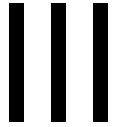# Automatic Workstation Import and Removal

**III**

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 Part V, "Application Management," on page 235. For more information about Workstation Management policies, see Part IV, "Workstation Management," on page 139.

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

# Understanding Automatic Workstation Import and Removal

# 7

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:

**NOTE:** The information in this section also applies to ZENworks 7 Desktop Management with Support Pack 1.

## 7.1  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 Part I, "Understanding ZENworks 7 Desktop Management," on page 33. For more information about installing Automatic Workstation Import, see "Installing the ZENworks Desktop Management Server" in the *Novell ZENworks 7 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 make sure that it is pointing to the correct address.

The following sections provide additional information:

### 7.1.1  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 still generate some network traffic.

For more information, see Section 13.4, "Workstation Import Policy," on page 161.

### 7.1.2  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.

### 7.1.3  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 .

# 7.2  Server Considerations

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

## 7.2.1  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.

## 7.2.2  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 information about setting up a `hosts` file on a local workstation, see .

**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`

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.

## 7.2.3  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.

# Setting Up Automatic Workstation Import and Removal

8

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 129.

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 7 Desktop Management Installation Guide*.

2. Set up the Automatic Workstation Import and Removal policies. For more information, see Section 8.1, "Setting Up the Automatic Workstation Import and Removal Policies," on page 132.

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 7 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 7 Desktop Management Installation Guide*.

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

- Section 8.1, "Setting Up the Automatic Workstation Import and Removal Policies," on page 132

- Section 8.2, "Setting Up Automatic Workstation Import and Removal to Run on the Servers," on page 132

- Section 8.3, "Using the Novell Client and the ZENworks Desktop Management Agent," on page 133

- Section 8.4, "Verifying that Automatic Workstation Import and Removal are Working," on page 133

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**NOTE:** The information in this section also applies to ZENworks 7 Desktop Management with Support Pack 1.

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## 8.1 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 132
- "Configuring the Automatic Workstation Removal Policy" on page 132
- "Associating the Server Package" on page 132

### 8.1.1 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 Section 13.4, "Workstation Import Policy," on page 161.

### 8.1.2 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 are removed from eDirectory.

For conceptual and step-by-step information about configuring the Workstation Removal policy, see Section 13.5, "Workstation Removal Policy," on page 166.

### 8.1.3 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 Section 13.7, "Associating the Server Package," on page 172.

## 8.2 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 7 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.

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.

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.

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
```

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

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

```
ping zenwsimport
```

# 8.3 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 Part I, "Understanding ZENworks 7 Desktop Management," on page 33.

# 8.4 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)

### Verifying That Automatic Workstation Import and Removal Are Working

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
```

◆ For each SLES 9 SP1 or OES Linux server, run `/etc/init.d/novell-zdm-awsi status` at the bash prompt. The import service returns a message as to whether it is currently running.

If Automatic Workstation Import or Removal is not running on the Windows server or on the NetWare server, restart the server. If they are not running on the Linux server, restart the service as explained below.

### Forcing Workstation Import at the Workstation

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`

### Stopping the Import/Removal Service on NetWare Servers

To stop an import or removal service on a NetWare server, 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.

### Stopping and Restarting the Import/Removal Service on Linux Servers

To stop the import/removal service on a SLES 9 SP1 server or on an OES Linux server:

**1** At the Linux server prompt, go to `/etc/init.d`.

**2** Enter `./novell-zdm-awsi stop`.

To start the service, run `/etc/init.d/novell-zdm-awsi start` or `/etc/init.d/novell-zdm-awsi restart` at the bash prompt.

To restart the service while it is currently running, run `/etc/init.d/novell-zdm-awsi restart` at the bash prompt.

# Workstation Registration Files

<div align="right">

# 9

</div>

Workstation registration in Novell® ZENworks® 7 Desktop Management involves three executable files: `zwsreg.exe`, `zenwsreg.dll`, and `zenwsrgr.dll`.

The following sections provide information on these files:

- Section 9.1, "Registration File Functions," on page 135
- Section 9.2, "Registration File Locations," on page 135
- Section 9.3, "Using Zwsreg.exe," on page 135
- Section 9.4, "Using Zenwsreg.dll," on page 136

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**NOTE:** The information in this section also applies to ZENworks 7 Desktop Management with Support Pack 1.

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## 9.1  Registration File Functions

**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.

## 9.2  Registration File Locations

**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
```

## 9.3  Using Zwsreg.exe

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`:

***Table 9-1***  *Zwsreg.exe Startup Options*

| Option | Explanation |
|---|---|
| -importserver *server_ip_address* | 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 *policy_DN* | Specifies the DN of the effective Workstation Import policy. |
| -importws *new_workstation_DN* | Specifies the DN of the workstation to be imported. You can specify a custom workstation DN to override the effective Workstation Import policy. |
| -version 3_or_4 | 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. |

# 9.4 Using Zenwsreg.dll

`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`.

# Documentation Updates

H

This section contains information on documentation content changes that have been made in this section of the *Administration* guide since the initial release of Novell® ZENworks® 7 (August 26, 2005). The 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 ZENworks 7 Personality Migration.

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.

The documentation was updated on the following dates:

## H.1  July 14, 2006 (Support Pack 1)

The following note was added to each section:

**NOTE:** The information in this section also applies to ZENworks 7 Desktop Management with Support Pack 1.

## H.2  December 9, 2005

The page design in the guide was reformatted to comply with revised Novell documentation standards.