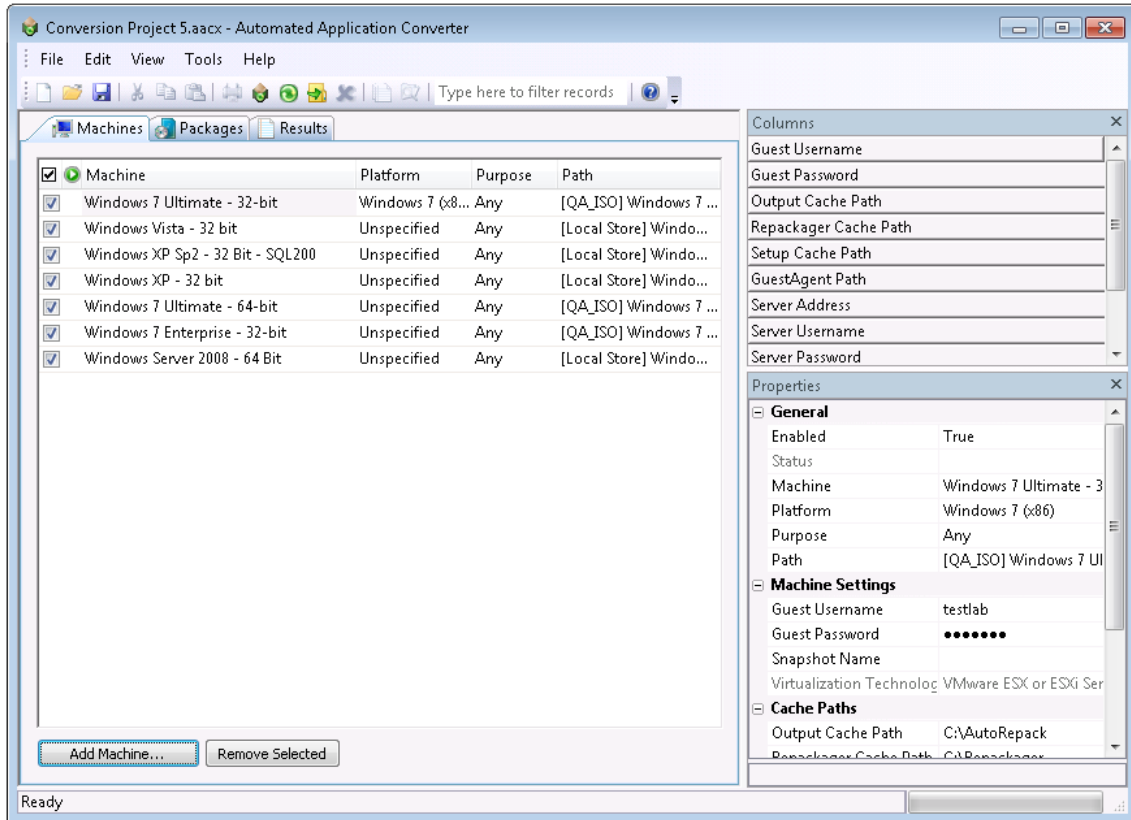


Figure 1-10: Machines Tab

This section includes the following information about the **Machines** tab:

- [Adding Virtual Machines to the List](#)
- [Viewing Virtual Machine Information on the Machines Tab](#)
- [Machines Tab Properties](#)
- [Context Menu Commands on Machines Tab](#)

Adding Virtual Machines to the List

To add a virtual machine to the list, click **Add Machine** to open the Virtual Machine Import Wizard, as described in [Adding Virtual Machines Using the Virtual Machine Import Wizard](#). You will then be prompted for login information and other relevant data required to prepare the machine.



Note • Before you add a machine to this list, you need to perform the steps listed in [Preparing Your Virtual Machines for Use With the Automated Application Converter](#) to enable automatic login and to create a clean snapshot.

To perform repackaging, you have the option of selecting one virtual machine or multiple virtual machines (that can be used simultaneously to speed up the repackaging of multiple setups). You can also specify that you want to use only virtual machines of a specific operating system platform.

When each virtual machine finishes repackaging a package, it is reverted to its clean snapshot image, and then starts repackaging the next package in the list.

Viewing Virtual Machine Information on the Machines Tab

By default, the **Machines** tab lists the **Status**, **Machine**, **Platform**, **Purpose**, and **Path** columns for each machine. Additional columns of information can be viewed by selecting one of the fields in the **Column** selector area and dragging it onto the list. Also, the properties for these **Columns** for the selected machine can be viewed in the **Properties** window when that column is selected in the **Column** selector area.

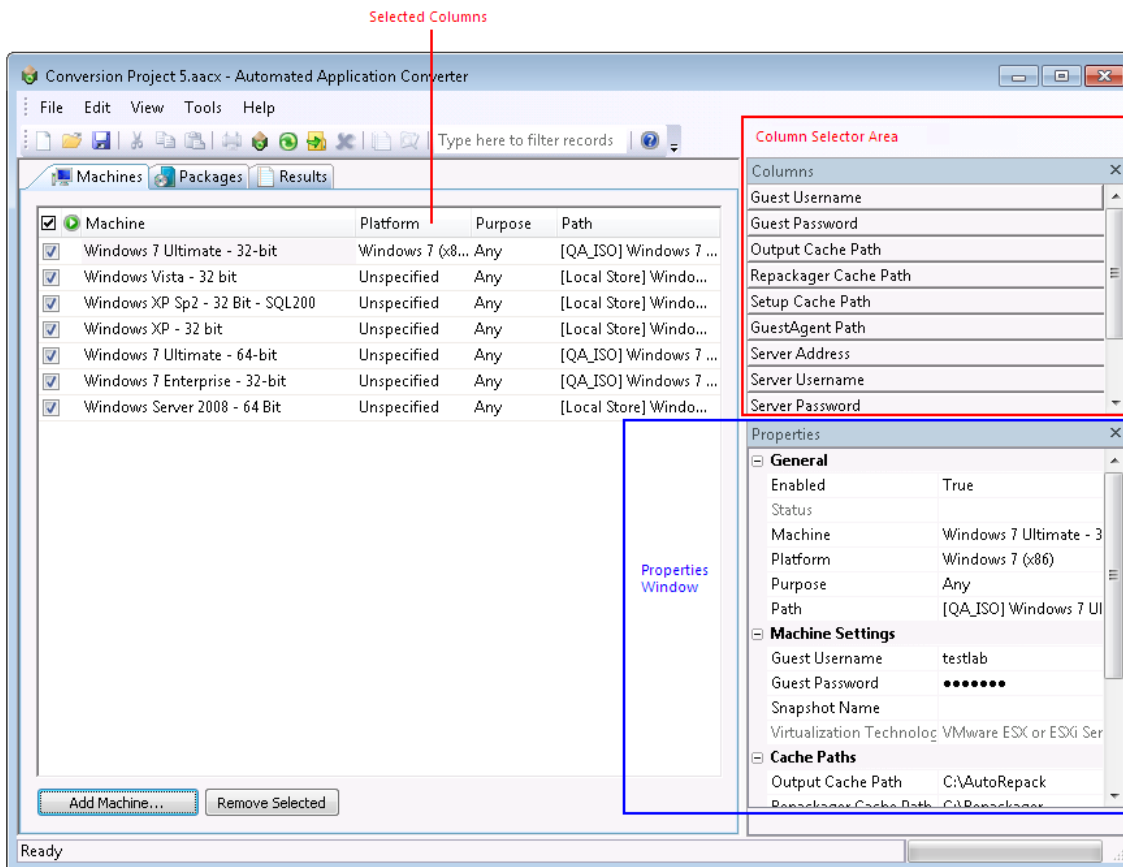


Figure 1-11: Column Selector Area on the Machines Tab



Note • You can sort this list, change the columns that are displayed, change the column order, resize the columns, and group the list by a specific column. See [Using List Features](#) for more information.

Machines Tab Properties

The **Machines** tab includes the following properties and information:

Table 1-10 • Machines Tab






Property	Description
<input checked="" type="checkbox"/>	Selection column. To select a virtual machine to use for automated repackaging, click the check box in this column.
Status 	The icon displayed in this column indicates the status of the virtual machine:
	Virtual machine is in use.
	The Automated Application Converter encountered an error when attempting to connect to this virtual machine. or when rolling back to a snapshot on this virtual machine.
	The Automated Application Converter is waiting for the virtual machine to boot up.
(No icon)	Virtual machine is not currently in use.
	The last conversion run on this virtual machine was cancelled.
Machine	Name of the virtual machine image.
Platform	Field that identifies the operating system platform of the virtual machine. When you select a virtual machine to add to the Automated Application Converter, you need to manually identify the operating system platform either on the Select Virtual Machines panel or by clicking in this field on the Machines tab and making a selection from the list. When you perform a conversion run, you are given the opportunity (on the Automated Repackaging on Virtual Machines panel) to either select a specific platform to use for the repackaging of the selected packages, or to select Any Platform , meaning that all of the selected virtual machines will be used for repackaging.
Path	Path on the server or file system to the virtual machine image file.

Table 1-10 • Machines Tab (cont.)




Property	Description
Purpose	<p>By default, virtual machines that you add to the Packages tab will be available for use for both automated repackaging of packages and for testing packages. However, if you want to specify that a virtual machine should be used for only repackaging or for only testing, click in the Purpose column of that virtual machine and select one of the following options:</p> <ul style="list-style-type: none"> • Repackaging—Virtual machine will only be used to perform automated repackaging. • Testing—Virtual machine will only be used to test packages. You test a package by selecting it on the Packages tab and selecting Launch Package for Testing from the context menu. You will then be prompted to install and run that package on a virtual machine. • Any—Make this virtual machine available for use during both automated repackaging and package testing. This is the default value. <p> Important • If the Purpose column is not listed in the Machines list, you can select it in the Columns area and drag it to the list, or you can edit the Purpose value in the Properties window.</p> <p> Note • The Launch Package for Testing functionality will primarily be useful to test converted packages. However, if a problem occurs during conversion, it is also possible to use this function to install and launch the source package for testing.</p>
Guest Username	The user name to use to login to this virtual machine.
Guest Password	The password to use to login to this virtual machine.
Output Cache Path	Specify the location for the repackaged output on the virtual machine. By default, this value is C:\AutoRepack.
Repackager Cache Path	Specify the location where Repackager will be installed on the virtual machine. By default, this value is C:\Repackager.
Setup Cache Path	Specify the location where the package will be copied to on the virtual machine. By default, this value is C:\AppSetup.
GuestAgent Path	Specify the location where the GuestAgent.exe file will be installed on the virtual machine. By default, this value is C:\GuestAgent.exe.
Server Address	The address of the virtual machine server on which this virtual machine is found. This may be a host name or a URL.
Server Username	The user name of the account used to access the virtual machine server.


Table 1-10 • Machines Tab (cont.)

Property	Description
Server Password	The password of the account used to access the virtual machine server.
Snapshot Name	Name of the snapshot to revert to before starting an automated repackaging session. This is only used if the virtualization technology supports named snapshots. If this value is not specified, but named snapshots are supported on the virtualization technology, the default name of AutoRepack_Base will be used.
Virtualization Technology	The virtualization technology powering this virtual machine.
Add Machine	Click to launch the Virtual Machine Import Wizard , which you can use to add virtual machines to the Machines tab.
Remove Selected	Click to remove the selected virtual machine from this list.  Note • A virtual machine is selected for removal when you click on it and it becomes highlighted, not by selecting the virtual machine's check box. Use the Ctrl key to select multiple machines.

Context Menu Commands on Machines Tab

When you make a selection in the **Machines** list on the **Machines** tab, the following commands are available on the context menu:

Table 1-11 • Context Menu Commands on Machines Tab

Command	Description
Connect to Machine	When the Running  icon is displayed in the Status column, indicating that this virtual machine is currently being used to perform repackaging, you can select Connect to Machine from the context menu to connect to this virtual machine via Remote Desktop.
Remove	Select to remove the selected machine from this project.
Machine Import Wizard	Select to add virtual machines to this project using the Virtual Machine Import Wizard .

Results Tab

On the **Results** tab, the results of each virtualization conversion run for this project are listed.

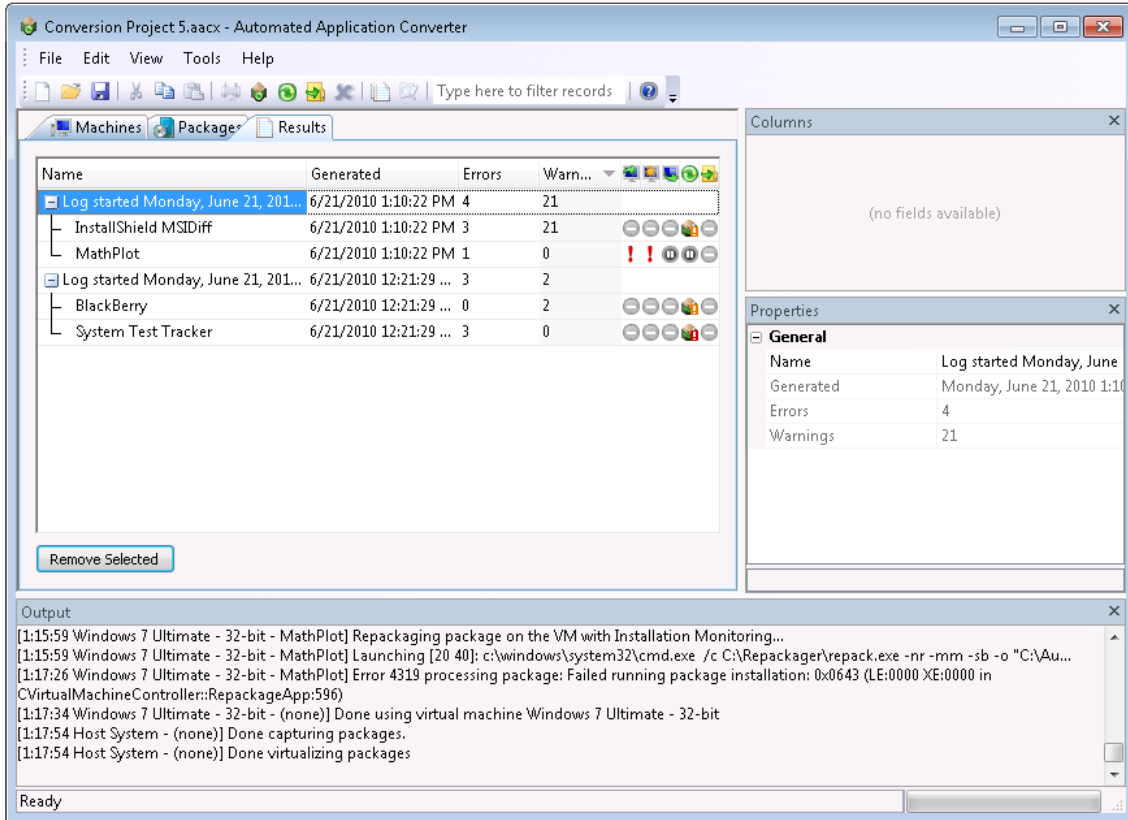


Figure 1-12: Results Tab


This section includes the following information about the **Results** tab:

- [Results Tab Properties](#)
- [Icons Used on the Results Tab](#)
- [Context Menu Commands on Results Tab](#)

Results Tab Properties

The **Results** tab includes the following properties and information:

Table 1-12 • Results Tab

Property	Description
Name	List of logged results for each run of this project. The log is identified by the date and time it was started, and the packages that were part of this run are listed in a tree structure under the log title. Click the plus sign to expand the listing.
Generated	Date and time the conversion of each package began.
Errors	The number of errors generated for each package in this run is listed in this column next to each package. The cumulative sum of all errors generated for all of the packages in the run is listed in this column next to the parent Log row.
Warnings	The number of warnings generated for each package in this run is listed in this column next to each package. The cumulative sum of all warnings generated for all of the packages in the run is listed in this column next to the parent Log row.
Results Icons 	Icons in these columns indicate the status of each of the steps of the repackaging and conversion process. See Icons Used on the Results Tab for detailed information.

Icons Used on the Results Tab

The following icons are used on the **Results** tab:

Table 1-13 • Icons Used on Results Tab




















Column	Icon	Description
Copy In 		Operation (copying to virtual machine, repackaging, or copying from virtual machine back to source location) was successfully performed.
Repackage 		Operation (copying to virtual machine, repackaging, or copying from virtual machine back to source location) was successfully performed, but warnings were encountered. View the results AdminStudio Automated Application Converter Log Report for detailed information on these warnings.
Copy Out 		<p>Operation (copying to virtual machine, repackaging, or copying from virtual machine back to source location) failed.</p> <ul style="list-style-type: none"> • Copy In—Error could have been caused by not being able to connect to the virtual machine. • Repackage—Error means that repackaging has failed. • Copy Out—Error could mean that you ran out of hard drive space at the package source location or that there is a permission problem preventing you from writing to the selected directory. <p>View the results AdminStudio Automated Application Converter Log Report for detailed information on the errors encountered.</p>
		<p>Operation (copying to virtual machine, repackaging, or copying from virtual machine back to source location) was skipped. Possible reasons that the operation was skipped could be:</p> <ul style="list-style-type: none"> • Repackaging not required—Because repackaging was not required, these three operations were not required. • Could not connect to virtual machine—The Automated Application Converter could not successfully connect to the virtual machine, so therefore the Repackage and Copy Out operations were skipped.
		Operation (copying to virtual machine, repackaging, or copying from virtual machine back to source location) is currently being performed.
		Operation (copying to virtual machine, repackaging, or copying from virtual machine back to source location) is still being performed even though a warning was generated. View the results AdminStudio Automated Application Converter Log Report for detailed information on the errors encountered.
		Operation was cancelled.

Table 1-13 • Icons Used on Results Tab (cont.)

Column	Icon	Description
Conversion Column 		Package was converted to a virtual application successfully.
		Package was converted to a virtual application, but warnings were generated. View the results AdminStudio Automated Application Converter Log Report for detailed information on the errors encountered.
		Package was converted to a virtual application, but errors were generated. View the results AdminStudio Automated Application Converter Log Report for detailed information on the errors encountered.
		The Automated Application Converter was unable to convert this package to a virtual application.
		Conversion is in progress.
		Conversion is in progress, but a warning has been generated. View the results AdminStudio Automated Application Converter Log Report for detailed information on the errors encountered.
		An error was generated when converting one of the virtual formats which caused it to fail. However, the conversion to another one of the selected virtual formats continues.
		Conversion was cancelled.

Context Menu Commands on Results Tab

When you select a log node on the **Results** tab, the following commands are available on the context menu:

Table 1-14 • Context Menu Commands on Results Tab

Command	Description
View Report	Select to view the AdminStudio Automated Application Converter Log Report for the selected run.
Explore	Select to open the directory where the selected log file is located.
Remove	Select to delete the selected log file.



Note • If you have selected a child node under the parent Log node, the context menu is disabled.

Menus & Toolbar Buttons

The Automated Application Converter user interface includes the following menus, commands, and toolbar icons:

Table 1-15 • Automated Application Converter Menus and Commands





Menu	Command	Icon	Description
File	New		Click to open a new Automated Application Converter project file.
	Open...		Click to open an existing Automated Application Converter project file.
	Save		Click to save the open Automated Application Converter project file.
	Save As...		Click to save the open Automated Application Converter project file in a new location or using a different name.
	Recently Opened Items		Lists the most recently used list of Automated Application Converter projects. Click to open.
	Exit		Click to exit the Automated Application Converter.
Edit	Copy		Copy selected text. You can then paste it in an external program such as Notepad or Microsoft Word.
	Select All		Select all of the Packages, Machines, or Results in the list.
	Select None		Unselect all selected items.
View	Toolbars		Select one of the following options: <ul style="list-style-type: none"> • Standard—Toggles the display of the toolbar. • Customize—Select to customize which menu commands are displayed on the toolbar.
	Windows		Toggle the display of the Columns selector area, the Properties window and the Output window.
	Status Bar		Toggles the display of the status bar at the bottom of the interface.

Table 1-15 • Automated Application Converter Menus and Commands (cont.)










Menu	Command	Icon	Description
Tools	Project Wizard....		Click to open the Application Conversion Project Wizard , which guides you step-by-step through the entire virtualization process: adding virtual machines, adding packages, and virtualizing applications.
	Application Conversion Wizard...		Click to open the Application Conversion Wizard , which you can use to select the virtualization format you want to convert to and to perform conversion of the selected packages on the selected virtual machines.
	Explore		Open the directory containing the selected package.
	View Report		After selecting the top level node of a conversion run log on the Results tab (Log started Monday, April 01, 2010...), click this to open the AdminStudio Automated Application Converter Log report. See AdminStudio Automated Application Converter Log Report for more information.
	Test Virtualization Readiness		Click to test the selected package for virtualization readiness. The possible results are: <ul style="list-style-type: none"> —Package is ready to virtualize; no repackaging is required. <p>If a Windows Installer package does not contain any custom actions, conditional components, or unsupported tables, repackaging prior to virtualization is not required. An example of an unsupported table is the IniFile table, which changes files on the target machine in ways that cannot be statically determined.</p> <ul style="list-style-type: none"> —Package must be repackaged before it can be successfully virtualized. —The Automated Application Converter was unable to determine whether this package is ready to be virtualized directly or whether it requires repackaging.
	Cancel Virtualization		Cancel current conversion run.

Table 1-15 • Automated Application Converter Menus and Commands (cont.)

Menu	Command	Icon	Description
Help	Contents		Launches the Help Library, displaying the Contents tab.
	Index		Launches the Help Library, displaying the Index tab.
	Search		Launches the Help Library, displaying the Search tab.
	About the Automated Application Converter		Displays the About the Automated Application Converter dialog box.

Output Window

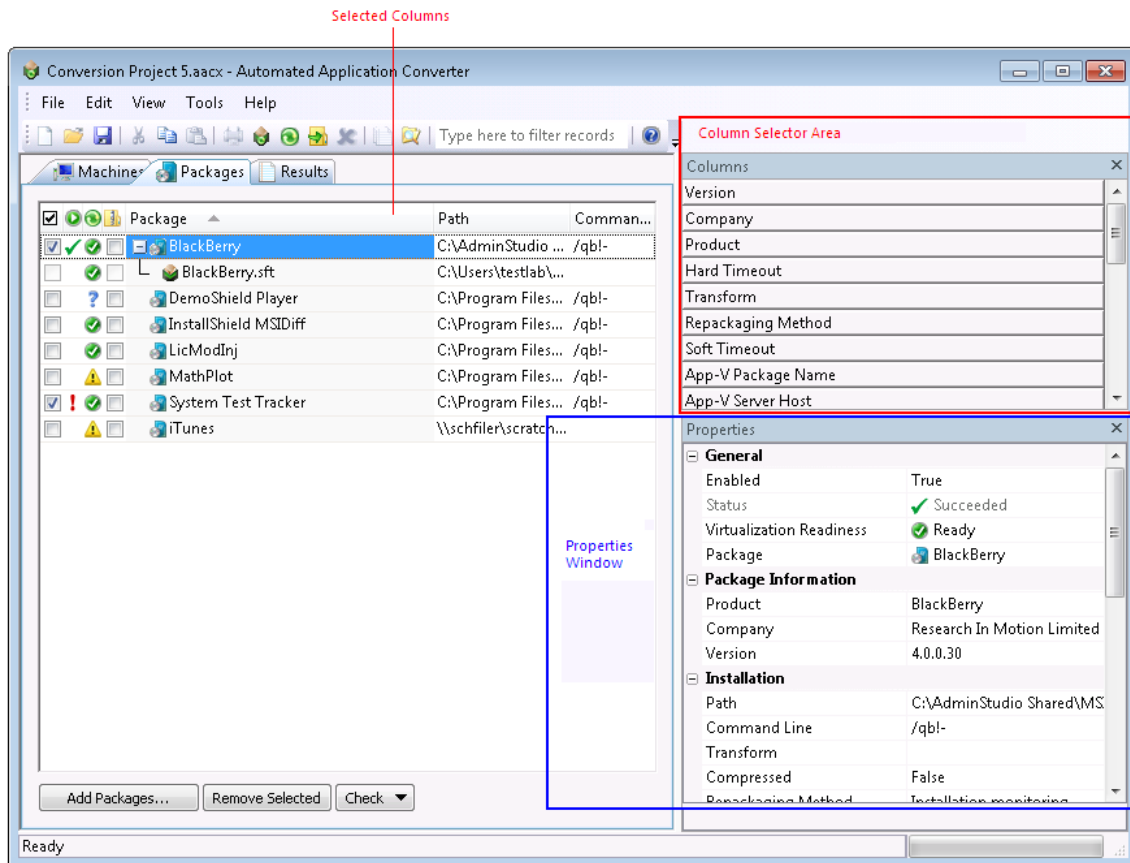
When a virtualization run is performed, the output messages and results are displayed in the Output Window.

You can copy the results in the Output window and paste them in an outside location, such as Notepad or Microsoft Word.

All of the messages and results listed in the Output window can also be viewed in the AdminStudio Automated Application Converter Log report. See [AdminStudio Automated Application Converter Log Report](#).

Column Selector and Properties Windows

By default, the **Packages** and **Machines** tabs list several columns of information. However, additional columns of information can be viewed by selecting one of the fields in the **Column Selector** area and dragging it onto the list. Also, the values for these fields for the selected package or machine can be viewed in the **Properties** window.



A description of each of these properties can be found in [Packages Tab](#) and [Machines Tab](#).



Note • You can sort the lists on the **Package** and **Machines** tabs, change the columns that are displayed, change the column order, resize the columns, and group the lists by a specific column. See [Using List Features](#) for more information.

AdminStudio Automated Application Converter Log Report

The AdminStudio Automated Application Converter Log is an HTML report you can view that lists the following information for each conversion run:

- **Machines**—List of the virtual machines used in the conversion run.
- **Packages**—List of the packages that included in this conversion run. The packages are linked to the Package Conversion Messages section of the report for that package.
- **Log Results / General Messages**—Start time, number of errors and warnings generated, and general processing messages.
- **Log Results / Package Conversion Messages**—Conversion messages for each package that the Automated Application Converter attempted to convert.

The following is an example of an AdminStudio Automated Application Converter Log report:

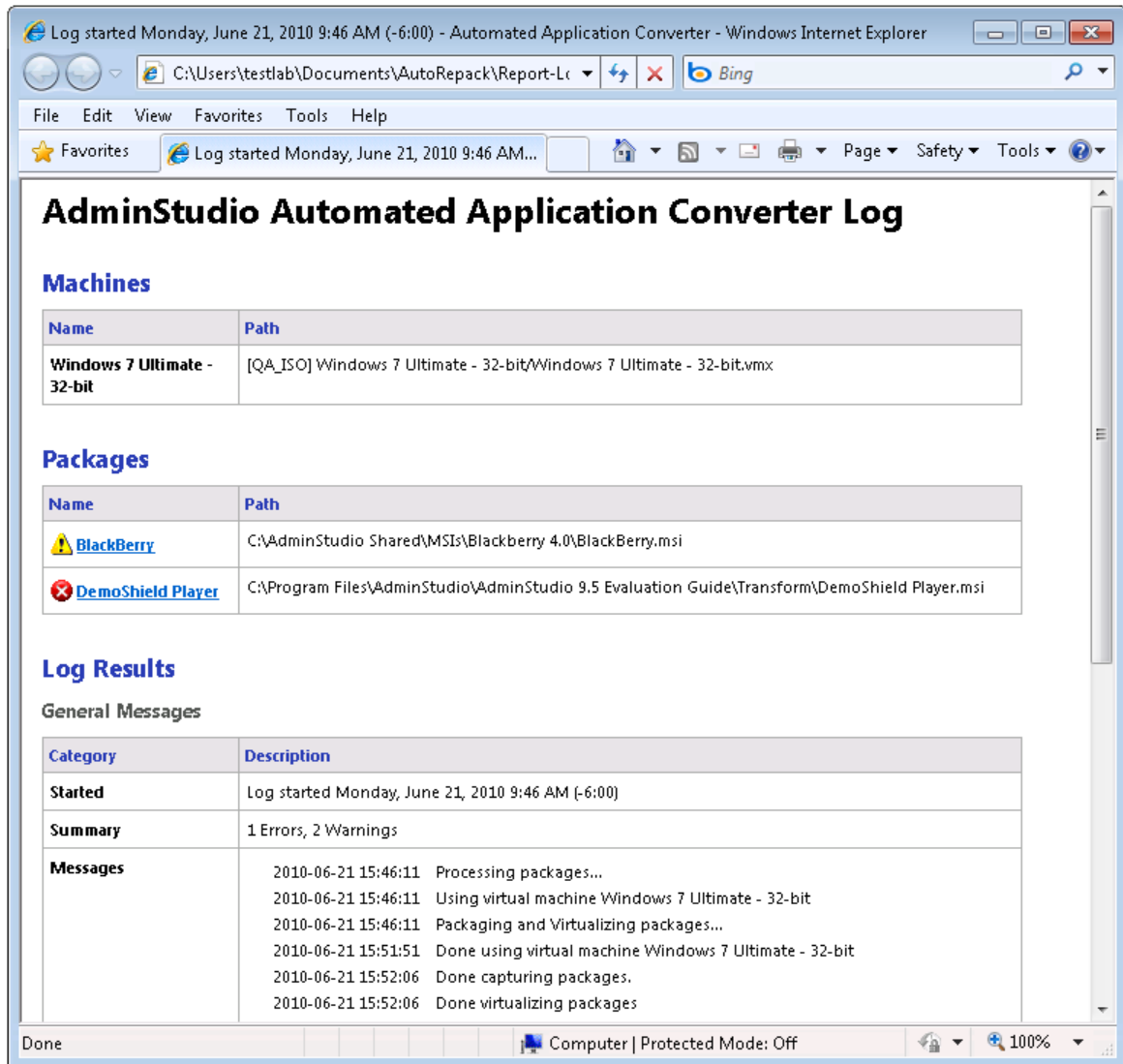


Figure 1-13: AdminStudio Automated Application Converter Log Report

Viewing an AdminStudio Automated Application Converter Log Report

To view an AdminStudio Automated Application Converter Log report, perform the following steps:



Task: *To view an AdminStudio Automated Application Converter Log report:*

1. Open the **Results** tab.
2. Select the top level node of a conversion run log (Log started Monday, June 21, 2010...), and do one of the following:
 - Click **View Report** on the **Tools** menu.
 - Select **View Report** from the context menu.
 - Click the **Reports** icon on the toolbar.
 - Press Ctrl+R.

The report opens in a new browser window.

Viewing Debug Messages

By default, debug messages that occur during a conversion run are saved in the log report, but the display of those debug messages is turned off. However, if you are using Microsoft Internet Explorer 8 as your default browser, you can choose to view those debug messages by performing the following steps:



Task: *Viewing debug messages in an Automated Application Converter Log Report:*

1. Open an Automated Application Converter Log Report as described in [Viewing an AdminStudio Automated Application Converter Log Report](#).
2. Press F12. The **Developer Tools** window opens.
3. Click on the **CSS** tab. The CSS file for the log report opens, displaying checkmarks next to each class and each property.
4. Scroll down to locate the following class: `.debug` (not `P.debug`).

5. Clear the selection of the `display : none` property, as shown below:

AdminStudio Automated Application Converter Log

The screenshot shows the AdminStudio Automated Application Converter Log window. The main pane displays a tree view of CSS properties for various elements. A red box highlights the `display : none` property under a `.debug` class. Below the tree view, a table shows the log messages.

Package	Messages
openproj-1.4 0 Errors, 0 Warnings	2010-06-22 11:51:54 Package openproj-1.4 will be repackaged and virtualized Debug Message
	2010-06-22 11:51:54 Repackaging is required for unsupported custom actions.
	2010-06-22 11:52:01 Processing package openproj-1.4

6. Return to the log report window. The debug messages are now displayed in green.

Using List Features

All of the lists displayed in the Automated Application Converter user interface—including the lists shown on Wizard panels—implement the same list features, which allow you to group a list by any column, sort a list by any column, resize list columns, change which columns are displayed, and change column order.

- [Sorting Lists](#)
- [Changing Which List Columns Are Displayed](#)
- [Changing Column Order](#)
- [Resizing List Columns](#)
- [Grouping Lists](#)

Sorting Lists

You can sort lists by any column by clicking on the header of the column you want to sort by or by selecting a column header and making a selection from the context menu.



Task: *To sort a list by a column heading:*

1. Open the **Machines**, **Packages**, or **Results** tab.
2. To sort by a column heading, click on the column heading to toggle through the three sort order states, which are identified by a visual indicator:
 - **Sorted in ascending order**—When the column is sorted in ascending order, an up arrow is displayed in the header row.
 - **Sorted in descending order**—When the column is sorted in descending order, a down arrow is displayed in the header row.
 - **Not sorted**—When the column is not sorted (meaning that the list is either sorted by another column or is just listed in the default order that the records appear in the database), no arrow is displayed.



Tip • *Another way to do this is to select the column header of the column you want to sort, and then select **Sort Ascending** or **Sort Descending** from the context menu.*

3. To sort just the children of the top level items (not the top level items), select the column header of the column you want to sort by, and then select **Sort Children** from the context menu.

Changing Which List Columns Are Displayed

To improve readability or clarity, you can choose to remove a column from a list. When you remove a column from a list, you are just turning off the display of that column, not deleting the data that was in that column. You can restore a removed column to the list at any time.

Adding/Restoring a Column to a List

To restore the display of a hidden column to a list, perform the following steps.



Task: *To restore the display of a deleted column to a list:*

1. To restore the display of a deleted column to a list, point the cursor anywhere in the heading row.
2. Point to **Columns** in the context menu. A list of all of the available columns for this list is displayed.
3. Select the name of the column that you want to restore to the list.



Tip • To add a column to the list, you can also click and drag a column header from the **Column Selector** area to the header row of the list.

Removing a Column from a List

To remove a column from a list, perform the following steps.



Task: *To remove a column from a list:*

1. To remove a column from a list, point the cursor anywhere in the heading row.
2. Point to **Columns** in the context menu. A list of all of the available columns for this list is displayed, with those that are currently selected for display indicated by a check mark.
3. Select the name of the column to clear the selection.

The column is now hidden.



Note • To remove a column to the list, you can also click and drag a column header from the header row of the list to the **Column Selector** area.

Changing Column Order

To help compare the values of columns, you can click and drag to change the order of columns in a list.



Task: *To change column order:*

1. Click on the column header of the column you wish to relocate.
2. While holding the mouse button down, drag the column header on top of the rule between two columns.
3. When the red arrows appear, release the mouse button to perform the move.

Resizing List Columns

To improve the readability of the values in a column of a list, you can click and drag to resize a column.



Task: *To resize a column:*

1. Position your cursor at the right side of the column header of the column that you want to resize and click. After you click, the cursor turns into a double-arrow icon:
2. While holding the mouse button down, drag the edge of the column left or right until it is the desired width.

Grouping Lists

This section explains how to group a list by a column, ungroup a list, and create subgroupings.

- [Grouping an Ungrouped List](#)
- [Ungrouping a List](#)

Grouping an Ungrouped List

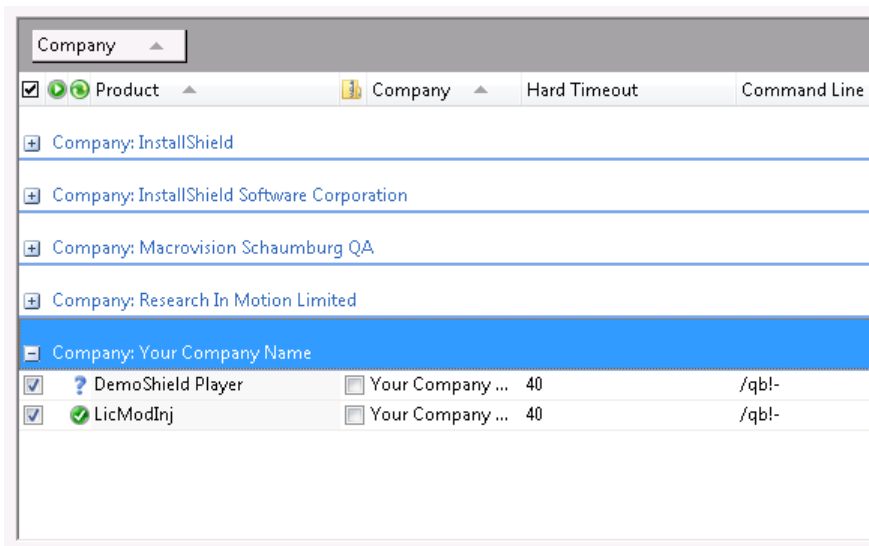
If a list is not grouped by a column, no Group By Box is displayed.

To group by a column, perform the following steps.



Task: *To group a list by a column heading:*

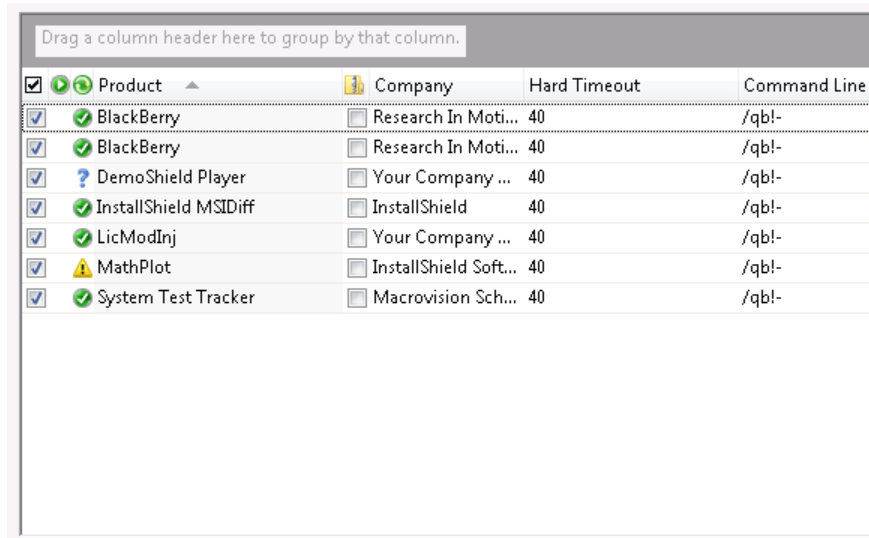
1. Click on the column header that you want to group by and select **Group By [Column Name]** from the context menu.



When you group by a column header, the following occurs:

- The name of the column header that you have chosen now appears in the Group By Box.
- The name of the column header that you selected and each of its values (in the format of **CoLumn Name: VaLue**) is now listed in a bar at the left of the list, with all records associated with that value of that column grouped underneath that bar.
- One group (bar) appears for each of the values of the selected column. Click the plus sign to expand the list.

2. To display the Group By box without performing any grouping, select **Show Group Header** from the context menu. The text *Drag a column header here to group by that column.* is displayed in the **Group By** box:



Note • When the Group By box is displayed, you can perform grouping by dragging a column header to the Group By box.

Ungrouping a List

Perform the following steps to ungroup a list.



Task: **To ungroup a list or change a list's Group By column:**

1. Click on the name of the column header in the Group By Box and drag it back to the header row in the list to the location where you want the column to be displayed.



Tip • Another way to do this is to click on the column header name and clearing the **Group By [Column Name]** selection on the context menu.

The list is now ungrouped.

2. If you want to choose another column to use to group the list by, follow the steps listed above under [Grouping an Ungrouped List](#).

Wizards

The [Application Conversion Project Wizard](#) guides you step-by-step through the entire virtualization process: adding virtual machines, adding packages, and virtualizing packages. You can also choose to perform each of these tasks separately by using one of the other three wizards that are provided:

Table 1-16 • Automated Application Converter Wizards

If you want to ...	Use this wizard ...	Description and Purpose
Add packages	Package Import Wizard	Add packages from an AdminStudio Application Catalog, a Microsoft SCCM server, or from a local or network file system.
Add virtual machines	Virtual Machine Import Wizard	Add virtual machines to use to perform automated repackaging of Windows Installer packages.
Virtualize packages	Application Conversion Wizard	Virtualize packages to the virtual formats you specify.

You can also use the [Package Publish Wizard](#) to publish converted packages to an AdminStudio Application Catalog or Microsoft SCCM Server.


Application Conversion Project Wizard

When using the Automated Application Converter to perform batch conversion to virtual packages, there are three main procedures that you perform:

- **Step 1: Select packages**—Select packages to virtualize and/or repackage.
- **Step 2: Select machines**—Select the virtual machines that you want to use during automated repackaging.
- **Step 3: Select formats and perform conversion**—Select the virtualization formats you want to convert to and perform the conversion.

You can use the **Application Conversion Project Wizard** to perform all three of these steps in one guided procedure.

You can launch the Application Conversion Project Wizard in one of two ways:

- **Creating a new project upon product launch**—The **Open Project** panel opens automatically when you launch the Automated Application Converter or when you select **New Project** on the **File** menu.
- **Creating a new project after product launch**—Select **Project Wizard** on the **Tools** menu or when you click the Project Wizard  icon on the toolbar, or select **New Project** on the **File** menu.

Chapter 1: Using the AdminStudio Automated Application Converter

Reference

The Application Conversion Project Wizard includes the following panels:

- [Open Project Panel](#)
- [Application Conversion Project Wizard Welcome](#)
- [Select Package Source](#)
- [Connect to an AdminStudio Application Catalog](#)
- [Connect to a Microsoft SCCM Server](#)
- [Select Packages](#)
- [Selected Package List](#)
- [Select Virtual Machine Source](#)
- [Select Virtual Machines from a Microsoft Hyper-V Server](#)
- [Select Virtual Machines from a VMware ESX or ESXi Server](#)
- [Select Virtual Machines](#)
- [User Credentials](#)
- [Initial Configuration Complete](#)
- [Select Output Formats](#)
- [Automated Repackaging on Virtual Machines](#)
- [Application Conversion Project Wizard Complete Panel](#)

Automated Application Converter’s Other Wizards

Each of the Automated Application Converter’s other three wizards—[Virtual Machine Import Wizard](#), [Package Import Wizard](#), and [Application Conversion Wizard](#)—consist of a subset of the panels included in the Application Conversion Project Wizard. The following table lists the panels in each of these three wizards.

Table 1-17 • Breakdown of Panels in the Automated Application Converter Wizards

Panel Name	Application Conversion Project Wizard	Package Import Wizard	Virtual Machine Import Wizard	Application Conversion Wizard
Select Package Source	X	X		
Connect to an AdminStudio Application Catalog	X	X		
Connect to a Microsoft SCCM Server	X	X		
Select Packages	X	X		
Selected Package List	X	X		
Select Virtual Machine Source	X		X	
Select Virtual Machines from a Microsoft Hyper-V Server	X		X	
Select Virtual Machines from a VMware ESX or ESXi Server	X		X	
Select Virtual Machines	X		X	
User Credentials	X		X	
Initial Configuration Complete	X			
Select Output Formats	X			X
Automated Repackaging on Virtual Machines	X			X

Open Project Panel

The **Open Project** panel opens automatically when you launch the Automated Application Converter or when you select **New Project** on the **File** menu.

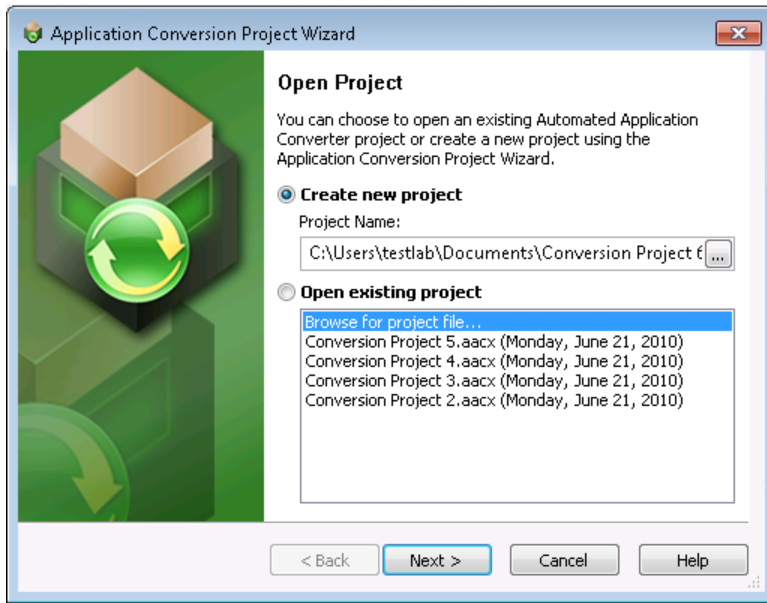



Figure 1-14: Open Project Panel

You have the following options:

- **Create a new project**—If you select the **Create a new project** option, click **Next** to continue with the wizard. You will be prompted to name and save the project when you begin conversion or exit the Automated Application Converter.
- **Select an existing project**—If you select an existing project from the list, click **Finish** to open the project.

Application Conversion Project Wizard Welcome

The **Application Conversion Project Wizard Welcome** panel opens when you select **Project Wizard** on the **Tools** menu or when you click the Project Wizard  icon on the toolbar.

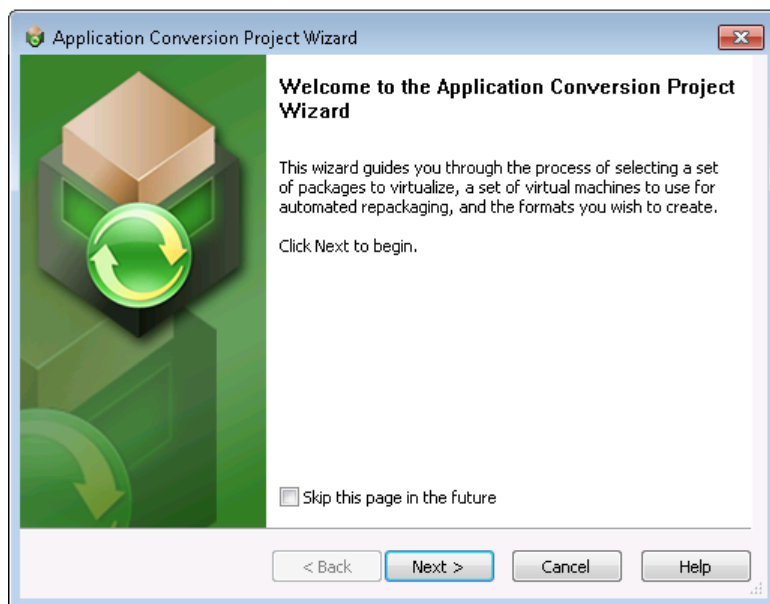


Figure 1-15: Application Conversion Project Wizard Welcome Panel

If you would prefer to perform each of these steps separately, you can instead use the following wizards:

Table 1-18 • Automated Application Converter Wizards

Wizard	Description
Virtual Machine Import Wizard	Use to add virtual machines to your project which can be used to perform automated repackaging into Windows Installer packages.
Package Import Wizard	Use to select packages from a Microsoft SCCM Server, AdminStudio Application Catalog, or from a file system to virtualize.
Application Conversion Wizard	Use to select the virtualization format you want to convert to and to perform the conversion.

Select Package Source

On the **Select Package Source** panel, you select the source that contains the packages that you want to virtualize and/or repackage.

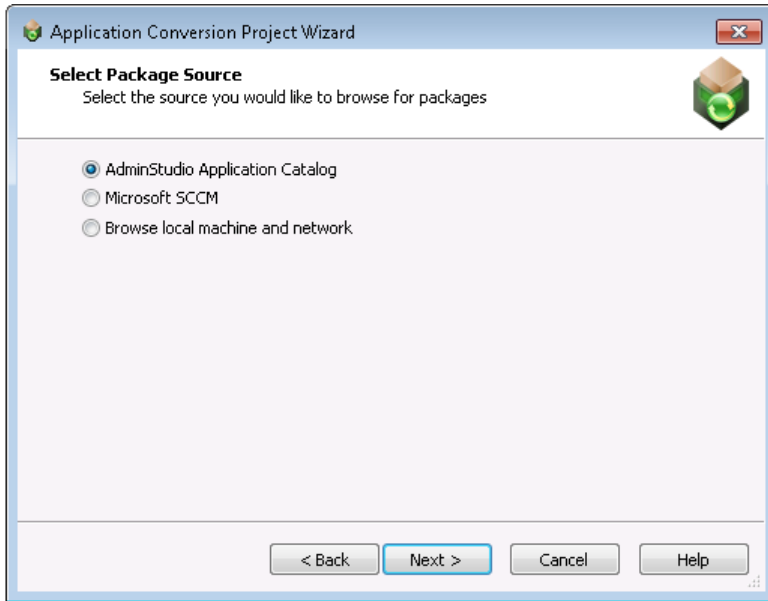


Figure 1-16: Select Package Source Panel

The **Select Package Source** panel includes the following options:

Table 1-19 • Select Package Source Panel

Option	Description
AdminStudio Application Catalog	Select this option to connect to an AdminStudio Application Catalog and add all of the installations in that catalog to the list of packages to convert. If you select this option, the Connect to an AdminStudio Application Catalog panel opens, prompting you to login to an Application Catalog.
Microsoft SCCM	Select this option to connect to a Microsoft System Center Configuration Manager Server and add all of the installations on this server to the list of packages to convert. If you select this option, the Connect to a Microsoft SCCM Server panel opens, prompting you to login to a Microsoft SCCM Server.
Browse local machine and network	Select this option to browse a local or network machine to add installations to the list of packages to convert. If you select this option, the Selected Package List panel opens, where you are prompted to select an installation file or a directory of installation files to add to the list of packages to convert.

Connect to an AdminStudio Application Catalog

On the **Connect to an AdminStudio Application Catalog** panel, which opens if you select **AdminStudio Application Catalog** on the **Select Package Source** panel, you enter connection information to connect to an AdminStudio Application Catalog SQL database.

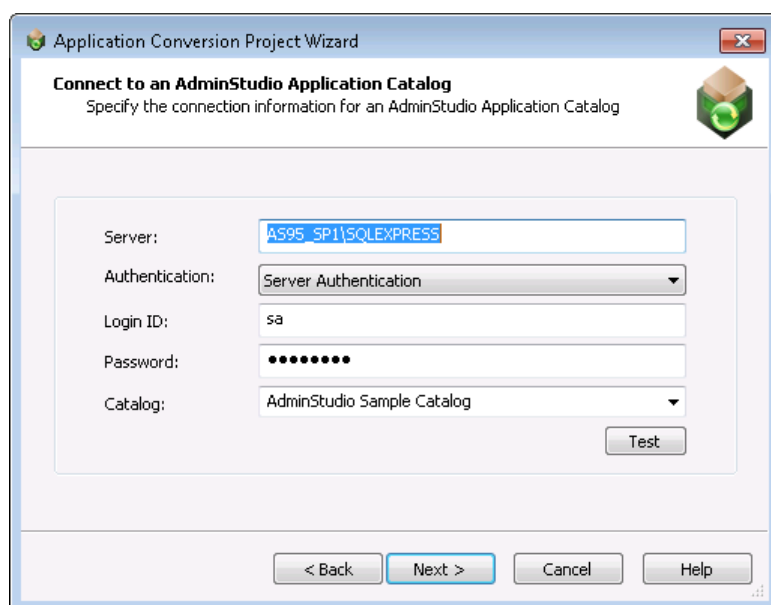


Figure 1-17: Connect to an AdminStudio Application Catalog Panel

On the **Connect to an AdminStudio Application Catalog** panel, enter the following information:

Table 1-20 • Connect to an AdminStudio Application Catalog Panel


Option	Description
Server	Enter the name of the SQL Server that you want to connect to.
Authentication	<p>Choose one of the following options:</p> <ul style="list-style-type: none"> • Server Authentication—Choose this option if you want to use SQL Server login identification to log into this Application Catalog. Then enter the appropriate Login ID and Password. • Windows Authentication—Choose this option if you want to use Windows network authentication (your network login ID) to log into this Application Catalog. <p> Note • After you successfully connect to an Application Catalog, the next time you open this panel, those previously-entered values (except the Password) will pre-populate this panel.</p>

Table 1-20 • Connect to an AdminStudio Application Catalog Panel

Option	Description
Catalog	Enter the name of the existing AdminStudio Application Catalog database that you want to connect to

Connect to a Microsoft SCCM Server

On the **Connect to a Microsoft SCCM Server** panel, which opens if you select **Microsoft SCCM** on the **Select Package Source** panel, you enter connection information to connect to a Microsoft System Center Configuration Manager (SCCM) server.

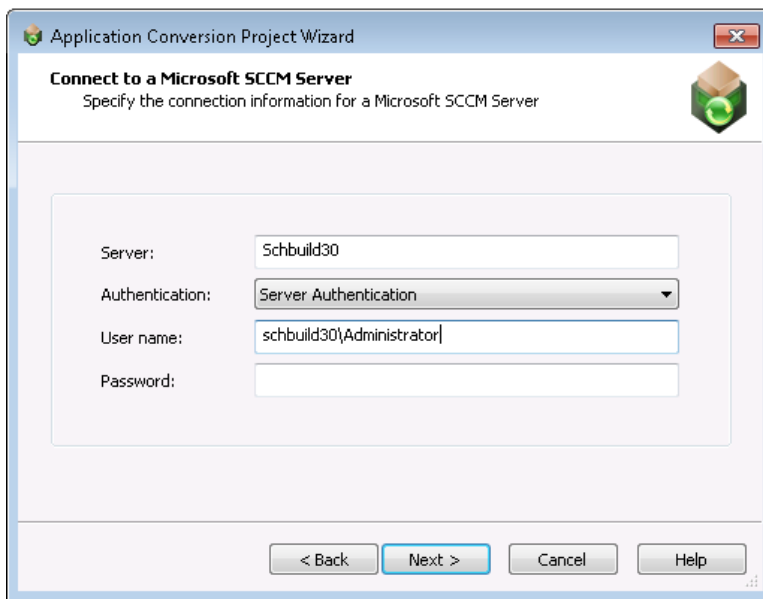



Figure 1-18: Connect to a Microsoft SCCM Server Panel

On the **Connect to a Microsoft SCCM Server** panel, enter the following information:

Table 1-21 • Select Packages from Application Catalog Panel

Option	Description
Server	Enter the name of the Microsoft SCCM Server that you want to connect to.
Authentication	<p>Choose one of the following options:</p> <ul style="list-style-type: none"> • Server Authentication—Choose this option if you want to use Microsoft SCCM Server login identification to log into this SCCM Server. Then enter the appropriate User name and Password. • Windows Authentication—Choose this option if you want to use Windows network authentication (your network login ID) to log into this Microsoft SCCM Server. <div style="text-align: center; margin-top: 10px;">  </div> <hr style="width: 100%; margin-top: 10px;"/> <p>Note • After you successfully connect to a Microsoft SCCM Server, the next time you open this panel, those previously-entered values (except the Password) will pre-populate this panel.</p>

Select Packages

The contents of the **Select Packages** panel depends upon the selection you made on the **Select Package Source** panel:

- **Browse local machine and network**—If you selected this option on the **Select Package Source** panel, there are no packages listed on the **Select Packages** panel. You need to click **Browse Folders** or **Browse Files** to select packages to convert. The **Browse For Folder** or **Select Package Installation File** dialog box would open. See [Automated Application Converter's Selection Rules When Adding Packages from a Directory](#) for more information.

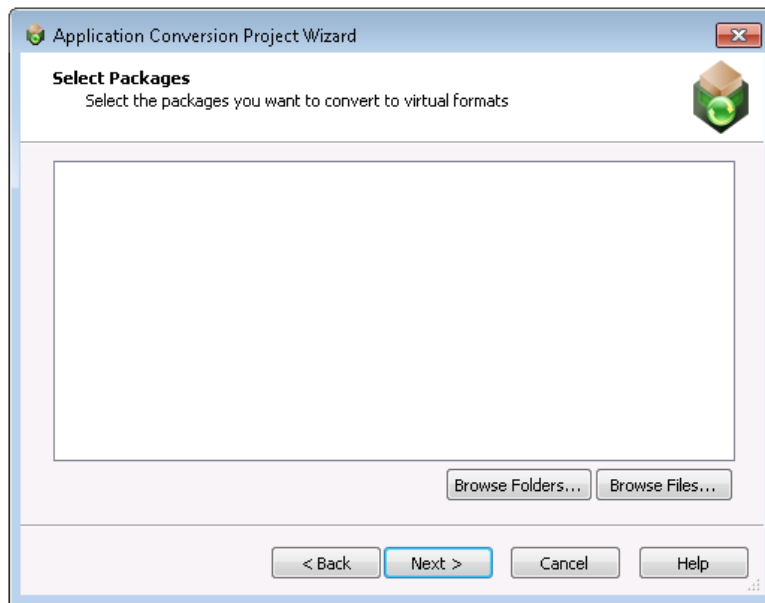


Figure 1-19: Select Packages Panel / No Packages Listed

- **AdminStudio Application Catalog** or **Microsoft SCCM**—If you selected either of these options on the **Select Package Source** panel, the **Select Packages** panel lists all of the packages in the connected package source, in a tree format.

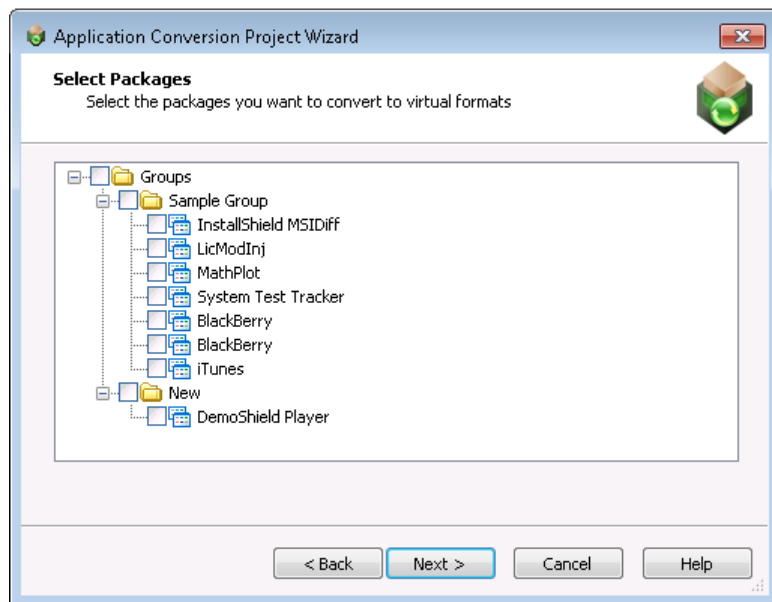


Figure 1-20: Select Packages Panel / Packages Listed

Select the packages that you want to convert and click **Next** to continue.

Selected Package List

The **Selected Package List** panel lists all of the packages you selected on the [Select Packages](#) panel.

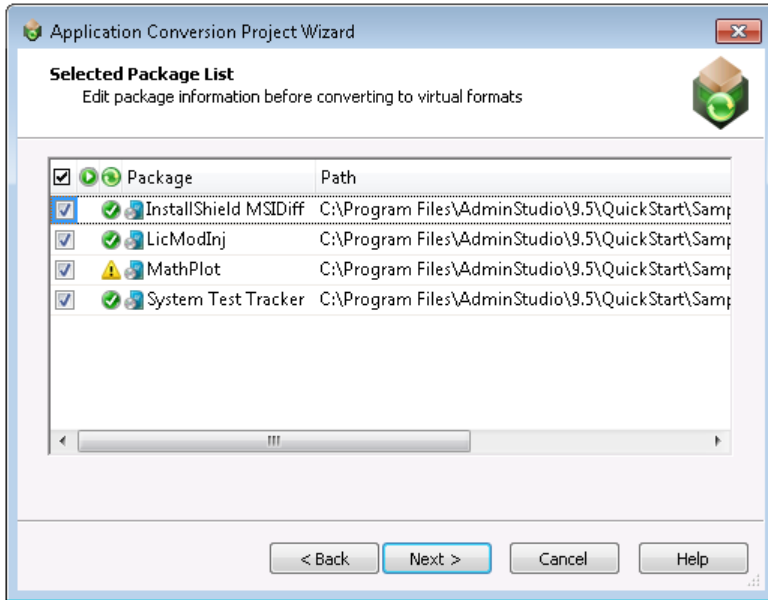


Figure 1-21: Selected Package List Panel

The **Selected Package List** panel includes the following options:

Table 1-22 • Selected Package List Panel








Option	Description
<input checked="" type="checkbox"/>	Selection column. To select a package for conversion, click the check box in this column.
	Indicates the status of the package. On this panel, no status is indicated, but when this column is shown on the Packages tab, status will be indicated by an icon. See Packages Tab for more information.

Table 1-22 • Selected Package List Panel (cont.)

Option	Description
Virtualization Readiness 	<p>When you add a package to the Selected Packages List panel, the Automated Application Converter does a quick check to identify that package's virtualization readiness: whether the package can be virtualized directly or whether it requires repackaging before virtualization. An icon is displayed in this column to indicate the virtualization readiness:</p> <p>You can click on the icon in this column to override the Virtualization readiness status that was automatically been assigned to this package by the Automated Application Converter. The choices are:</p> <ul style="list-style-type: none"> • Ready —Package is ready to virtualize; no repackaging is required. • Requires repackaging —Package must be repackaged before it can be successfully virtualized. • Unknown —The Automated Application Converter was unable to determine whether this package is ready to be virtualized directly or whether it requires repackaging. <p>You can click on the icon in this column to override the Virtualization readiness status that has automatically been assigned to this package. The choices are:</p> <ul style="list-style-type: none"> • Unknown • Ready • Requires repackaging
Package	Lists the name of the Windows Installer file or legacy installation file that you have added to the Select Packages panel.
Path	<p>Lists the path from where the package was selected locally or from where it was originally imported into the AdminStudio Application Catalog or Microsoft SCCM Server.</p>  <hr/> <p>Note • <i>It is recommended that you use UNC path when importing packages into the Application Catalog or publishing packages to Microsoft SCCM Server.</i></p>  <hr/> <p>Note • <i>If you are adding packages from an AdminStudio Application Catalog or a Microsoft SCCM Server installed on a machine other than the machine where the Automated Application Converter is installed, make sure that the package source path listed here is accessible to the Automated Application Converter machine.</i></p>
Command Line	Editable field that lists the command line parameters required to run this installation silently.

Automated Application Converter's Selection Rules When Adding Packages from a Directory

Instead of adding packages from an AdminStudio Application Catalog or a Microsoft SCCM Server, you can choose to add a directory of packages from your local machine or network by doing the following:

- On the **Select Package Source** panel, select **Browse local machine and network** and click **Next**. The **Select Packages** panel opens.
- On the **Select Packages** panel, click **Browse Folders** and select a directory that contains multiple Windows Installer files (.msi), installation script files (.vbs, .bat, .cmd, .ps1), and/or legacy setups (.exe).

When adding packages from a directory, it is recommended that you organize the packages you want to convert in one root directory, with each package in its own first level subdirectory, such as:

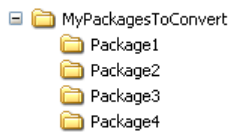


Figure 1-22: Recommended Directory Structure When Adding Packages from a Directory

When you click the **Browse Folders** button and select a folder (such as MyPackagesToConvert), the Automated Application Converter scans that folder's first-level subfolders (such as Package1, Package2, Package3, etc.) and uses specific rules to determine which packages it will add to the list on the **Select Packages** panel and which of those packages will be selected:

- **All .msi, .exe, and script files are added to the list**—All .msi files, .exe files, and script files in the first-level subfolders are added to the list.
- **Only some of the packages are selected**—The Automated Application Converter uses the following rules to determine which of the packages that it adds to the list are selected:
 - .msi files are always selected.
 - .exe files are only selected if there are no .msi files in that folder.
 - Script files are only selected if there are neither .msi files nor .exe files in that folder.
- **If a first-level subfolder does not contain any .msi, .exe, or script files, its subfolders are scanned**—If a first-level subfolder does not contain any .msi, .exe, or script files, the Automated Application Converter will scan its child subfolders to locate package files. However, if a first-level subfolder does contain an .msi, .exe, or script file, its subfolders are not scanned.

The following table demonstrates these rules:

Table 1-23 • Automated Application Converter’s Selection Rules When Adding Packages from a Directory

If the root subdirectory contains...	What are added to the list? Which are selected?	Continue to search subdirectories?
MSI files only	<input checked="" type="checkbox"/> MSIs (added and selected)	No
MSI files and EXE or script files	<input checked="" type="checkbox"/> MSIs (added and selected) <input type="checkbox"/> EXEs (added, not selected) <input type="checkbox"/> Scripts (added, not selected)	No
EXE files only	<input checked="" type="checkbox"/> EXEs (added and selected)	No
EXE and script files	<input checked="" type="checkbox"/> EXEs (added and selected) <input type="checkbox"/> Scripts (added, not selected)	No
Script files only	<input checked="" type="checkbox"/> Scripts (added and selected)	No
None of the above	None	Yes

The following diagram gives a visual representation of these rules in action:

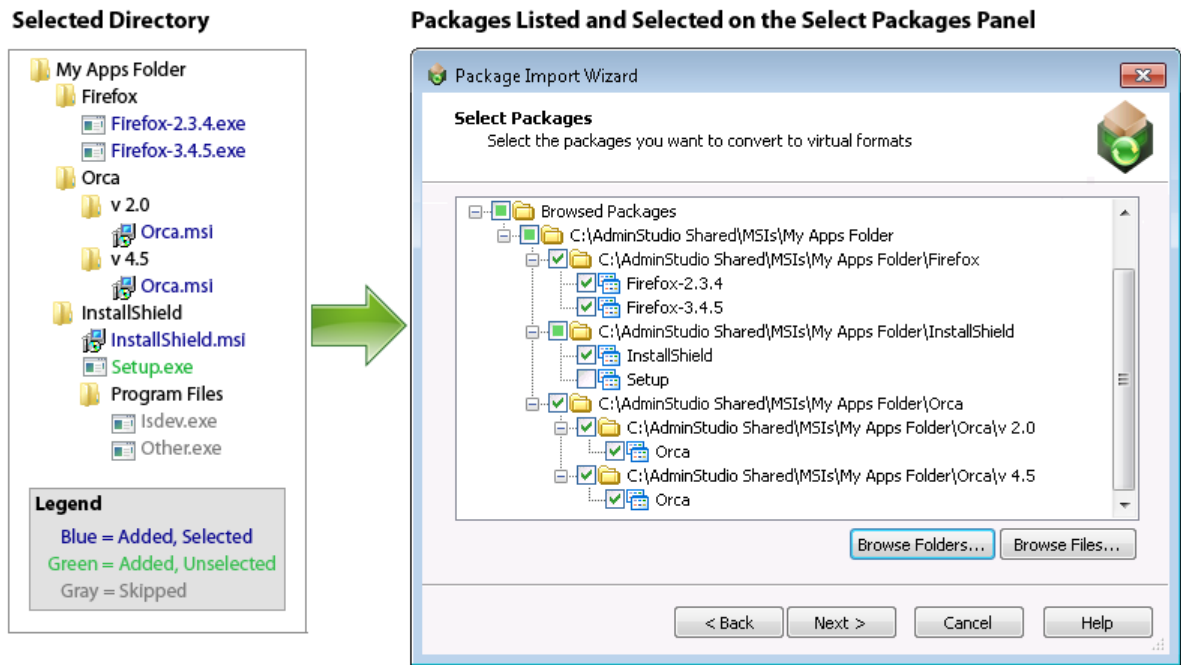


Figure 1-23: Example of How Packages are Added to List When a Directory is Selected

Select Virtual Machine Source

On the **Select Virtual Machine Source** panel, you select the source location of the virtual machines you want to use with the Automated Application Converter to perform automated repackaging.

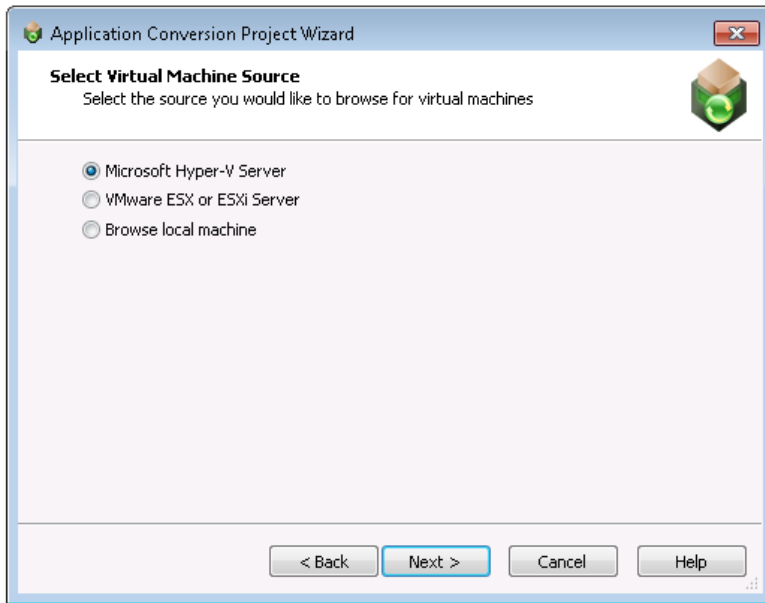


Figure 1-24: Select Virtual Machine Source Panel



Note • If none of the packages selected on the **Selected Package List** panel require repackaging in order to be converted into a virtual package, the **Select Virtual Machine Source** panel will not be displayed. Instead, the **Initial Configuration Complete** panel will open.

On the **Select Virtual Machine Source** panel, select one of the following options:

Table 1-24 • Select Virtual Machine Source Panel

Option	Description
Microsoft Hyper-V Server	Select this option to connect to a Microsoft Hyper-V Server. You will then be prompted for login information on the Select Virtual Machines from a Microsoft Hyper-V Server panel.
VMware ESX or ESXi Server	Select this option to connect to a VMware ESX or ESXi Server. You will then be prompted for login information on the Select Virtual Machines from a VMware ESX or ESXi Server panel.
Browse local machine	Select this option to connect to a VMware Workstation virtual image installed locally. The Select Virtual Machines opens, where will be prompted to select either a VMware Workstation image or directory of images.

Select Virtual Machines from a Microsoft Hyper-V Server

On the **Select Virtual Machines from a Microsoft Hyper-V Server** panel, you enter a server name and the login information to connect to a Microsoft Hyper-V Server.

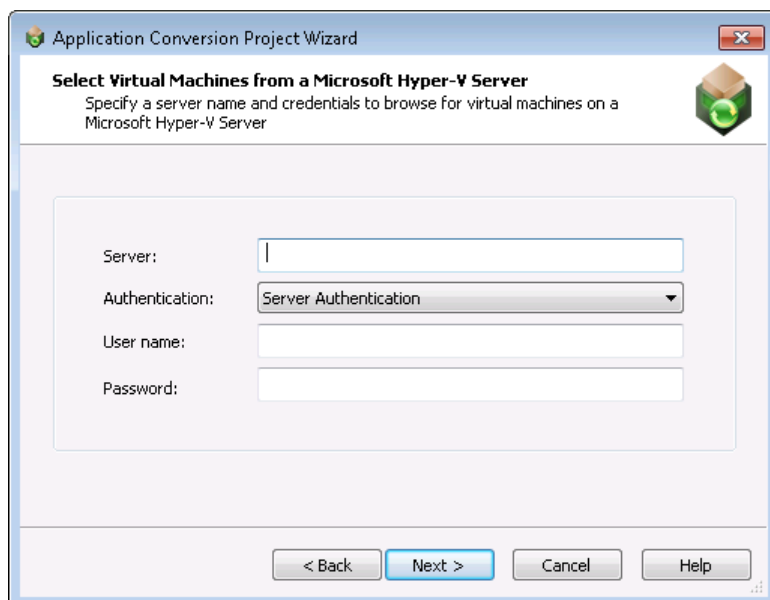


Figure 1-25: Select Virtual Machines from a Microsoft Hyper-V Server Panel

On the **Select Virtual Machines from a Microsoft Hyper-V Server** panel, enter the following information:

Table 1-25 • Select Virtual Machines from a Microsoft Hyper-V Server

Option	Description
Server Name	Enter the server name of the Microsoft Hyper-V Server that you want to connect to.
Authentication	Select one of the following options: <ul style="list-style-type: none"> • Server Authentication—Select this option if you want to connect to the Hyper-V Server using a User name and Password that you specify. • Windows Authentication—Select this option to use the credentials of the logged in user to login to the Hyper-V Server.

Select Virtual Machines from a VMware ESX or ESXi Server

On the **Select Virtual Machines from a VMware ESX or ESXi Server** panel, you enter a server name and the login information to connect to a VMware ESX or ESXi Server.

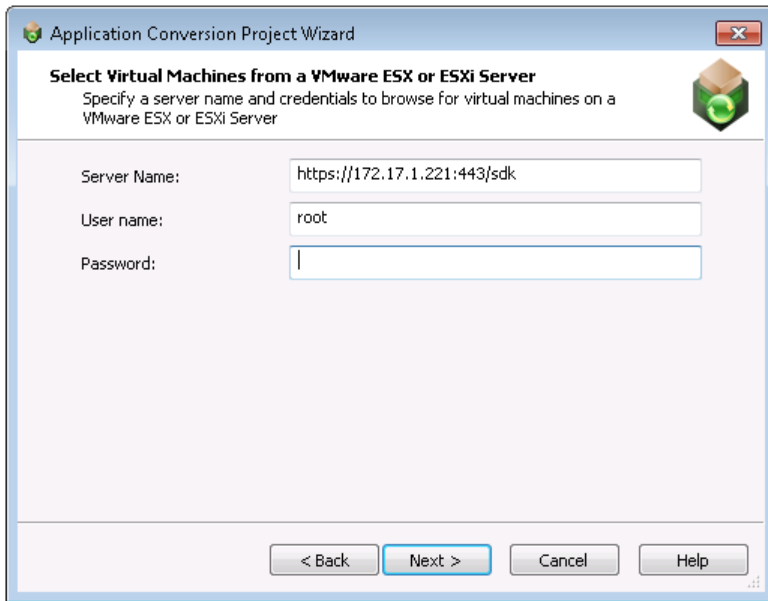


Figure 1-26: Select Virtual Machines from a VMware ESX or ESXi Server Panel

On the **Select Virtual Machines from a VMware ESX or ESXi Server** panel, enter the following information:

Table 1-26 • Select Virtual Machines from a VMware ESX or ESXi Server Panel

Option	Description
Server Name	Enter the name of the VMware ESX or ESXi server you want to connect to.
User name	Enter the login ID for the VMware ESX or ESXi server.
Password	Enter the password for the VMware ESX or ESXi server.

Select Virtual Machines

The contents of the **Select Virtual Machines** panel depends upon the selection you made on the **Select Virtual Machine Source** panel:

- **Browse local machine**—If you selected this option, there are no virtual machines listed on the **Select Virtual Machines** panel. You need to click **Browse Folders** or **Browse Files** to select virtual images. The [Browse for Folder Dialog Box](#) or [Select Virtual Machine Image File Dialog Box](#) would open.

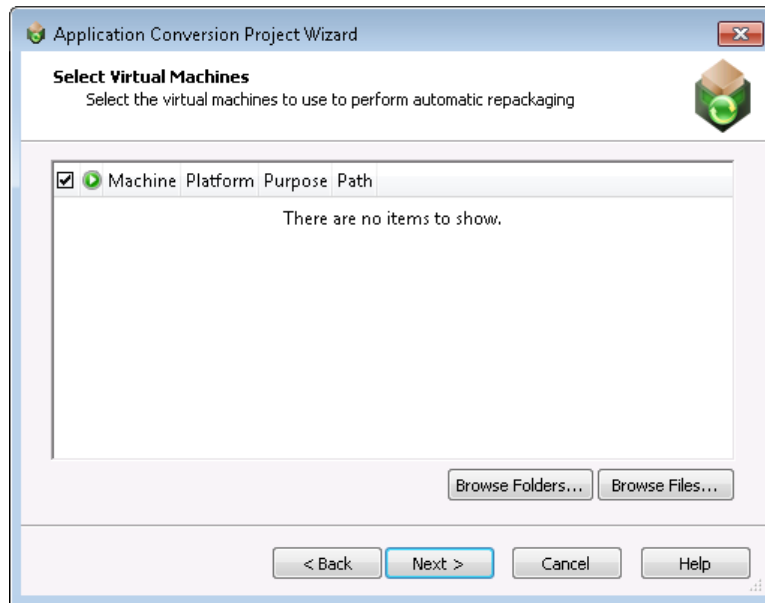


Figure 1-27: Select Virtual Machines Panel / No Machines Listed

- Microsoft Hyper-V Server or VMware ESX or ESXi Server**—If you selected either of these options on the **Select Virtual Machine Source** panel, and have connected to the server, the **Select Virtual Machines** panel lists all of the virtual machines found on the selected server, but does not automatically select all of them.

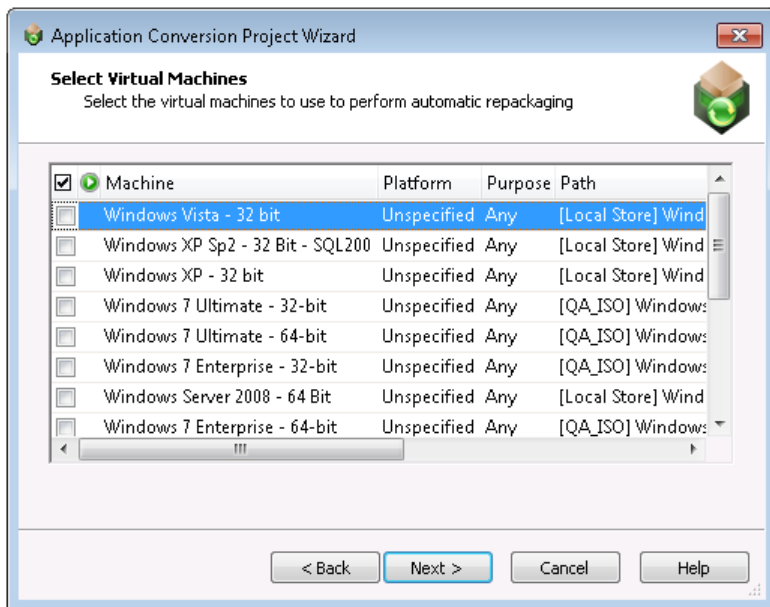


Figure 1-28: Select Virtual Machines Panel / Machines Listed

The **Select Virtual Machines** panel includes the following options:

Table 1-27 • Select Virtual Machines Panel

Option	Description
<input checked="" type="checkbox"/>	Selection column. To select a virtual machine to use for automated repackaging, click the check box in this column.
	Indicates the status of the virtual machine. On the Select Virtual Machines panel, no status is indicated, but when this column is shown on the Machines tab, status will be indicated by an icon. See Machines Tab for more information.
Machine	Name of the virtual machine image.

Table 1-27 • Select Virtual Machines Panel (cont.)

Option	Description
Platform	<p>Identifies the operating system platform of the virtual machine. When you select a virtual machine to add to the Automated Application Converter, you need to manually identify the operating system platform either on the Select Virtual Machines panel or by clicking in this field on the Machines tab and making a selection from the list.</p> <p>When you perform a conversion run, you are given the opportunity (on the Automated Repackaging on Virtual Machines panel) to either select a specific platform to use for the repackaging of the selected packages, or to select Any Platform, meaning that all of the selected virtual machines will be used for repackaging.</p>
Path	Path to the virtual machine on the virtual machine server or your local machine.

User Credentials

On the **User Credentials** panel, enter the user name and password to use to access the virtual machines you selected on the **Select Virtual Machines** panel.

The screenshot shows a dialog box titled "Application Conversion Project Wizard" with a close button in the top right corner. The main heading is "User Credentials" with a sub-instruction: "Specify the user name and password to access these virtual machines". There is a small icon of a green cube with a white 'X' on it. Below the instruction, there are two text input fields: "User name:" and "Password:". At the bottom of the dialog, there are four buttons: "< Back", "Next >", "Cancel", and "Help".

Figure 1-29: User Credentials Panel

The **User Credentials** panel includes the following options:

Table 1-28 • User Credentials Panel

Option	Description
User name	Enter the user name to use to access the virtual machines you selected on the Select Virtual Machines panel.
Password	Enter the password to use to access the virtual machines you selected on the Select Virtual Machines panel.



Important • If the virtual machines you selected do not all use the same login credentials, you can add the appropriate credentials in the **Guest Username** and **Guest Password** properties on the [Machines Tab](#) after you have added the virtual machine.

Initial Configuration Complete

The **Initial Configuration Complete** panel lists the packages and machines you have selected to add to your project. You can choose to either begin conversion or to close the wizard so that you can perform additional configuration of these packages and machines prior to conversion.

- **Virtualize packages with detected settings**—Select this option if you want to begin conversion of the selected packages using the selected virtual machines using the current settings.
- **Close wizard to configure packages and machines**—Select this option if you want to close this wizard and perform additional configuration of these packages and virtual machines on the **Packages** and **Machines** tabs prior to beginning conversion.



Figure 1-30: Initial Configuration Complete Panel

Select Output Formats

On the **Select Output Formats** panel, select the output formats you want to create and the output location for the packages.

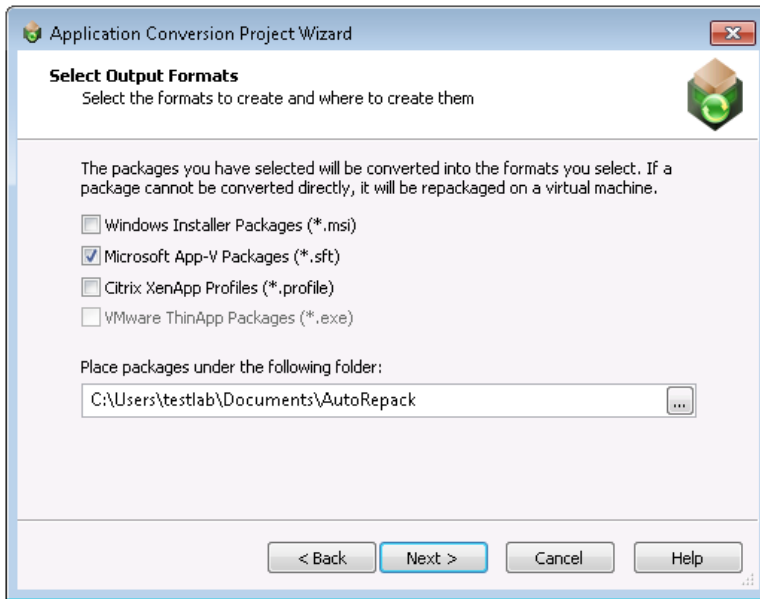


Figure 1-31: Select Output Formats Panel

The **Select Output Formats** panel includes the following options:

Table 1-29 • Select Output Formats Panel

Option	Description
Windows Installer Packages (*.msi)	Select this option to repackage the selected packages into Windows Installer packages (.msi).
Microsoft App-V Packages (*.sft)	Select this option to convert the selected packages to Microsoft App-V packages.
Citrix XenApp Profiles (*.profile)	Select this option to convert the selected packages to Citrix XenApp profiles.
VMware ThinApp Packages (*.exe)	Select this option to convert the selected packages to VMware ThinApp packages.
Place packages under the following folder	Select the location where you want to store the package output.

Automated Repackaging on Virtual Machines

On the **Automated Repackaging on Virtual Machines** panel, you specify which operating system platform you want to use to perform automated repackaging

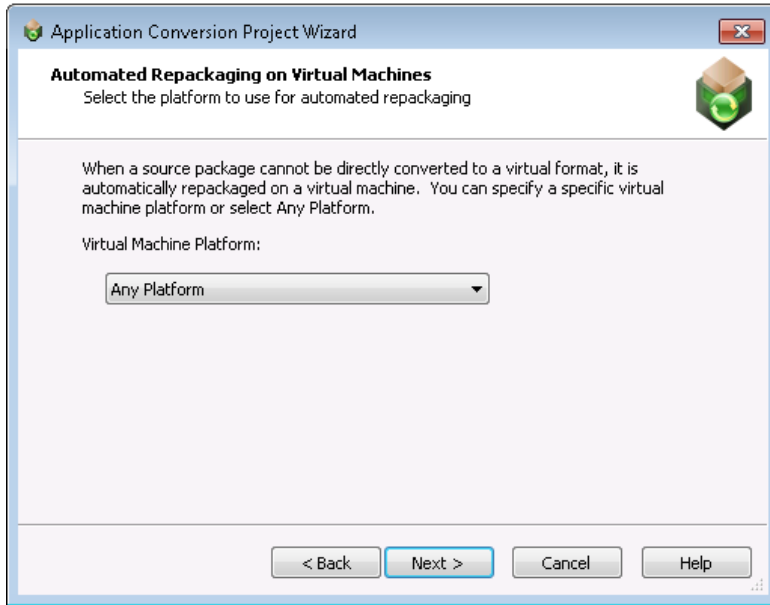



Figure 1-32: Automated Repackaging on Virtual Machines Panel

On the **Automated Repackaging on Virtual Machines** panel, select one of the following options:

Table 1-30 •

Option	Description
Any Platform	The Automated Application Converter will use any of the virtual machines that you have selected on the Machines tab to perform automated repackaging, regardless of platform.
OS Platform	<p>If you select a specific operating system, the Automated Application Converter will use only those virtual machines that you have selected on the Machines tab that are of the selected operating system to perform automated repackaging.</p> <p> Note • When you select a virtual machine to add to the Automated Application Converter, you need to manually identify the operating system platform either on the Select Virtual Machines panel or by clicking in the Platform field on the Machines tab and making a selection from the list.</p>

Application Conversion Project Wizard Complete Panel

The **Application Conversion Project Wizard Complete** panel lists the virtual formats that your selected packages will be converted to, and the operating system platform of the virtual machine that will be used to perform repackaging if repackaging is required during conversion.

Click **Finish** to close the wizard and begin converting your packages.

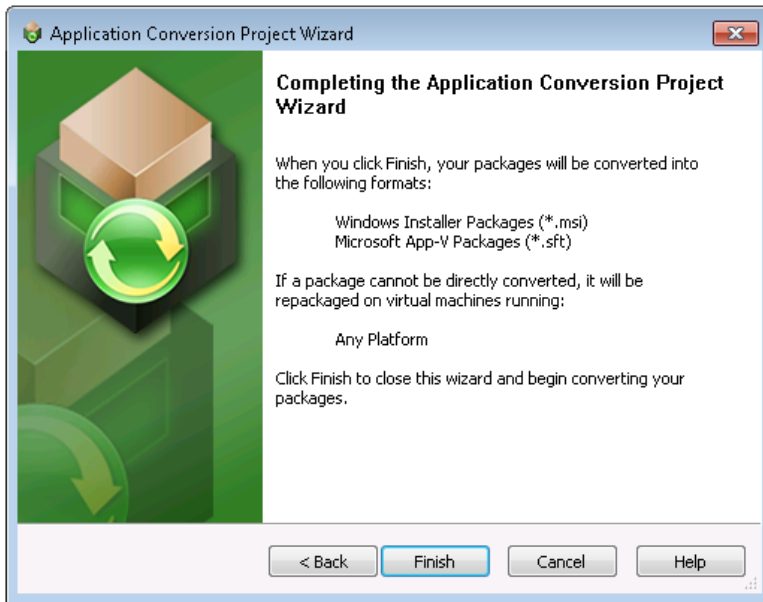


Figure 1-33: Application Conversion Project Wizard Complete Panel

Package Import Wizard

You can use the Package Import Wizard to select packages to convert to virtual formats. You can select packages from a specified AdminStudio Application Catalog, Microsoft SCCM server, or from the file system of a local or network machine.

The Package Import Wizard, which is launched by clicking the **Add Packages** button on the Automated Application Converter **Packages** tab, consists of the following panels:

- [Package Import Wizard Welcome](#)
- [Select Package Source](#)
- [Connect to an AdminStudio Application Catalog](#)
- [Connect to a Microsoft SCCM Server](#)
- [Select Packages](#)
- [Selected Package List](#)
- [Package Import Wizard Complete](#)



Note • The main panels of the Package Import Wizard are also included in the end-to-end [Application Conversion Project Wizard](#).

Package Import Wizard Welcome

You can use the Package Import Wizard to select packages to convert to virtual formats. You can select packages from a specified AdminStudio Application Catalog, Microsoft SCCM server, or from the file system of a local or network machine.

After you have added the packages, you can use the [Virtual Machine Import Wizard](#) to add virtual machines to use for automated repackaging, and then begin a conversion run using the [Application Conversion Wizard](#).

Click **Next** to begin.

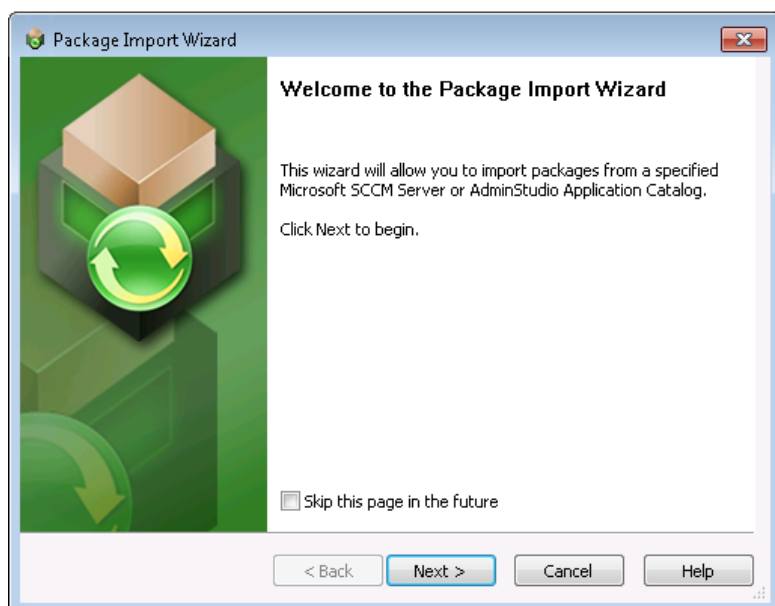


Figure 1-34: Package Import Wizard Welcome Panel

Package Import Wizard Complete

The **Package Import Wizard Complete** panel lists the number of packages you have added to your project for repackaging and virtualization. Click **Finish** to close the wizard and add these packages to your project.

To convert these packages to virtual applications, use the [Application Conversion Wizard](#).

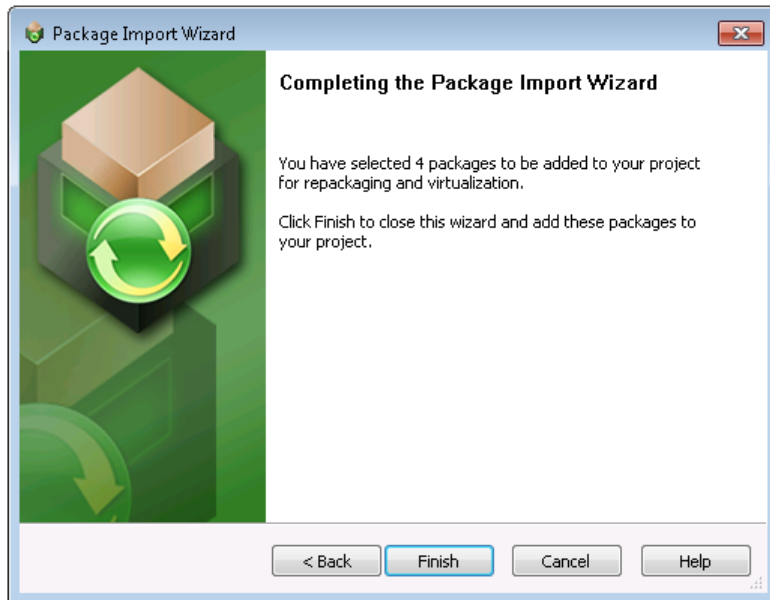


Figure 1-35: Package Import Wizard Complete Panel

Virtual Machine Import Wizard

The Virtual Machine Import Wizard consists of the following panels:

- [Virtual Machine Import Wizard Welcome](#)
- [Select Virtual Machine Source](#)
- [Select Virtual Machines from a Microsoft Hyper-V Server](#)
- [Select Virtual Machines from a VMware ESX or ESXi Server](#)
- [Select Virtual Machines](#)
- [User Credentials](#)
- [Virtual Machine Import Wizard Complete](#)



Note • The main panels of the Virtual Machine Import Wizard are also included in the end-to-end [Application Conversion Project Wizard](#).

Virtual Machine Import Wizard Welcome

You can use the **Virtual Machine Import Wizard** to select virtual machines to use for automated repackaging. You can use virtual machines from a Microsoft Hyper-V Server, a VMware ESX or ESXi Server, or a local VMware Workstation.

After you have added the virtual machines, you can use the [Package Import Wizard](#) to add packages to convert, and then begin a conversion run using the [Application Conversion Wizard](#).

Click **Next** to begin.

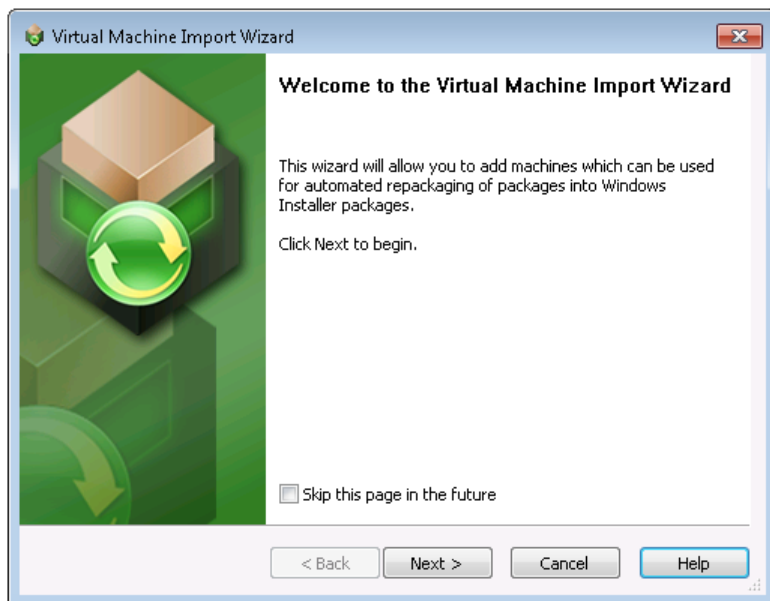


Figure 1-36: Virtual Machine Import Wizard Welcome Panel

Virtual Machine Import Wizard Complete

The **Virtual Machine Import Wizard Complete** panel lists the number of virtual machines you have added to your project for use in automated repackaging.

Click **Finish** to close the wizard and add these virtual machines.

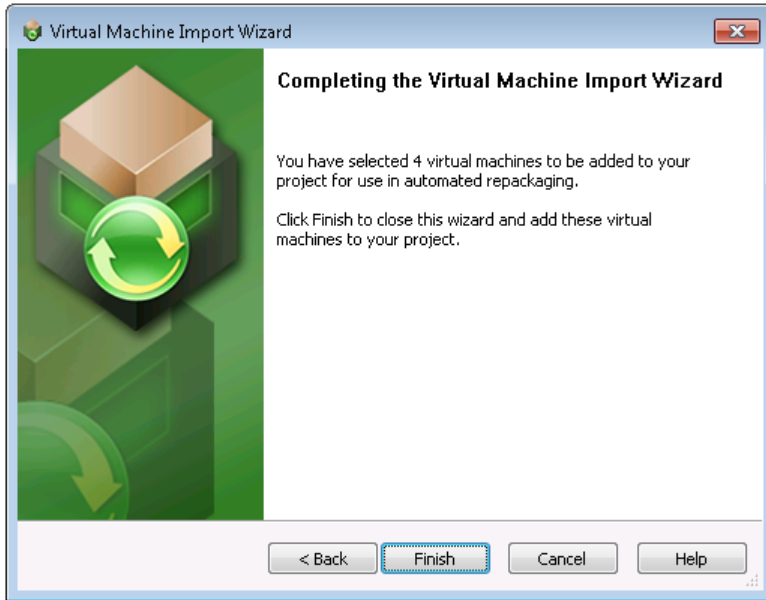


Figure 1-37: Virtual Machine Import Wizard Complete Panel

Application Conversion Wizard

The Application Conversion Wizard consists of the following panels:

- [Application Conversion Wizard Welcome](#)
- [Select Output Formats](#)
- [Automated Repackaging on Virtual Machines](#)
- [Application Conversion Wizard Complete](#)



Note • The main panels of the Application Conversion Wizard are also included in the end-to-end [Application Conversion Project Wizard](#).

Application Conversion Wizard Welcome

You can use the **Application Conversion Wizard** to convert selected packages to virtual applications after you have used the [Virtual Machine Import Wizard](#) to add virtual machines to the project to use for automated repackaging and used the [Package Import Wizard](#) to add the packages you want to convert.

Click **Next** to begin.

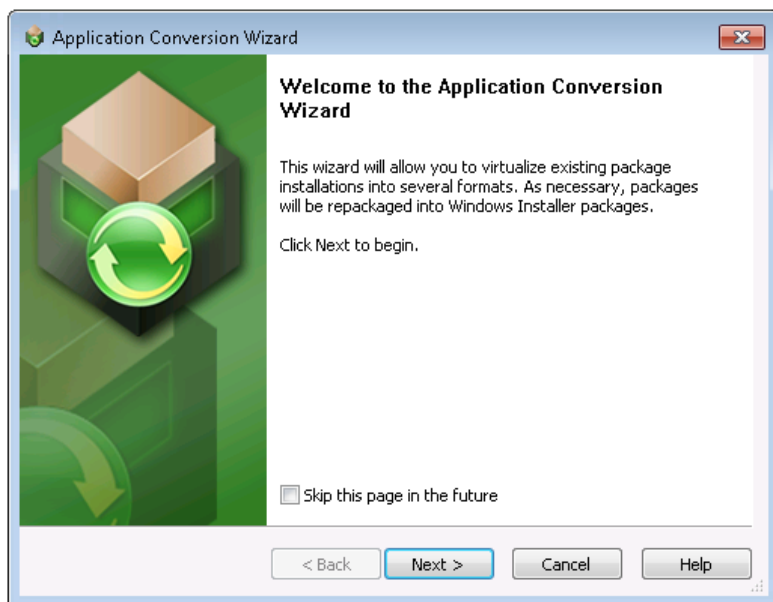


Figure 1-38: Application Conversion Wizard Welcome Panel

Application Conversion Wizard Complete

The **Application Conversion Wizard Complete** panel lists the virtual formats that your selected packages will be converted to, and the operating system platform of the virtual machine that will be used to perform repackaging if repackaging is required during conversion.

Click **Finish** to close the wizard and begin converting your packages.



Figure 1-39: Application Conversion Wizard Complete Panel

Package Publish Wizard

After converting applications to virtual packages, you can publish them to a Microsoft SCCM Server or AdminStudio Application Catalog using the **Package Publish Wizard**.

The **Package Publish Wizard** consists of the following panels:

- [Package Publish Wizard Welcome](#)
- [Select Publish Target](#)
- [Connect to an AdminStudio Application Catalog](#)
- [Connect to a Microsoft SCCM Server](#)
- [Select Destination Folder](#)
- [Select Group](#)
- [Select Package Types to Publish](#)
- [Package Publish Wizard Complete](#)

Package Publish Wizard Welcome

You can use the Package Publish Wizard to publish the virtualized/repackaged packages you have generated using the Automated Application Converter to an AdminStudio Application Catalog or Microsoft SCCM Server.

Click **Next** to continue.

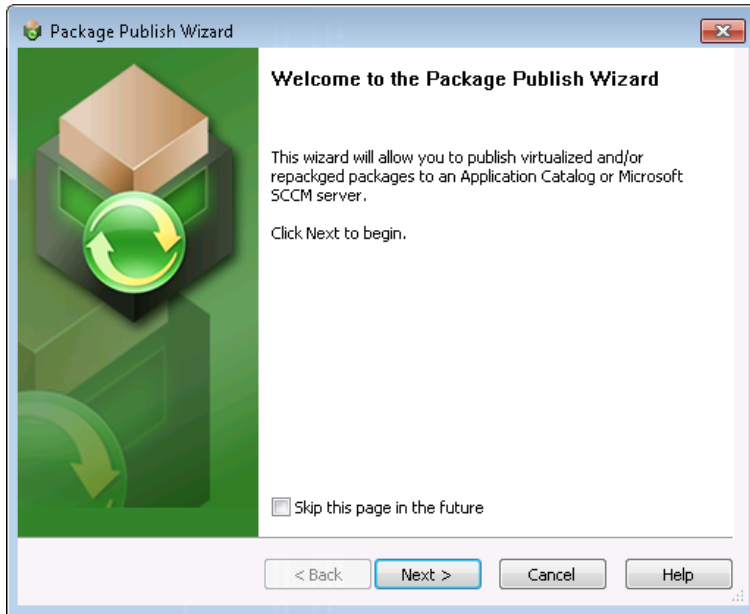


Figure 1-40: Package Publish Wizard Welcome Panel

Select Publish Target

On the **Select Publish Target** panel of the **Package Publish Wizard**, select the target location where you want to publish the selected virtual or repackaged packages. Select either **AdminStudio Application Catalog** or **Microsoft SCCM** and click **Next** to continue.

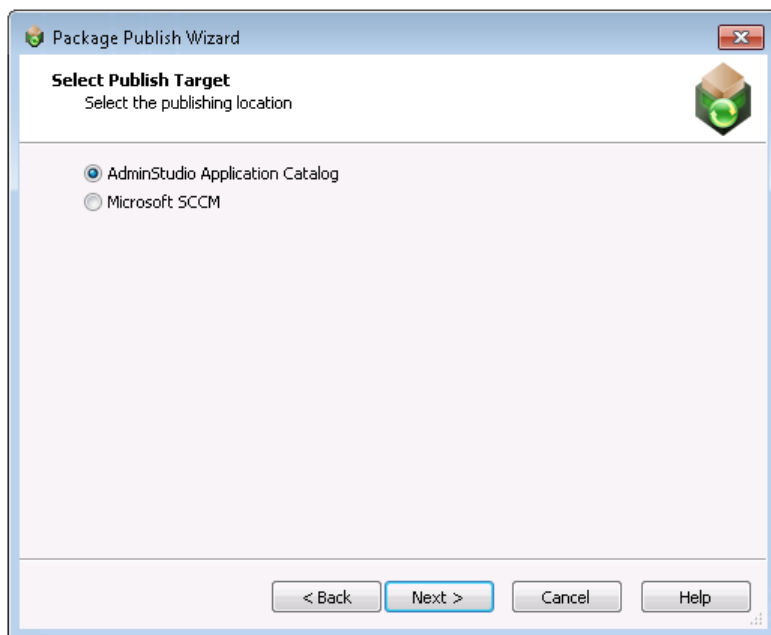


Figure 1-41: Select Publish Target Panel

Connect to an AdminStudio Application Catalog

On the **Connect to an AdminStudio Application Catalog** panel, which opens if you select **AdminStudio Application Catalog** on the **Select Publish Target** panel, you enter connection information to connect to an AdminStudio Application Catalog SQL database.

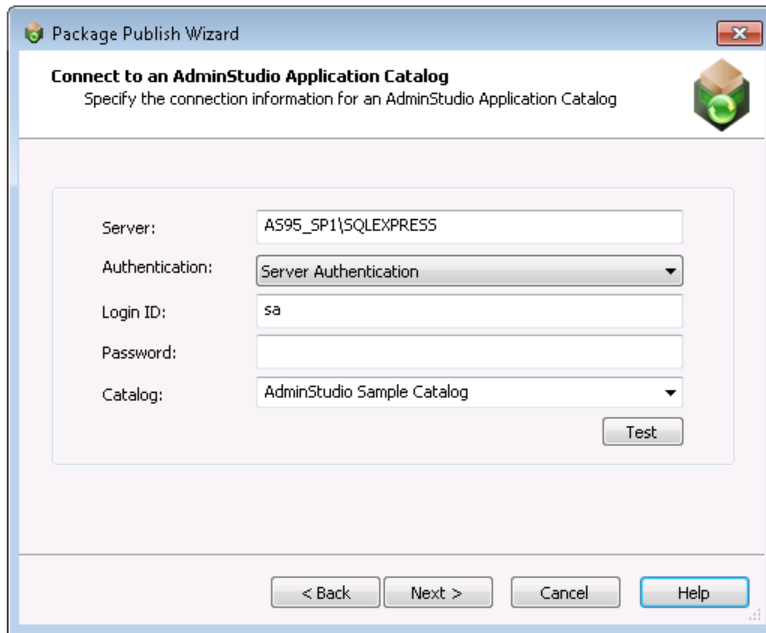


Figure 1-42: Connect to an AdminStudio Application Catalog Panel

On the **Connect to an AdminStudio Application Catalog** panel, enter the following information:

Table 1-31 • Connect to an AdminStudio Application Catalog Panel


Option	Description
Server	Enter the name of the SQL Server that you want to connect to.
Authentication	<p>Choose one of the following options:</p> <ul style="list-style-type: none"> • Server Authentication—Choose this option if you want to use SQL Server login identification to log into this Application Catalog. Then enter the appropriate Login ID and Password. • Windows Authentication—Choose this option if you want to use Windows network authentication (your network login ID) to log into this Application Catalog. <p> Note • After you successfully connect to an Application Catalog, the next time you open this panel, those previously-entered values (except the Password) will pre-populate this panel.</p>

Table 1-31 • Connect to an AdminStudio Application Catalog Panel

Option	Description
Catalog	Enter the name of the existing AdminStudio Application Catalog database that you want to connect to

Connect to a Microsoft SCCM Server

On the **Connect to a Microsoft SCCM Server** panel, which opens if you select **Microsoft SCCM** on the **Select Publish Target** panel, you enter connection information to connect to a Microsoft System Center Configuration Manager (SCCM) server.

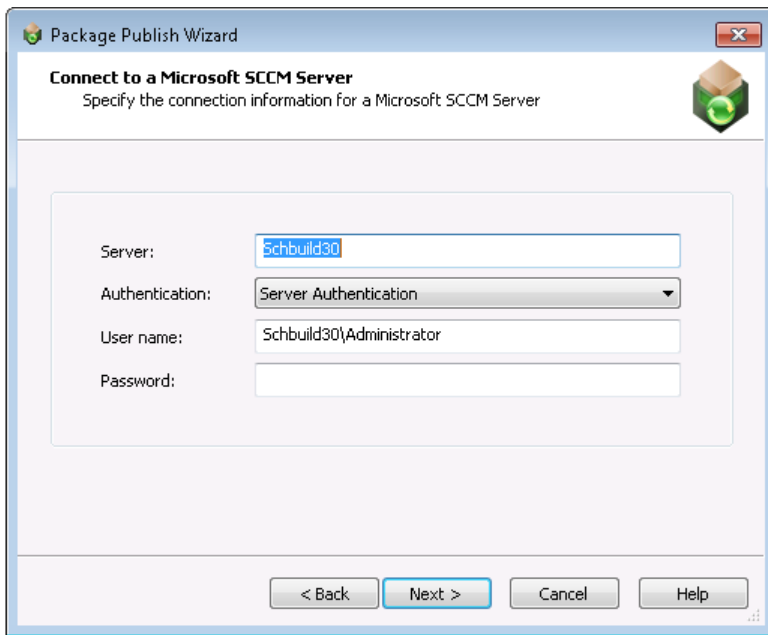



Figure 1-43: Connect to a Microsoft SCCM Server Panel

On the **Connect to a Microsoft SCCM Server** panel, enter the following information:

Table 1-32 • Select Packages from Application Catalog Panel

Option	Description
Server	Enter the name of the Microsoft SCCM Server that you want to connect to.
Authentication	<p>Choose one of the following options:</p> <ul style="list-style-type: none"> • Server Authentication—Choose this option if you want to use Microsoft SCCM Server login identification to log into this SCCM Server. Then enter the appropriate User name and Password. • Windows Authentication—Choose this option if you want to use Windows network authentication (your network login ID) to log into this Microsoft SCCM Server. <div style="text-align: center; margin: 10px 0;">  </div> <hr/> <p>Note • After you successfully connect to a Microsoft SCCM Server, the next time you open this panel, those previously-entered values (except the Password) will pre-populate this panel.</p>

Select Destination Folder

When publishing to a Microsoft SCCM Server, the **Select Destination Folder** panel opens prompting you to select a location that the Microsoft SCCM Server has access to where you want to publish the selected packages.

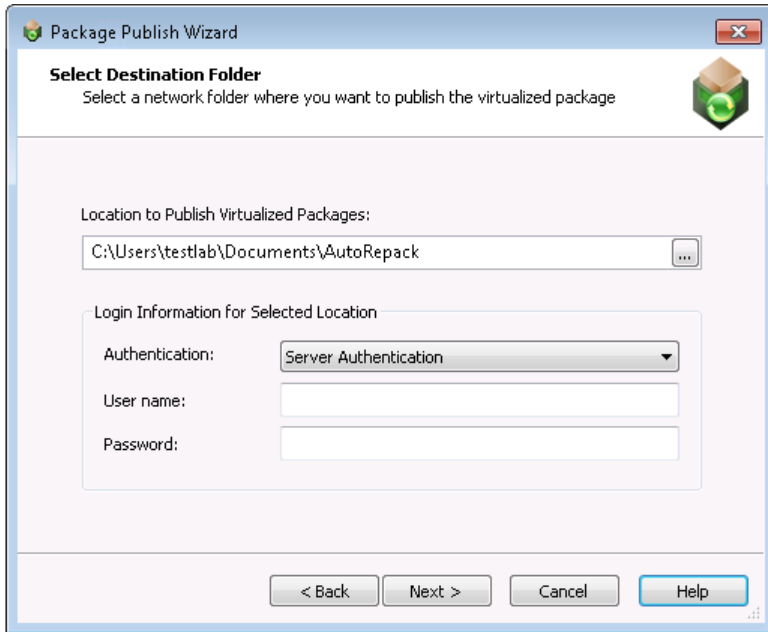


Figure 1-44: Select Destination Folder Panel

On the **Select Destination Folder** panel, enter the following information:

Table 1-33 • Select Destination Folder Panel

Option	Description
Location to Publish Virtualized Packages	Enter a target path, in UNC format (\\Server\Share), of the location where you want to publish the selected packages. Make sure that you enter a location that the Microsoft SCCM Server has access to.
Authentication	Choose one of the following options: <ul style="list-style-type: none"> • Windows Authentication—Choose this option if you want to use Windows network authentication (your network login ID) to log into this location. • SCCM Authentication—Choose this option if you want to use Microsoft SCCM Server authentication (your Microsoft SCCM Server login ID) to log into this location. • Server Authentication—Choose this option if you are publishing to an alternate file server that requires credentials. Then enter the appropriate User name and Password.

Select Group

When publishing to an AdminStudio Application Catalog, the **Select Group** panel opens, prompting you to specify the Application Catalog group where you want to publish the selected packages. You need to specify whether to attempt to publish the packages in their original source location or another specified location.

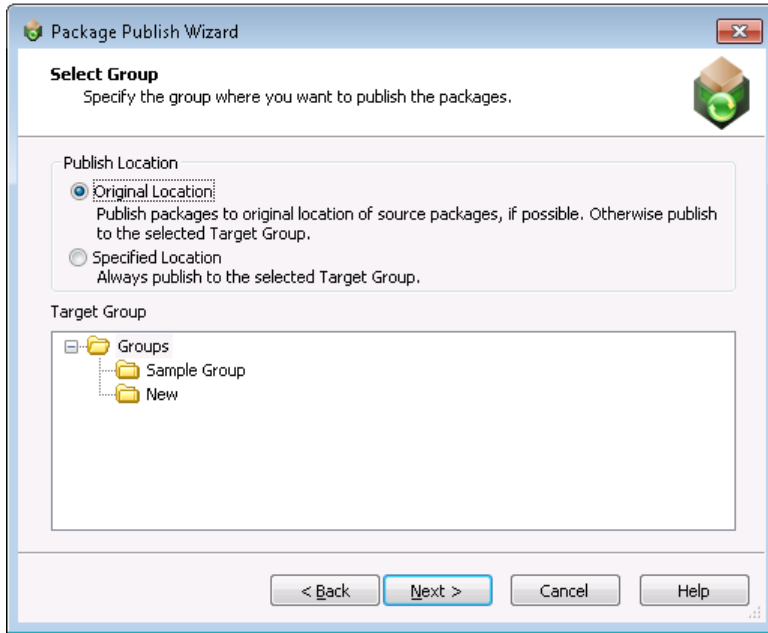


Figure 1-45: Select Group Panel

The **Select Group** panel includes the following options:

Table 1-34 • Select Group Panel Options

Option	Description
Original Location	Select this option if you want to publish the selected packages to the original location of their source package, if possible. If that location no longer exists, then publish the package to the location specified in Target Group .
Specified Location	Select this option if you want to publish the selected packages to the location specified in Target Group .
Target Group	If you selected the Original Location option, select the group where you want to publish the selected packages only if their original source location is unavailable. If you selected the Specified Location option, select the group where you want to publish the selected packages.

Select Package Types to Publish

Select the package formats that you want to publish:

- **Repackaged MSI (*.msi)**
- **Microsoft App-V Packages (*.sft)**
- **Citrix XenApp Profiles (*.profile)**
- **VMware ThinApp Packages (*.exe)**

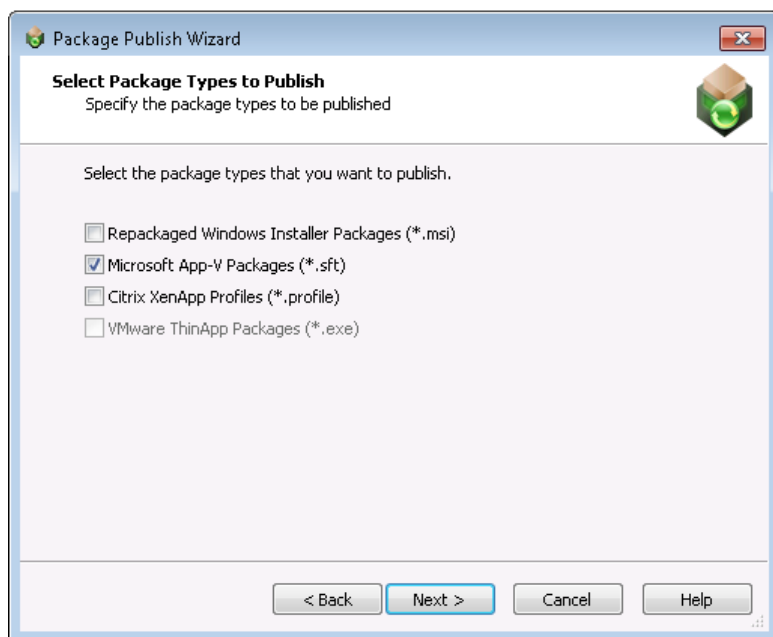


Figure 1-46: Select Package Types to Publish Panel

Package Publish Wizard Complete

The **Package Publish Wizard Complete** panel lists the number of packages you want to publish and the publish target location.

Click **Finish** to close the wizard and publish your packages.



Figure 1-47: Package Publish Wizard Complete Panel

Dialog Boxes

The Automated Application Converter provides the following dialog boxes:

- [Browse for Folder Dialog Box](#)
- [Guest Agent](#)
- [Open Dialog Box](#)
- [Project Options Dialog Box](#)
- [Select Package Installation File Dialog Box](#)
- [Select Transform Dialog Box](#)
- [Select Virtual Machine Dialog Box](#)
- [Select Virtual Machine Image File Dialog Box](#)

Browse for Folder Dialog Box

On the **Browse for Folder** dialog box, select the directory containing the packages to convert.

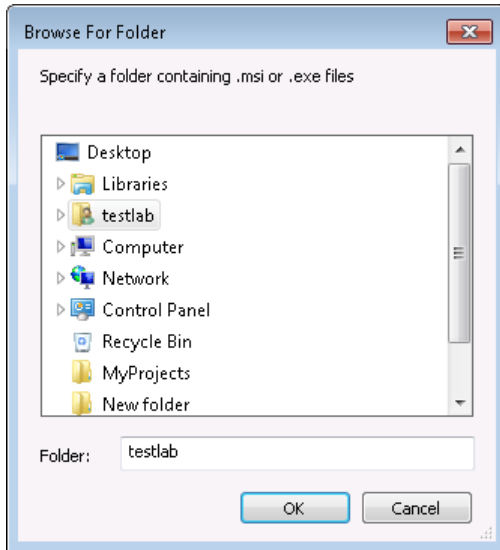


Figure 1-48: Browse for Folder Dialog Box

Select the directory that contains the Windows Installer files (.msi) and/or legacy package files (.exe) you want to convert and click **Open**. The Automated Application Converter searches the selected directory and its subdirectories to locate .msi and .exe files and adds them to the list on the **Select Packages** panel.



Important • The Automated Application Converter uses specific rules to determine which packages in the selected directory and its subdirectories are added to the list on the **Select Packages** panel, and which of those files are automatically selected. See [Automated Application Converter's Selection Rules When Adding Packages from a Directory](#) for more information.

Guest Agent

The Guest Agent (GuestAgent.exe) is a tool that is launched on a virtual image that enables the Automated Application Converter to manipulate the virtual machine in ways that may be unsupported by its automation APIs. In particular, this enables launching and monitoring the AdminStudio Repackager in an automated fashion.

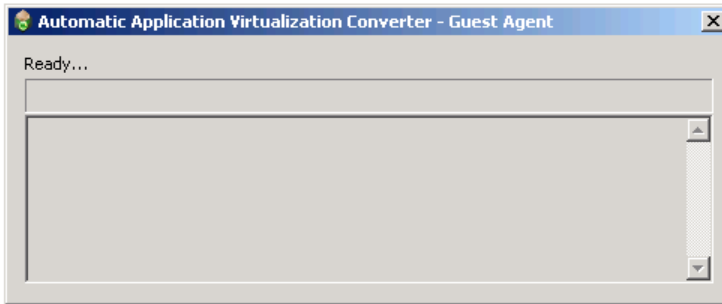


Figure 1-49: Guest Agent Interface

Open Dialog Box

The **Open** dialog box opens when you select **Open** on the **File** menu or when you select the **Open existing project** option on the **Open Project** panel of the Application Conversion Project Wizard and then select **Browse for project file...** from the list.

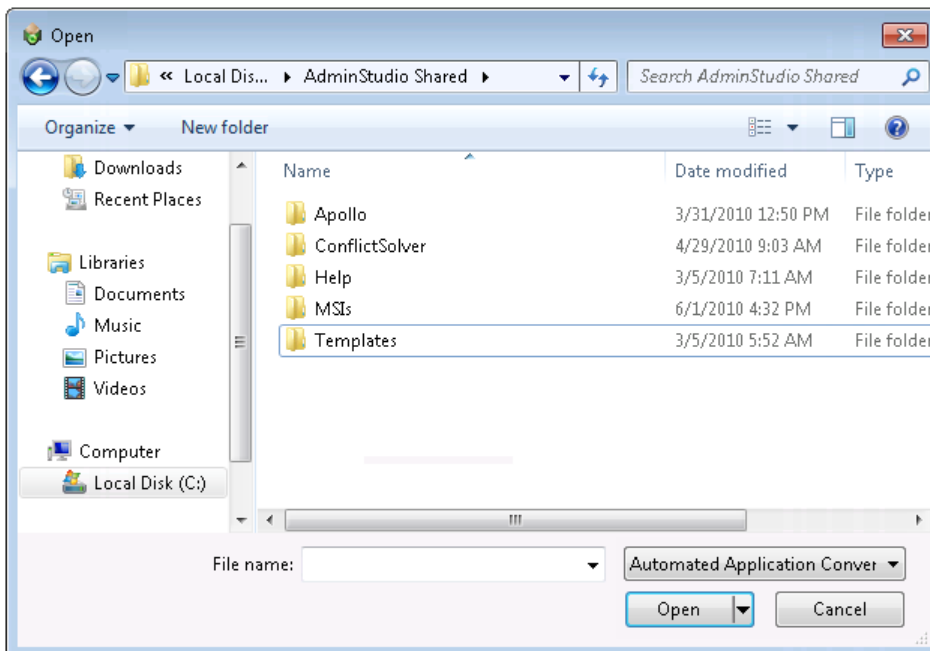


Figure 1-50: Open Dialog Box

Select an Automated Application Converter project file (*.aacx) and click **Open** to open the file.

Project Options Dialog Box

On the **Project Options** dialog box, which is opened by selecting **Options** on the **Tools** menu, you can specify project-wide default options.

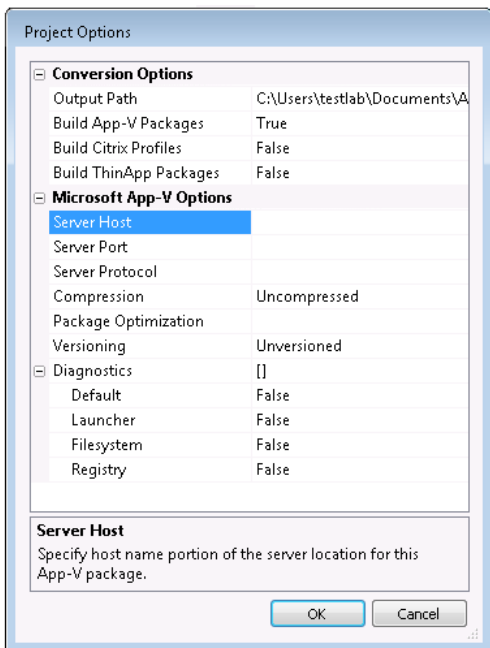


Figure 1-51: Project Options Dialog Box

The **Project Options** dialog box includes the following options:

Table 1-35 • Options on the Project Options Dialog Box

Option	Description
Output Path	Specify the default location that will populate the Place packages under the following folder field on the Select Output Formats panel of the Application Conversion Project Wizard and Application Conversion Wizard.
Build Windows Installer Packages Build App-V Packages Build Citrix Profiles Build ThinApp Packages	If this option is set to True , the output format will be selected by default on the Select Output Formats panel of the of the Application Conversion Project Wizard and Application Conversion Wizard. If it is set to False , the output format will not be selected by default.

Table 1-35 • Options on the Project Options Dialog Box


Option	Description
<p>Server Host</p>	<p>Specify the default App-V Server Host value, which is the virtual application server or the load balancer in front of a group of virtual application servers that will stream the software package to an App-V Application Virtualization Desktop Client.</p> <p>You must complete this item to create a sequenced application package, but you can change from the default %SFT_SOFTGRIDSERVER% environment variable to the actual hostname or IP address of a virtual application server.</p>  <p>Note • If you choose not to specify a static hostname or IP address, on each Application Virtualization Desktop Client you must set up an environment variable called SFT_SOFTGRIDSERVER.</p> <ul style="list-style-type: none"> • Its value must be the hostname or IP address of the virtual application server or load balancer that is this client's source of applications. • You should make this environment variable a system variable rather than a user variable. • Any Application Virtualization Desktop Client session that is running on this computer during your assignment of this variable must be closed and then opened so that the resumed session will be aware of its new application source.
<p>Server Port</p>	<p>Specify the default App-V Server Port value, which is the port on which the virtual application server or the load balancer will listen for an Application Virtualization Desktop Client's request for the package.</p> <ul style="list-style-type: none"> • This information is required to create a package, but you can change it. • The default port is 554.
<p>Server Protocol</p>	<p>Specify the default App-V Server Protocol value, which is the protocol that will stream the sequenced application package from a virtual application server to an Application Virtualization Desktop Client. The following protocols are available:</p> <ul style="list-style-type: none"> • RTSP—The default, it specifies that the Real-Time Streaming Protocol controls the exchange of virtualization-enabled applications. • RTSPS—Specifies that the Real-Time Streaming Protocol with Transport Layer Security controls the exchange of a sequenced application package. • FILE—Specifies that the sequenced application will be streamed from a file share. • HTTP—Specifies that Hypertext Transport Protocol controls the exchange of a package. • HTTPS—Specifies that Secure Hypertext Transport Protocol controls the exchange of a package.

Table 1-35 • Options on the Project Options Dialog Box

Option	Description
Compression	Specify the default App-V Compression value by selecting Default , Compressed , or Uncompressed .
Package Optimization	Specify the default App-V Package Optimization value, which specifies whether to optimize package for offline use (entire package is included in Feature Block 1) by selecting Offline , or streaming use (only shortcut targets are included in Feature Block 1) by selecting Stream .
Versioning	<p>Specify the default App-V Versioning value.</p> <ul style="list-style-type: none"> • Select Versioned to append the package version to the SFT file name. • Select Unversioned to leave the package version off of the SFT file name. • Select Default to use the setting that is defined on the Project Options dialog box.
Diagnostics	<p>Specify the default Diagnostic tools to include in App-V packages by selecting True or False.</p> <ul style="list-style-type: none"> • Launcher—Set this to True to include the App-V Application Launcher with each App-V application that you build. You can use the App-V Application Launcher to test a newly built App-V application before moving it to a deployment server. • Filesystem—Set this to True to if you want to include the Windows Command Prompt application with your App-V application so that you can browse the virtual file system at runtime from within the virtual environment. If this option is selected, a file named <code>Virtual File System.osd</code> will be created in the App-V Package folder, which can be used to display the files and folders within the virtual environment. You can use <code>Virtual File System.osd</code> to view the existing files and folders on the computer plus the files and folders for the virtual package. • Registry—Set this to True to if you want to include the Registry Editor (<code>regedit.exe</code>) with your App-V application so that you can browse the registry at runtime from within the virtual environment. If this option is selected, a file named <code>Virtual Registry.osd</code> will be created in the App-V Package folder, which can be used to display the registry within the virtual environment. You can use <code>Virtual Registry.osd</code> to view the existing registry on the computer plus the registry for the virtual package.

Select Package Installation File Dialog Box

On the **Select Package Installation File** dialog box, select the installation file (.msi or .exe) or installation script (*.vbs, *.bat, *.cmd, or *.ps1) that you want to add to your project for conversion to a virtual application.



Note • You can use installation scripts to run more complex installation scenarios.

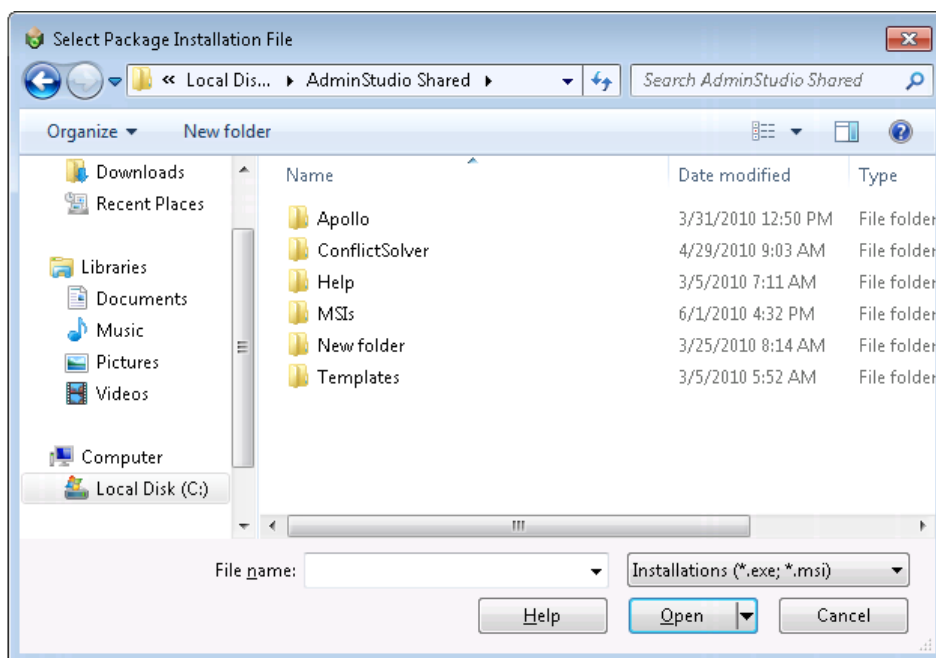


Figure 1-52: Select Package Installation File Dialog Box

Select Transform Dialog Box

On the **Select Transform** dialog box, which opens when you click in the **Transform** column/property on the **Packages** tab, you can select a transform file (.mst) to modify or install a Windows Installer package silently.



Note • While the **Transform** property on the **Packages** tab can contain a semicolon-delimited list of transforms, when you browse to the transform file location using the **Select Transform** dialog box, you are only able to select one transform file. To include multiple transforms with a package, rather than browsing to the transform file location, you need to manually edit the **Transform** property on the **Packages** tab to enter multiple transform files, separated by a semicolon.

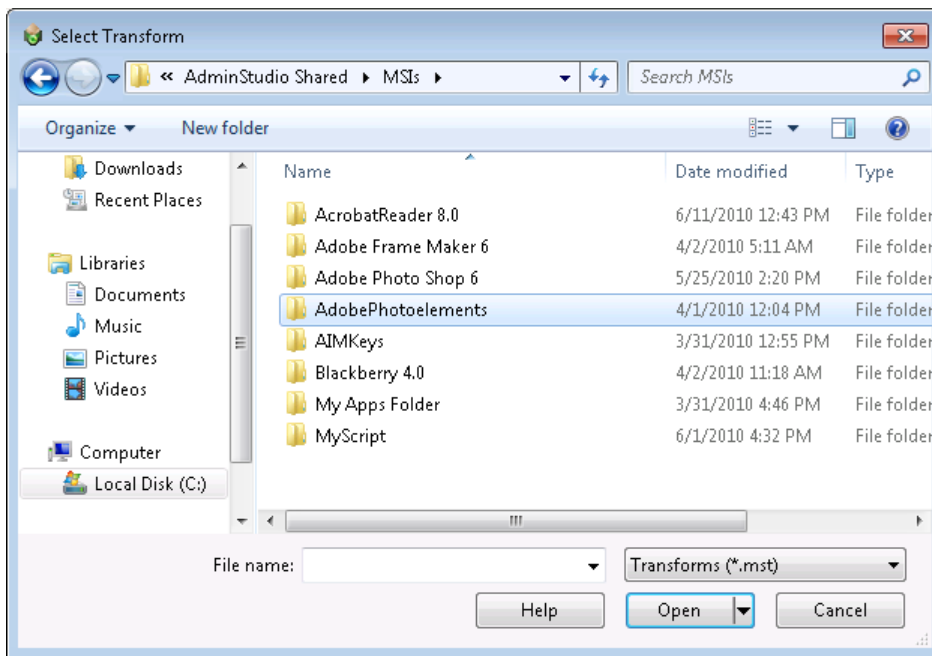


Figure 1-53: Select Transform Dialog Box

Select Virtual Machine Dialog Box

On the **Select Virtual Machine** dialog box, which opens when you select a package on the **Packages** tab and then select **Launch Package for Testing** from the context menu, you select the virtual machine that you want to use to test the selected package.

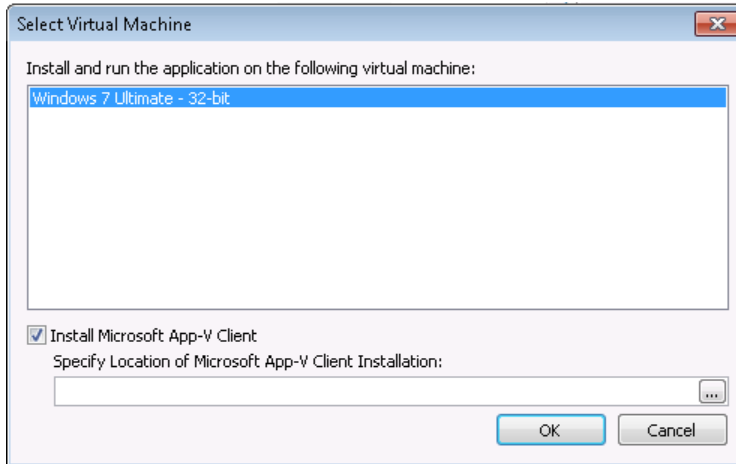


Figure 1-54: Select Virtual Machine Dialog Box

The following options are available:

Table 1-36 • Select Virtual Machine Dialog Box

Option	Description
Install and run the application on the following virtual machine	Select the virtual machine that you would like to use the test the selected package.
Install Microsoft App-V Client	If you are testing an App-V package, select this option to instruct the Automated Application Converter to install the App-V client on the selected virtual machine.
Specify Location of Microsoft App-V Client Installation	If you have selected the Install Microsoft App-V Client option, specify the location of the App-V client installation. Make sure that Automated Application Converter machine has access to the specified location.

Select Virtual Machine Image File Dialog Box

When you click **Browse Files** on the **Select Virtual Machines** panel, the **Select Virtual Machine Image File** dialog box opens, prompting you to select a VMware Workstation virtual machine image.

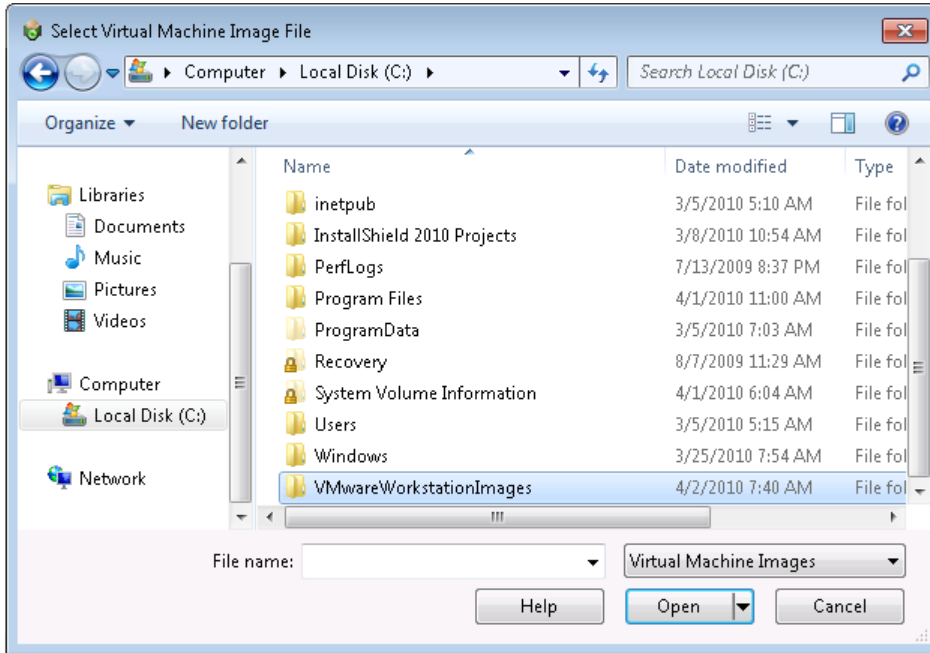


Figure 1-55: Select Virtual Machine Image File Dialog Box

Command Line Support

You can choose to run an Automated Application Converter project file via command line using the following command:

```
aacx.exe projectname.aacx
```

where `projectname.aacx` is the project file to load and execute. Results are displayed in console mode.

You can also use the following command line parameters to override project file settings:

Table 1-37 • Command Line Parameters




Parameter	Description
/create	<p>Use the <code>/create</code> parameter to indicate the virtual formats to create, such as:</p> <pre>aacx.exe /create formattype projectname.aacx</pre> <p>where <code>formattype</code> can be any of the following (case-insensitive):</p> <ul style="list-style-type: none"> AppV Citrix ThinApp MSI <p>and <code>projectname.aacx</code> is the project file to load and execute.</p> <p>For example, to create an App-V package, enter:</p> <pre>aacx.exe /create AppV myproject.aacx</pre> <p>Multiple create commands can be specified in the same command line. For example, to create all virtual formats, enter:</p> <pre>aacx.exe /create AppV /create Citrix /create ThinApp myproject.aacx</pre>  <p>Note • Settings made using the <code>/create</code> parameter override the selections you made on the Select Output Formats panel, which are saved in the project file.</p>
/help /?	<p>To view command line help, enter either of the following:</p> <pre>aacx.exe /? aacx.exe /help</pre>
/log	<p>To create a unicode text file to contain output messages, enter the <code>/log</code> parameter followed by an output file name:</p> <pre>aacx.exe /log output.txt myproject.aacx</pre>  <p>Note • These are the same output messages that would appear in the Output window when using the Automated Application Converter interface,</p>

Table 1-37 • Command Line Parameters (cont.)

Parameter	Description
/outdir	To override the output directory for built and converted packages that was set in the project file on the Select Output Formats wizard panel, use the <code>/outdir</code> parameter: <pre>aacx.exe /outdir "C:\output\aacxoutput" myproject.aacx</pre> where <code>C:\output\aacxoutput</code> is the name of the directory that will contain the output.
/report	To specify the name of the HTML report that is generated after conversion, use the <code>/report</code> parameter: <pre>aacx.exe /report reportname.html myproject.aacx</pre>
/showreport	To specify the name of the HTML report that is generated after conversion and to automatically display that report, use the <code>/showreport</code> parameter: <pre>aacx.exe /showreport reportname.html myproject.aacx</pre>
/vmplatform	To specify the platform to use when performing automated repackaging, overriding the VMs selected in the project file, use the <code>/vmplatform</code> parameter: <pre>aacx.exe /vmplatform platformvalue proj.aacx</pre> where <i>platformvalue</i> is constructed from a version integer using the formula of <code>MajorVersion * 100 + MinorVersion</code> of the operating system (such as 600 for Windows Vista), followed optionally by s (for server) and/or x64 (for 64-bit). Examples are below.
Windows Vista 32-bit	<pre>aacx.exe /vmplatform 600 myproject.aacx</pre>
Windows Vista 64-bit	<pre>aacx.exe /vmplatform 600x64 myproject.aacx</pre>
Windows Server 2008 R2 64-bit	<pre>aacx.exe /vmplatform 601sx64 myproject.aacx</pre>
All enabled machines	<pre>aacx.exe /vmplatform any myproject.aacx</pre>
 <p>Note • The version integer described above is similar to the Windows Installer VersionNT property. See Operating System Property Values on the MSDN Web site.</p>	

Specifying Global Default Virtual Conversion Settings

In addition to the settings that can be specified on the [Project Options Dialog Box](#), a default value can be specified for any virtual conversion setting that would normally be stored in the `ISVirtualPackage` table by editing the `settings.xml` file. The global value is used if no project-specific value is found.

To configure these global default values, locate the `settings.xml` file installed with InstallShield Editor and AdminStudio Repackager, and then find the `<Properties>` subelement of the `<Virtualization>` element:

```
<Virtualization>
  <Properties>
    <Property Name="AppVRuntimeDrive" Value="G:" />
    <Property Name="AppVServerURLPath" Value="%PackageName%_v%PackageVersion%" />
  </Properties>
</Virtualization>
```

To define a default value for any of the properties in the `ISVirtualPackage` table, create a `<Property>` in the `<Properties>` element and set a value. In the examples above, the `AppVRuntimeDrive` property is set to a default value of `G:`, and the `AppVServerURLPath` property is set to a default value of `%PackageName%_v%PackageVersion%`.

The following three replaceable parameters are only valid for the `AppVServerURLPath` property:

- **%PackageName%**—Name of the virtual package (which normally corresponds to the MSI `ProductName`).
- **%PackageVersion%**—Version number. (Each new upgrade increments this number.)
- **%PackageVersionedName%**—This is the `%PackageName%` for version one packages, and `%PackageName%_v%PackageVersion%` otherwise.

Troubleshooting

This section includes information to help you resolve typical problems that you might encounter when using the Automated Application Converter. The following sections are included:

- [First Things to Check](#)
- [Problems and Solutions](#)
- [Best Practices for Optimal Performance](#)
- [How to Test a Virtual Machine](#)
- [Error Messages](#)

First Things to Check

If you encounter a problem when performing package conversion, first scan this table to review of list of the most likely causes for conversion failure.

Table 1-38 • Most Likely Causes of Errors



Cause of Error	Resolution
Did not run the Virtual Machine Preparation Tool	<p>On each virtual machine that you are going to use to perform automated repackaging, you need to run the Virtual Machine Preparation Tool, an application that will enable automatic login. See Preparing Your Virtual Machines for Use With the Automated Application Converter.</p>  <hr/> <p>Important • If you do not run the Virtual Machine Preparation Tool on the virtual machines you want to use, the Automated Application Converter will be unable to connect to them.</p>
Did not install VMware VIX API	<p>If you are using VMware virtualization technology (VMware ESX or ESXi Server or a local VMware Workstation 6.5 or later), you need to have the VMware VIX API installed on the same machine as the Automated Application Converter. See VMware VIX API Requirement.</p>
Snapshot does not exist on the virtual image	<p>After you run the Virtual Machine Preparation Tool on a virtual machine, you need to shut it down and create a snapshot. This enables the Automated Application Converter to revert the virtual image to a clean state after each repackaging run. See Taking a Snapshot.</p>  <hr/> <p>Important • If a snapshot does not exist on the virtual machine, not only will repackaging on that virtual machine fail, but you will also be unable to use that virtual machine to perform testing (as described in Launching Packages for Testing).</p>

Table 1-38 • Most Likely Causes of Errors



Cause of Error	Resolution
<p>Name of Snapshot on virtual image is not identified properly</p>	<p>If your virtualization technology supports named snapshots, you should name the snapshot AutoRepack_Base, which is the default name that the Automated Application Converter will be looking for.</p> <p>If you assign a snapshot name other than AutoRepack_Base, after you add the virtual machine to the Automated Application Converter, you need to specify that snapshot name in the Snapshot Name property in the Properties window of the Machines tab for that machine. See Editing Virtual Machine Properties on the Machines Tab.</p>  <p>Important • If the snapshot on the virtual machine is not identified properly in the Automated Application Converter, not only will repackaging on that virtual machine fail, but you will also be unable to use that virtual machine to perform testing (as described in Launching Packages for Testing).</p>
<p>ThinApp client is not installed</p>	<p>If you choose to build ThinApp applications, AdminStudio will convert the package installation into a format compatible with ThinApp. However, the ThinApp build process requires the availability of certain ThinApp tools. As a prerequisite to building a ThinApp application from AdminStudio, you must have installed ThinApp and accepted any and all license agreements. For more information, see ThinApp on the VMware Web site.</p>
<p>Password of the virtual image has changed</p>	<p>When you add a virtual image to a project, you are prompted for the user name and password to logon to that machine. If you entered an incorrect password or if the password has recently changed, you need to edit that machine's Guest Password property on the Machines tab. See Editing Virtual Machine Properties on the Machines Tab.</p>
<p>Virtual machine is corrupted, or cannot be launched</p>	<p>If the Automated Application Converter is attempting to connect to a virtual machine that is corrupt or cannot be launched, conversion will fail. To make sure that your virtual machines are in proper working order, attempt to launch them manually (outside of the Automated Application Converter) using the configuration tool of the virtual technology.</p>
<p>Virtual machine does not have network connectivity</p>	<p>In order for the Automated Application Converter to use a virtual machine, the virtual machine must have connectivity to your network. From the host machine, try to manually browse to the C drive of the virtual machine by entering the following address:</p> <pre>\\virtual_machine_name\C\$</pre>

Table 1-38 • Most Likely Causes of Errors

Cause of Error	Resolution
Repackaging is taking a very long period of time	<p>If the repackaging of a package is taking a very long period of time, you may want to verify that the value for that package's Compressed property is correct.</p> <p>If a package is in a directory that contains many other applications, and its Compressed property is set to True, the Automated Application Converter knows that only that one file needs to be copied to the virtual machine for repackaging. However, if the Compressed property set is set to False, there is no way to determine which of the files in that directory belong to the package, so all of the files in the directory must be copied to the virtual machine before repackaging can start. See Editing Package Properties on the Packages Tab.</p> <p></p> <hr/> <p>Tip • <i>It is recommended that each package be placed in its own directory to avoid problems such as this one.</i></p>

Problems and Solutions

The following chart lists some typical problems that you might encounter when using the Automated Application Converter and some suggested solutions.

Table 1-39 • Solutions to Common Problems



Problem	Possible Causes	Solution
Cannot connect to a virtual machine	Virtual machine has not been prepared.	<p>Verify that the Virtual Machine Preparation Setup (VMCfg.exe) was run on the virtual machine to enable automatic login. See Running the Virtual Machine Preparation Setup for instructions.</p>  <p>Tip • A quick way to determine if the Virtual Machine Preparation Tool has been run on a virtual image is the presence of the GuestAgent.exe file on the root of the C: drive.</p>
	Specified Guest Username or Guest Password property is not specified correctly.	<p>When you add a virtual machine to the Automated Application Converter, you specify the User name and Password on the User Credentials panel. If you entered an incorrect value or if one of these values has changed, you will be unable to connect to the virtual machine. Open the Machines tab and verify that the values in the Guest Username and Guest Password properties for the virtual machine are correct.</p>  <p>Note • When using a domain account, do not include the domain name in the Guest Username property.</p>
Cannot connect to a Windows 7 or Windows Server 2008 virtual machine	User Account Control (UAC) settings on a Windows 7 or Windows Server 2008 virtual machine could be causing problems during auto-login.	<p>Make sure that you run the Virtual Machine Preparation Setup on the virtual machine to disable UAC. See Running the Virtual Machine Preparation Setup.</p>

Table 1-39 • Solutions to Common Problems (cont.)

Problem	Possible Causes	Solution
<p>Unable to add packages from an AdminStudio Application Catalog or a Microsoft SCCM Server</p>	<p>User does not have required login and/or view permissions on the Application Catalog or SCCM Server.</p>	<p>Try to manually view packages on a Microsoft SCCM Server or AdminStudio Application Catalog to see if you have the required view permissions.</p> <ul style="list-style-type: none"> ● Microsoft SCCM Server—Use SCCM Console to view packages on the Microsoft SCCM Server that you were having trouble with. ● Application Catalog—Use AdminStudio Application Manager to view the packages in the Application Catalog. <p>Also, if using an AdminStudio Application Catalog with the Software Repository, make sure you have view permission to the Software Repository location of that Application Catalog.</p>
<p>Cannot connect to a Microsoft SCCM Server or an AdminStudio Application Catalog</p>	<p>There are connection issues between domains due to user name.</p>	<p>Try to manually connect to the Application Catalog or Microsoft SCCM Server to make sure that you are using the correct credentials or that there are no other networking issues.</p>
<p>Unable to publish packages to an AdminStudio Application Catalog or a Microsoft SCCM Server</p>	<p>User does not have required permission to import/publish packages.</p>	<p>Try to manually publish and/or import a package to Microsoft SCCM Server or to AdminStudio Application Catalog to see if you have the required permissions:</p> <ul style="list-style-type: none"> ● Microsoft SCCM Server—Use SCCM Console to manually publish a package to the Microsoft SCCM Server that you were having trouble with. This enables you to determine if you have import/publish permission. ● Application Catalog—Use AdminStudio Application Manager Import Wizard to manually import a package into the Application Catalog. This enables you to determine if you have import permission. <p>Also, if using an AdminStudio Application Catalog with the Software Repository, make sure you have write permission to the Software Repository location of that Application Catalog.</p>

Table 1-39 • Solutions to Common Problems (cont.)


Problem	Possible Causes	Solution
<p>Cannot connect to a Microsoft Hyper-V Server or a Microsoft SCCM Server</p>	<p>DCOM configuration settings need to be adjusted.</p>	<p>Adjust the DCOM settings, as described in this MSDN article, Connecting to WMI on a Remote Computer: http://msdn.microsoft.com/en-us/library/aa389290%28VS.85%29.aspx</p>
<p>Copy errors are generated during package conversion</p>	<p>User does not have permission to the Output Path location specified in the Automated Application Converter.</p>	<p>To make sure that you have permission to the Automated Application Converter output directory, perform the following steps:</p>  <p>To specify Output Path directory:</p> <ol style="list-style-type: none"> 1. Open the Automated Application Converter. 2. Select Options on the Tools menu. The Project Options dialog box opens. 3. Locate the Output Path setting under Conversion Options. By default, the path is C:\Users\[UserName]\Documents\AutoRepack. 4. Browse to that location using Windows Explorer to and attempt to copy a file to that location. 5. If you are unable to copy a file to that location, change the Output Path to a location that you do have write permission on.

Table 1-39 • Solutions to Common Problems (cont.)



Problem	Possible Causes	Solution
<p>Package status changes to soft or hard timeout</p>	<p>The installation is requesting user input.</p>	<p>In order for the Automated Application Converter to perform automated repackaging, packages must support silent installation mode and the silent installation mode command line parameters must be specified in the Command Line property for each package.</p> <p>To resolve this problem, open the Packages tab and make sure that the package's Command Line property contains the command line parameters to run the installation silently.</p>  <hr/> <p>Note • The Automated Application Converter automatically populates the Command Line property for Windows Installer (.msi) packages that you add to the project. However, for non-MSI packages, you must manually enter the Command Line property.</p> <p>If the Command Line property is specified, but you are still receiving a timeout error, you may want to try to manually run the installation using the command line parameters to make sure that the installation is not requesting any user input.</p>
<p>App-V application does not launch</p>	<p>VM does not have App-V client installed</p>	<p>If you are able to connect to the virtual machine, but the App-V application will not launch, make sure that the App-V client is installed on the virtual machine.</p> <p>Also, make sure that App-V file streaming is enabled on the virtual machine.</p>  <hr/> <p>Note • When you select Launch Package for Testing, you are prompted to Install the Microsoft App-V Client on the Select Virtual Machine panel. See Launching Packages for Testing.</p>
<p>Cannot build a ThinApp package</p>	<p>ThinApp application is not installed.</p>	<p>To create a ThinApp application, you are required to have ThinApp installed on the same machine as the Automated Application Converter.</p>
<p>Cannot connect to Hyper-V server</p>	<p>Hyper-V Management Tools are not installed.</p>	<p>Make sure that Hyper-V Management Tools are installed on the same machine as the Automated Application Converter.</p>

Table 1-39 • Solutions to Common Problems (cont.)


Problem	Possible Causes	Solution
Virtualization Readiness status of a package is “Unknown” (?)	Location of source files is no longer accessible.	When you originally added the package to your Automated Application Converter project, you were able to access the source files, but now the source files are either no longer there or you no longer have permission to access them.
Repackaging is taking a long time	It is taking a long time to copy the files required for repackaging to the virtual machine and back to the host machine.	Try to copy the files manually from the host machine to the virtual machine to attempt to identify the cause of the delay. For VMware, try switching the Network connection setting between Bridged and NAT on the virtual machine to see if it helps to improve the copy speed.
	The package’s Compressed property setting is incorrect.	If a package is in a directory that contains many other applications, and its Compressed property is set to True , the Automated Application Converter knows that only that one file needs to be copied to the virtual machine for repackaging. However, if the Compressed property set is set to False , there is no way to determine which of the files in that directory belong to the package, so all of the files in the directory must be copied to the virtual machine before repackaging can start. See Editing Package Properties on the Packages Tab .  Tip • It is recommended that each package be placed in its own directory to avoid problems such as this one.

Table 1-39 • Solutions to Common Problems (cont.)

Problem	Possible Causes	Solution
<p>Cannot connect to a VMware virtual machine</p>	<p>The latest version of the VMware VIX API is not installed on the same machine as the Automated Application Converter.</p>	<p>If you are using VMware virtualization technology (VMware ESX or ESXi Server or a local VMware Workstation 6.5 or later), you need to have the VMware VIX API installed on the same machine as the Automated Application Converter. See VMware VIX API Requirement.</p>
	<p>You are using VMware Workstation 7.01, but the wrapper-config.txt file does not identify Workstation 7.0.1</p>	<p>If running VMware Workstation 7.0.1, verify that the wrapper-config.txt contains the following line that identifies a Workstation 7.0.1. For example:</p> <pre># Workstation 7.0.1 ws 9vmdb 7.0.1 Workstation-7.0.0 player 9 vmdb 3.0.1 workstation-7.0.0</pre>
	<p>You are attempting to connect to a VMware ESX and a VMware Workstation image at the same time.</p>	<p>When performing repackaging on a VMware virtual machine using the Automated Application Converter, you should connect to either a VMware ESX/ESXi image or a VMware Workstation image, but not both at the same time.</p>
	<p>VIX API is not working properly on virtual machine.</p>	<p>If the VIX API is not working, verify that vmrun.exe works. You can enter <code>vmrun.exe /?</code> to get the parameters for this tool. For example, to power up a virtual image on a VMware ESX server, use this command:</p> <pre>C:\Program Files (x86)\VMware\VMware VIX>vmrun -h https://172.17.1.221/sdk -T esx -u root -p hostpassword -gu UserName -gp guestpassword start "[QA_ISO] Windows 7 Ultimate - 32-bit/Windows 7 Ultimate - 32-bit.vmx"</pre>

Best Practices for Optimal Performance

When setting up the Automated Application Converter to perform automated repackaging and conversion to virtual packages, you should following these best practices:

Table 1-40 • Best Practices

Practice	Description
Machine containing virtual images should be dedicated for use with the Automated Application Converter	Machines that contain the virtual images that you will use with the Automated Application Converter should be dedicated for use with this tool only.
Virtual machine needs adequate resources	Make sure that the machine containing the virtual images has adequate resources.
Each package should be in its own folder	Each package that you add to an Automated Application Converter project should be in an individual folder, especially if they are uncompressed packages.
Manually test a virtual machine before adding it to an Automated Application Converter project	Before adding a virtual machine to your Automated Application Converter project, boot it up manually to make sure it is running properly. Make sure that no message boxes open (such as a Failure to Start Service error message) that would require user input.
Windows 7 is recommended	It is recommended that you install the Automated Application Converter on a machine running Windows 7, either 32-bit or 64-bit.
Disable unnecessary devices	On each virtual machine, disable devices that are not required, such as: <ul style="list-style-type: none"> • CD/DVD drives • USB Controller • Floppy drives • Sound cards
Turn off Windows Update on the virtual machines	To avoid problems with repackaging, turn off Windows Update on the virtual machines.

How to Test a Virtual Machine

If you are having trouble using a virtual machine with the Automated Application Converter, you may want to perform the following steps to manually test that virtual machine to see if it is in working order.



Task: *To manually test a virtual machine:*

1. Connect to the technology provider: Microsoft Hyper-V Server, VMware ESX or ESXi Server, or VMware Workstation 6.5 or later.
2. Use Remote Desktop to connect to the virtual machine you want to test.
3. Launch the virtual machine to make sure that it boots up properly and that you can login using the user name and password you specified when you added the virtual machine to your Automated Application Converter project.



Tip • *If you discover that you specified an incorrect user name or password, update the **Guest Username** and **Guest Password** properties on the **Machines** tab for this machine.*

4. Check to see if a snapshot exists and that snapshot name is either AutoRepack_Base or that you have specified an alternate name in the **Snapshot Name** property on the **Packages** tab for that virtual machine.
5. Manually copy the Repackager folder in the AdminStudio installation directory to the virtual machine to determine if you have write permission on the virtual machine.
6. Manually copy an application to the virtual machine.
7. Launch the Repackaging Wizard and repackage that application.
8. Copy the captured data from the virtual machine to the host machine in the output location specified for that package in the **Path** property on the **Packages** tab to test if you have permission to write to that location.
9. Repeat these steps for each of the virtual machines you are using with your project.

Error Messages

This section includes information on how to resolve the following error messages:

- Error -4308: VM failed to start up
- Error -4309: VM failed to shut down
- Error -4310: Failed to connect to VM
- Error -4312: Failed to prepare Repackager
- Error -4313: Failed to access the package
- Error -4314: Failed to copy repackaged output from virtual machine
- Error -4315: Failed to send command to VM
- Error -4316: Failed getting response from VM
- Error -4317: Failed running pre-snapshot
- Error -4318: Failed running post-snapshot
- Error -4319: Failed running package installation
- Error -4320: Failed creating folder on VM
- Error -4333: Preparing command-line...
- Error -4380: Failed to prepare AppV
- Error -4388: Failed preparing for pre-snapshot
- Error -4389: Failed connecting to server
- Error -4390: Failed connecting to image
- Error -4391: Failed to reboot
- Error -4395: Failed to create VM directory
- Error -4409: Failed to delete package cache folder

Debug Messages in the Automated Application Converter Log Report

By default, debug messages that occur during a conversion run are saved in the AdminStudio Automated Application Converter Log report, but the display of those debug messages is turned off. However, if you are using Microsoft Internet Explorer 8 as your default browser, you can choose to view those debug messages. See [Viewing Debug Messages](#) for instructions.

Error -4308: VM failed to start up

The following table documents this message:

Table 1-41 • Error -4308: VM failed to start up

Category	Description
Message:	Error -4308 controlling virtual machine: VM failed to start up
Cause:	Automated Application Converter is unable to access this VMware virtual machine due to a failure to login to the virtual machine server or into the guest virtual machine.
Resolution:	Open the Machines tab and verify that the following properties are set correctly for this virtual machine: <ul style="list-style-type: none">• Machine Settings—Verify the Guest Username and Guest Password properties.• Virtual Machine Server—Verify the Server Username and Server Password properties.

Error -4309: VM failed to shut down

The following table documents this message:

Table 1-42 • Error -4309: VM failed to shut down

Category	Description
Message:	Error -4309 controlling virtual machine: VM failed to shut down
Cause:	Automated Application Converter is unable to access this machine virtual machine in order to shut it down.
Resolution:	Open the Machines tab and verify that the following properties are set correctly for this virtual machine: <ul style="list-style-type: none">• Machine Settings—Verify the Guest Username and Guest Password properties.• Virtual Machine Server—Verify the Server Username and Server Password properties.

Error -4310: Failed to connect to VM

The following table documents this message:

Table 1-43 • Error -4310: Failed to connect to VM

Category	Description
Message:	Error -4310 controlling virtual machine: Failed to connect to VM
Cause:	<p>This error could be caused by the following reasons:</p> <ul style="list-style-type: none"> • Virtual machine was unexpectedly shut down early. • Operating system on the virtual machine does not launch. • The Guest Agent is not running on the virtual machine. • Permissions to the virtual machine are incorrect.
Resolution:	<p>To resolve this error, try the following:</p> <ul style="list-style-type: none"> • After you have run the Virtual Machine Preparation Tool on this virtual machine, verify that the snapshot launches, automatically logs into the virtual machine, and that the Guest Agent opens. • Ensure that the virtual machine has access to the network and is visible to/accessible from the host machine (if it is running on a different computer). • Do not shut down the virtual machine in the middle of using it.

Error -4312: Failed to prepare Repackager

The following table documents this message:

Table 1-44 • Error -4312: Failed to prepare Repackager

Category	Description
Message:	Error -4312 controlling virtual machine: Failed to prepare Repackager
Cause:	The Automated Application Converter could not read the Repackager source location or could not write to the Repackager cache location.
Resolution:	<p>To resolve this error, try the following:</p> <ul style="list-style-type: none">• Ensure that the virtual machine has access to the network and is visible to/accessible from the host machine (if it is running on a different computer).• Verify that the Guest Username and Guest Password properties under Machine Settings on the Machines tab for this virtual machine are set correctly.• Verify that the virtual machine's Repackager Cache Path property on the Machines tab for this virtual machine is set to a drive on the virtual machine, especially if the virtual machine does not have a C: drive.

Error -4313: Failed to access the package

The following table documents this message:

Table 1-45 • Error -4313: Failed to access the package

Category	Description
Message:	Error -4313 processing package: Failed to access the package
Cause:	The Automated Application Converter could not read from the package source location or could not write to the package cache location.
Resolution:	<p>To resolve this error, try the following:</p> <ul style="list-style-type: none"> • Ensure that the host machine has access to the network and is visible to/accessible from the virtual machine (if it is running on a different computer). • Verify that the Guest Username and Guest Password properties on the Machines tab for the virtual machine are set correctly. • If the package is on a network share, verify that both the host machine and virtual machine have access to that network share. • Verify that the virtual machine's Setup Cache Path property on the Machines tab for this virtual machine is set to a drive on the virtual machine, especially if the virtual machine does not have a C: drive. • Verify that the package does not already exist as read-only.

Error -4314: Failed to copy repackaged output from virtual machine

The following table documents this message:

Table 1-46 • Error -4314: Failed to copy repackaged output from virtual machine

Category	Description
Message:	Error -4314 controlling virtual machine: Failed to copy repackaged output from virtual machine
Cause:	The virtual machine could not read the output cache location, or could not write to the project output location.
Resolution:	To resolve this error, try the following: <ul style="list-style-type: none">• Ensure that the virtual machine has access to the network and is visible to/accessible from the host machine (if it is running on a different computer).• Verify that the virtual machine's Output Cache Path property on the Machines tab for this virtual machine is set to a drive on the virtual machine, especially if the virtual machine does not have a C: drive.• If the project Output Path is set to a network share, verify that the host machine has access to that network share.

Error -4315: Failed to send command to VM

The following table documents this message:

Table 1-47 • Error -4315: Failed to send command to VM

Category	Description
Message:	Error -4315 controlling virtual machine: Failed to send command to VM
Cause:	There was a network error sending a command from the host machine to the Guest Agent on the virtual machine.
Resolution:	To resolve this error, try the following: <ul style="list-style-type: none">• Ensure that the virtual machine has access to the network and is visible to/accessible from the host machine (if it is running on a different computer).• Verify that the Guest Agent running on the virtual machine has not crashed.• Update the Guest Agent on the virtual machine by running the latest version of the Virtual Machine Preparation Tool (VMCfg.exe) and taking a new snapshot.

Error -4316: Failed getting response from VM

The following table documents this message:

Table 1-48 • Error -4316: Failed getting response from VM

Category	Description
Message:	Error -4316 controlling virtual machine: Failed getting response from VM
Cause:	The Automated Application Converter did not receive a response from the virtual machine.
Resolution:	<p>To resolve this error, try the following:</p> <ul style="list-style-type: none"> • Ensure that the virtual machine has access to the network and is visible to/accessible from the host machine (if it is running on a different computer). • Verify that the Guest Agent running on the virtual machine has not crashed. • Update the Guest Agent on the virtual machine by running the latest version of the Virtual Machine Preparation Tool (VMCfg.exe) and taking a new snapshot.

Error -4317: Failed running pre-snapshot

The following table documents this message:

Table 1-49 • Error -4317: Failed running pre-snapshot

Category	Description
Message:	Error -4317 processing package: Failed running pre-snapshot
Cause:	The virtual machine could not create the output cache location or could not run Repackager.
Resolution:	<p>To resolve this error, try the following:</p> <ul style="list-style-type: none"> • Ensure that the host machine has access to the network and is visible to/accessible from the virtual machine (if it is running on a different computer). • Verify that the Guest Username and Guest Password properties on the Machines tab for the virtual machine are set correctly. • Verify that the virtual machine's Output Cache Path and Repackager Cache Path properties on the Machines tab for this virtual machine are set to a drive on the virtual machine, especially if the virtual machine does not have a C: drive. • Consider changing the Repackaging Method property for the package to Installation monitoring, which would eliminate the need for a pre-snapshot.

Error -4318: Failed running post-snapshot

The following table documents this message:

Table 1-50 • Error -4318: Failed running post-snapshot

Category	Description
Message:	Error -4318 processing package: Failed running post-snapshot
Cause:	The virtual machine could not run Repackager.
Resolution:	<p>To resolve this error, try the following:</p> <ul style="list-style-type: none">• Ensure that the virtual machine has access to the network and is visible to/accessible from the host machine (if it is running on a different computer).• Verify that the Guest Username and Guest Password properties on the Machines tab for the virtual machine are set correctly.• Verify that the virtual machine's Output Cache Path and Repackager Cache Path properties on the Machines tab for this virtual machine are set to a drive on the virtual machine, especially if the virtual machine does not have a C: drive.• Consider changing the Repackaging Method property for the package to Installation monitoring, which would eliminate the need for a post-snapshot.

Error -4319: Failed running package installation

The following table documents this message:


Table 1-51 • Error -4319: Failed running package installation

Category	Description
Message:	Error -4319 processing package: Failed running package installation
Cause:	The virtual machine could not run Repackager or the virtual machine could not launch the application.
Resolution:	<p>To resolve this error, try the following:</p> <ul style="list-style-type: none">• Ensure that the virtual machine has access to the network and is visible to/accessible from the host machine (if it is running on a different computer).• Verify that the Guest Username and Guest Password properties on the Machines tab for the virtual machine are set correctly.• Verify that the virtual machine's Setup Cache Path property on the Machines tab for this virtual machine is set to a drive on the virtual machine, especially if the virtual machine does not have a C: drive.

Error -4320: Failed creating folder on VM

The following table documents this message:

Table 1-52 • Error -4320: Failed creating folder on VM

Category	Description
Message:	Error -4320 processing package: Failed creating folder on VM
Cause:	<p>Virtual machine was unable to create the Setup Cache folder.</p>  <p>Note • This error may be related to Error -4313: Failed to access the package.</p>
Resolution:	<p>To resolve this error, try the following:</p> <ul style="list-style-type: none"> • Ensure that the virtual machine has access to the network and is visible to/accessible from the host machine (if it is running on a different computer). • Verify that the Guest Username and Guest Password properties on the Machines tab for the virtual machine are set correctly. • Verify that the virtual machine's Setup Cache Path property on the Machines tab for this virtual machine is set to a drive on the virtual machine, especially if the virtual machine does not have a C: drive.

Error -4333: Preparing command-line...

The following table documents this message:

Table 1-53 • Error -4333: Preparing command-line...

Category	Description
Message:	Error -4333 processing package: Preparing command-line...
Cause:	The virtual machine could not query the associated program for the provided extension.
Resolution:	<p>To resolve this error, try the following:</p> <ul style="list-style-type: none">• Ensure that the virtual machine has access to the network and is visible to/accessible from the host machine (if it is running on a different computer).• Verify that the package's source file (as specified in the Setup Cache Path property on the Machines tab) can run when double-clicked on the virtual machine.• If any special tools are required (script engines, etc.) to run the command line, install them on the virtual machine and retake the snapshot.

Error -4380: Failed to prepare AppV

The following table documents this message:

Table 1-54 • Error -4380: Failed to prepare AppV

Category	Description
Message:	Error -4380 controlling virtual machine: Failed to prepare AppV
Cause:	The virtual machine was unable to read the App-V client installation sources, or was unable to write to the Setup Cache Path.
Resolution:	<p>To resolve this error, try the following:</p> <ul style="list-style-type: none"> • Ensure that the virtual machine has access to the network and is visible to/accessible from the host machine (if it is running on a different computer). • Verify App-V Client installation folder was specified correctly on the Select Virtual Machine Dialog Box. • Verify that the Guest Username and Guest Password properties on the Machines tab for the virtual machine are set correctly. • Verify that the virtual machine's Setup Cache Path property on the Machines tab for this virtual machine is set to a drive on the virtual machine, especially if the virtual machine does not have a C: drive.

Error -4388: Failed preparing for pre-snapshot

The following table documents this message:

Table 1-55 • Error -4388: Failed preparing for pre-snapshot

Category	Description
Message:	Error -4388 processing package: Failed preparing for pre-snapshot
Cause:	The virtual machine was unable to write to the Output Cache Path.
Resolution:	<p>To resolve this error, try the following:</p> <ul style="list-style-type: none">• Ensure that the virtual machine has access to the network and is visible to/accessible from the host machine (if it is running on a different computer).• Verify that the Guest Username and Guest Password properties on the Machines tab for the virtual machine are set correctly.• Verify that the virtual machine's Output Cache Path property on the Machines tab for this virtual machine is set to a drive on the virtual machine, especially if the virtual machine does not have a C: drive.

Error -4389: Failed connecting to server

The following table documents this message:

Table 1-56 • Error -4389: Failed connecting to server

Category	Description
Message:	Error -4389 controlling virtual machine: Failed connecting to server
Cause:	The Automated Application Converter was unable to connect to the virtual machine server. The server machine may be unavailable.
Resolution:	<p>To resolve this error, try the following:</p> <ul style="list-style-type: none"> • Verify that the Server Address, Server Username, and Server Password properties under Virtual Machine Server on the Machines tab are set correctly for this virtual machine. • Verify that the Hyper-V or VMware ESX/ESXi server is running. • Ensure that the virtual server has access to the network and is visible to/accessible from the host machine (if it is running on a different computer). • If you are using VMware and you received XE values 22002 (55F2) or 22003 (55F3), verify that the VMware VIX API is installed. See VMware VIX API Requirement.

Error -4390: Failed connecting to image

The following table documents this message:

Table 1-57 • Error -4390: Failed connecting to image

Category	Description
Message:	Error -4390 controlling virtual machine: Failed connecting to image
Cause:	The Automated Application Converter was unable to connect to the virtual machine. The virtual machine may be unavailable or the virtual machine credentials may be incorrect.
Resolution:	<p>To resolve this error, try the following:</p> <ul style="list-style-type: none"> • Verify that the virtual machine has not been deleted. • Verify that the Guest Username and Guest Password properties on the Machines tab for the virtual machine are set correctly. • If you are using VMware ESXi Server and you received an XE value of 0020 (corresponding to a VIX_E_LICENSE error), this indicates that you may need to purchase a license for your VMware ESXi Server in order to use it with the Automated Application Converter.

Error -4391: Failed to reboot

The following table documents this message:

Table 1-58 • Error -4391: Failed to reboot

Category	Description
Message:	Error -4391 controlling virtual machine: Failed to reboot
Cause:	The Automated Application Converter could not access the virtual machine.
Resolution:	To resolve this error, try the following: <ul style="list-style-type: none">• Verify that the Server Address, Server Username, and Server Password properties under Virtual Machine Server on the Machines tab are set correctly for this virtual machine.• Attempt to launch the virtual machine manually to ensure that it has not become corrupted.

Error -4395: Failed to create VM directory

The following table documents this message:


Table 1-59 • Error -4395: Failed to create VM directory

Category	Description
Message:	Error -4395 controlling virtual machine: Failed to create VM directory
Cause:	Virtual machine could not create a directory.
Resolution:	To resolve this error, try the following: <ul style="list-style-type: none">• Verify that the Guest Username and Guest Password properties on the Machines tab for the virtual machine are set correctly.• Verify that the virtual machine's Output Cache Path property on the Machines tab for this virtual machine is set to a drive on the virtual machine, especially if the virtual machine does not have a C: drive.• Verify that the package's Package field does not include any characters that are invalid for a file name.

Error -4409: Failed to delete package cache folder

The following table documents this message:

Table 1-60 • Error -4409: Failed to delete package cache folder

Category	Description
Message:	Error -4409 processing package: Failed to delete package cache folder
Cause:	<p>Virtual machine could not delete a directory.</p>  <hr/> <p>Note • This error may be related to Error -4313: Failed to access the package.</p>
Resolution:	<p>To resolve this error, try the following:</p> <ul style="list-style-type: none"> • Verify that the Guest Username and Guest Password properties on the Machines tab for the virtual machine are set correctly. • Verify that the file or its containing folder is not locked due to being open in Windows Explorer, the Command Window, etc.

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