

Integration Guide

Novell® ZENworks® Application Virtualization

6.1

October 17, 2008

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About This Guide

This guide provides information about using Novell® ZENworks® Application Virtualization to prepare Novell products for use in your environment. The information in this guide is organized as follows:

- ♦ Chapter 1, “Overview,” on page 9
- ♦ Chapter 2, “Preparing GroupWise Messenger for Virtualization,” on page 13
- ♦ Chapter 3, “Preparing GroupWise and GroupWise Notify for Virtualization,” on page 17
- ♦ Chapter 4, “Preparing Novell OpenOffice for Virtualization,” on page 21

Audience

This guide is intended for administrators.

Feedback

We want to hear your comments and suggestions about this manual and the other documentation included with this product. Please use the User Comments feature at the bottom of each page of the online documentation, or go to [Novell Documentation Feedback site \(http://www.novell.com/documentation/feedback.html\)](http://www.novell.com/documentation/feedback.html) and enter your comments there.

Documentation Updates

For the most recent version of the *ZENworks Application Virtualization 6.1 Integration Guide*, visit the [Novell Documentation Web site \(http://www.novell.com/documentation/zav61\)](http://www.novell.com/documentation/zav61).

Additional Documentation

ZENworks Application Virtualization is supported by other documentation (in PDF format) that you can use to learn about and implement the product. For additional documentation, see the [ZENworks Application Virtualization Web site \(http://www.novell.com/documentation/zav61/index.html\)](http://www.novell.com/documentation/zav61/index.html). You can also click *Help > Novell ZENworks Application Virtualization* from within the program to access this information.

Documentation Conventions

In Novell documentation, a greater-than symbol (>) is used to separate actions within a step and items in a cross-reference path.

A trademark symbol (®, ™, etc.) denotes a Novell trademark. An asterisk (*) denotes a third-party trademark.

When a single pathname can be written with a backslash for some platforms or a forward slash for other platforms, the pathname is presented with a backslash. Users of platforms that require a forward slash, such as Linux* or UNIX*, should use forward slashes as required by your software.

Novell® ZENworks® Application Virtualization 6.1 IR1 lets you convert applications that run on Microsoft* Windows* into self-contained virtual applications. After being virtualized, an application becomes a single, isolated file that runs instantly from anywhere, including a thumb drive or other removable media. Unlike traditional installation methods, the single virtual application file does not require a separate setup process, and does not rely on external components and runtimes, reboots, or administrative privileges. The application is now isolated from other system applications, preventing DLL conflicts and other deployment nightmares, yet the experience for the application's user is unchanged.

NOTE: ZENworks Application Virtualization 6.1 IR1 lets you use the Configuration Wizard to prepare Novell GroupWise®, GroupWise Messenger, and Novell OpenOffice for virtualization. In the previous version (6.1), the Configuration Wizard did not include the ability to virtualize these Novell applications.

To virtualize GroupWise, GroupWise Messenger, and Novell OpenOffice, you have the following options:

- ◆ Use the options in the Configuration Wizard to virtualize these applications. This process is recommended for first time users.

For more information, see [Section 1.1, “Using the Configuration Wizard to Prepare Applications for Virtualization,”](#) on page 9.

- ◆ Configure these applications manually.

This guide provides step-by-step information to help you use Novell ZENworks Application Virtualization to create virtual executable files to run Novell GroupWise, GroupWise Notify, GroupWise Messenger, and Novell OpenOffice. You cannot currently use the wizard to virtualize GroupWise Notify.

You can use the information in this guide to customize the virtualized files or you can use the information to better understand the virtualization process. For more information, see [Section 1.2, “Manually Preparing Applications for Virtualization,”](#) on page 11

1.1 Using the Configuration Wizard to Prepare Applications for Virtualization

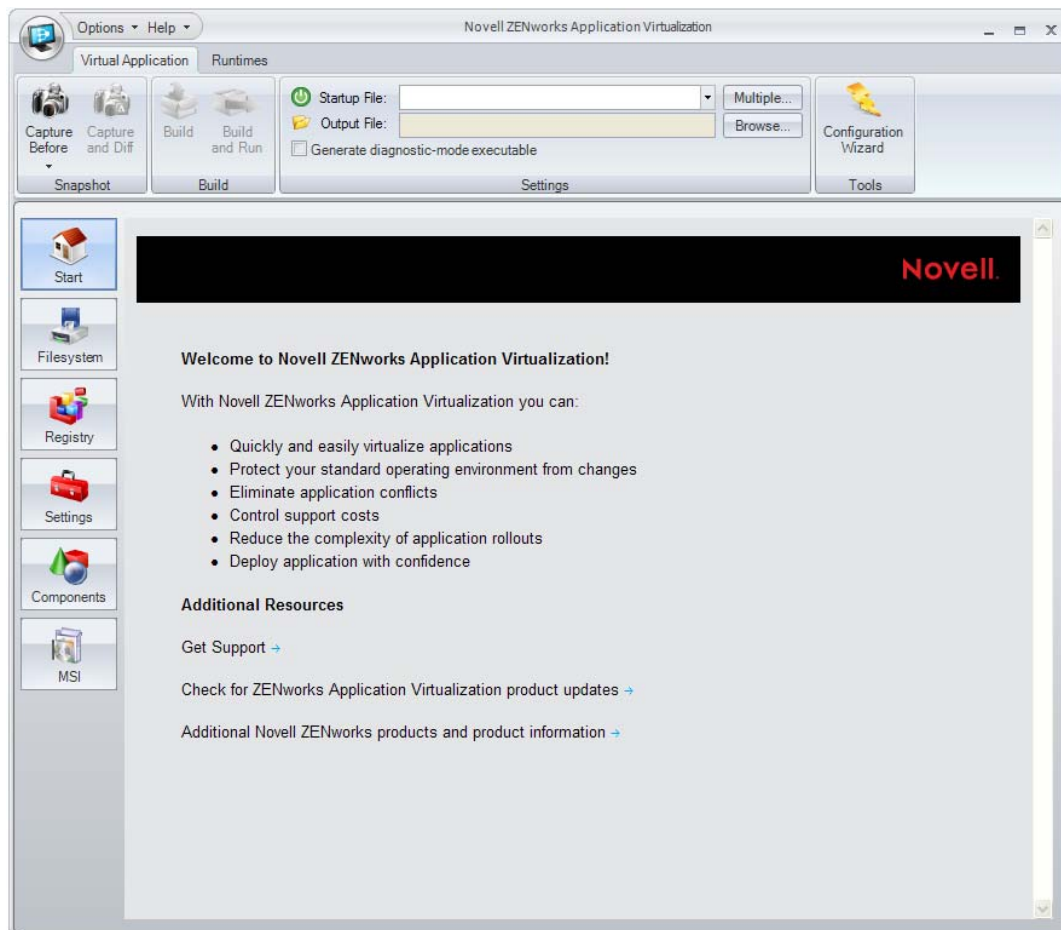
ZENworks Application Virtualization includes a Configuration Wizard that helps you prepare the following common applications for virtualization:

- ◆ Adobe* Reader 8
- ◆ Gimp 2
- ◆ Internet Explorer* 6
- ◆ Microsoft Office Professional 2003
- ◆ Microsoft Office Professional 2007
- ◆ Microsoft Ultimate 2007
- ◆ Mozilla* Firefox* 2

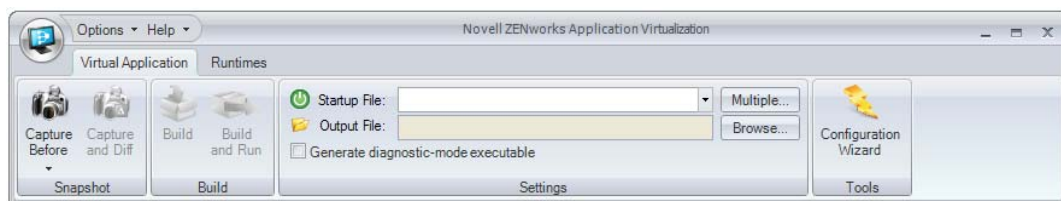
- ◆ Mozilla Firefox 3
- ◆ Novell GroupWise Client
- ◆ Novell GroupWise Messenger
- ◆ Novell OpenOffice 2.4.1
- ◆ OpenOffice 2

To use the Configuration Wizard to virtualize GroupWise, GroupWise Messenger, or Novell OpenOffice:

- 1 Click *Start > Programs > Novell ZENworks Application Virtualization > Novell ZENworks Application Virtualization* to start the application.



- 2 Click the *Configuration Wizard* button in the *Tools* section of the *Virtual Application* ribbon.



- 3 Click *Build an auto-configured virtual application*.

- 4 Select the desired application from the *Application* drop-down list.
- 5 Click *Next*, then follow the instructions in the wizard.

1.2 Manually Preparing Applications for Virtualization

Most commercial applications, including GroupWise and Novell OpenOffice, require complex combinations of file system and registry entries to function properly. To facilitate virtualization of these applications, ZENworks Application Virtualization creates snapshot application installations and automatically configures itself based on modifications made to the host system during application setup.

Snapshotting uses images of the host machine that are taken at different points in time to determine the virtual application configuration.

Prior to installing the application to be virtualized, a snapshot is taken that captures the state of the host device without the target application installed. After installing the application, a second snapshot is taken that captures all changes to the host device. ZENworks Application Virtualization then computes the changes, or delta, between the snapshots, and inserts these changes into the configuration.

You can use the configuration information to create executable files that behave differently, depending on the application you are preparing to use:

- ♦ **A Single Executable File to Launch an Application:** To prepare GroupWise Messenger, you can create a single executable file to launch the program. For more information, see [Chapter 2, “Preparing GroupWise Messenger for Virtualization,”](#) on page 13.

To prepare Novell OpenOffice, you have the option to create a single executable file to launch the OpenOffice.org Quickstarter, which lets users choose the program to launch (Writer, Calc, Draw, Impress, or Math). For more information, see [Chapter 4, “Preparing Novell OpenOffice for Virtualization,”](#) on page 21.

- ♦ **A Single Executable File to Simultaneously Launch Multiple Applications:** To prepare GroupWise and Notify, you can create a single executable file to launch both programs simultaneously. For more information, see [Chapter 3, “Preparing GroupWise and GroupWise Notify for Virtualization,”](#) on page 17.
- ♦ **A Single Executable File to Expose Multiple Executable Startup Files:** To prepare Novell OpenOffice, you can create a single executable file to expose multiple executable startup files (Writer, Calc, Draw, Impress, or Math). ZENworks Application Virtualization allows multiple entry points into the virtual application to be triggered based on a command line argument to the virtual application executable. If you use Novell ZENworks Desktop Management or ZENworks Configuration Management to distribute applications, command line arguments let you use the same application object for all OpenOffice.org programs. For more information, see [Chapter 4, “Preparing Novell OpenOffice for Virtualization,”](#) on page 21.

Preparing GroupWise Messenger for Virtualization

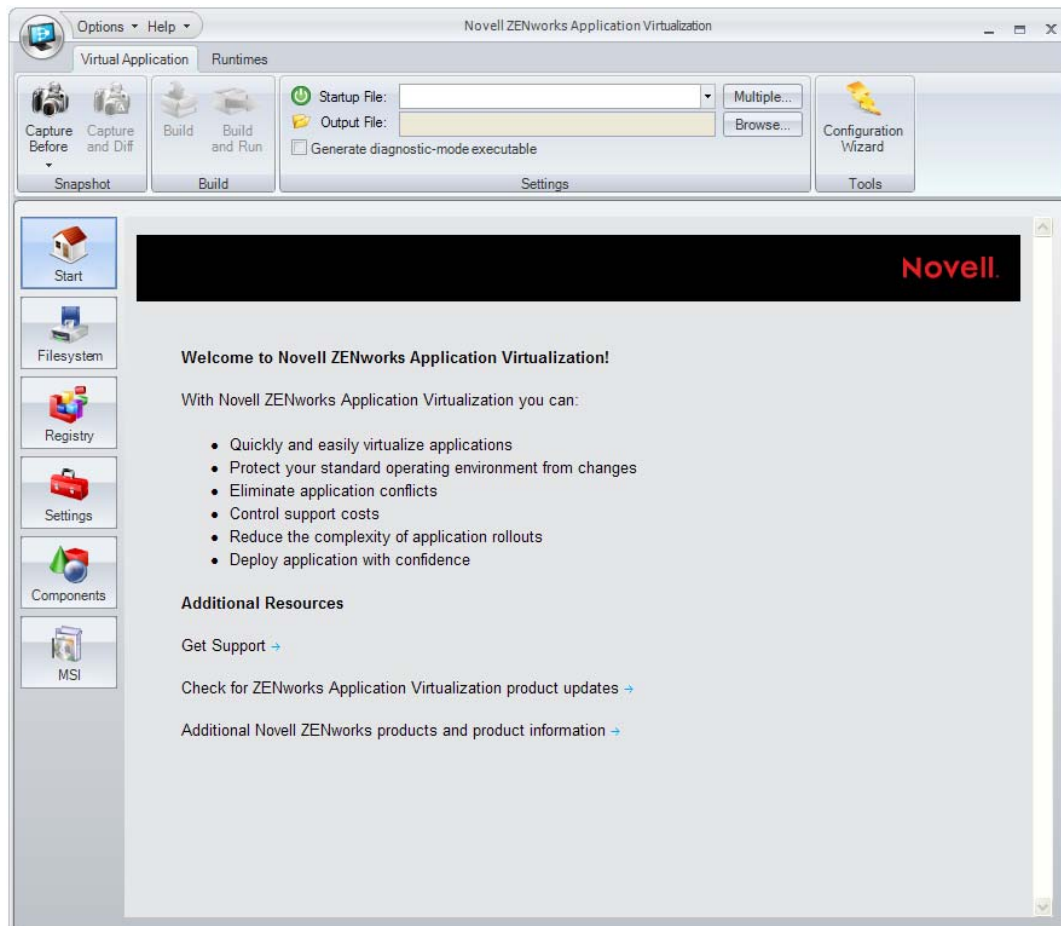
2

The section contains step-by-step information to help you use Novell® ZENworks® Application Virtualization to prepare Novell GroupWise® Messenger to run as a virtual application.

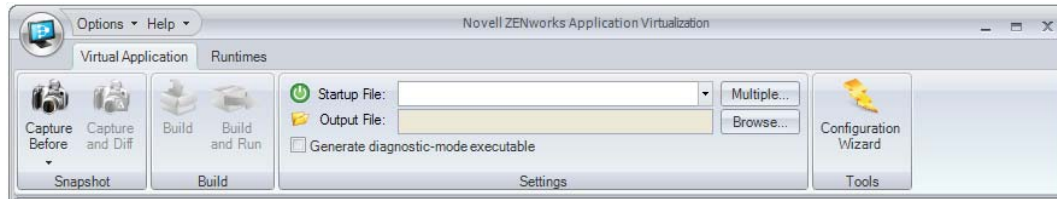
- 1 Install ZENworks Application Virtualization onto a clean machine.

You can prepare a clean machine by uninstalling GroupWise Messenger. However, we recommend that you start the process on a machine that has only the desired Windows OS, any applicable OS service packs, and ZENworks Application Virtualization installed. Starting with a machine that includes only these items helps to ensure that your virtual application does not contain settings that might cause conflicts.

- 2 Click *Start > Programs > Novell ZENworks Application Virtualization > Novell ZENworks Application Virtualization* to start the application.



- 3 Click *Capture Before* in the *Snapshot* section of the *Virtual Application* ribbon.



This process captures the first snapshot image. Snapshotting iterates through the file system and registry, and therefore might take several minutes to complete.

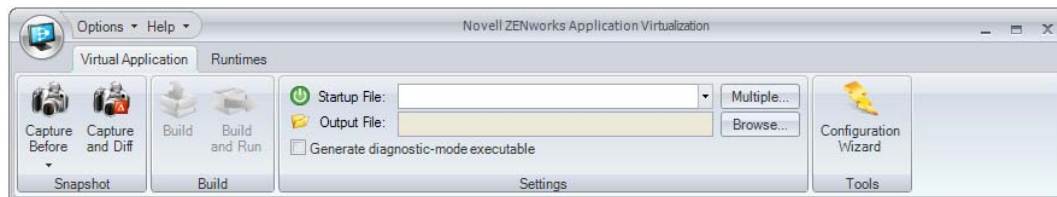
- 4 (Optional) Click the down-arrow on the bottom of the *Capture Before* button, then click *Save Snapshot*.

Saving the first snapshot lets you skip this step when snapshotting subsequent applications from the same clean machine image.

- 5 Install GroupWise Messenger on the clean machine.

For installation instructions, see the [GroupWise Documentation Web site \(http://www.novell.com/documentation/groupwise.html\)](http://www.novell.com/documentation/groupwise.html). Depending on the version of GroupWise that you have deployed in your environment, click the appropriate link, then locate and display the *Installation Guide*.

- 6 Click *Capture and Diff* in the *Snapshot* section of the *Virtual Application* ribbon.



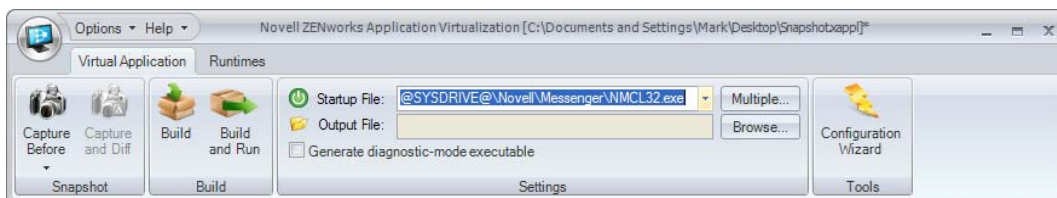
- 7 Browse to and select the destination folder to store the snapshot, then click *OK*.

This process captures the second snapshot, computes the delta between the two snapshots, and populates the virtual application with the delta entries. This process might take a few minutes.

- 8 (Optional) Click the *Filesystem* button on the left side of the ZENworks Application Virtualization console to review the file system and registry entries.

You can remove any files or settings that are not required for proper execution of your virtual application. Removing unused entries reduces virtual application size. However, accidental removal of a required resource might cause your virtual application to not function properly.

- 9 From the *Startup File* drop-down list, select the GroupWise Messenger executable file (NMCL32.exe).



- 10 Click *Build* in the *Build* section of the *Virtual Application* ribbon to process the application.

11 Specify the location and filename of the virtual application executable file.

12 Test the virtual application executable file on another machine.

The executable file is now ready to distribute to users. You can use any method you want to distribute the file, including USB thumb drives.

You can also use Novell ZENworks or Novell ZENworks Configuration Management to distribute the file. For more information, see the [ZENworks Documentation Web site \(http://www.novell.com/documentation/zenworks.html\)](http://www.novell.com/documentation/zenworks.html).

Users must authenticate to the GroupWise Messenger system after they launch the virtual application.

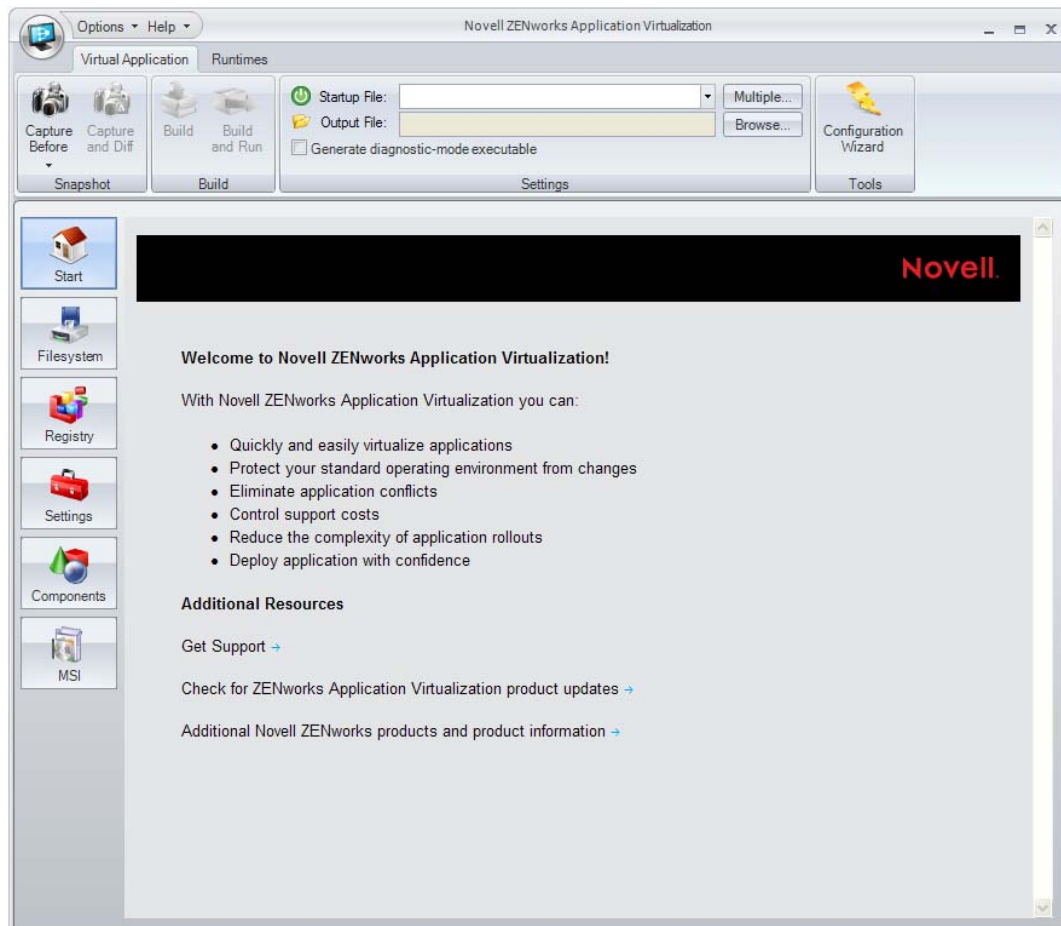
Preparing GroupWise and GroupWise Notify for Virtualization

The section contains step-by-step information to help you use Novell® ZENworks® Application Virtualization to prepare Novell GroupWise® and GroupWise Notify to run as virtual applications.

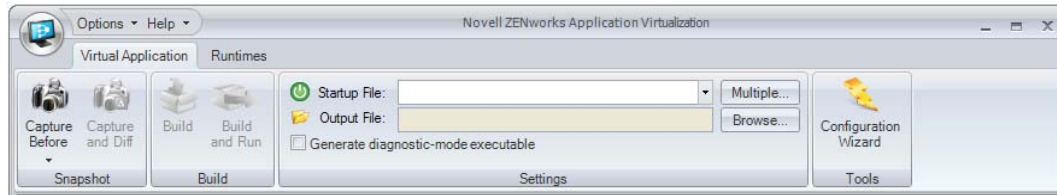
- 1 Install ZENworks Application Virtualization onto a clean machine.

You can prepare a clean machine by uninstalling GroupWise and GroupWise Notify. However, we recommend that you start the process on a machine that has only the desired Windows OS, any applicable OS service packs, and ZENworks Application Virtualization installed. Starting with a machine that includes only these items helps to ensure that your virtual application does not contain settings that might cause conflicts.

- 2 Click *Start > Programs > Novell ZENworks Application Virtualization > Novell ZENworks Application Virtualization* to start the application.



- 3 Click *Capture Before* in the *Snapshot* section of the *Virtual Application* ribbon.



This process captures the first snapshot image. Snapshotting iterates through the file system and registry, and might take several minutes to complete.

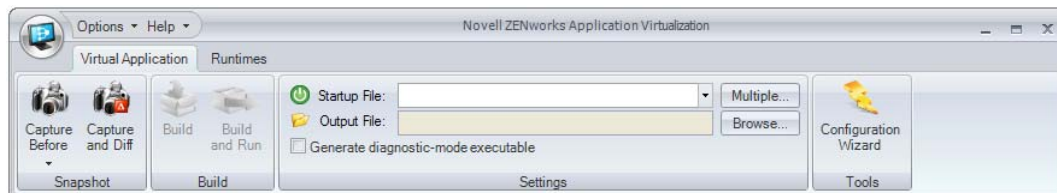
- 4 (Optional) Click the down-arrow on the bottom of the *Capture Before* button, then click *Save Snapshot*.

Saving the first snapshot lets you skip this step when snapshotting subsequent applications from the same clean machine image.

- 5 Install GroupWise on the clean machine.

For installation instructions, see the [GroupWise Documentation Web site \(http://www.novell.com/documentation/groupwise.html\)](http://www.novell.com/documentation/groupwise.html). Depending on the version of GroupWise that you have deployed in your environment, click the appropriate link, then locate and display the *Installation Guide*.

- 6 Click *Capture and Diff* in the *Snapshot* section of the *Virtual Application* ribbon.



- 7 Browse to and select the destination folder to store the snapshot, then click *OK*.

This process captures the second snapshot, computes the delta between the two snapshots, and populates the virtual application with the delta entries. This process might take a few minutes.

- 8 (Optional) Click the *Filesystem* button on the left side of the ZENworks Application Virtualization console to review the file system and registry entries.

You can remove any files or settings that are not required for proper execution of your virtual application. Removing unused entries reduces virtual application size. However, accidental removal of a required resource might cause your virtual application to not function properly.

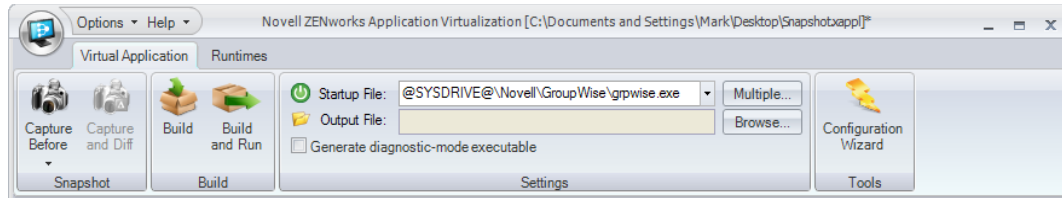
- 9 (Conditional) If you plan to use the GroupWise Caching mode or the Archive feature, click the *Filesystem* button on the left side of the ZENworks Application Virtualization console, then add the sandbox data area folders you want to embed in the application executable to store cached or archived data. For example, you could create a *Cache* folder and an *Archive* folder for users.

Caching mode stores a copy of a user's network mailbox, including messages and other information, on a local drive. The archive saves mail or phone messages, appointments, reminder notes, or tasks to a designated database on a local drive. For more information, see the [GroupWise Documentation Web site \(http://www.novell.com/documentation/groupwise.html\)](http://www.novell.com/documentation/groupwise.html).

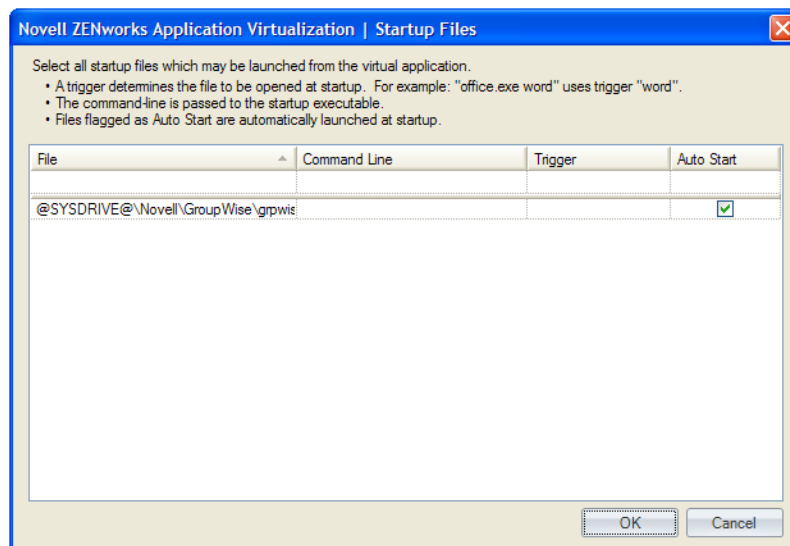
Ensure that you have enough disk space in your ZENworks Application Virtualization sandbox to store that mailbox. For information, see the *Configuring the sandbox location* topic in online help (click *Help* > click *Novell ZENworks Application Virtualization Documentation* > expand

the *Virtual Application Customization* book > click *Configuring the sandbox location*) or see the *Editing the virtual filesystem* topic in the online help (expand the *Configuring Virtual Applications* book > click *Editing the virtual filesystem*).

- 10 From the *Startup File* drop-down list, select the GroupWise executable file (`grpwise.exe`).



- 11 Click the *Multiple* button on the right side of the *Startup File* drop-down list to display the Startup Files dialog box.



ZENworks Application Virtualization lets you launch both GroupWise and Notify when users click the virtual application executable file.

- 11a Click the *File* column on the first empty row in the startup file list and select `notify.exe`, then press Enter.
- 11b Click the *Auto Start* check box next to `notify.exe` so that it is always automatically launched on virtual application startup along with GroupWise.

The *Auto Start* flag can be specified for multiple startup files to automatically launch multiple applications that are typically used together in a single session (also known as shotgunning).

- 12 Click *Build* in the *Build* section of the *Virtual Application* ribbon to process the application.
- 13 Specify the location and filename of the virtual application executable file.
- 14 Test the virtual application executable file on another machine.

The executable file is now ready to distribute to users. You can use any method you want to distribute the file, including USB thumb drives.

You can also use Novell ZENworks or Novell ZENworks Configuration Management to distribute the file. For more information, see the [ZENworks Documentation Web site \(http://www.novell.com/documentation/zenworks.html\)](http://www.novell.com/documentation/zenworks.html).

Users must authenticate to the GroupWise system after they launch the virtual application. The virtual application executable, as configured above, does not populate the username, password, or post office information. When the user logs in to the virtual GroupWise application the first time, the user can choose to save this information.

Users can use the virtualized GroupWise application on a machine that already has GroupWise installed. However, both instances of GroupWise cannot run at the same time. The authentication and post office information for the installed instance are not used for the virtualized instance of GroupWise.

The virtual executable file can be used to run GroupWise in Online, Remote, or Caching mode. For more information on these modes, see the [GroupWise Documentation Web site \(http://www.novell.com/documentation/groupwise.html\)](http://www.novell.com/documentation/groupwise.html).

Preparing Novell OpenOffice for Virtualization

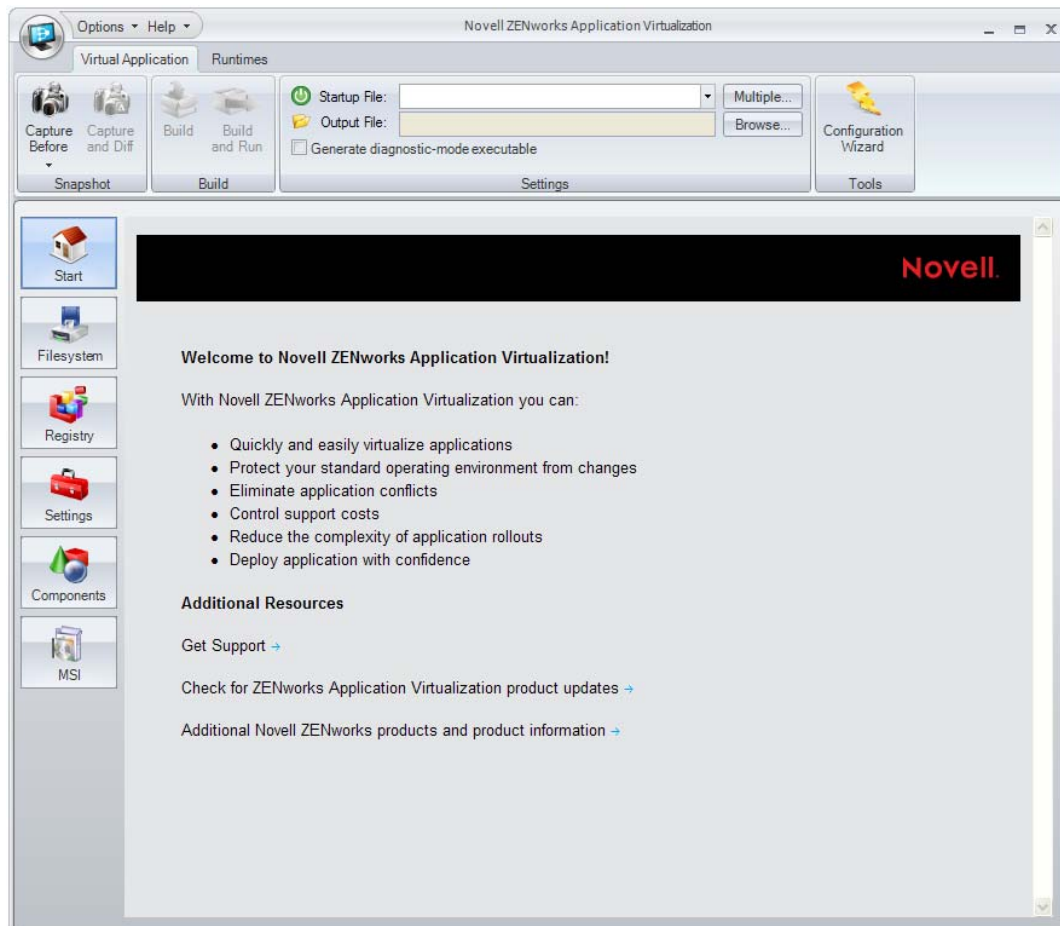
4

The section contains step-by-step information to help you use Novell® ZENworks® Application Virtualization to prepare the programs in Novell OpenOffice to run as virtual applications.

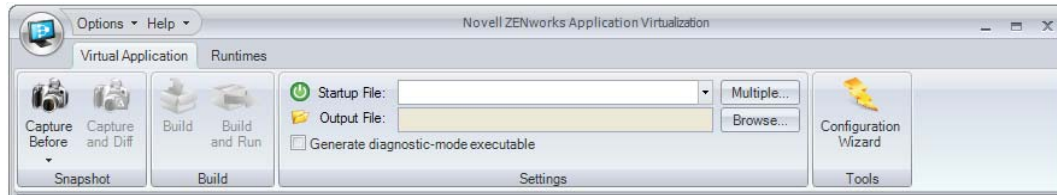
- 1 Install ZENworks Application Virtualization onto a clean machine.

You can prepare a clean machine by uninstalling Novell OpenOffice. However, we recommend that you start the process on a machine that has only the desired Windows OS, any applicable OS service packs, and ZENworks Application Virtualization installed. Starting with a machine that includes only these items helps to ensure that your virtual application does not contain settings that might cause conflicts.

- 2 Click *Start > Programs > Novell ZENworks Application Virtualization > Novell ZENworks Application Virtualization* to start the application.



- 3 Click *Capture Before* in the *Snapshot* section of the *Virtual Application* ribbon.



This process captures the first snapshot image. Snapshotting iterates through the file system and registry, and might take several minutes to complete.

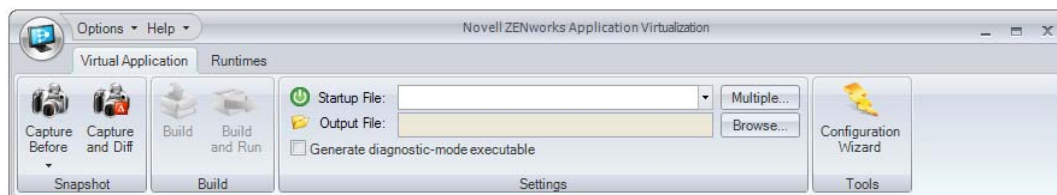
- 4 (Optional) Click the down-arrow on the bottom of the *Capture Before* button, then click *Save Snapshot*.

Saving the first snapshot lets you skip this step when snapshotting subsequent applications from the same clean machine image.

- 5 Install OpenOffice.org on the clean machine.

You can download Novell OpenOffice from the [Novell Downloads page \(http://download.novell.com\)](http://download.novell.com).

- 6 Click *Capture and Diff* in the *Snapshot* section of the *Virtual Application* ribbon.



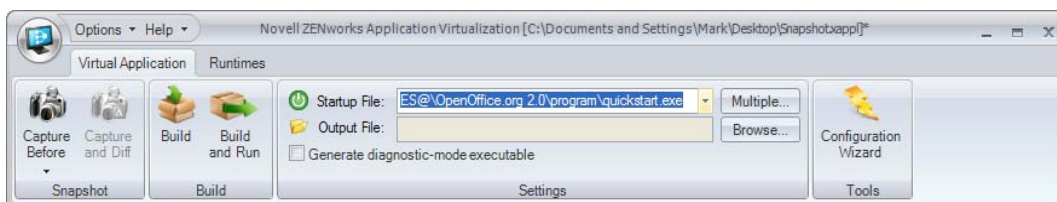
- 7 Browse to and select the destination folder to store the snapshot, then click *OK*.

This process captures the second snapshot, computes the delta between the two snapshots, and populates the virtual application with the delta entries. This process might take a few minutes.

- 8 (Optional) Click the *Filesystem* button on the left side of the ZENworks Application Virtualization console to review the file system and registry entries.

You can remove any files or settings that are not required for proper execution of your virtual application. Removing unused entries reduces virtual application size. However, accidental removal of a required resource might cause your virtual application to not function properly.

- 9 From the *Startup File* drop-down list, select the `quickstart.exe` file.

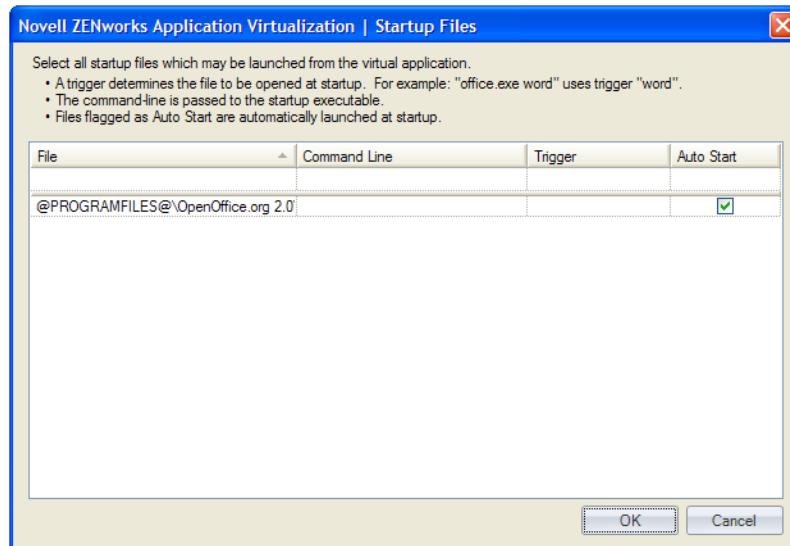


Selecting the `quickstart.exe` file causes the resulting executable file to launch the OpenOffice Quickstarter. The OpenOffice Quickstarter, which displays in the notification area, lets users choose which OpenOffice application to launch (Writer, Calc, Draw, Impress, or Math).

You can also create a single executable file to expose multiple executable startup files (Writer, Calc, Draw, Impress, or Math). ZENworks Application Virtualization allows multiple entry points into the virtual application to be triggered based on a command line argument to the virtual application executable. If you use Novell ZENworks or Novell ZENworks Configuration Management to distribute applications, command line arguments let you use the same application object for all OpenOffice.org programs.

If you want to use the OpenOffice Quickstarter, skip to **Step 11**. If you want the virtual application executable file to expose multiple applications, continue with **Step 10**.

- 10** (Optional) Click the *Multiple* button on the right side of the *Startup File* drop-down list to display the Startup Files dialog box.



- 10a** Click the *File* column on the first empty row in the startup file list, select `scal.c.exe`, then press Enter.

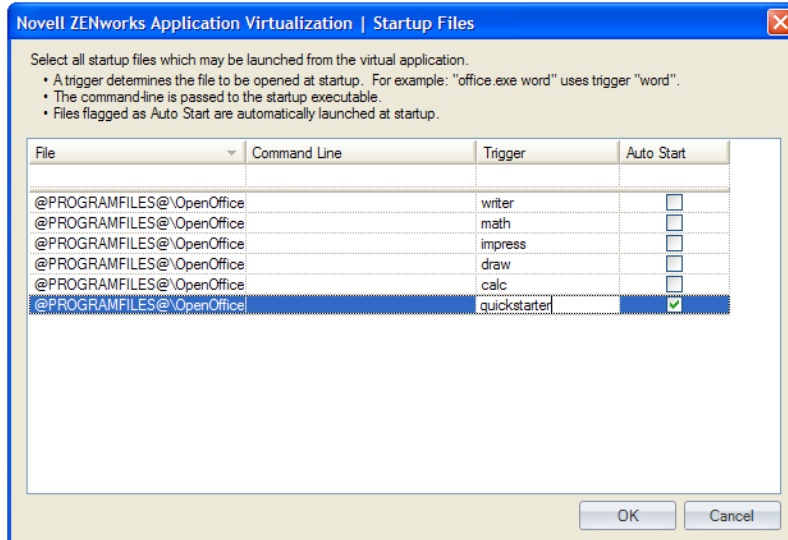
NOTE: If you cannot see the entire path to the `scal.c.exe` file, expand the *File* column. To expose the drop-down arrow to select the executable file, click in the *File* field.

- 10b** Click the *File* column on the first empty row in the startup file list, select `sdraw.exe`, then press Enter.
- 10c** Click the *File* column on the first empty row in the startup file list, select `simpress.exe`, then press Enter.
- 10d** Click the *File* column on the first empty row in the startup file list, select `smath.exe`, then press Enter.
- 10e** Click the *File* column on the first empty row in the startup file list, select `swriter.exe`, then press Enter.
- 10f** Specify the desired command line trigger in the *Trigger* column for each row.

If you create a trigger for each application in Novell OpenOffice, you can use the trigger as a command line option in ZENworks Desktop Management or ZENworks Configuration Management to launch the desired application from an application object. For example, if you specify `writer` for the trigger for OpenOffice Writer, you could use `writer` as the command line option to open Writer when the user opens the executable.

10g (Conditional) Click the *Auto Start* check box next to any startup files that you want to always automatically launch on virtual application startup.

The *Auto Start* flag can be specified for multiple startup files to automatically launch multiple applications that are typically used together in a single session (also known as shotgunning).



10h Click *OK*.

11 Click *Build* in the *Build* section of the *Virtual Application* ribbon to process the application.

12 Specify the location and filename of the virtual application executable file.

13 Test the virtual application executable file on another machine.

The executable file is now ready to distribute to users. You can use any method you want to distribute the file, including USB thumb drives.

You can also use Novell ZENworks or Novell ZENworks Configuration Management to distribute the file. For more information, see the [ZENworks Documentation Web site \(http://www.novell.com/documentation/zenworks.html\)](http://www.novell.com/documentation/zenworks.html).