



Automatic Workstation Import and Removal

The Automatic Workstation Import and Automatic Workstation Removal features of Novell® ZENworks® Desktop Management provide simplified, hands-off management of users' workstations.

Automatic Workstation Import imports workstations into Novell eDirectory™ and integrates them automatically. Automatic Workstation Removal removes obsolete workstation data from the directory and from the Inventory database.

The Workstation objects created by Automatic Workstation Import provide you with a way to push software and computer settings down to the workstations by using the Novell Application Launcher™ and Workstation Management policies. For more information about the Novell Application Launcher, see [“Application Management” on page 187](#). For more information about Workstation Management policies, see [“Workstation Management” on page 91](#).

The following sections help you to understand, deploy, and use Automatic Workstation Import and Removal:

- ◆ [Chapter 6, “Understanding Automatic Workstation Import and Removal,” on page 79](#)
- ◆ [Chapter 7, “Setting Up Automatic Workstation Import and Removal,” on page 83](#)
- ◆ [Chapter 8, “Workstation Registration Files,” on page 87](#)
- ◆ [Appendix E, “Documentation Updates,” on page 89](#)

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Understanding Automatic Workstation Import and Removal

Novell® ZENworks® Desktop Management Automatic Workstation Import includes Automatic Workstation Removal and provides management of the entire life cycle of a workstation, from the creation of its object to its removal.

The following sections help you to understand Automatic Workstation Import and Removal:

- ♦ [“Understanding Workstation Import and Registration” on page 79](#)
- ♦ [“Server Considerations” on page 81](#)

Understanding Workstation Import and Registration

After you have installed Automatic Workstation Import using the ZENworks Desktop Management Server installation, importing workstations is a one-step process. The Workstation Registration program in the Desktop Management Agent accesses the Automatic Workstation Import service, which creates the Workstation object in Novell eDirectory™ and registers the workstation. For more information about using ZENworks Desktop Management with either the Novell Client or with the Desktop Management Agent, see [“Understanding ZENworks 6.5 Desktop Management” on page 29](#). For more information about installing Automatic Workstation Import, see [“Installing the ZENworks Desktop Management Server” in the *Novell ZENworks 6.5 Desktop Management Installation Guide*](#).

The actual process of importing unregistered workstations into eDirectory depends on the physical location of the workstation (whether it is located inside or outside of the firewall).

If the workstation is located inside the firewall, the workstation accesses the Automatic Workstation Import service directly. In this scenario, the hostname (zenwsimport) must resolve to the Import Service as in previous versions of ZENworks.

If the workstation is located outside the firewall, the workstation accesses the ZENworks Desktop Management Middle Tier Server via HTTP using the Desktop Management Agent. The Middle Tier Server then acts as a proxy to pass the request on to the Automatic Workstation Import service. In this scenario, the hostname on the Middle Tier Server (zenwsimport) must resolve to the server running the import service. You should ping the server from the Middle Tier Server to ensure that it is pointing to the correct address.

The following sections provide additional information:

- ♦ [“Using the Import Service” on page 80](#)
- ♦ [“Registering Imported Workstations” on page 80](#)
- ♦ [“Removing Workstation Objects” on page 80](#)

Using the Import Service

The Automatic Workstation Import service creates network traffic; however, the import service is used only when one of the following occurs:

- ◆ A workstation boots and a corresponding Workstation object does not exist.

This is normally the first time the workstation is registered. The Automatic Workstation Import service initially creates the Workstation object in the tree, populates the object with default values, and updates the properties with the current registration information.

The Workstation Import policy is used to determine where the Workstation object is created and how it is named.

- ◆ A workstation attempts to log in to the tree and its Workstation object was either moved or renamed.

The registration program calls the import service to synchronize the workstation with its Workstation object.

At all other times when a workstation is logged in to the network, the Workstation Registration program registers the workstation and updates the Workstation object. The import service is not contacted for these operations, so network traffic to and from the Workstation Import service is not an issue. (Workstations that authenticate and update Workstation objects will still generate some network traffic.)

For more information, see [“Workstation Import Policy” on page 109](#).

Registering Imported Workstations

After a workstation has been imported into the directory, it only needs to be registered each time it logs in to the tree. The Workstation Registration program updates the Workstation object when one of the following occurs:

- ◆ The Workstation Manager program starts
- ◆ A user logs in to the tree
- ◆ A Windows 2000/XP user logs out

The Workstation Registration program updates the workstation’s registration time, network address, last server, and last user information.

Network traffic is minimized because the Workstation Registration program doesn’t need to access the import service.

Removing Workstation Objects

You should periodically remove unused Workstation objects from the directory so that inventory reporting is more accurate.

Automatic Workstation Removal uses the Workstation Removal policy to determine when Workstation objects are considered to be unused so that they can automatically be removed from the directory.

Workstation objects can be automatically removed when a workstation has not been registered within the time frame you specify in the effective Workstation Removal policy.

You can specify any number of days for how long a workstation can go without registering before it is considered unused.

For more information, see [“Workstation Removal Policy” on page 114](#).

Server Considerations

Consider the following when setting up the server portion of Automatic Workstation Import and Removal:

- ◆ [“Selecting Servers for Deployment” on page 81](#)
- ◆ [“Using DNS Names or HOSTS Files” on page 81](#)
- ◆ [“Scheduling Workstation Removal” on page 82](#)

Selecting Servers for Deployment

Generally, more workstations are imported than are removed. Therefore, you should have more servers set up with the Automatic Workstation Import service than with the Automatic Workstation Removal service.

To minimize network traffic, you should install the Automatic Workstation Import service on at least one server per WAN location. Automatic Workstation Removal does not generally produce a lot of network traffic, so it can be used across WAN links.

If you create a Server package in ZENworks Desktop Management 4.x or later, you cannot associate the package with a ZENworks for Desktops 3.x import server. You must associate it with a ZENworks Desktop Management 4.x or later import server.

Using DNS Names or HOSTS Files

In setting up Automatic Workstation Import, you should use DNS for TCP/IP addresses so that hostnames can be found automatically, instead of setting up and maintaining a HOSTS file on every workstation.

Using DNS names in your network provides you with automated management of workstation importing. You should coordinate with your DNS administrator to set up IP addresses for your workstation import services according to physical location in order to allow workstations to contact the import service locally, rather than across WAN links.

You can differentiate IP addresses according to domain or zone by using multiple domains or by using primary and secondary zones. For example, you could have a DNS entry for Automatic Workstation Import using the following syntax:

```
zenwsimport.context_string.com
```

HOSTS files can be used to handle exceptions, such as when you want a specific workstation to resolve to a specific workstation import service. A HOSTS file is useful for manually importing a workstation, such as in a test environment. For more information, see [“Setting Up a HOSTS File on a Local Workstation” on page 81](#).

Setting Up a HOSTS File on a Local Workstation

To set up workstation import on a local workstation, open and edit the HOSTS file on the local workstation.

For Windows 98, the HOSTS file's location should be:

```
Win98_drive:\Win98_directory\hosts
```

IMPORTANT: The default HOSTS file in Windows is named hosts.sam. Do not use the .sam extension with your filename. Rename hosts.sam to hosts, or make a copy and rename the copy. By default, Windows 98 hides filename extensions that are of a known type, so you should make sure that filename extensions are being displayed so that you can correctly rename the hosts.sam file to hosts.

For Windows 2000/XP, the HOSTS file's location should be:

```
Win_drive:\Win_directory\SYSTEM32\drivers\etc\hosts
```

as shown above is a filename, not a folder name.

The following is an example of the text you would add in a HOSTS file for Automatic Workstation Import:

```
151.155.155.55 zenwsimport
```

In this example, the TCP/IP address is for the server where you are running the Automatic Workstation Import service. "zenwsimport" is not the name of a server, but a DNS name that resolves to this TCP/IP address. In other words, zenwsimport is a label to identify the server as the one running the Automatic Workstation Import service.

Scheduling Workstation Removal

You should schedule workstation removal so that it is performed periodically when the network is least busy, such as during non-work hours.

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Setting Up Automatic Workstation Import and Removal

When installing Novell® ZENworks® Desktop Management, you can specify import and removal roles for selected servers. Therefore, before running the ZENworks Desktop Management installation program, you should determine which servers you want to run the import service, the removal service, or both. For further information on selecting servers to run each service, see [“Selecting Servers for Deployment” on page 81](#).

To deploy Automatic Workstation Import and Removal, we recommend the following sequence:

1. Install the Automatic Workstation Import and Removal service software. For more information, see [“Installing the ZENworks Desktop Management Server”](#) in the *Novell ZENworks 6.5 Desktop Management Installation Guide*.
2. Set up the Automatic Workstation Import and Removal policies. For more information, see [“Setting Up the Automatic Workstation Import and Removal Policies” on page 84](#).
3. Set up DNS names and customize logging.
Using DNS names is preferable to using HOSTS files for registering workstations because HOSTS files must be managed manually at each workstation.
4. Install the Novell Client™ and/or the Desktop Management Agent on the workstations. For more information, see [“User Workstation Hardware Requirements”](#) and [“User Workstation Software Requirements”](#) in the *Novell ZENworks 6.5 Desktop Management Installation Guide*.

After you have completed this sequence, Automatic Workstation Import and Removal is functional.

Before completing the tasks in the following sections, you should have already installed the Automatic Workstation Import and Removal software during your installation of ZENworks Desktop Management. For more information, see [“Installing the ZENworks Desktop Management Server”](#) in the *Novell ZENworks 6.5 Desktop Management Installation Guide*.

The following sections contain steps to help you set up Automatic Workstation Import and Removal:

- ♦ [“Setting Up the Automatic Workstation Import and Removal Policies” on page 84](#)
- ♦ [“Setting Up Automatic Workstation Import and Removal to Run on the Servers” on page 84](#)
- ♦ [“Using the Novell Client and the ZENworks Desktop Management Agent” on page 85](#)
- ♦ [“Verifying that Automatic Workstation Import and Removal are Working” on page 85](#)

Setting Up the Automatic Workstation Import and Removal Policies

The following sections help you to configure and associate the necessary policies:

- ◆ [“Configuring the Automatic Workstation Import Policy” on page 84](#)
- ◆ [“Configuring the Automatic Workstation Removal Policy” on page 84](#)
- ◆ [“Associating the Server Package” on page 84](#)

Configuring the Automatic Workstation Import Policy

For Automatic Workstation Import to work, you must configure the Workstation Import policy. This policy determines how the workstation objects are named and where they are placed in Novell eDirectory™.

For conceptual and step-by-step information about configuring the Workstation Import policy, see [“Workstation Import Policy” on page 109](#).

Configuring the Automatic Workstation Removal Policy

For Automatic Workstation Removal to work, you must configure the Workstation Removal policy. This policy determines when unused Workstation objects will be removed from eDirectory.

For conceptual and step-by-step information about configuring the Workstation Removal policy, see [“Workstation Removal Policy” on page 114](#).

Associating the Server Package

The import and removal policies you configured and enabled cannot be in effect until you associate their Server Package with a server. For further information, see [“Associating the Server Package” on page 121](#).

Setting Up Automatic Workstation Import and Removal to Run on the Servers

The steps in the following sections assume that you selected the Import, Removal, or Import/Removal option as part of Automatic Workstation Import installation. For further information, see [“Installing the ZENworks Desktop Management Server”](#) in the *Novell ZENworks 6.5 Desktop Management Installation Guide*.

The most important item to remember when deploying Automatic Workstation Import is to use DNS for TCP/IP addresses so that DNS names can be found automatically. This is preferable to setting up and maintaining HOSTS files on every workstation.

For information about setting up a HOSTS file on a local workstation, see [“Setting Up a HOSTS File on a Local Workstation” on page 81](#).

To set up Automatic Workstation Import, do the following for each import service server:

- 1 Set up a DNS name for Automatic Workstation Import to use.

This can be either a DNS entry or an entry in a local HOSTS file. An example of a DNS name is `www.novell.com`.

- 2 To verify the DNS name or TCP/IP address, type the following at the workstation command prompt:

```
ping zenwsimport
```

Using the Novell Client and the ZENworks Desktop Management Agent

You must update each workstation that you want to import with the latest ZENworks Desktop Management Agent. This is required to place Workstation Manager on the workstations. For further information, see [“Understanding ZENworks 6.5 Desktop Management” on page 29](#).

Verifying that Automatic Workstation Import and Removal are Working

At this point, if the scheduler is working, workstation import should happen automatically when any of these events occur, depending on the Import policy:

- ◆ Scheduler service startup (98/2000/XP)
- ◆ User login (98/2000/XP)

To verify that Automatic Workstation Import and Removal are working:

- ◆ For each NetWare[®] import or removal service server, press Ctrl+Esc and look for a ZENworks Workstation Import screen.
- ◆ For each Windows 2000/XP import or removal service server, check services for:

```
ZENworks Workstation Import
```

or

```
ZENworks Workstation Removal
```

If Automatic Workstation Import or Removal is not running, restart the server.

You can force workstation import or registration to occur by running `zwsreg.exe`, located on the workstation at:

```
drive:\program files\novell\zenworks\zwsreg.exe
```

To stop an import or removal service on a NetWare server, you can use the following commands in place of using the process IDs displayed by the `java -show` command. Enter the following at the server console:

```
java -killzenwsimp
```

```
java -killzenwsrem
```

These commands are also contained in the `sys:\system\zfdstop.ncf` file.

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Workstation Registration Files

Workstation registration in Novell® ZENworks® Desktop Management involves three executable files: zwsreg.exe, zenwsreg.dll, and zenwsrgr.dll.

The following sections provide information on these files:

- ♦ “Registration File Functions” on page 87
- ♦ “Registration File Locations” on page 87
- ♦ “Zwsreg.exe Usage” on page 87
- ♦ “Zenwsreg.dll Usage” on page 88

Registration File Functions

Following are the functions of the registration files:

Zwsreg.exe: Calls zenwsreg.dll.

zenwsreg.dll: Performs workstation registration tasks.

zenwsrgr.dll: Contains strings used by zenwsreg.dll. These strings are available for language translation.

Registration File Locations

Following are the locations of the registration files (by machine):

Windows 98 Client Workstation:

drive:\program files\novell\zenworks\zwsreg.exe

drive:\program files\novell\zenworks\zenwsreg.dll

drive:\program files\novell\zenworks\nls\english\zenwsrgr.dll

Windows 2000/XP Client Workstation:

drive:\program files\novell\zenworks\zwsreg.exe

drive:\program files\novell\zenworks\zenwsreg.dll

drive:\program files\novell\zenworks\nls\english\zenwsrgr.dll

Zwsreg.exe Usage

In previous versions of ZENworks for Desktops, wsreg32.exe and unreg32.exe handled workstation import and removal functions. In ZENworks Desktop Management 4.x or later, zwsreg.exe replaces both files.

The syntax for zwsreg is as follows:

zwsreg option

You can use the following options with zwsreg:

Option	Explanation
-importserver <i>server_ip_address</i>	Specifies the IP address of the import server. If you specify None or 0 for the import server, you can import workstations without setting up an import server. To do this, however, the user must have sufficient rights and the Novell Client must be installed on the workstation.
-importpolicy <i>policy_DN</i>	Specifies the DN of the effective Workstation Import policy.
-importws <i>new_workstation_DN</i>	Specifies the DN of the workstation to be imported. You can specify a custom workstation DN to override the effective Workstation Import policy.
-version <i>3_or_4</i>	Specifies whether the workstation to be imported is a ZENworks for Desktops 3 or a ZENworks for Desktops 4 workstation. The 4 setting is the default and works for ZENworks for Desktops 4 and newer.
-unreg	Clears the registry.

Zenwsreg.dll Usage

Zenwsreg.dll is called by Workstation Manager's Scheduler when one of the following events occurs:

- ◆ Workstation startup
- ◆ User login
- ◆ User logout
- ◆ Registration service shutdown

When one of the above events is detected, the sequence of file calls is as follows:

Windows 98: wm95.exe > wm98sast.exe > zenwsreg.dll.

Windows 2000/XP: wm.exe > wmrundll.exe > zenwsreg.dll.

E

Documentation Updates

This section contains information on documentation content changes that have been made in the *Administration Guide* for Automatic Workstation Import and Removal since the initial release of ZENworks 6.5 Desktop Management. This information will help you to keep current on updates to the documentation.

All changes that are noted in this section were also made in the documentation. The documentation is provided on the Web in two formats: HTML and PDF. The HTML and PDF documentation are both kept up-to-date with the documentation changes listed in this section.

The documentation update information is grouped according to the date the changes were published. Within a dated section, the changes are alphabetically listed by the names of the main table of contents sections for Workstation Management.

If you need to know whether a copy of the PDF documentation you are using is the most recent, the PDF document contains the date it was published on the front title page or in the Legal Notices section immediately following the title page.

The documentation was updated on the following dates:

- ♦ “June 17, 2005” on page 89
- ♦ “October 4, 2004” on page 90

June 17, 2005

Updates were made to the following sections. The changes are explained below.

- ♦ “Setting Up Automatic Workstation Import and Removal to Run on the Servers” on page 89
- ♦ “Using DNS Names or HOSTS Files” on page 89

Setting Up Automatic Workstation Import and Removal to Run on the Servers

The following updates were made in this section:

Location	Change
“Setting Up Automatic Workstation Import and Removal to Run on the Servers” on page 84.	Deleted some content regarding setting up manual workstation import using the HOSTS file on a local workstation. Moved this content to “Setting Up a HOSTS File on a Local Workstation” on page 81.

Using DNS Names or HOSTS Files

The following updates were made in this section:

Location	Change
"Using DNS Names or HOSTS Files" on page 81	Added a subsection entitled "Setting Up a HOSTS File on a Local Workstation" on page 81.

October 4, 2004

Updates were made to the following sections. The changes are explained below.

- ◆ "Using the Import Service" on page 90
- ◆ "Verifying that Automatic Workstation Import and Removal are Working" on page 90
- ◆ "Zwsreg.exe Usage" on page 90

Using the Import Service

The following updates were made in this section:

Location	Change
"Using the Import Service" on page 80.	<p>Wording changes made to the two events that cause the import service to be used.</p> <p>The first bullet item now reads: A workstation boots and a corresponding Workstation object does not exist.</p> <p>The second bullet item now reads: A workstation attempts to log in to the tree and its Workstation object was either moved or renamed.</p>

Verifying that Automatic Workstation Import and Removal are Working

The following updates were made in this section:

Location	Change
"Verifying that Automatic Workstation Import and Removal are Working" on page 85.	Removed the third and fourth bullet items describing the events that trigger workstation import.

Zwsreg.exe Usage

The following updates were made in this section:

Location	Change
"Zwsreg.exe Usage" on page 87.	Added text about needing the Novell Client installed on the workstation to use the <code>-importserver server_ip_address</code> option in <code>zwsreg.exe</code> .