



ZENworks 2020 Update 1 Disaster Recovery Reference

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About This Guide

This *ZENworks Disaster Recovery Reference* explains the disaster recovery mechanisms available to help you protect the first Primary Server of a Management Zone if an organizational risk assessment identifies a need for such steps:

Audience

This guide is intended for ZENworks 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.

Additional Documentation

ZENworks is supported by other documentation (in both PDF and HTML formats) that you can use to learn about and implement the product. For additional documentation, see the [ZENworks documentation Web site](#).

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1 Backing Up and Restoring the ZENworks Server and Certificate Authority

The following sections provide more information about backing up and restoring a ZENworks Server and certificate authority:

- ♦ [Section 1.1, “Backing Up a ZENworks Server,” on page 7](#)
- ♦ [Section 1.2, “Restoring a ZENworks Server,” on page 11](#)
- ♦ [Section 1.3, “Backing Up the Certificate Authority,” on page 13](#)
- ♦ [Section 1.4, “Restoring the Certificate Authority,” on page 13](#)
- ♦ [Section 1.5, “Migrating the Internal Certificate Authority Role between Primary Servers,” on page 13](#)

1.1 Backing Up a ZENworks Server

ZENworks allows you to back up and restore the configuration files for a ZENworks Primary Server. This enables you to maintain a ZENworks Server’s identity and configuration if a server fails or if you need to upgrade to new server hardware.

Server backup operation is version specific. When a server is updated to a higher version, the backup data needs to be collected for the specific version. The backup saves only the configuration files. The database and content repository must be backed up separately and they need to be in sync:

- ♦ The content repository (bundle, policy, and image files). You should do a separate backup for the content repository if you only have one Primary Server in the Management Zone. If you have two or more Primary Servers and you’ve replicated all content to both servers, they serve as backup copies to each other.
- ♦ The ZENworks database (if it resides on the ZENworks server). Backing up the ZENworks Server and backing up the ZENworks database are two separate processes. If your ZENworks database resides on the same server as one of your ZENworks Servers, first back up the database and then back up the ZENworks Server. Because the ZENworks database changes frequently, you should back up the database on a regular schedule. For information about backing up the database, see the [ZENworks Database Management Reference](#).

When you back up a ZENworks Server using a zman command, all files in the `Novell\ZENworks\conf` directory on a Windows server or the `etc/opt/novell/zenworks/` directory on a Linux server are stored in an encrypted backup file in a location that you specify. For more information on the files that are stored as backup, see [“List of files and folders stored as backup after running the zman zenserver-backup command” on page 8](#).

- 1 (Conditional) If the server you are backing up hosts the ZENworks database, manually back up the database file to a safe location.

For information about backing up the database, see the [ZENworks Database Management Reference](#).

2 At a command prompt on the ZENworks Server, enter the following command:

```
zman zenserver-backup path_to_backup_file_to_create
```

For example:

```
zman zenserver-backup c:\zcm_backups\zone_backup.bak
```

or

```
zman zenserver-backup /root/zcm_backups/zone_backup.bak
```

3 When prompted, enter a ZENworks administrator name and password.

4 When prompted, enter a passphrase (at least 10 characters) to be used for encrypting the backup file.

Make sure you remember this passphrase. You must enter it if you ever need to restore the server.

5 (Conditional) If this is the only Primary Server, or if this Primary Server contains all the content defined in your Management Zone, you must manually back up the content repository to a safe location, unless the content repository is hosted externally. In case of two or more Primary Servers in the zone, it is recommended to perform the file system backup of the local content-repo folder on the Primary Server to ensure that the replicated content is preserved.

For information on the content repository, see “[Content](#)” in the *ZENworks Primary Server and Satellite Reference*.

IMPORTANT: If this is the only Primary Server that contains all of your defined content for the Management Zone and you do not back up the content repository, you are not prepared for a full disaster recovery.

6 Repeat [Step 1](#) and [Step 5](#) on a regular basis.

The `zman` command documented in [Step 2](#) through [Step 4](#) only needs to be run once.

List of files and folders stored as backup after running the `zman zenserver-backup` command

Following files and folders are stored as backup for Windows:

- ◆ ActionHandlersRegistration.xml
- ◆ ActionUndoHandlersRegistration.xml
- ◆ components.properties
- ◆ database-migration.properties
- ◆ DeviceData
- ◆ DeviceGuid
- ◆ DLUPolicyHandlerRegistration.xml
- ◆ guid.txt
- ◆ initial-web-service
- ◆ ippman.conf
- ◆ LCPRegistration.xml
- ◆ logger-server-conf.xml

- logger-zman-conf.xml
- ♦ logger-zmd-conf.xml
- logger.xsl
- lpm-server.properties
- monitor.conf
- novell-rm-audit.xml
- novell-rm-setting.ini
- novell-zenworks-configure.properties
- PolicyHandlersRegistration.xml/
- zman/properties/
- primary_server_version.dll
- RMHandlerRegistration.xml
- WGPRRegistration.xml
- ZenMemoryCache.config
- ZenServerVersion.xml
- zenworks.uninstall.logger.config
- zenworks_database.conf
- security/
- datamodel/
- casa/
- fde/
- loader/
- loader-logging/
- pmconfig/
- preboot/
- quicktask/
- RMPolicy/
- Satellite/
- services
- zman/properties/
- server.xml
- casa/server.xml
- extcasa/WEB-INF/classes/casa_crypto.properties
- casa/WEB-INF/classes/casa_crypto.properties

Following files and folders are not stored as backup on Windows:

- ♦ agentcomponents/
- datamodel/authsources

datamodel/cache
datamodel/default
zman/resources/
pru/
resources/
trusted-certs/
LoggerConfiguration-windows.xml

Following files and folders are stored as a backup for Linux:

- ◆ components.properties
- zenworks.properties
- monitor.conf
- version.txt
- database-migration.properties
- initial-web-service
- ZenServerVersion.xml
- primary_server_version.txt
- DeviceData
- DeviceGuid
- ippman.conf
- zenworks_database.conf
- guid.txt
- lpm-server.properties
- logger-server-conf.xml
- novell-zenworks-configure.properties
- logger-zman-conf.xml
- zenworks.uninstall.logger.config
- security/
- datamodel/
- casa/
- fde/
- loader/

loader-logging/
preboot/
puppet/
quicktask/
services/
zman/properties/
server.xml
casa/server.xml
extcasa/WEB-INF/classes/casa_crypto.properties
casa/WEB-INF/classes/casa_crypto.properties
zentruststore/

Following files and folders are not stored as backup on Linux:

- ♦ agentcomponents/
 - datamode/lauthsources
 - datamodel/cache
 - datamodel/default
- conf/
- pru/
- resources/
- trusted-certs/
- zman/resources

1.2 Restoring a ZENworks Server

This procedure assumes the following:

- ♦ You have a backup of the ZENworks server's configuration information. See [Section 1.1, "Backing Up a ZENworks Server,"](#) on page 7.
- ♦ If the ZENworks database resides on the ZENworks server, you have a backup of the database see [ZENworks Database Management Reference](#).
- ♦ The bundles and policies should be replicated to and stored on the ZENworks server. If not, distribution of a policy or bundle from the restored ZENworks server fails. This can be achieved by restoring the content-repo folder that was backed up earlier for the specific Primary Server.

To do this, stop the ZENworks server services and then copy the backed up content files to the content repository of the server that is to be restored. The default locations of the content repository are:

- ◆ On a Windows Server: `installation_path\zenworks\work\content-repo`
- ◆ On a Linux Server: `/var/opt/novell/zenworks/content-repo/`

For more information on content repository, see “[Content Repository](#)” in *ZENworks Primary Server and Satellite Reference*.

- ◆ The image files that are stored on the ZENworks Server are available on another ZENworks Server. If not, distribution of the image files from the restored ZENworks Server will fail.

IMPORTANT: When you restore the ZENworks Server and the database, you must first restore the ZENworks Server, then continue with restoring the latest backed-up ZENworks database.

To restore a ZENworks server:

- 1 Reinstall the ZENworks server, using the same IP address and DNS name.

If you do not use the same IP address and DNS name, devices that connect to the server need to reregister.

If you have only one Primary Server connected to an external database in a zone, reinstall the Primary Server and create a dummy database during the installation. You do not need to create an internal database.

If you have more than one Primary Server connected to an external database in a zone, reinstall the failed Primary Server as a second Primary Server. You are not prompted to configure the database during the installation.

- 2 Ensure that you have read/write rights to the `Novell\ZENworks\conf` directory on a Windows server or the `etc/opt/novell/zenworks` directory on a Linux server.

- 3 At a command prompt on the ZENworks Server, enter the following command:

```
zman zenserver-restore path_to_backup_file_to_restore
```

For example:

```
zman zenserver-restore c:\zcm_backups\zone_backup.bak
```

or

```
zman zenserver-restore /root/zcm_backups/zone_backup.bak
```

- 4 When prompted, enter a ZENworks administrator name and password.
- 5 When prompted, enter the pass phrase (at least 10 characters) to be used for decrypting the backup file.

This is the same passphrase that was entered to encrypt the file when backing up the server.

- 6 (Conditional) If the database is located on the server, restore the database after the ZENworks Server information has been restored. For instructions see the *ZENworks Database Management Reference*.
- 7 Run the `permissions.sh` command on the Linux Primary Server to set the correct permissions.

- 8 (Conditional) If you have backups of the image files, restore the files to the `Novell\Zenworks\work\content-repo\images` directory on a Windows server or the `/var/opt/novell/zenworks/content-repo/images` directory on a Linux server.
- 9 Restart the ZENworks Server.

1.3 Backing Up the Certificate Authority

To back up the certificate authority files using ZENworks Control Center on the Primary Server that is configured to be the ZENworks internal certificate authority, see [“Taking a Backup of the Certificate Authority”](#) in the [ZENworks SSL Management Reference](#).

1.4 Restoring the Certificate Authority

To restore the certificate authority files using ZENworks Control Center on the Primary Server that is configured to be the ZENworks internal certificate authority. For information, see [“Restoring the Certificate Authority”](#) in the [ZENworks SSL Management Reference](#).

1.5 Migrating the Internal Certificate Authority Role between Primary Servers

To migrate the internal Certificate Authority (CA) role from one ZENworks Primary Server to another. For information, see [“Moving the CA Role”](#) in the [ZENworks SSL Management Reference](#).

2 Replacing Primary Servers

- ♦ [Section 2.1, “Replacing the First Primary Server with the Second Primary Server,”](#) on page 15
- ♦ [Section 2.2, “Replacing an Existing Primary Server with a New Primary Server,”](#) on page 21

2.1 Replacing the First Primary Server with the Second Primary Server

You can replace the first Primary Server in your Management Zone with an existing second Primary Server or with a new server. If you choose to replace the first Primary Server with a new server that has a different hostname and IP address, you must install ZENworks 2020 on the new server in the same Management Zone. Consequently, the new server becomes the first Primary Server.

Ensure that the ZENworks version on the new server is the same as that of the existing Primary Server. For example: If the existing Primary Server is in the ZENworks 2020 Update 2 version, then you need to install ZENworks 2020 Update 2 on the new server.

IMPORTANT

- ♦ If you have two Primary Servers (PS1 and PS2) in the zone and both are configured as MDM Servers, then if PS1 is removed/deleted, then all the mobile devices enrolled to PS1 should be re-enrolled to PS2.
- ♦ If you are replacing a Primary Server (PS1) with another Primary Server (DR1) with the same DNS name. If PS1 is configured as an MDM server, then even DR1 becomes an MDM server, as DR1 is equivalent to PS1. Hence, all mobile devices enrolled to PS1 work seamlessly with DR1.

To replace the first Primary Server with the second Primary Server:

- 1 Before replacing the first Primary Server with the second Primary Server, take a reliable backup of the following on all Primary Servers in the Management Zone:
 - ♦ **Content-Repo Directory:** The `content-repo` directory is located by default in the `ZENworks_installation_directory\work` directory on Windows and in the `/var/opt/novell/zenworks/` on Linux.
Ensure that the `images` directory located within the `content-repo` directory has been successfully backed up.
 - ♦ (Optional) If there are any TFTP customizations related to imaging, then back up the TFTP files. The `tftp` directory is located in the `/srv/` folder on Linux and in the `%ZENWORKS_HOME%\share\` folder on Windows.
 - ♦ **Certificate Authority:** For detailed information on how to back up the certificate authority, see [Section 1.3, “Backing Up the Certificate Authority,”](#) on page 13.
 - ♦ **Embedded Database:** For detailed information on how to back up the embedded database, see [ZENworks Database Management Reference](#).

- ♦ **ZENworks Server:** For detailed information on how to back up the ZENworks Server, see [Chapter 1, “Backing Up and Restoring the ZENworks Server and Certificate Authority,”](#) on page 7.

NOTE: Since sandbox bundle content only syncs to the Primary Server to which the content is uploaded and is not replicated to all the Primary Servers in the zone, it is recommended that you manually sync the sandbox bundle content to other Primary Servers by using the **Sync Sandbox Content to Content Servers** option in ZCC. For more information, see [Bundle Behavior Based on Content Replication Settings](#).

- 2 Ensure that all the contents of the `content-repo` directory of the first Primary Server are replicated to the second Primary Server.

The `content-repo` directory is located in the `ZENworks_installation_directory\work` directory on Windows and in the `/var/opt/novell/zenworks/` directory on Linux.

(Optional) Also, copy the backed-up TFTP files to the second Primary Server. The `tftp` directory is located in the folder `/srv/` on Linux and in the folder `%ZENWORKS_HOME%\share\` on Windows.

- 3 (Conditional) If the first Primary Server has add-on images:

- 3a In ZENworks Control Center for the second Primary Server, click the **Bundles** tab, then click the Imaging bundle.


The **Summary** tab is displayed.

- 3b Click **Edit** next to **Add-on Image File**.

The Bundle Add-on Image wizard is displayed.

- 3c On the **Add Image Server Address** page, select the first Primary Server that is associated with the bundle, then click **Remove**.

- 3d Click **Add**.

- 3e Click  next to the **Servers** folder to navigate through the folders until you find the second Primary Server.

- 3f Select the second Primary Server to display its name in the **Selected** list, then click **OK**.





- 3g Click **Finish**.

The add-on image is associated with the second Primary Server, and the add-on image content is created on the second Primary Server.

- 3h In the **Summary** tab of the bundle, click the **Increment Version** underlined link for **Version**, then click **Yes** in the Confirm Version Increment dialog box.

- 4 (Conditional) If ZooKeeper is enabled on the first Primary Server, take a backup of the ZooKeeper folder available at `/var/opt/novell/zenworks/zookeeper` on a Linux server and `%zenworks_home%\work\zookeeper` on a Windows server.

If the first Primary Server is up and running, then to replace the ZooKeeper role, see [Changing the ZooKeeper role from the first Primary Server to the second Primary Server](#) in [ZENworks Vertica Guide](#).

- 5 (Conditional) If the first Primary Server has a ZENworks Imaging bundle, copy the bundle to the second Primary Server:
 - 5a Manually copy all the files with the `.zmg` extension from the `/content-repo/images` directory of the first Primary Server to the `/content-repo/images` directory on the second Primary Server.
 - 5b In ZENworks Control Center of the second Primary Server, click the **Bundles** tab, then click the Imaging bundle.
 - 5c Click the **Actions** tab.
 - 5d Click the ZENworks Image action.
The Edit Action dialog box is displayed.
 - 5e In the **ZENworks Image** field, click .
The Server and Path Information dialog box is displayed.
 - 5f In the **Server Object, IP or DNS** field, click  to browse for and select the second Primary Server.
 - 5g In the **File Path on Server** field, click  to browse for and select the `image.zmg` file.
- 6 (Conditional) If the first Primary Server is a ZENworks Patch Management (ZPM) Server, then select another ZPM sever:
 - 6a In ZENworks Control Center, click the **Configuration** tab in the left panel.
 - 6b Click **Patch Management**.
 - 6c Click the **Subscription Service Settings** Link. The Subscription Service Settings page appears.
 - 6d In the **Subscription Service Settings** panel, click **Reset Subscription Service**. A dialog box appears requesting you to confirm your action. Click **Yes** to proceed further.
 - 6e In the **Start the Subscription Service** field, you can select another server from multiple servers in your management zone.
 - 6f Click **Start Service**.
- 7 (Conditional) If the first Primary Server is a ZENworks Subscription Server, select another subscription server.
 - 7a In ZENworks Control Center, click the **Subscribe and Share** tab in the left panel.
 - 7b In the **Subscription** page, click the subscription name in the **Name** column.
 - 7c In the **Summary** page, navigate to the **Schedules** Panel, then click  in the **Subscription Server** field to select any other server.
- 8 (Conditional) If you have installed a reporting server that points to the first Primary Server, then reconfigure it to point to the second Primary Server. For more information, see [ZENworks Reporting Configuration](#) in [ZENworks Reporting Appliance Deployment and Administration Reference](#).

- 9 If the first Primary Server is configured as the Dedicated System Update server, then select another Dedicated System Update server:
 - 9a In ZENworks Control Center, click **Configuration** tab in the left panel.
 - 9b Under **Management Zone Settings**, click **Infrastructure Management > System Update Settings**.
 - 9c In the **Dedicated Server Settings** panel, select the new server that is to be configured as the dedicated server.
- 10 If the first Primary Server has the Certificate Authority (CA) role, then move the CA role to the second Primary Server. For more information, see [Moving the CA Role in ZENworks SSL Management Reference](#).
- 11 If ZCC Diagnostics fails to connect on the new server, ensure that you execute the following commands in the order listed below,
 1. `novell-zenworks-configure -c MergeTruststore -Z`
 2. `novell-zenworks-configure -c EnableJMX`
 3. `novell-zenworks-configure -c ZenProbe`
 4. `novell-zenworks-configure -c Start`. Select the restart option to restart the services.
- 12 In the default closest server rule at the Management Zone level, move the first Primary Server as the last entry in the servers list.
 - 12a In ZENworks Control Center, click the **Configuration** tab.
 - 12b In the Management Zone Settings panel, click **Infrastructure Management > Closest Server Default Rule**.
 - 12c In the **Collection Servers** list, select the check box next to the first Primary Server, then click **Move Down** until the server is the last entry in the list.
 - 12d In the **Content Servers** list, select the check box next to the first Primary Server, then click **Move Down** until the server is the last entry in the list.
 - 12e In the **Configuration Servers** list, select the check box next to the first Primary Server, then click **Move Down** until the server is the last entry in the list.
 - 12f In the **Authentication Servers** list, select the check box next to the first Primary Server, then click **Move Down** until the server is the last entry in the list.
 - 12g Click **OK**.
- 13 (Conditional) If you have any additional closest server rules configured, remove the first Primary Server from the rules.
 - 13a In ZENworks Control Center, click the **Configuration** tab.
 - 13b In the Management Zone Settings panel, click **Infrastructure Management > Closest Server Rules**.
 - 13c Select a closest server rule, then click **Edit**.

The Rule Construction dialog box is displayed.
 - 13d In the **Collection Servers** list, select the check box next to the first Primary Server, then click **Remove**.
 - 13e In the **Content Servers** list, select the check box next to the first Primary Server, then click **Remove**.

- 13f** In the **Configuration Servers** list, select the check box next to the first Primary Server, then click **Remove**.
- 13g** In the **Authentication Servers** list, select the check box next to the first Primary Server, then click **Remove**.
- 13h** Click **OK** twice.

NOTE: Remove the server entry from the Location and Network Environment server lists as well. For more information, see [Adding Closest Servers to Locations](#).

- 14** Execute the command `zman location-response-recompute -f (zman lrr -f)`.
- 15** Refresh all the devices (Primary Servers, Satellites, and managed devices) in the Management Zone so that they get the new closest server rules.
- 16** (Conditional) Move the database to another device in any of the following scenarios:
- ◆ You are using an internal ZENworks database.
 - ◆ You are using an external database installed on the device hosting the first Primary Server and you do not plan to use the device after uninstalling the Primary Server.

To move the database to another device:

- 16a** (Conditional) If you are using an external database, ensure that you have a reliable backup of the database.

- 16b** Obtain the credentials of the database.

To procure the credentials of the internal database, use one of the following commands:

```
zman dgc -U administrator_name -P administrator_password
```

or

```
zman database-get-credentials -U administrator_name -P  
administrator_password
```

To obtain the credentials of the external database, contact the database administrator.

- 16c** Ensure that you run the `Commit` command after every `Update` or `Delete` statements.
- 16d** If the database is installed on the same device as that of the first Primary Server, move the database.

MS SQL: For detailed information on how to move the data to a new MS SQL database, see the MS SQL documentation. Later on, perform the steps described in “[Configuring the ZENworks Server to Point to the New MS SQL Database Containing Data Moved from Another MS SQL Database](#)” in the *ZENworks Database Management Reference*.

Oracle: For detailed information on how to move the data from one Oracle database to another Oracle database, see the Oracle documentation. Later on, perform the steps described in “[Configuring the ZENworks Server to Point to the New Oracle Database Containing Data Moved from Another Oracle Database](#)” in the *ZENworks Database Management Reference*.

PostgreSQL: For detailed information on how to move the data from one PostgreSQL database to another PostgreSQL database, see the Oracle documentation. Later on, perform the steps described in “[Moving an Embedded PostgreSQL Database from One Primary Server to another Primary Server](#)” in the *ZENworks Database Management Reference*.

- 16e** If the first Primary Server is an MDM Server, then you need to remove the MDM role from the first server and add the role to another server. All mobile devices enrolled to the first Primary Server should be re-enrolled to the new MDM Server. For more information on removing the MDM role, see [Removing MDM Servers](#) in *ZENworks Mobile Management Reference*. For more information on adding an MDM role to the new server, see [Adding an MDM Server](#) in *ZENworks Mobile Management Reference*.
- 17** Update the MasterPrimary and DeviceCertAuth roles to the new Primary Server.

MasterPrimary Role:

- ◆ Run the following query to identify the server with MasterPrimary role:

```
select * from zzenseverroles where roles = 'MasterPrimary'
```

If the GUID that you have obtained matches with the GUID of the old Primary Server, then run the following queries to update the MasterPrimary role.

- ◆ For MSSQL:

```
update zZenServerRoles set id=0x<second PS GUID>, position=(select max(position)+1 from zZENServerRoles where id=0x<second PS GUID>) where Roles='MasterPrimary' ;
```

- ◆ For Oracle:

```
update zZenServerRoles set id=HEXTORAW(<second PS GUID>), position=(select max(position)+1 from zZENServerRoles where id=HEXTORAW(<second PS GUID>)) where Roles='MasterPrimary' ;
```

- ◆ For PostgreSQL:

```
update zZenServerRoles set id=decode(<second PS GUID>), position=(select max(position)+1 from zZENServerRoles where id=decode(<second PS GUID>)) where Roles='MasterPrimary' ;
```

Ensure that you run the Commit command after every Update or Delete statements.

DeviceCertAuth Role:

For the DeviceCertAuth role, run the following command at the new server’s command prompt:

```
novell-zenworks-configure -c DeviceIdentityCertConfigureAction
```

NOTE: To obtain the second primary server GUID, in ZENworks Control Center navigate to [Devices](#) and select the server. The summary page displays the GUID number. Alternatively, log into the database and execute the following command: `select* from zZENObject where name like '<<Primary Server Name>>'`.

- 18** To restore the ZooKeeper role in the second Primary Server, execute following steps:

Restore the backed up ZooKeeper folder that was taken in Step 4 and Step 5 in location `/var/opt/novell/zenworks/zookeeper` on a Linux server or `%zenworks_home%\work\zookeeper` on Windows server and ensure that the permission of this folder is set to ZENworks in the second Primary Server.

IMPORTANT: Perform the following steps only when the first Primary Server is not accessible or no longer available.

Execute the command `zman server-role-kafka-reconfig-broker (zman srkrbc)`.
For example:

```
zman server-role-kafka-reconfig-broker --  
servers=ps1.example.com,ps2.example.com
```

- 19** Move all Satellites from the first Primary Server to another server.

For more information on how to remove the Satellites from the Server Hierarchy listing in ZENworks Control Center, see “[Moving a Satellite from One Primary Server to Another Primary Server](#)” in the *ZENworks Primary Server and Satellite Reference*.

- 20** (Conditional) Re-configure the reporting server as mentioned in [Step 8](#).

- 21** After ensuring that all the operations in the Management Zone are working as expected, uninstall ZENworks 2020 on the first Primary Server and restart the second Primary Server.

For detailed information on how to uninstall ZENworks 2020, see “[ZENworks Uninstall Guide](#)”.

NOTE: If Multizone is configured for this server (which has got replaced with a new Primary Server) as Publisher, then all its subscribers must be updated with the new IP address and certificate of this server.

1. Log in to ZENworks Control Center (ZCC) of subscribers.
2. Navigate to **Subscribe And Share > Subscriptions > <subscription_name> > Remote Server > Base URL > Edit**.
3. Update the IP address with the new IP address of the Primary Server (Publisher).

To update the new certificate:

1. Navigate to **Subscribe And Share > Subscriptions > <subscription_name> > Remote Server > Update Certificate**.
 2. Update the certificate.
-

2.2 Replacing an Existing Primary Server with a New Primary Server

NOTE: The steps documented in this section have not been tested for replacing a Windows or a Linux Primary Server with an Appliance server.

If you have only one Primary Server in the Management Zone and if you want to replace the device hosting the Primary Server with a new device that has the same host name and IP address as the old device, you must move the Primary Server to the new device.

Ensure that the version on the new server and the existing Primary Server is ZENworks 2020 .

NOTE: If you want to replace more than one Primary Server, you need to install the same number of servers and replace each server on a one to one basis, either simultaneously or sequentially. For faster deployment, all servers can be deployed to a single temporary zone.

IMPORTANT

- ◆ If you have two Primary Servers (PS1 and PS2) in the zone and both are configured as MDM Servers, then if PS1 is removed/deleted, then all the mobile devices enrolled to PS1 should be re-enrolled to PS2.
 - ◆ If you are replacing a Primary Server (PS1) with another Primary Server (DR1) with the same DNS name. If PS1 is configured as an MDM server, then even DR1 becomes an MDM server, as DR1 is equivalent to PS1. Hence, all mobile devices enrolled to PS1 work seamlessly with DR1.
-

1 Take a reliable backup of the existing ZENworks Server.

For detailed information on how to take a backup of the ZENworks Server, see [Chapter 1, “Backing Up and Restoring the ZENworks Server and Certificate Authority,”](#) on page 7.

2 Take a backup of the `novell-tftp.conf` and `novell-proxydhcp.conf` files from `/etc/opt/novell` on Linux and `ZENWORKS_HOME\conf\preboot` on Windows.

3 (Conditional) Take a reliable backup of the certificate authority of the Primary Server.

For detailed information on how to take a backup of the certificate authority, see [Section 1.3, “Backing Up the Certificate Authority,”](#) on page 13.

During the ZENworks Server backup, certificates are backed up for Primary Servers having an internal Certificate Authority and the same network identity (IP, FQDN, and Cert). Also, during the ZENworks Server restore, the Certificate Authority is restored.

4 (Conditional) If Zookeeper is enabled, take a backup of the ZooKeeper folder available at `/var/opt/novell/zenworks/zookeeper`.

5 (Conditional) If Kafka is enabled, then take a backup of the following files:

- ◆ `Kafka-data` available at `/var/opt/novell/zenworks/kafka-data`.
- ◆ `zenCaCertStore` and `zenCacertConfig.xml` available at `/etc/opt/novell/zenworks/security`.
- ◆ (Conditional) If you have edited the `connector-configs.xml` or the `stream-processor-config.xml` available at `/etc/opt/novell/zenworks`, then take a backup of these files.

6 (Conditional) If Vertica is enabled, then take a back up of the database files available at `/vastorage/home/dbadmin/zenworks` and the config file available at `/opt/vertica/config/admintools.conf`.

7 (Conditional) Take a reliable backup of the database in any of the following scenarios:

- ◆ You are using an internal ZENworks database.
- ◆ You are using an external database installed on the device hosting the Primary Server and you do not plan to use the device after uninstalling the Primary Server.

For detailed information on how to take a backup of an internal database, see the [Backing Up and Restoring the PostgreSQL Database](#) in the [ZENworks Database Management Reference](#).

To take a backup of an external database, see the documentation for the database.

8 Stop all the ZENworks services on the Primary Server.

For detailed information on how to stop the ZENworks services on Windows, see [“Stopping the ZENworks Services”](#) in the [ZENworks Primary Server and Satellite Reference](#). For detailed information on how to stop the ZENworks services on Linux, see [“Stopping the ZENworks Services”](#) in the [ZENworks Primary Server and Satellite Reference](#).

- 9 Take a reliable backup of the `content-repo` directory of the Primary Server.

The `content-repo` directory is located by default in the `ZENworks_installation_directory\work` directory on Windows and in the `/var/opt/novell/zenworks/` on Linux.

Ensure that the `images` directory located within the `content-repo` directory has been successfully backed up.

- 10 (Optional) If there are any TFTP customizations related to imaging, then back up the TFTP files. The `tftp` directory is located in the `/srv/` folder on Linux and in `%ZENWORKS_HOME%\share\` on Windows.
- 11 Disconnect the device from the network.
- 12 To restore on a new Primary Server, ensure that the total RAM allocated in the new Primary Server is the same as that in the existing Primary Server. For a Primary Server hosted in the virtual environment, you need to reserve the allocated memory.
- 13 Install ZENworks 2020 on the new server with the following settings that are same as that of the old Primary Server:
 - ♦ Installation drive and path.
 - ♦ ZENworks Ports
 - ♦ Management Zone name

For detailed information on how to install ZENworks 2020, see [“Installing a ZENworks Primary Server on Windows”](#) in the *ZENworks Server Installation*.

NOTE: Install the new server to a temporary zone and not to the existing production zone.

The new server can be installed with any database engine (preferably the same database engine as that in the production zone, that is, if the production zone is using MSSQL, then install the new server with MSSQL in the temporary zone). After the existing Primary Server is replaced with the new server, the new server will start using the actual database in the production zone.

- 14 Do the following on the new Primary Server:

- 14a Restore the backed-up ZENworks Server.

For detailed information on how to restore the ZENworks Server, see [Chapter 1, “Backing Up and Restoring the ZENworks Server and Certificate Authority,”](#) on page 7.

- 14b Restore the files `novell-tftp.conf` and `novell-proxydhcp.conf`, which were backed up in Step 2, to `/etc/opt/novell` on Linux and `ZENWORKS_HOME\conf\preboot` on Windows.

- 14c Run the following commands on ZENworks Appliance, after restoring the backed-up ZENworks Server:

- ♦ `rm -f /etc/opt/novell/zenworks/preboot/novell-tftp.conf`
- ♦ `ln -s /etc/opt/novell/novell-tftp.conf /etc/opt/novell/zenworks/preboot/novell-tftp.conf`
- ♦ `rm -f /etc/opt/novell/zenworks/preboot/novell-proxydhcp.conf`
- ♦ `ln -s /etc/opt/novell/novell-proxydhcp.conf /etc/opt/novell/zenworks/preboot/novell-proxydhcp.conf`

- 14d (Conditional) Restore the backed-up database. For more information, see [Backing Up and Restoring the PostgreSQL Database](#).

For detailed information on how to take a backup of an internal database, see the [Backing Up and Restoring the PostgreSQL Database](#) in the *ZENworks Database Management Reference*.

14e (Conditional) Restore the backed up ZooKeeper folder at `/var/opt/novell/zenworks/zookeeper` and ensure that the permission of this folder is set to ZENworks.

14f (Conditional) To restore Vertica in the new server, perform the following steps:

1. Run the following command and provide GUID, DNS, or the path of the new server:

```
zman server-role-vertica-prepare-server
```

2. Run the command `su dbadmin` to switch user to dbadmin.

3. Install Vertica on the new server by executing the following commands:

```
♦sudo /opt/vertica/sbin/install_vertica --record-config vertica-
install.conf --license CE --accept-eula --dba-user-password
<dbadmin_password> --hosts <DNS-of-machine> -l /vastorage/
home/dbadmin --failure-threshold FAIL
```

```
♦sudo /opt/vertica/sbin/install_vertica --config-file vertica-
install.conf
```

4. Restore the backed up database files to the path `/vastorage/home/dbadmin/zenworks` and the config file to the path `/opt/vertica/config/admintools.conf`. Ensure that the permission of these files are set to `dbadmin:verticadba`.

5. Run the following command:

```
ssh-keygen -R <ip of replacing host> -f /vastorage//home/
dbadmin/.ssh/known_hosts
```

6. (Conditional) If Vertica is running as a cluster, enable passwordless ssh amongst the other servers in the zone by running the command `ssh-copy-id dbadmin@<ip of the machine that we are replacing>` from another Vertica server in the cluster. Subsequently, stop the Vertica service on all other servers in the Vertica cluster and go to [Step 8](#), to start the database from any other server in the cluster.

7. (Conditional) If the IP address of the new server is different from that of the older server, then run the following command in the older server.

a. Login as dbadmin (`su dbadmin`)

b. Run the following command where the content of the `ip.txt` file should be `<old ip> <new ip>`:

```
admintools -t re_ip -f /tmp/ip.txt
```

8. Run the following command and wait for the database to start:

```
admintools -t start_db -d zenworks
```

14g (Conditional) If you are replacing a server with an Appliance, connect to the database and execute the following query:

```
insert into zzserverroles(id, Roles, position) values
(<GUID>, 'ApplianceServer', (select max(position) + 1 from
zzserverroles where id = <GUID> ));
```


Where <GUID> is the old Primary Servers's GUID that is being replaced.

Assume e9c2c75196f7dc7bb25e6134b03cfdfd is the GUID of the Primary Server, then depending on the database, specify the GUID as shown below:

- ♦ For PostgreSQL: '\xe9c2c75196f7dc7bb25e6134b03cfdfd'
- ♦ For MS SQL: 0xe9c2c75196f7dc7bb25e6134b03cfdfd
- ♦ For Oracle: 'E9C2C75196F7DC7BB25E6134B03CFDFD'

14h (Conditional) If ZCC (on the new server) Diagnostics fails to connect, then execute the following commands in the order listed below:

1. novell-zenworks-configure -c MergeTruststore -Z
2. novell-zenworks-configure -c EnableJMX
3. novell-zenworks-configure -c ZenProbe
4. novell-zenworks-configure -c Start. Select the restart option to restart the services.

14i Re-create all the default and custom deployment packages.

Default Deployment Packages: At the server's command prompt, enter the following command:

```
novell-zenworks-configure -c CreateExtractorPacks -Z
```

IMPORTANT: Ensure that you do not run the `zman surp` command instead of `novell-zenworks-configure -Z -c CreateExtractorPacksConfigureAction` to rebuild deployment packages. The command `novell-zenworks-configure -Z -c CreateExtractorPacksConfigureAction` uses a different method to rebuild deployment packages. For more information, see [Rebuilding the Default Packages in ZENworks Discovery, Deployment, and Retirement Reference](#).

Custom Deployment Packages: At the server's command prompt, enter the following command:

```
novell-zenworks-configure -c RebuildCustomPacks -Z
```

To avoid any errors while running this command, ensure that the custom packages are available in the new server at the following locations before you run the command:

For Linux: /opt/novell/zenworks/install/downloads/custom

For Windows: %zenworks_home%\install\downloads\custom

14j Copy all the contents of the backed-up `content-repo` directory to the `ZENworks_installation_directory%ZENWORKS_HOME%\work\` directory on Windows or to the `/var/opt/novell/zenworks/` directory on Linux. If you have any issues in copying `content-repo` directory in Linux.

(Optional) Also, copy the backed-up TFTP files to the second Primary Server. The `tftp` directory is located in the folder `/srv/` on Linux and in the folder `%ZENWORKS_HOME%\share\` on Windows.

14k Run `permissions.sh` command.

- 15 (Conditional) Execute the `zac zesm-ref` command to reset the ZENworks Endpoint Security Management cache on the managed devices.
- 16 Ensure that the new server is running correctly. Subsequently, uninstall ZENworks 2020 from the old device. For detailed information on how to uninstall ZENworks 2020, see [ZENworks Uninstall Guide](#).

WARNING

After the new Primary Server starts running, you must disconnect the old Primary Server from the network and uninstall ZENworks, or disable ZENworks services so that it cannot register back to the zone.

3 Changing the IP Address or DNS Name of Primary Servers

If you want to change the IP address or DNS Name of a Primary Server after installing ZENworks 2020, review the following sections:

- ♦ [Section 3.1, “Changing the IP Address of a Primary Server after Installing ZENworks,” on page 27](#)
- ♦ [Section 3.2, “Changing the DNS and IP address on a single Primary Server zone,” on page 29](#)
- ♦ [Section 3.3, “Changing the DNS Name or DNS Name and the IP Address of a Primary Server after Installing ZENworks,” on page 30](#)
- ♦ [Section 3.4, “Changing the DNS name of a Satellite Server,” on page 37](#)
- ♦ [Section 3.5, “Updating Inventory-Only Agent \(IOA\) devices if the IP address or DNS name of the Primary Server changes,” on page 38](#)

3.1 Changing the IP Address of a Primary Server after Installing ZENworks

If you want to change the IP address of the Primary Server after installing ZENworks, and if the CN of the certificate does not have the IP address configured, use the following steps to change the IP address of the Primary Server:

- 1 Before changing the IP address of the Primary Server, take a reliable backup of the following on all Primary Servers in the Management Zone:
 - ♦ **Content-Repo Directory:** The `content-repo` directory is located by default in the `ZENworks_installation_directory\work` directory on Windows and in the `/var/opt/novell/zenworks/` on Linux.
Ensure that the `images` directory located within the `content-repo` directory has been successfully backed up.
 - ♦ **Certificate Authority:** For detailed information on how to back up the certificate authority, see [Section 1.3, “Backing Up the Certificate Authority,” on page 13](#).
 - ♦ **Embedded Database:** For detailed information on how to back up the embedded database, see the [ZENworks Database Management Reference](#).
 - ♦ **ZENworks Server Back up:** For detailed information on how to back up the ZENworks Server, see [Chapter 1, “Backing Up and Restoring the ZENworks Server and Certificate Authority,” on page 7](#).
- 2 Change the IP address of the Primary Server.

IMPORTANT: Do not change the DNS name of the server.

- 3 Ensure that the new IP address of the server is correctly mapped to its existing DNS name on the DNS server.

- 4 Run the `microfocus-zenworks-configure -c GenerateOSPPProperties` configure action.
- 5 Restart all the ZENworks services by running the following command at the server's command prompt:


```
novell-zenworks-configure -c Start
```

 By default, all the services are selected. You must select **Restart** as the **Action**.
- 6 Re-create all the default and custom deployment packages:
 - ♦ **Default Deployment Packages:** At the server's command prompt, enter the following command:


```
novell-zenworks-configure -c CreateExtractorPacks -Z
```
 - ♦ **Custom Deployment Packages:** At the server's command prompt, enter the following command:


```
novell-zenworks-configure -c RebuildCustomPacks -Z
```
- 7 If the database is located on the Primary Server whose IP address you changed in [Step 2](#).
 1. Change the database server address on all the second Primary Servers. On all the second Primary Servers, change the value of database server address in the `ZENworks_Installation_Directory\Novell\ZENworks\conf\datamodel\zdm.xml` to point to the new IP address of the first Primary Server.
 2. Change the audit database server address on all the second Primary Servers. On all the second Primary Servers, change the value of audit database server address in the `ZENworks_Installation_Directory\Novell\ZENworks\conf\datamodel\zenaudit.xml` to point to the new IP address of the first Primary Server.
- 8 Restart the ZENworks Agent and the ZENworks Updater Service on the primary server by executing the following commands:

On a Linux Server:

 - ♦ **SLES 12 and above:** `systemctl restart novell-zenworks-xplatzmd.service` and `systemctl restart novell-zenworks-updater-service.service`.
 - ♦ **SLES 11:** `/etc/init.d/novell-zenworks-xplatzmd.service restart` and `/etc/init.d/novell-zenworks-updater-service restart`.

On a Windows Server:

 - ♦ Navigate to **Start > Administrative tools > Services** and restart the ZENworks Agent and ZENworks Updater Services.
- 9 Restart the Proxy DHCP services on all the Satellites.
- 10 (Conditional) If multizone is configured with this server (whose IP address is changed) as Publisher, then after replacing the First Primary Server with the Second Primary Server, update the new IP address of this server for all its Subscribers. Perform the following to update the new IP address:
 1. Log in to ZENworks Control Center (ZCC) of subscribers.
 2. Navigate to **Subscribe And Share > Subscriptions > <subscription_name> > Remote Server > Base URL>Edit**.
 3. Update the IP address with new IP address of the Primary Server (Publisher).

3.2 Changing the DNS and IP address on a single Primary Server zone

Perform the following steps to change the DNS and IP address on a single Primary Server zone:

- 1 In ZCC, add the additional DNS name (for example, test.epm.blr.novell.com) for the Primary Server, by selecting the Primary Server object and navigating to **Settings → Infrastructure Management → Additional DNS Names**.
- 2 Execute the *zman location-response-recompute -f (or) zman lrr -f* command to re-compute the location configuration response so that the requesting devices can obtain the latest changes.
- 3 Ensure that all the devices in the zone are refreshed so that these devices can obtain the newly added DNS in their Closest Server Rules (CSR).
- 4 Verify that the CSR on the ZENworks agent is updated with the new hostname.
- 5 Test the communication between the Primary Server and the managed devices and ensure that they are able to communicate with each other.
- 6 Change the hostname of the Primary Server to the new hostname that was added in [Step 1](#).
- 7 Change the IP address of the Primary Server.
- 8 (Conditional) If any of Vertica, ZooKeeper or Kafka is configured,
 1. Update database with new DNS (the new SQL function that is created). For more information, see [“SQL Query for Updating DNS in the Database” on page 34](#).
 2. Update ZooKeeper or/and Kafka or/and Vertica properties files with new DNS using shell script or bat file. For more information, see [“Creating the Replace DNS Script” on page 33](#).
 3. Reconfigure all Kafka brokers by running: *zman server-role-kafka-reconfig-broker –servers=<comma separated list of servers> or zman srkrb –servers=<comma separated list of servers>*.
- 9 Reboot the Primary Server.
- 10 Add an entry of the new IP address of the Primary Server and the old hostname in the `/etc/hosts` file on Linux and `%SYSTEM_DRIVE%\Windows\System32\drivers\etc\hosts` file on Windows and ensure that SSL works.
- 11 Rename the Primary Server object in ZCC.
- 12 Execute the *zac refresh (zac ref)* command on the Primary Server to ensure that the new hostname is reflected in ZCC.
- 13 Test the communication between the Primary Server and the ZENworks agent on the Primary Server and ensure that they are able to communicate with each other.
- 14 Remint the server certificate. While reminting the server certificate, edit the Common Name from the older hostname name to the newly added hostname name (FQDN). In case the zone is using an Internal CA, then you might be asked to remint satellite certificates also.
For more information, see [Reminting Server Certificates](#) in the [ZENworks SSL Management Reference](#).
- 15 After the certificate is activated, ensure that the server certificate does not contain the old hostname.
- 16 Remove the entry from the host file that was added in [Step 10](#).

- 17 Go to the database and remove the additional DNS entry in the table `znetworkaddress` by running the following query:


```
delete from znetworkaddress where device = <Device-Guid> and dns =
<additional-DNS added> and ipaddress is null and subnetmask is null and
macaddress is null and autodetected = 0
```
- 18 Navigate back to ZCC and ensure that the additional DNS name added in [Step 1](#) is not present for the Primary Server.
- 19 (Conditional) If database is configured, recreate connectors by running `zman server-role-kafka-recreate-connectors` or `zman srkrcc`.
- 20 Test the communication between the Primary Server and the managed devices and ensure that they are able to communicate with each other.

3.3 Changing the DNS Name or DNS Name and the IP Address of a Primary Server after Installing ZENworks

If you want to change only the DNS name or if you want to change both the IP address and DNS name of the Primary Server after installing ZENworks, and if the certificate's CN has fully qualified DNS configured, use the following steps to change only the DNS name or to change both the IP address and DNS name of the Primary Server.

The following two scenarios are supported:

- ♦ [Section 3.3.1, "Zone configured with external certificate," on page 30](#)
- ♦ [Section 3.3.2, "Zone configured with internal certificate," on page 31](#)

3.3.1 Zone configured with external certificate

- 1 Take a reliable backup of the following on all the Primary Servers in the Management Zone:
 - ♦ **Content-Repo Directory:** The `content-repo` directory is located by default in the `ZENworks_installation_directory\work` directory on Windows and in the `/var/opt/novell/zenworks/` on Linux.

Ensure that the `images` directory located within the `content-repo` directory has been successfully backed up.
 - ♦ **Certificate Authority:** For detailed information on how to back up the certificate authority, see [Section 1.3, "Backing Up the Certificate Authority," on page 13](#).
 - ♦ **Embedded Database:** For detailed information on how to back up the embedded database, see the [ZENworks Database Management Reference](#).
 - ♦ **ZENworks Server:** For detailed information on how to back up the ZENworks Server, see [Chapter 1, "Backing Up and Restoring the ZENworks Server and Certificate Authority," on page 7](#).
- 2 Change the DNS name or the DNS name and IP address.

- 3 If the database is located on the Primary Server whose IP address you changed in [Step 2](#).
 1. Change the database server address on all the second Primary Servers. On all the second Primary Servers, change the value of database server address in the `ZENworks_Installation_Directory\Novell\ZENworks\conf\datamodel\zdm.xml` to point to the new IP address of the first Primary Server.
 2. Change the audit database server address on all the second Primary Servers. On all the second Primary Servers, change the value of audit database server address in the `ZENworks_Installation_Directory\novell\ZENworks\conf\datamodel\zenaudit.xml` to point to the new IP address of the first Primary Server.
- 4 (Conditional) If ZooKeeper or Kafka is configured
 1. Update database with new DNS. For more information, see [SQL Query for Updating DNS in the Database](#).
 2. Update ZooKeeper or/and Kafka properties files with new DNS using shell script or bat file on Primary Servers. For more information on running script, see [Creating the Replace DNS Script](#).
- 5 (Conditional) If Vertica is configured, update `zenvertica.xml` with new DNS using shell script or bat file on all primary servers.
- 6 Remint the server certificate. For information, see [“Reminting Server Certificates”](#) in the [ZENworks SSL Management Reference](#).
- 7 (Conditional) If Multizone is configured with this server (whose IP address and DNS name is changed) as Publisher, then after replacing the First Primary Server with the Second Primary Server, update the new IP address and DNS name of this server for all its Subscribers. Perform the following to update the new IP address and DNS name:
 1. Log in to ZENworks Control Center (ZCC) of subscribers.
 2. Navigate to **Subscribe And Share > Subscriptions > <subscription_name> > Remote Server > Base URL>Edit**.
 3. Update the IP address or Hostname with new IP address or Hostname of the Primary Server (Publisher).
- 8 To update the new certificate:
 1. Navigate to **Subscribe And Share > Subscriptions > <subscription_name> > Remote Server > Update Certificate**.
 2. Update the certificate.

3.3.2 Zone configured with internal certificate

If you want to change only the DNS name or if you want to change both the IP address and the DNS name of the Primary Server after installing ZENworks 2020, and if the certificates CN has fully qualified DNS configured, perform the following steps to change only the DNS name or to change both the IP address and the DNS name of the Primary Server.

- 1 Take a reliable backup of the following on all the Primary Servers in the Management Zone:
 - ♦ **Content-Repo Directory:** The `content-repo` directory is located by default in the `ZENworks_installation_directory\work` directory on Windows and in the `/var/opt/novell/zenworks/` on Linux.

Ensure that the `images` directory located within the `content-repo` directory has been successfully backed up.

- ◆ **Certificate Authority:** For detailed information on how to backup certificate authority, see [Section 1.3, “Backing Up the Certificate Authority,” on page 13.](#)
 - ◆ **Embedded Database:** For detailed information on how to back up the embedded database, see the [ZENworks Database Management Reference.](#)
 - ◆ **ZENworks Server:** For detailed information on how to back up the ZENworks Server, see [Chapter 1, “Backing Up and Restoring the ZENworks Server and Certificate Authority,” on page 7.](#)
- 2 If the database is located on the Primary Server whose IP address you changed.
 - 2a Change the database server address on all the second Primary Servers. On all the second Primary Servers, change the value of database server address in the `ZENworks_Installation_Directory\Novell\ZENworks\conf\datamodel\zdm.xml` to point to the new IP address of the first Primary Server.
 - 2b Change the audit database server address on all the second Primary Servers. On all the second Primary Servers, change the value of audit database server address in the `ZENworks_Installation_Directory\Novell\ZENworks\conf\datamodel\zenaudit.xml` to point to the new IP address of the first Primary Server.
 - 3 (Conditional) If ZooKeeper or kafka is configured
 1. Update database with new DNS. For more information, see [SQL Query for Updating DNS in the Database.](#)
 2. Update ZooKeeper or/and Kafka properties files with new DNS using shell script or bat file on Primary Servers. For more information, see [Creating the Replace DNS Script.](#)
 - 4 (Conditional) If Vertica is configured, update `zenvertica.xml` with new DNS using shell script or bat file on all Primary Servers.
 - 5 Remint the server certificate. For information, see [“Reminting Server Certificates”](#) in the [ZENworks SSL Management Reference.](#)
 - 6 (Conditional) If your zone includes Intel AMT devices, unprovision and provision the devices. For more information about unprovisioning and provisioning Intel AMT devices, see [“Introducing Intel Active Management Technology”](#) in the [ZENworks Out-of-Band Management Reference.](#)
 - 7 (Conditional) If Multizone is configured with this server (whose IP address and DNS name is changed) as Publisher, then after replacing the First Primary Server with the Second Primary Server, update the new IP address and DNS name of this server for all its Subscribers. Perform the following to update the new IP address and DNS name:
 1. Log in to ZENworks Control Center (ZCC) of subscribers.
 2. Navigate to **Subscribe And Share > Subscriptions > <subscription_name> > Remote Server > Base URL>Edit.**
 3. Update the IP address or Hostname with new IP address or Hostname of the Primary Server (Publisher).
 - 8 To update the new certificate:
 1. Navigate to **Subscribe And Share > Subscriptions > <subscription_name> > Remote Server > Update Certificate.**
 2. Update the certificate.

Creating the Replace DNS Script

The following script replaces the old DNS with the new DNS. Ensure that you update the parameters accordingly and then run the script file.

- ♦ [“Windows Script \(.bat\)” on page 33](#)
- ♦ [“Linux Script \(.sh\)” on page 33](#)

Windows Script (.bat)

Create a .bat file and add the following content.

```
@echo off

set "oldDNS=PutOldDnsHere"
set "newDNS=PutNewDnsHere"

setlocal EnableExtensions EnableDelayedExpansion
set "SOURCEFILE=<ZENworks_Installation_Directory>\Micro
Focus\ZENworks\conf\zookeeper.properties"
set "TEMPFILE=test_out.txt"

for /f "delims=" %%A in ('type "%SOURCEFILE%"') do (
    set "string=%%A"
    set "modified=!string:%oldDNS%=%newDNS%!"
    echo !modified!>>"%TEMPFILE%"
)

del "%SOURCEFILE%"
move "%TEMPFILE%" "%SOURCEFILE%"
endlocal
```

After creating the script file, update the PutOldDnsHere and PutNewDnsHere, and then execute the bat file.

Linux Script (.sh)

Create a .sh file and then add the following content.

```
#!/bin/bash
oldDns=PutOldDnsHere;
newDns=PutNewDnsHere;

echo $oldDns
echo $newDns

#zookeeper.properties
file=/vastorage/etc/opt/microfocus/zenworks/zookeeper.properties
if test -f $file; then
    sed -i "s/$oldDns/$newDns/" $file
fi

# kafka-service-config.properties
file=/vastorage/etc/opt/microfocus/zenworks/kafka-service-
config.properties
```

```

if test -f $file; then
    sed -i "s/$oldDns/$newDns/" $file
fi

#kafka.properties
file=/vastorage/etc/opt/microfocus/zenworks/kafka/zenworks-kafka-
server.properties
if test -f $file; then
    sed -i "s/$oldDns/$newDns/" $file
fi

# schema-registry.properties
file=/vastorage/etc/opt/microfocus/zenworks/kafka/zenworks-schema-
registry.properties
if test -f $file; then
    sed -i "s/$oldDns/$newDns/" $file
fi

# kafka-connect.properties
file=/vastorage/etc/opt/microfocus/zenworks/kafka/zenworks-connect-avro-
distributed.properties
if test -f $file; then
    sed -i "s/$oldDns/$newDns/" $file
fi

# vertica-datamodel
file=/vastorage/etc/opt/microfocus/zenworks/datamodel/zenvertica.xml
if test -f $file; then
    sed -i "s/$oldDns/$newDns/" $file
fi

```

After creating the script file, update the PutOldDnsHere and PutNewDnsHere, and then execute the script file.

SQL Query for Updating DNS in the Database

Depending on the database configured in the zone, ensure that you run the following SQL query to update the DNS in the database.

- ♦ [“PostgreSQL Query” on page 35](#)
- ♦ [“MS SQL Query” on page 36](#)
- ♦ [“Oracle Query” on page 36](#)

PostgreSQL Query

```
CREATE OR REPLACE FUNCTION replaceDNS(guid character varying,oldDns
character varying, newDns character varying )
RETURNS void AS
$$
DECLARE
    actualValue varchar(1024);
    updatedValue varchar(1024);
    guidAsBytea bytea;
BEGIN
    select decode(guid, 'hex') into guidAsBytea;
    raise notice '%', guidAsBytea;
    select data into actualValue from zzserverroles where id=guidAsBytea
and roles = 'ZooKeeper';
    raise notice '%', actualValue;
    updatedValue := REPLACE(actualValue, oldDns, newDns );
    raise notice '%', updatedValue;
    update zzserverroles set data=updatedValue where id=guidAsBytea and
roles = 'ZooKeeper';

    -- update zopaquedata for kafka cluster
    IF EXISTS (select 1 from zopaquedata where name = 'kafka.cluster.config')
THEN
    select data into actualValue from zopaquedata where name =
'kafka.cluster.config';
    raise notice '%', actualValue;
    updatedValue := REPLACE(actualValue, oldDns, newDns );
    raise notice '%', updatedValue;
    update zopaquedata set data=updatedValue where name =
'kafka.cluster.config';
    END IF;
END;
$$
LANGUAGE plpgsql; -- language specification
```

Execute function/procedures in the database, for postgresql to run the following function:

```
select replaceDNS(server_guid, oldDns ,newDns);
```

Example:

```
select replaceDNS('\xc79de1490818e00f55c82cd6b28e157c',
'oldDns.novell.com', 'newDns.microfocus.com');
```

MS SQL Query

```
CREATE PROCEDURE replaceDNS @guid nvarchar(100),@oldDns nvarchar(1024),
@newDns nvarchar(1024)
AS
BEGIN
    declare @actualValue nvarchar(1024), @updatedValue nvarchar(1024);
    select @actualValue=data from zzenserverroles where id=@guid and roles =
'ZooKeeper';
    print 'Actual value: ' + @actualValue;
    set @updatedValue = REPLACE(@actualValue, @oldDns, @newDns );
    print 'update value: ' + @updatedValue;
    update zzenserverroles set data=@updatedValue where id=@guid and roles =
'ZooKeeper';

    -- update zopaquedata for kafka cluster
    IF EXISTS (select 1 from zopaquedata where name = 'kafka.cluster.config')
    BEGIN
        select @actualValue=data from zopaquedata where name =
'kafka.cluster.config';
        print 'Actual value: ' + @actualValue;
        set @updatedValue = REPLACE(@actualValue, @oldDns, @newDns );
        print 'update value: ' + @updatedValue;
        update zopaquedata set data=@updatedValue where name =
'kafka.cluster.config';
    END
END;
```

Execute function/procedures in the database, for MS SQL to run the following function:

```
exec replaceDNS(guid, oldDns, newDns)
```

Example:

```
exec replaceDNS(0xc79de1490818e00f55c82cd6b28e157c,
'oldDns.novell.com', 'newDns.microfocus.com');
```

Oracle Query

```
CREATE OR REPLACE PROCEDURE replaceDNS(guid in varchar2,oldDns in varchar2,
newDns in varchar2 )
as
    actualValue varchar2(1024);
    updatedValue varchar2(1024);
    BEGIN

        select data into actualValue from zzenserverroles where id=guid and
roles = 'ZooKeeper';
        dbms_output.put_line('Actual value: ' || actualValue);
        updatedValue := REPLACE(actualValue, oldDns, newDns );
        dbms_output.put_line('update value: ' || updatedValue);
        update zzenserverroles set data=updatedValue where id=guid and roles =
'ZooKeeper';
```

```

-- update zopaquedata for kafka cluster
BEGIN
  select data into actualValue from zopaquedata where name =
'kafka.cluster.config';
  dbms_output.put_line('Actual value: ' || actualValue);
  updatedValue := REPLACE(actualValue, oldDns, newDns );
  dbms_output.put_line('update value: ' || updatedValue);
  update zopaquedata set data=updatedValue where name =
'kafka.cluster.config';
EXCEPTION
  WHEN NO_DATA_FOUND THEN
    NULL;
END;

```

Execute function/procedures in the database, for Oracle to run the following function:
select replaceDNS (guid, oldDns, newDns)

Example:

```

select replaceDNS('C79DE1490818E00F55C82CD6B28E157C', 'oldDns.novell.com'
,'newDns.microfocus.com');

```

3.4 Changing the DNS name of a Satellite Server

Perform the following steps to change the DNS on a Satellite Server:

- 1 In ZCC, add the additional DNS name (for example, test.epm.blr.novell.com) for the Satellite Server, by selecting the Satellite Server object and navigating to Settings → Infrastructure Management → Additional DNS Names.

NOTE: Currently the addition of DNS name is applicable only on server class devices and not on workstations class devices.

- 2 Execute the `zman location-response-recompute -f` (or) `zman lrr -f` command to re-compute the location configuration response so that the managed devices can be aware of the new name.
- 3 Change the hostname of the Satellite Server to the new hostname that was added in Step 1. It is recommended that this is done after all the managed devices (that contacts this satellite server) are refreshed. If not, the devices will not be able to reach the server.
- 4 Reboot the Satellite Server.
- 5 Update the new hostname of the satellite in the DNS server configuration.
- 6 Execute the `zac refresh` (or) `zac ref` command on the Satellite Server to ensure that the new hostname is updated in DB immediately.
- 7 Rename the Satellite Server object in ZCC to only the hostname that was added in Step 1 (in our example, test is the name).

- 8 Execute the `zman location-response-recompute -f` (or) `zman lrr -f` command to re-compute the location configuration response so that the requesting devices can obtain the latest changes and CSRs are updated.
- 9 Test the communication between the ZENworks agent and the ZENworks Primary via Satellite Server and ensure that they can communicate with each other via Satellite Server.

3.5 Updating Inventory-Only Agent (IOA) devices if the IP address or DNS name of the Primary Server changes

Perform the following steps to update Inventory-Only Agent (IOA) device details on the Primary Server if the IP address or the DNS name of the Primary Server has changed.

- 1 Verify whether the following files present in the Primary Server are automatically updated with the new IP address of the Primary Server. If the old IP address is no longer a part of the zone, then it should be automatically removed from these files.

On a Linux Server:

- ♦ `/var/opt/novell/zenworks/zmd/cache/settings/umiCS.xml`
- ♦ `/var/opt/novell/zenworks/cache/loader/settings/umiCS.xml`
- ♦ `/var/opt/novell/zenworks/unmanaged/umfilestore/settings/common/uiacnfig.xml`

On a Windows Server:

- ♦ `%ZENWORKS_HOME%\work\cache\loader\settings\umiCS.xml`
- ♦ `%ZENWORKS_HOME%\work\unmanaged\umfilestore\settings\common\uiacnfig.xml`

- 2 Verify whether the following file in the Inventory Only Agent (IOA) devices is automatically updated with the new IP address of the Primary Server. If the old IP address is no longer a part of the zone, then it should be automatically removed from these files.

On Windows IOA devices:

- ♦ `C:\Program Files\Novell\ZENworks\bin\uiacnfig.xml` (in the 32-bit version)
- ♦ `C:\Program Files (x86)\Novell\ZENworks\bin\uiacnfig.xml` (in the 64-bit version)

On Linux or Macintosh IOA devices:

- ♦ `/var/opt/novell/zenworks/uiacnfig.xml`

NOTE: The default refresh time for IOA devices is set at 12 hours. Therefore, it is recommended that you verify the file 12 hours after the Primary Server is updated.

- 3 Run a command to generate and upload a WIF file to the new Primary Server to update the details of Inventory-Only Agent (IOA) devices on the new Primary Server.

On Windows IOA devices: Run the command `zenumia scannow` in the command prompt. This will create a WIF file. To upload this file in the new Primary Server, you need to specify the registry key of this Primary Server by navigating to the path `HKLM\Software\Novell\ZCM\UMIA\Server` on the device. On updating the registry key, the file will be uploaded to the new Primary Server.

On Linux or Macintosh Inventory-Only Agent (IOA) devices: Run the command `zac inv scannow`. The WIF file is automatically generated and uploaded to the new Primary Server.

4 Managing SSL Zone certificates

To manage the SSL zone certificates, review the following scenarios:

- ♦ [Section 4.1, “Reminting Single or Multiple Server Certificates,” on page 41](#)
- ♦ [Section 4.2, “Reconfiguring the Certificate Authority before and after it Expires,” on page 41](#)

4.1 Reminting Single or Multiple Server Certificates

If you want to renew or remind the server certificates on single or multiple Primary Servers, see [“Reminting Server Certificates”](#) in the *ZENworks SSL Management Reference*.

4.2 Reconfiguring the Certificate Authority before and after it Expires

ZENworks prompts you to change your ZENworks Certificate Authority (CA) 90 days before the expiration of the certificate. The following warning message is displayed for each administrator once every 24 hours after the administrator logs in to ZENworks Control Center:

The Zone CA will expire in *number_of_days* days.

The above warning message is displayed for each administrator for every login when the expiry is below five days.

To re-create the zone certificate before it expires, review the following scenarios:

- ♦ [Section 4.2.1, “Changing the CA to Internal,” on page 41](#)
- ♦ [Section 4.2.2, “Changing the CA to External,” on page 42](#)
- ♦ [Section 4.2.3, “Additional Information,” on page 42](#)

IMPORTANT: If you do not change your zone certificate before it expires, the communication between Primary Servers and managed devices breaks down, and the managed devices fail to receive new assignments and policies. To reestablish the communication, you must re-create the certificate.

4.2.1 Changing the CA to Internal

If you want to replace the internal or external server certificate of your Windows or Linux Primary Server, then you can choose to replace the certificate with a new internal server certificate.

- 1 If the current CA is internal, see [“Reminting the Certificate Authority”](#) or [“Changing the CA to Internal”](#) in the *ZENworks SSL Management Reference*.

If the current CA is external, see [“Changing the CA to Internal”](#) in the *ZENworks SSL Management Reference*.

- 2 (Conditional) If your zone includes Intel AMT devices, unprovision and provision the devices. For more information about unprovisioning and provisioning Intel AMT devices, see [“Configuring Intel AMT Devices in Enterprise Mode”](#) in the *ZENworks Out-of-Band Management Reference*.
- 3 (Conditional) If multizone is configured, and the Publisher’s certificate is changed, then update the new certificate of this server for all its Subscribers. Perform the following to update the new certificate:
 1. Log in to ZENworks Control Center (ZCC) of subscribers.
 2. Navigate to **Subscribe And Share > Subscriptions > <subscription_name> > Remote Server > Update Certificate**.
 3. Update the certificate.

4.2.2 Changing the CA to External

If you want to replace the internal or external server certificate of your Windows or Linux Primary Server, then you can choose to replace the certificate with a new external server certificate.

- 1 To change the CA to external, see in [“Changing the CA to External”](#) in the *ZENworks SSL Management Reference*.
- 2 (Conditional) If your zone includes Intel AMT devices, unprovision and provision the devices. For more information about unprovisioning and provisioning Intel AMT devices, see [“Configuring Intel AMT Devices in Enterprise Mode”](#) in the *ZENworks Out-of-Band Management Reference*.
- 3 (Conditional) If multizone is configured, and the Publisher’s certificate is changed, then update the new certificate of this server for all its Subscribers. Perform the following to update the new certificate:
 1. Log in to ZENworks Control Center (ZCC) of subscribers.
 2. Navigate to **Subscribe And Share > Subscriptions > <subscription_name> > Remote Server > Update Certificate**.
 3. Update the certificate.

4.2.3 Additional Information

If the mobile devices in your zone are connected to the network during the system update process (as a part of the Remint CA or Change CA operation), then the new MDM server certificate is issued to these devices. The devices will communicate with the Primary Server using this new certificate.

However, if certain mobile devices are offline during the system update process, then based on the stage at which these devices were offline, you need to perform the relevant action:

- ♦ **If the devices are offline at the Update Assigned stage and the CA activation date has passed:**

The devices have to be re-enrolled so that they can continue to communicate with the Primary Server using the new certificate.

- ♦ **If the devices are offline at the Pending Certificate Activation stage and the CA activation date has passed:** No action needs to be performed. As soon as the devices are connected to the network, the new MDM server certificate is issued to the devices. The devices will communicate with the Primary Server using this new certificate.

5 Changing the ZENServer Port Number

ZENServer is configured to use ports 80 and 443. If these ports are required for other applications, then the ZENServer ports need to be reconfigured to any other port numbers. Using the information in this chapter, you can change the ZENServer port number. These steps can be performed on both Appliance and Non-appliance Primary Servers to change the port numbers.

IMPORTANT: Before starting this process, ensure that you take a backup of the configuration files, certificates and the database.

Points to Remember: The following points should be considered if agents updates are automated:

- ♦ If the zone has multiple Primary Servers, the following steps are optional. Because, when the device tries to connect to the server, it will be marked as bad as it is not reachable. Till the next refresh is triggered, it will use another server in the zone based on the configured closest server rules. When the next refresh happens on the agent, it will get the updated server list which will have the updated information and the agent will be updated with the new details.
- ♦ In the case of a single Primary Server, when the agent comes up, the server will be marked as bad. To avoid this, delay the execution of the `zac cc` command and the agent restart. After the policy has been applied on the device, the server port has to be changed and then the agent service has to be restarted. A time delay can be added to execute the `zac cc` command and restart the agent.
- ♦ Also, the `initial-web-service` file needs to be modified ONLY on the devices registered to the Primary Server whose port number has been changed. Grep the contents of `initial-web-service` and make sure whether it has the current server's IP or Hostname in it and then proceed.

During this process, the Primary Server will be down. Therefore, it is recommended to have an alternate Primary Server in the zone so that the managed devices will be able to connect to that server for any activity involving servers.

NOTE: The following actions should be performed in the same order.

1 Upgrade the port number on the agent machine:

1a Stop the agent service.

1b Update the `initial-web-service` file on the server with the correct port number. The `initial-web-service` file can be accessed from the following location:

- ♦ **Linux Managed Devices:** `/etc/opt/novell/zenworks/initial-web-service`
- ♦ **Windows Managed Devices:** `%ZENWORKS_HOME%/conf/initial-web-service`

1c Remove the cache folder.

2 Update the port number on the server. The `server.xml` file can be accessed from the following location:

- ♦ Windows: `%ZENWORKS_HOME%/share/tomcat/conf`
- ♦ Linux: `/opt/novell/zenworks/share/tomcat/conf`

2a Stop the zenworks services by using the `novell-zenworks-configure -c Start` command.

2b Open the `server.xml` file in a text editor and go to the `Service` section. In this section, look for the `Connector` subsection in which the value of the `port` is the same as the previous `https` port value and the scheme is `https`. Update the port to the `https` port that you want to configure. It should have a line similar to `<!-- Define a SSL HTTP/1.1 Connector on port 443 -->` above it.

2c In the `Service` section in which the `Connector` port value is the same as the previous `http` port, update the port value to the desired `http` port and change the `redirectPort` attribute to the `https` port that is configured in the previous step. It should have a line similar to `<!-- Define a non-SSL HTTP/1.1 Connector on port 80 -->` above it.

2d In the `Service` section, in which the connector port value is the same as the previous `AJP` port and the protocol is something like `AJP/1.3`, update the port value to the desired `AJP` port and change the `redirectPort` to the `https` port that was configured previously. It should have a line similar to `<!-- Define an AJP 1.3 Connector on port 8009 -->`

NOTE: On Linux, at the end, ensure that the permissions of `server.xml` are intact. Permissions should be `-rw-r--r--`, and ownership should be `zenworks:zenworks`. If you are unsure, it is recommended to run `permissions.sh` at the command prompt.

2e Open an SQL console to execute the following SQL queries:

- ♦ For MSSQL run the following queries:

- ♦ `update zzserver set Port = <NEW_HTTP_PORT> where zuid = 0x<SERVER_GUID>`
- ♦ `update zzserver set SSLPort = <NEW_HTTPS_PORT> where zuid = 0x<SERVER_GUID>`

- ♦ For Oracle run the following queries:

- ♦ `update zzserver set Port = <NEW_HTTP_PORT> where zuid = HEXTORAW('<SERVER_GUID>')`
- ♦ `update zzserver set SSLPort = <NEW_HTTPS_PORT> where zuid = HEXTORAW('<SERVER_GUID>')`

- ♦ For PostgreSQL run the following queries:

- ♦ `update zzserver set Port = <NEW_HTTP_PORT> where zuid = '\x<SERVER_GUID>'`
- ♦ `update zzserver set SSLPort = <NEW_HTTPS_PORT> where zuid = '\x<SERVER_GUID>'`

2f Update the `initial-web-service` file on the server with the latest `https` port number:

- ♦ Windows: `ZENWORKS_HOME/conf/initial-web-service`
- ♦ Linux: `/etc/opt/novell/zenworks/initial-web-service`

2g If you have a firewall enabled, update it with the new port numbers.

- 2h Run `novell-zenworks-configure -c ZenProbeConfigureAction` to configure probe.
- 2i Restart the ZENworks services using the `novell-zenworks-configure -c Start` command (select the option next to Restart).
- 2j Execute the `zman lrr -f` command to re-calculate the closest server rules.
- 2k Re-build deployment packages using the `novell-zenworks-configure -c CreateExtractorPacks -Z` command.

NOTE: Ensure that the new port that is configured is provided along with `zman` as it uses the default port. (use `zman <command> --port=<new port>`). The `zuid` can be found in the following location:

- ♦ On Windows: `ZENWORKS_HOME/conf/DeviceGuid`
- ♦ On Linux: `/etc/opt/novell/zenworks/DeviceGuid`

-
- 3 Start the agent service. Use either the `/etc/init.d/novell-zenworks-xplatzmd start --clean` command or the `systemctl start novell-zenworks-xplatzmd.service` command for Linux devices.

NOTE: If you are changing the server port to a non-default port, use the `GLOBAL_OPTIONS_FILE` option to store the non-default port information for the ZMAN commands. For more information on this option, see [ZENworks Command Line Utilities Reference](#).
