



ZENworks 2020 Update 1 Upgrade Guide

June 2020

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About This Guide

This guide includes information about new enhancements in ZENworks 2020 and information to help you successfully upgrade to this release.

The information in this guide is organized as follows:

- ♦ [Chapter 1, “Upgrading the Primary Servers to ZENworks 2020,” on page 7](#)
- ♦ [Chapter 2, “Appliance Migration,” on page 33](#)
- ♦ [Chapter 3, “Updating Satellites and Managed Devices to ZENworks 2020,” on page 39](#)
- ♦ [Chapter 4, “Replacing a ZENworks Primary Server with Another Server \(Windows, Linux and Appliance\),” on page 41](#)
- ♦ [Appendix A, “Documentation Updates,” on page 43](#)

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 comment on this topic link 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.

1 Upgrading the Primary Servers to ZENworks 2020

This section provides information on upgrading your Linux or Windows Primary Servers to ZENworks 2020. To migrate your Appliance server, see [Appliance Migration](#).

NOTE: If a zone with multiple Primary Servers has added support for newly released versions of OS, then consolidate the effective user-defined targets in the `custom_ostargets.xml` of master primary and update the master Primary Server first.

Using the ZENworks 2020 installation media, you can directly upgrade a Primary Server to ZENworks 2020 if it is using ZENworks 2017.

If the upgrade installer reports any of the following issues during the upgrade, follow the recommended procedures to resolve the problem:

- ♦ **Unsupported ZENworks version:** Upgrade all Primary Servers to ZENworks 2017 Update x. Ensure that all Primary Servers in the zone have the same version of ZENworks.
- ♦ **Unsupported operating systems:** Upgrade the operating systems to a supported version. For more information about the discontinued operating systems, see the [System Requirements](#).

NOTE: ZENworks does not support a major version upgrade of an operating system on a Primary Server. For example, you cannot upgrade from SLES 11 SP4 to SLES 12.x. However, you can upgrade the operating system to a minor version. For example, from SLES 12 SP3 to SLES 12 SP4.

IMPORTANT: Do not extract the ISO image and use it to install. The installation must be run from an installation DVD.

1.1 Understanding the Upgrade Installer

- ♦ If you are using the Sybase database, then the database should be migrated to the PostgreSQL database. For more information, see [Database Migration from Sybase to PostgreSQL](#).
- ♦ Upgrades all ZENworks Configuration Management components on the Primary Servers, including Configuration Management, Asset Management, Asset Inventory, Endpoint Security Management, and Patch Management.
- ♦ Upgrades the ZENworks database and the Audit database. This occurs when the first server is upgraded.

- ♦ After you upgrade the first server to ZENworks 2020, the System Update is available for upgrading the supported versions of ZENworks Satellite Servers and managed devices to ZENworks 2020.

The time required to complete the upgrade on the first Primary Server depends on the size of the data present in database. For Primary Servers using an Microsoft SQL or Oracle database with more than 200,000 records to be purged, the Upgrade installer provides an option to prune the database before upgrading. For information, see [“Database Purging” on page 17](#).

1.2 Database Considerations

Before you perform the upgrade from ZENworks 2017 to ZENworks 2020, consider the following guidelines:

- ♦ If you are using the Sybase database, then ensure that you migrate the database to the PostgreSQL database.

For more information, see [Database Migration from Sybase to PostgreSQL](#).

- ♦ If you are using an external database, you need to upgrade or migrate the external database to the supported latest version before upgrading the Primary Server.

NOTE: If the ZENworks database is configured to the compatibility level of an older version of the Microsoft SQL Server, for example, 2005, then it should be set to the current supported version of the SQL Server.

For more information about the supported database versions, see “Database Requirements”, in the [ZENworks Server Installation](#) guide.

- ♦ (Recommended) Select the type of database based on the number of devices in the environment:
 - ♦ For environments with up to 5,000 devices, use Embedded PostgreSQL
 - ♦ For environments with up to 20,000 devices, use Remote PostgreSQL.
 - ♦ For environments with up to 40,000 devices, use MS SQL or Oracle.
 - ♦ For environments with more than 40,000 devices, use Oracle Enterprise Edition (with partitioning). For information about partitioning, see [Oracle Enterprise with Partitioning](#), in the [ZENworks Server Installation](#) guide.

If the existing database does not meet the recommendation, migrate the existing database after the upgrade is complete.

- ♦ For upgrading database, you can either upgrade the database on the same device where it is running or you can migrate the database using a third-party upgrade installer.

If you are using an embedded PostgreSQL database, the ZENworks Upgrade installer will upgrade and rebuild the database.

NOTE: On a server that hosts an embedded PostgreSQL database, ensure that you have the required free space, equal to the size of the database file.

- ♦ You can only upgrade to a higher version of the same database. You cannot migrate from one database to another using the Upgrade installer.

- ♦ For all external databases, stop the ZENworks services on all other Primary Servers before performing the database upgrade.

-
- ♦ **IMPORTANT:** If you are using Microsoft SQL server database, before upgrading your zone, ensure that the database tables are available in the default database schema DBO. If the ZENworks database tables are not present under the default database schema DBO, then to avoid any issues, contact Micro Focus Customer Support.

To find out the database schema, run the following query in the Microsoft SQL database:

```
SELECT distinct(SCHEMA_NAME(schema_id)) as OWNER FROM sys.objects WHERE  
type= 'U'
```

1.3 Understanding the Upgrade Order

Ensure that you perform the ZENworks 2020 upgrade tasks in the following order:

1. **Upgrade the Operating System:** If the operating system installed on the device is not supported by ZENworks, upgrade the operating system to the latest supported version.

For more information on the supported operating systems, see [System Requirements](#).

NOTE

Refer to the following scenarios for information on the order in which the operating system (OS) and ZENworks upgrades need to be performed:

- ♦ On Windows Primary Servers: You can perform major and minor in-place OS upgrades. The following scenarios provide clarity on the upgrade order to be followed for the major and minor OS upgrades:
 - ♦ To perform an OS upgrade to a version that is supported by ZENworks 2017.x and ZENworks 2020, you can perform the upgrade in any order. Example: If you are upgrading from Windows 2012 Server to Windows 2016 Server, you can either upgrade the OS first or ZENworks first.
 - ♦ To perform an OS upgrade from a version that is not supported by ZENworks 2020 , you need to first upgrade the OS and then upgrade to ZENworks 2020 . As currently all Windows OS versions that are supported in 2017.x are supported in ZENworks 2020 as well, there are no examples for this scenario.
 - ♦ To perform an OS upgrade to a version that is not supported by 2017.x but is supported by 2020 , you need to first upgrade to ZENworks 2020 and then upgrade the OS. Example: If you are upgrading from Windows 2016 Server to Windows 2019 Server, you need to first upgrade to ZENworks 2020 and then perform the OS upgrade.
- ♦ On Linux Primary Servers: You cannot perform a major in-place OS upgrade. To perform a major in-place upgrade, you need to replace the current Primary Server having the older OS version, with a new Primary Server having the latest supported OS version. Example: If you are upgrading from SLES 12 SP4 to SLES 15, you need to first upgrade to ZENworks 2020 and then replace the SLES 12 SP4 Primary Server with a new SLES 15 Primary Server. For information on how to replace Primary Servers, see [Chapter 4, “Replacing a ZENworks Primary Server with Another Server \(Windows, Linux and Appliance\),” on page 41](#).

However, you can perform minor in-place OS upgrades. The following scenarios provide clarity on the upgrade order to be followed for minor OS upgrades:

- ♦ To perform a minor upgrade to an OS version that is supported by ZENworks 2017.x and ZENworks 2020, you can perform the upgrade in any order. Example: If you are upgrading from SLES 12 SP3 to SLES 12 SP4, you can either upgrade the OS first or ZENworks first.
- ♦ To perform a minor OS upgrade from an OS version that is supported by ZENworks 2017.x but not ZENworks 2020, you need to first upgrade the OS and then upgrade to ZENworks 2020 . Example: If you are upgrading from SLES 12 to SLES 12 SP4, you need to first upgrade the OS to SLES 12 SP4 and then upgrade to ZENworks 2020 .
- ♦ To perform a minor OS upgrade from an OS version that is supported by ZENworks 2020, but not supported by ZENworks 2017.x you need to first upgrade to ZENworks 2020 and then upgrade the OS. Example: If you are upgrading from SLES 12 SP4 to SLES 12 SP5, you need to first upgrade to ZENworks 2020 and then perform an OS upgrade to SLES 12 SP5.

IMPORTANT: Before you perform the upgrade, ensure that you back up the data and the certificate information.

2. Upgrade ZENworks: Upgrade ZENworks to the latest version.

The ZENworks 2020 upgrade is a two step process:

- a. (Conditional) If you are using the Sybase database, then migrate the database from Sybase to PostgreSQL.
 - b. Upgrade your zone to ZENworks 2020.
- ♦ The ZENworks 2020 upgrade installer can upgrade only the server on which you run it.

IMPORTANT: If you are using an Embedded PostgreSQL database, first upgrade the device that hosts the database, then upgrade the other Primary Servers.

NOTE: After you upgrade the first Primary Server to ZENworks 2020 , all other servers must be upgraded to ZENworks 2020.

- ♦ When you perform the upgrade for the first time in the Management Zone, only one Primary Server can be upgraded at a time. The subsequent upgrade of additional Primary Servers can be done in parallel, or in any order.

While upgrading the first Primary Server, you must stop the ZENworks services on all other Primary Servers. During the upgrade of additional Primary Servers, you must stop the services on those servers that have not been upgraded. If you do not stop the services, the database might be affected.

NOTE: The Schema and License information will be updated only during the first Primary Server upgrade, not during the subsequent server upgrades.

- ♦ You must upgrade the Primary Servers first; then upgrade the Satellite Servers and agents in the zone.

IMPORTANT: When upgrading additional Primary Servers in the zone, ensure that the ZENworks Server services are running on the upgraded first Primary Server. If the zone uses Embedded PostgreSQL, the Embedded PostgreSQL service must be running on the upgraded first Primary Server.

- ♦ If you are using ZENworks Reporting, then after upgrading the zone to ZENworks 2020 , ensure that you reconfigure ZENworks reporting. For more information, see [Reconfiguring ZENworks Reporting Appliance](#) in the [ZENworks Reporting Appliance Deployment and Administration Reference](#).

1.3.1 Special Upgrade Scenario

If you are using the External Sybase database and have installed ZENworks 2017 Update x on a SLES 11 SP2 device, then to upgrade to your zone to ZENworks 2020 , perform the following steps:

1. Upgrade the device to SLES 11 SP4.
2. (Conditional) If you want to migrate to the External PostgreSQL database, then install the ZENworks supported PostgreSQL on a SLES 12 device.
3. Migrate the External Sybase database to an Embedded or External PostgreSQL database.
You can either use the database migration tool or ZENworks 2020 installer to migrate the database.
4. Use the ZENworks 2020 installer to upgrade your zone to ZENworks 2020 .
5. After upgrading your zone to ZENworks 2020 , upgrade the device to any version of Linux operating system supported by ZENworks.

1.4 Prerequisites

When you upgrade a Primary Server to ZENworks 2020 for the first time in the Management Zone, complete the following tasks before running the upgrade:

- ♦ Ensure that the Primary Server that you want to upgrade to ZENworks 2020 meets all the [System Requirements](#).

For more information, see “Database Requirements” in the [System Requirements](#).

- ♦ Back up the ZENworks database.
- ♦ The time required to complete the upgrade on the first Primary Server depends on the size of the data present in database. If the first Primary Server upgrade is on a device that is using an Microsoft SQL or Oracle database, then run the upgrade in a test environment (with server data similar to the production environment). This is to calculate the outage time of the production server.
- ♦ Ensure that there is no high CPU utilization or memory utilization during the first Primary Server upgrade.

- ♦ Stop all ZENworks services on any Primary Server that is not being upgraded in order to prevent the database from being accessed during the upgrade. Otherwise, this might result in the database going into a nonrecoverable state.
 - ♦ For information about stopping ZENworks services:
 - ♦ **On a Windows Primary Server:** See “ZENworks Services on a Windows Server” in the *ZENworks Primary Server and Satellite Reference*.
 - ♦ **On a Linux Primary Server:** See “ZENworks Services on a Linux Server” in the *ZENworks Primary Server and Satellite Reference*.

When you upgrade the first server, then the System Update is available to upgrade the ZENworks Satellite Servers and managed devices to ZENworks 2020.

- ♦ Ensure that the server hosting the database is running with an active database.
- ♦ On a Linux Primary Server, ensure that the `c3p0`, the hibernate logs for ZENLoader, and ZENServer are disabled prior to the upgrade. For more information, see [TID 7015032 \(https://www.novell.com/support/kb/doc.php?id=7015032\)](https://www.novell.com/support/kb/doc.php?id=7015032).
- ♦ Ensure that the time on the server and the database are synchronized (time difference must be less than 2 minutes).

NOTE:

- ♦ If the time difference is more than 2 minutes and less than 24 hours, a warning message is displayed during the upgrade.
 - ♦ If the time difference is more than 24 hours, an error message is displayed.
-
- ♦ Ensure that the Windows Primary Servers have Windows Installer 4.5 or later versions installed and running.
 - ♦ Ensure that all fixed ports are free during the upgrade. If the fixed ports are blocked, the upgrade can not proceed. For the list of ports, see [ZENworks 2020 Update 1 TCP and UDP Ports](#).
 - ♦ If you have obtained the ZENworks upgrade software as an ISO image download, do one of the following to create the upgrade DVD:
 - ♦ “Using Windows to Create a ZENworks Installation DVD from an ISO Image” on page 12
 - ♦ “Using Linux to Create a ZENworks Installation DVD from an ISO Image” on page 13

IMPORTANT: Do not extract and use the ISO image for upgrading ZENworks.

1.4.1 Using Windows to Create a ZENworks Installation DVD from an ISO Image

- 1 Download the ZENworks upgrade ISO image from the [Micro Focus Download site](#) to a temporary location on your Windows device.
- 2 Burn the ISO image to a DVD.

1.4.2 Using Linux to Create a ZENworks Installation DVD from an ISO Image

- 1 Download the ZENworks upgrade ISO image from the [Micro Focus Download site](#) to a temporary location on your Linux device.
- 2 Mount the ISO image by using the following command:

```
mount -o loop /tempfolderpath/isoimagename.iso mountpoint
```

Replace *tempfolderpath* with the path of the temporary folder, replace *isoimagename* with the ZENworks ISO file name, and replace *mountpoint* with the path of the file system location where you want to mount the image. The path specified by *mountpoint* must already exist.

For example:

```
mount -o loop /zcm11/ZCM11upgr.iso /zcm11/upgrade
```

1.5 Upgrading the Primary Servers

You can upgrade by using a graphical user interface (GUI) program or a command line (Linux only).

- ♦ [Section 1.5.1, “Appliance Migration,” on page 13](#)
- ♦ [Section 1.5.2, “Using the GUI to Upgrade Linux and Windows Servers,” on page 14](#)
- ♦ [Section 1.5.3, “Using a Command Line to Upgrade a Linux Server,” on page 22](#)
- ♦ [Section 1.5.4, “Running ZENworks Diagnostic Center to Verify the Database Schema,” on page 24](#)
- ♦ [Section 1.5.5, “Post-Upgrade Configurations,” on page 26](#)

NOTE: After upgrading the zone, ZooKeeper is enabled on the Primary Server that is first updated. For more information see, [Post-Upgrade Configurations](#).

IMPORTANT

- ♦ Do not use the ZENworks System Update to upgrade the Primary Servers to ZENworks 2020.

Before upgrading the ZENworks server on a Windows device, run the Windows Update on the device to ensure that all the available updates are installed on the device. Subsequently, disable the Windows Update to ensure that there are no further updates on the device when you upgrade the ZENworks server on the device. Windows Update can be enabled after upgrading ZENworks.
 - ♦ Disable the Linux Update to ensure that there are no further updates on the device when you upgrade the ZENworks server on the device.
-

1.5.1 Appliance Migration

To migrate a ZENworks 2017 Update x Appliance to ZENworks 2020 Appliance, see [Chapter 2, “Appliance Migration,” on page 33](#).

1.5.2 Using the GUI to Upgrade Linux and Windows Servers

Perform the following procedure on the Primary Server that you want to upgrade to ZENworks 2020, if all the prerequisites are met:

- 1 To start the ZENworks upgrade program:
 - ♦ **Linux:** Do the following:
 1. Download the ZENworks upgrade ISO image from the [Micro Focus Download site](#).
 2. Mount the ISO by running the command `mount -o loop <ISO path including name> <mount_path>`
 3. `cd` to the mounted location and run `./setup.sh`.
 - ♦ **Windows:** Do one of the following:
 1. Download the ZENworks upgrade ISO image from the [Micro Focus Download site](#).
 2. Mount the ISO.
 3. Run `setup.exe`.
- 2 During upgrade, see [Table 1-1, “Upgrade Information,” on page 15](#) for details on the upgrade data.

If you are using the GUI upgrade, you can also click the **Help** button for similar information.
- 3 Do one of the following on the Windows device:
 - ♦ If you selected to reboot automatically (you selected the **Yes, restart the system** option during the upgrade; see [“Restarting the Server \(applicable only for Windows\)” on page 19](#)), continue with [Step 5](#) after the booting process has completed and the services have started.
 - ♦ If you selected to reboot manually (you selected the **No, I will restart the system myself** option during the upgrade; see [“Restarting the Server \(applicable only for Windows\)” on page 19](#)), wait for the upgrade to complete and the services to start in order to verify it.
- 4 After the upgrade is complete and the ZENworks services are restarted, do any of the following to verify that ZENworks 2020 is running:
 - ♦ **Check the Windows services by using the GUI:**

On the server, click **Start**, select **Administrative Tools > Services**, then review the status of the **Novell ZENworks Loader** and **Novell ZENworks Server** services.

If the services are not running, start them. Right-click the **Novell ZENworks Server** service, select **Start**, right-click the **Novell ZENworks Loader** service, then select **Start**.

Alternatively, you can use the **Restart** option for **Novell ZENworks Server** to stop all of the related services, which stops and then starts each of them in their correct order, including **Novell ZENworks Loader**.
 - ♦ **Launch ZENworks Control Center:**

Use the following URL to open ZENworks Control Center in a web browser on any device in your network:

`https://DNS_name_or_IP_address_of_Primary_Server:port_number/zenworks`
 - ♦ **Check the Linux services by using the specific service command:**

On the server, run the following commands:

```
/etc/init.d/novell-zenserver status
```

```
/etc/init.d/novell-zenloader status
```

For SLES 12, or later servers run the following commands:

```
systemctl status novell-zenserver
```

```
systemctl status novell-zenloader
```

If the services are not running, run the following commands to start the ZENworks services:

```
/etc/init.d/novell-zenserver start
```

```
/etc/init.d/novell-zenloader start
```

♦ **Check the Linux services by using the configuration command:**

On the server, run the following command:

```
/opt/novell/zenworks/bin/novell-zenworks-configure -c SystemStatus
```

ZENworks services and their statuses are displayed.

To start the services, run the following command:

```
/opt/novell/zenworks/bin/novell-zenworks-configure -c Start
```

5 To upgrade another Primary Server, repeat from [Step 1](#).

IMPORTANT: Repeat these steps until all Primary Servers in the Management Zone are upgraded.

NOTE: If you are using ZENworks Reporting, then after upgrading the zone to ZENworks 2020 , ensure that you reconfigure ZENworks reporting. For more information, see [Reconfiguring ZENworks Reporting Appliance](#) in the [ZENworks Reporting Appliance Deployment and Administration Reference](#).

The [Table 1-1 on page 15](#) provides the upgrade information for upgrading from ZENworks 2017 Update x to ZENworks 2020 .

Table 1-1 Upgrade Information

Upgrade Information	Explanation
License agreement	The Upgrade installer does not proceed if the license agreement is not accepted.
ZENworks Prerequisites	<p>If the required prerequisites are not met, the upgrade procedure does not continue. The requirements that are not met are displayed (GUI) or listed (command line). For more information, see System Requirements.</p> <p>If the .NET prerequisite is not met, you can click the ZENworks link in the description to install the runtime version that is bundled with ZENworks. Ensure that you install Microsoft .NET 4.5 framework and all its latest updates. After .NET is installed, the ZENworks upgrade proceeds.</p> <p>NOTE: You must reboot the device after the installation of .NET 4.5.</p>

Upgrade Information	Explanation
Upgrade Type	<p>Select Yes if this is the first Primary Server in the Management Zone to be upgraded, else select No.</p> <p>If you select Yes, you are prompted for the zone administrator credentials.</p> <p>or</p> <p>If you select No, perform the steps listed in Table 1-2, “Upgrade Information - Upgrade of additional Primary Servers,” on page 20.</p>
Database Purging	<p>The time required to complete the upgrade of the first Primary Server depends on the size of the data present in the database. On Primary Servers that are using an Microsoft SQL or Oracle Enterprise database, the upgrade installer checks the size of unwanted inventory data that can be purged. If there are more than 200,000 records to be purged, the Upgrade installer gives an option to purge the database before upgrading the Primary Server. For other database types, if there are less than 200,000 records to be purged, this page does not open.</p> <ul style="list-style-type: none"> ♦ Purge the database now: If this option is selected, the wizard will continue with purging the database. After the database is purged, re-initiate the upgrade process. <p>Configure the following settings for purging:</p> <ul style="list-style-type: none"> ♦ Remove the deleted products and components older than x day(s): Specify the number of days after which to purge deleted product and component data. The default value is 180 days. ♦ Remove the inventory history data older than x day(s): Specify the number of days after which to purge the inventory history. The default value is 180 days. ♦ Remove the Software Application Usage data older than x day(s): Specify the number of days after which to purge the software application usage data collected for Asset Management. The default value is 180 days. ♦ Remove the Network Software Usage data older than x day(s): Specify the number of days after which to purge the network software usage data collected for Asset Management. The default value is 180 days. ♦ Remove the Web Application Usage data older than x day(s): Specify the number of days after which to purge the Web application usage data collected for Asset Management. The default value is 180 days. <p>IMPORTANT: If the purging process is interrupted, the database might become inconsistent.</p> <ul style="list-style-type: none"> ♦ Continue without purging the database: If this option is selected, the wizard continues with the upgrade process.

Upgrade Information	Explanation
ZENworks Diagnostic Center	<p>Verify the database using ZENworks Diagnostic Center. If any mismatches are found, then error are logged in the ZDC reports.</p> <p>The error reports are available in the following location:</p> <ul style="list-style-type: none"> ♦ On Windows: %ZENWORKS_HOME%\logs\migration\zdc\reports ♦ On Linux: /var/opt/novell/log/zenworks/migration/zdc/reports <p>Ensure that you resolve the issues before proceeding with the upgrade. For more information, see the Troubleshooting section in the Database Migration from Sybase to PostgreSQL document.</p> <p>NOTE: Verify the database before you upgrade the first Primary Server to ZENworks 2020 . You will not be prompted to verify the database for the subsequent server upgrades.</p>
ZENworks Licensing	<p>In the ZENworks Licensing page, specify whether you want to change the current ZENworks licensing.</p> <p>Depending on your current licensing, specify the required license information.</p>
Pre-Upgrade Tasks	<p>Ensure that you have stopped all ZENworks services on all other Primary Servers. If services are not stopped on other Primary Servers, then you cannot proceed with the upgrade.</p> <p>Ensure that you have taken complete backup of the ZENworks databases and other important data.</p> <p>After performing the required actions, select the displayed checkboxes .</p>
Pre-upgrade summary	<p>The following fields are displayed in the summary:</p> <p>Zone Name: Displays the name of the Management Zone to which this server belongs.</p> <p>To make changes to any information, click Previous.</p>
Upgrading process	<p>The upgrade process takes several minutes, depending on the capabilities of the hardware and size of data in the database.</p>

Upgrade Information	Explanation
Upgrading errors	<p>If there are errors during the upgrade, this page is displayed. For detailed information, see the log files in the following locations. Resolve the errors and restart the upgrade.</p> <p>On Windows: You can check the logs in the old Novell file path. When the Upgrade process is re-initiated, then check the logs in the new Micro Focus file paths.</p> <p>Novell File Path:</p> <p>Micro Focus File Path:</p> <ul style="list-style-type: none"> ♦ %ZENWORKS_HOME%\logs <ul style="list-style-type: none"> ♦ %ZENWORKS_HOME%\logs\ZENworks_Upgrade_<TimeStamp>.log.xml ♦ %ZENWORKS_HOME%\logs\loader-messages.log ♦ %ZENWORKS_HOME%\logs\system-update-import.log <p>%ZENWORKS_HOME%\logs\system-update\<Update GUID></p> <ul style="list-style-type: none"> ♦ %ZENWORKS_HOME%\logs\pre-global-actions.log ♦ %WINDOWS_SYSTEM_DRIVE%\tmp\err.log <ul style="list-style-type: none"> ♦ /var/opt/novell/log/zenworks <ul style="list-style-type: none"> ♦ /var/opt/novell/log/zenworks/ZENworks_Upgrade_<TimeStamp>.log.xml <p>/var/opt/novell/log/zenworks/system-update/<Update GUID></p> <ul style="list-style-type: none"> ♦ /var/opt/novell/log/zenworks/loader-messages.log ♦ /var/opt/novell/log/zenworks/system-update-import.log ♦ /var/opt/novell/log/zenworks/pre-global-actions.log ♦ /tmp/err.log <p>On Linux: You can check the logs in the old Novell file path. When the Upgrade process is re-initiated, then check the logs in the new Micro Focus file paths.</p> <p>Novell File Path</p>
Post-upgrade actions: Run the ZENworks System Status utility	<p>Choose to run the ZENworks System Status utility to launch the ZENworks services heartbeat check before closing the upgrade program. The results are posted in the upgrade log file.</p>
Restarting the Server (applicable only for Windows)	<p>Upon a successful upgrade on a Windows Primary Server, you can select between rebooting immediately or later:</p> <ul style="list-style-type: none"> ♦ Yes, Restart the System: If you select this option, the server is rebooted to complete the upgrade process. ♦ No, I Will Restart the System Myself: If you select this option, the upgrade process finishes when you reboot the server for the next time. <p>IMPORTANT: Reboot the server to complete the upgrade process.</p>

Upgrade Information	Explanation
Upgrade completion	<p>The actions you selected previously are performed, including:</p> <ul style="list-style-type: none"> ♦ Upgrading the ZENworks database (done when the first Primary Server is upgraded). ♦ Upgrading all ZENworks components installed on the Primary Server. ♦ Importing System Update into the zone so that you can upgrade the managed devices in the zone.

Table 1-2 Upgrade Information - Upgrade of additional Primary Servers

Installation Information	Explanation
Primary Server and Zone Credentials	You are prompted for the details of the Primary Server that is already upgraded, the Zone credentials, and the SSL port number.
ZENworks Database Details	(Conditional) If the device cannot connect to the database through the Primary Server that is already upgraded, you are prompted for the details to connect directly to the database.
Port Number	A few ports that might be blocked by your firewall need to be opened. You can open them now or you can manually open them later.
Pre-upgrade summary	<p>WARNING: Before the Pre-upgrade summary page is displayed, the ZENworks services will be stopped on the server. If you cancel the upgrade at this time, you will need to restart the ZENworks services manually.</p> <p>The following fields are displayed in the summary:</p> <p>ZENworks Home Directory: Displays the location on the Primary Server where the ZENworks software that is being upgraded is installed.</p> <p>Zone Name: Displays the name of the Management Zone to which this server belongs.</p>
Upgrading process	The upgrade process takes several minutes, depending on the capabilities of the hardware.

Installation Information	Explanation
Errors during upgrade	<p>If there are errors during the upgrade, this page is displayed. You must resolve the errors and restart the upgrade. For detailed information, see the log files in the following locations:</p> <p>On Windows: You can check the logs in both the old Novell and the new Micro Focus file paths:</p> <p>Novell File Path</p> <ul style="list-style-type: none"> ◆ %ZENWORKS_HOME%\logs <ul style="list-style-type: none"> ◆ %ZENWORKS_HOME%\logs\ZENworks_Upgrade_<TimeStamp>.log.xml ◆ %ZENWORKS_HOME%\logs\loader-messages.log ◆ %ZENWORKS_HOME%\logs\system-update-import.log %ZENWORKS_HOME%\logs\system-update\<Update GUID> <ul style="list-style-type: none"> ◆ %ZENWORKS_HOME%\logs\pre-global-actions.log ◆ %WINDOWS_SYSTEM_DRIVE%\tmp\err.log <p>On Linux: You can check the logs in the following file paths</p> <p>Novell File Path</p> <ul style="list-style-type: none"> ◆ /var/opt/novell/log/zenworks <ul style="list-style-type: none"> ◆ /var/opt/novell/log/zenworks/ZENworks_Upgrade_<TimeStamp>.log.xml /var/opt/novell/log/zenworks/system-update/<Update GUID> <ul style="list-style-type: none"> ◆ /var/opt/novell/log/zenworks/loader-messages.log ◆ /var/opt/novell/log/zenworks/system-update-import.log ◆ /var/opt/novell/log/zenworks/pre-global-actions.log ◆ /tmp/err.log
Post-upgrade actions	<p>Before closing the upgrade program, you can run the ZENworks System Status utility to launch a heartbeat check of the ZENworks services. The results are listed in the installation log.</p>
Restarting the Server (applicable only for Windows)	<p>After the upgrade on a Windows Primary Server, you can select either to reboot immediately or later:</p> <ul style="list-style-type: none"> ◆ Yes, Restart the System: Reboots the server to complete the upgrade process. ◆ No, I Will Restart the System Myself: Completes the upgrade process, when you reboot the server the next time. <p>IMPORTANT: You must reboot the server to complete the upgrade process.</p>

Installation Information	Explanation
Upgrade completion	<p>The actions you selected previously are performed, including:</p> <ul style="list-style-type: none"> ◆ Upgrading the ZENworks database (done when the first Primary Server is upgraded). ◆ Upgrading all ZENworks components installed on the Primary Server. ◆ Importing System Update into the zone so that you can upgrade the managed devices in the zone.

1.5.3 Using a Command Line to Upgrade a Linux Server

Perform the following on the Primary Server that you want to upgrade from ZENworks 2017 Update x to ZENworks 2020 :

- 1 Ensure that the upgrade prerequisites are met.
- 2 Start the ZENworks upgrade program, open a Linux terminal, browse to the root of the upgrade media, then enter the following command:

```
./setup.sh --console
```

or

```
./setup.sh -e
```

- 3 Select the language. English is the default language. Select the number corresponding to your language, then press **Enter** to continue.
- 4 Review the introduction, then press **Enter** to continue.

TIP: Type `back` and press **Enter** to return to a previous installation option to make the changes. Type `quit` to exit the wizard.

- 5 To accept the end-user license agreement (EULA), type `1`, then press **Enter**.
- 6 To accept the license agreement, type `1`, then press **Enter**.
If you disagree, the upgrade wizard quits.
- 7 The Prerequisite check page is displayed. If there are any warning or error messages, resolve the errors, then press **Enter** to continue.
- 8 Type `1` if this is the first Primary Server to be upgraded; otherwise, type `2`, then press **Enter**.
- 9 (Conditional) If you typed `1` in the previous page, you will be prompted for the zone administrator credentials. Specify details, then press **Enter** and continue with [Step 11](#).
- 10 (Conditional) If you typed `2` in the previous page, you will be prompted for the details of the upgraded Primary Server and the zone administrator credentials. Specify the required details, then press **Enter**.
- 11 At the end of the **Enter the zone administrative user's name** line, press **Enter** to accept the default (Administrator), or specify an administrator name, then press **Enter**.
- 12 Specify a password for the administrator, then press **Enter**.

13 In the ZENworks licensing page, you have an option to change the ZENworks licensing type. Specify the ZENworks 2020 license, and then click Next.

14 Stop the ZENworks services on all other Primary Servers, then press **Enter** to stop the services on the local server.

Before the upgrade, you should stop the services on all other Primary Servers in the Management Zone. If services are not stopped on other Primary Servers, then you will not be able to proceed with the upgrade.

Except for the database service, no ZENworks service should be running during the upgrade process.

15 Review the pre-upgrade summary, then press **Enter** to continue.

If you are upgrading the other Primary Servers in the Management Zone, the upgrade starts when you press **Enter** in this step.

16 When **Upgrade Complete** is displayed, press **Enter** to continue.

If errors are displayed, see the installation logs in the `/var/opt/novell/log/zenworks` or `/var/opt/novell/log/zenworks/systemupdate/<Update GUID>` file.

17 Do any of the following to verify that ZENworks 2020 is running:

- ♦ **Check the Linux services by using the specific service commands**

On the server, run the following commands:

```
/etc/init.d/novell-zenserver status
```

```
/etc/init.d/novell-zenloader status
```

For SLES 12, or later servers run the following commands:

```
systemctl status novell-zenserver
```

```
systemctl status novell-zenloader
```

If the services are not running, run the following commands to start the ZENworks services:

```
/etc/init.d/novell-zenserver start
```

```
/etc/init.d/novell-zenloader start
```

- ♦ **Check the Linux services by using the configuration command**

On the server, run the following commands:

```
/opt/novell/zenworks/bin/novell-zenworks-configure -c SystemStatus
```

ZENworks services and their status are listed.

To start the services, run the following command:

```
/opt/novell/zenworks/bin/novell-zenworks-configure -c Start
```

- ♦ **Run ZENworks Control Center**

Use the following URL to open the ZENworks Control Center in a web browser on any device in your network:

`https://<DNS name of the Primary_Server>/zenworks`

or

`https://<IP address of the Primary_Server>/zenworks`

18 To upgrade another Primary Server, repeat from [Step 2](#).

For information on the post-upgrade tasks, see “[Completing Post-Installation Tasks](#)” in the *ZENworks Server Installation*.

NOTE: If you are using ZENworks Reporting, then after upgrading the zone to ZENworks 2020 , ensure that you reconfigure ZENworks reporting. For more information, see [Reconfiguring ZENworks Reporting Appliance](#) in the *ZENworks Reporting Appliance Deployment and Administration Reference*.

1.5.4 Running ZENworks Diagnostic Center to Verify the Database Schema

The first time you upgrade any Primary Server to ZENworks 2020 , you must verify the database schema. Do not perform this procedure for the subsequent server upgrades.

- ♦ “[Verifying an Embedded Database Schema](#)” on page 24
- ♦ “[Verifying an External Database Schema](#)” on page 25

Verifying an Embedded Database Schema

1 At the Primary Server’s console prompt, run the following commands:

- ♦ **On Windows**

```
cd to MEDIA_ROOT\Common\tools\zdc
zdc_verifyDB.bat
```

- ♦ **On Linux**

```
cd to MEDIA_PATH/Common/tools/zdc
./zdc_verifyDB
```

ZENworks Diagnostic Center runs the diagnostic tests and generates the results in HTML format.

On a Windows Primary Server, the reports are stored in the following location:

`%ZENWORKS_HOME%\logs\zdcreports\%SESSION%`

On a Linux Primary Server the reports are stored in the following location:

`/var/opt/novell/log/zenworks/zdcreports`

To view the reports, open `index.html`, located in the `report` directory.

The complete log of diagnostic tests is stored in the following locations:

On Windows:

`%ZENWORKS_HOME%\logs\zdcreports\zdc_zen11_verify_%SESSION%.log`

On Linux: `/var/opt/novell/log/zenworks/zdcreports`

Verifying an External Database Schema

Perform the following steps to verify an external database schema such as external PostgreSQL, Microsoft SQL, or Oracle database schema:

- 1 At the Primary Server's console prompt, run the following commands:

- ♦ **On Windows**

```
cd to MEDIA_PATH/Common/tools/zdc
zdc_verifyDB.bat -d check
```

- ♦ **On Linux**

```
cd to MEDIA_PATH/Common/tools/zdc
./zdc_verifyDB -d check
```

NOTE: The `-d check` parameter must be used only when you migrate the database from one device to another. Do not use the `-d check` parameter if the database is upgraded on the same device.

- 2 Specify the type of database. Type the relevant number based on the database type:

- ♦ (1) PostgreSQL
- ♦ (2) MS-SQL
- ♦ (3) Oracle

- 3 Specify the database details, based on the selected database (Microsoft SQL, PostgreSQL, or Oracle).

NOTE: If you are using an Microsoft SQL database, based on the type of authentication you choose to log in, enter the user name in the relevant format:

- ♦ Windows Authentication: `<name>@<domain>`
 - ♦ SQL Server Authentication: `<name>`
-

- 4 (Conditional) If the database is Remote PostgreSQL, enter the Database Engine Name.

ZENworks Diagnostic Center runs the diagnostic tests and generates the results in HTML format. On a Windows Primary Server the reports are stored in the following location:

`%ZENWORKS_HOME%\logs\zdcreports\%SESSION%`

On a Linux Primary Server the reports are stored in the following location:

`/var/opt/novell/log/zenworks/zdcreports`

To view the reports, open `index.html`, located in the `report` directory.

The complete log of diagnostic tests is stored in the following locations:

On Windows:

`%ZENWORKS_HOME%\logs\zdcreports\zdc_zen11_verify_%SESSION%.log`

On Linux: `/var/opt/novell/log/zenworks/zdcreports`

1.5.5 Post-Upgrade Configurations

After successfully upgrading the Primary Servers, perform the following post-upgrade configurations:

1. Configure the system update entitlement by activating ZENworks licenses. For more information on licensing, see [TID 7024521](#).

NOTE

- ♦ Ensure that you license the product after upgrading to ZENworks 2020 and before upgrading to ZENworks 2020 Update 1.
- ♦ After licensing ZENworks, ensure that you check for updates in ZENworks System Update page.

-
2. Using the appliance key from Software Licenses and Downloads, register and then configure Online Updates. For more information, see:
 - ♦ [ZENworks Product Licensing Reference](#)
 - ♦ [Online Update](#)
 3. Ensure that you verify the version of ZENworks in ZENworks Control Center (**Configuration > Server Hierarchy**).
 4. Ensure that the status of System Update is successful.
 5. Ensure that you run the latest ZDC to verify the schema. For more information, see [ZENworks Diagnostic Center](#).
 6. (Conditional) Ensure that you apply the latest Tuxera NTFS driver or imaging updates. For more information, see [Adding Tuxera Driver for ZENworks Imaging](#).
 7. Ensure that you configure reporting to get the newly available domains. For more information, see [ZENworks Reporting Configuration](#).
 8. (Conditional) If ZENworks is connected to ZENworks Reporting Server, then ensure that you upgrade the Reporting database domain to the upgraded ZCM Database. For more information, see [Reconfiguring ZENworks Reporting Appliance](#) in [ZENworks Reporting Appliance Deployment and Administration Reference](#).
 9. Ensure that the ZooKeeper service is up and running at all times to enable proper functioning of various ZENworks components such as the ZENworks Loader services and the Vertica database. To verify the status of the ZooKeeper service, see the Diagnostics page in ZCC. For more information on the ZooKeeper component, see [ZooKeeper](#) in the [Vertica Reference Guide](#).

NOTE

- ♦ The [TID \(https://portal.microfocus.com/s/article/KM000002512?language=en_US\)](https://portal.microfocus.com/s/article/KM000002512?language=en_US) is applicable only for Window servers. Refer to the TID and perform the specified steps.
- ♦ In case of multiple Primary servers in the zone, by default, the Zookeeper service is and active on the first upgraded Primary Server node.

You also need to ensure that the firewall allows client connections from other Primary Servers to the ZooKeeper services on port 6789. If the Primary Servers in your zone are unable to access the ZooKeeper service, then to open the ports, you can run the following Configure action on the server in which ZooKeeper is enabled.

```
novell-zenworks-configure -c ClusterFirewallConfigureAction -  
Doperation=add -Dservice=zookeeper
```

However, if the Primary Server that is within the DMZ is unable to access the ZooKeeper service within the corporate network, then you need to manually open the port 6789 in the corporate firewall.

For more information on the ZooKeeper ports, see [ZENworks 2020 TCP and UDP Ports](#).

1.6 Managing Memory Requirements on the ZENworks Server

As per the system requirements, ZENworks recommends minimum memory requirement of 16 GB for both Appliance and Non-appliance Primary Servers. Based on the RAM size requirements, you need to ensure that memory is optimally allocated for the RDBMS (if embedded PostgreSQL is installed), Vertica, Kafka and ZENworks Services (ZENserver and ZENloader services), for these components to function effectively in the server. ZENworks provides you with a Configure action that will automatically calibrate appropriate memory for these processes.

You need to run this Configure action after upgrading the server to ZENworks 2020. However, if you plan to install Vertica in this server, then ensure that you run this Configure action only after configuring Vertica. For more information, see [Vertica Reference](#) documentation.

The scenarios in which this action should be run are:

- ♦ Non-appliance server on which only embedded PostgreSQL is installed
- ♦ Non-appliance second Primary Server
- ♦ Appliance server on which Kafka and Vertica are installed
- ♦ Appliance server on which only Vertica is installed
- ♦ Appliance server on which embedded PostgreSQL and Vertica are installed
- ♦ Appliance server on which embedded PostgreSQL and Kafka are installed
- ♦ Appliance server on which only Kafka is installed
- ♦ Appliance server on which embedded PostgreSQL, Kafka and Vertica are installed
- ♦ Appliance second Primary Server

To run this Configure action:

1. In the command line utility of the server, execute the command: `novell-zenworks-configure -c CalibrateMemoryConfigureAction`
2. A message is displayed informing the user that the ZENworks services will automatically restart on the server after the Configure action is run. If you want to proceed with the memory calibration, then press enter to select the default value 1 or else enter the value 2.
3. (Conditional) On an Appliance server, you will be asked if you want to install Vertica and Kafka on the server. If you plan to install Vertica and Kafka on this server, then ensure that you run this action only after configuring Vertica in the server. To exit the action, enter the value 2.

If you do not want to install Vertica and Kafka in the server and want to proceed with memory calibration, enter the value 1.

The newly configured values for each component are displayed. If you want to view the configured values at a later point in time, then run the following Configure action:`novell-zenworks-configure -c DisplayMemoryConfigureAction`

1.7 Troubleshooting

If the ZENworks Server Upgrade fails, you must rectify the problem and re-run the ZENworks Upgrade Installer.

- ♦ You must re-run the Upgrade Installer on the same server where the upgrade was started.
- ♦ If the upgrade fails during the post-package upgrade database action, then on re-running and after zone authentication, the pre-upgrade Summary page displays and the upgrade proceeds to perform the database actions.
- ♦ If Embedded PostgreSQL database is used, ensure that the `.dbR` and `.logR` files are deleted from the database folder before re-running the Upgrade Installer.

The following sections provide solutions to the problems that you might encounter while upgrading the ZENworks Primary Server:

- ♦ [“ZENworks upgrade fails as the PostgreSQL Engine upgrade failed” on page 28](#)
- ♦ [“Upgrading to ZENworks 2020 fails on Windows Primary Server” on page 29](#)
- ♦ [“System Update Failed Due to Pending Reboot Error” on page 29](#)
- ♦ [“The Inventory-Only Agent \(IOA\) System Update Fails on SLED 15 SP1 devices” on page 29](#)
- ♦ [“During the Upgrade of any Windows Primary Server, Windows Explorer Automatically Restarts a Few Times” on page 30](#)
- ♦ [“When ZENworks Upgrade is launched, if the database is executing any transactions, it might conflict with the upgrade process” on page 30](#)
- ♦ [“While using an Oracle database, during the upgrade or database creation, the TNS error message is displayed” on page 31](#)
- ♦ [“While using an MS-SQL database, during the upgrade or database creation, there are connection issues” on page 31](#)
- ♦ [“Incorrect values displayed for the inventory records to be pruned” on page 32](#)
- ♦ [“An error occurs when you delete a folder with a long name” on page 32](#)

ZENworks upgrade fails as the PostgreSQL Engine upgrade failed

Explanation: While upgrading ZENworks, the ZENworks upgrade fails if the PostgreSQL engine upgrade failed. This might be because the PostgreSQL service was in an inconsistent state before the upgrade was initiated.

Action: If the *Database Service Creation (dbsvc)* failed with return code: 2 exception is logged in the Upgrade log, then open `zen20u2_upgrade_status` file present at `/etc/opt/novell/zenworks` on Linux and `%ZENWORKS_HOME%\conf` on Windows and remove **POSTGRES_ENGINE_UPGRADE = stop service** line from the file. Start the embedded database service, and then re-trigger the upgrade.

The workaround should be performed only in case of stop service failure. However, this workaround is not recommended for failure at other stages.

Upgrading to ZENworks 2020 fails on Windows Primary Server

Explanation: While upgrading the Windows Primary Server to ZENworks 2020, the upgrade fails.

Action: Perform the following steps:

1. If the server upgrade has already failed, then run the following command as a super user:

```
icacls "%zenworks_home%\cache" /remove:d Users
```

2. After running the command, retry the upgrade using the ZENworks 2020 Media Upgrade (ISO).

System Update Failed Due to Pending Reboot Error

Source: ZENworks

Explanation: While deploying the system update, the system will restart multiple times. Even after shutting down the system, the system update failed and displayed the pending reboot error.

Action: It is recommended that you restart or reboot the device after updating the device. On the latest Windows devices, due to the Fast Startup mode, shutting down and starting is not considered a device reboot. Hence, you need to restart or reboot the device or disable the "Fast Startup" mode.

The Inventory-Only Agent (IOA) System Update Fails on SLED 15 SP1 devices

Source: ZENworks

Explanation: When you deploy an Inventory-Only Agent (IOA) system update on SLED 15 devices using the 'zac su' command, the system update might fail. This might be because the 'at' package might not be installed on the SLED 15 devices, by default.

To verify this, the Inventory-Only Agent (IOA) users or administrators can check the zmd-messages.log file and check for the '**Cannot run program "at": error=2, No such file or directory**' error.

Action: If the 'at' package is not installed on the Inventory-Only Agent (IOA) device, then install the 'at' command using the zypper command or other tools. After installing the 'at' command, rerun the zac su command.

In case the zypper command fails to identify the 'at' package, we can install the following RPMs:

The RPMs can be downloaded from <https://rpmfind.net/linux/rpm2html/search.php>

1. Search for 'libHX28' and download the rpm applicable to your OS platform.

Example: libHX28-3.22-lp150.1.7.x86_64.rpm

2. Search for 'libfl2' and download the rpm applicable to your OS platform.

Example: libfl2-2.6.4-lp150.2.48.x86_64.rpm

3. Search for 'at' and download the rpm applicable to your OS platform.

Example: at-3.1.20-lp150.2.27.x86_64.rpm

During the Upgrade of any Windows Primary Server, Windows Explorer Automatically Restarts a Few Times

Explanation: During the upgrade of any Windows Primary Server, Windows Explorer automatically restarts a few times and the command prompt window with the following message is automatically launched:

For each prompt presented, press 'enter' to accept the <default> value, type 'back' to return to the previous action, or type 'quit' to exit.

Action: Ignore the messages.

When ZENworks Upgrade is launched, if the database is executing any transactions, it might conflict with the upgrade process

Source: ZENworks; Upgrade

Explanation: When the ZENworks Upgrade is launched, if the database is executing any transactions, it might conflict with the upgrade process.

Action: Kill the database session that conflicts with the upgrade process. Perform the following steps, to kill a database session:

- 1 Log in to the database as a system user and launch the SQL client.
- 2 Execute one of the following scripts, based on the database type:

- ♦ Oracle:

```
select 'ALTER SYSTEM KILL SESSION
''||SID||','||SERIAL#||'';' AS "Drop
Query",b.sql_text,a.* from gv$session a, gv$sql b
where (case when a.sql_id is null then a.prev_sql_id
else a.sql_id end)=b.sql_id and a.program='JDBC Thin
Client' and a.logon_time< (sysdate-3/60/24) and
a.username='<<ZENWORKSUSER>>';
```

Where:

ZENWORKSUSER is the ZENworks database user name.

- ♦ MS SQL:

```
select 'KILL '+cast(spids as varchar(100)) as "Drop
Query", r.text,s.* from sys.sysprocesses s cross
apply sys.dm_exec_sql_text (sql_handle) r where
s.program_name='jTDS' and s.spid!=@@spid and
s.login_time < dateadd(minute,-3,getdate()) and
s.loginame='<<ZENWORKSUSER>>';
```

Where:

ZENWORKSUSER is the ZENworks database user name.

- ♦ SQL Anywhere:

```
SELECT 'Drop connection '+cast(sa_conn_info.Number
as varchar(100))+';' as "Drop Query",
sa_conn_info.Number AS connection_number, DB_NAME(
DBNumber ) AS database_name, sa_conn_info.name AS
connection_name, sa_conn_info.userid,
CONNECTION_PROPERTY( 'LoginTime', Number ) as "Login
Time", CONNECTION_PROPERTY( 'LastStatement', Number
) As "Query" FROM sa_conn_info() where
sa_conn_info.Number != @@spid and
CONNECTION_PROPERTY( 'LoginTime', Number ) <
dateadd(minute,-3,getdate()) and
userid='<<ZENWORKSUSER>>';
```

Where

ZENWORKSUSER is the ZENworks database user name.

While using an Oracle database, during the upgrade or database creation, the TNS error message is displayed

Source: ZENworks; Upgrade

Explanation: While using an Oracle database during the upgrade or database creation, you get an error message: **TNS:listener could not find available handler with matching protocol stack.**

Action: Increase the maximum load for dedicated connections, which is determined by the PROCESSES parameter. If the issue persists, contact Micro Focus Customer Support.

While using an MS-SQL database, during the upgrade or database creation, there are connection issues

Source: ZENworks; Upgrade

Explanation: While using an MS-SQL database, during the upgrade or database creation, there are connection issues with the following error message:

```
org.hibernate.exception.JDBCConnectionException: Cannot
open connection
Caused by: java.sql.SQLException: I/O Error: Connection
reset
Caused by: java.net.SocketException: Connection reset
```

Action: Run select * from sys.configurations where name='user connections'

By default, the maximum connection is 32,767. You can adjust it to *Number of Primary Servers * 200*.

For more information on how to configure the user connections, see <http://technet.microsoft.com/en-us/library/ms187030.aspx>.

Check whether the MS-SQL server has high CPU utilization and database server load. Contact Micro Focus Customer Support for further assistance.

Incorrect values displayed for the inventory records to be pruned

Source: ZENworks; Upgrade

Explanation: When you opt for pruning in the Upgrade wizard, the number of records specified for deletion is displayed in the Pre-prune summary page.

For example, if you have marked 8,000,000 records out of the total 10,000,000 records for pruning, then 8,000,000 of 10,000,000 is displayed in the **number of records specified for deletion** field.

After successful pruning, when you relaunch the Upgrade wizard for pruning, the Database Pruning page displays an incorrect value in the **Total number of records found to be deleted** field.

For example, if 8,000,000 inventory records have been deleted out of 10,000,000 inventory records, then the ideal value to be displayed in the **Total number of records found to be deleted** field is 200,000.

Currently, an incorrect value is displayed. As a result, there is a mismatch in the values displayed for deleted Inventory records and for Inventory records that are yet to be deleted.

Action: There is no workaround.

An error occurs when you delete a folder with a long name

Source: ZENworks; Upgrade

Explanation: In a ZENworks zone that uses an SQL Server database, when you try to delete a ZENworks object (for example, device or folder) that has a name which exceeds 900 bytes, you will receive the following error:

```
com.novell.zenworks.datamodel.exceptions.InternalDataModelException: org.hibernate.exception.GenericJDBCException: Operation failed. The index entry of length 912 bytes for the index 'idx_zZENObject_Name' exceeds the maximum length of 900 bytes.
```

Action: Ensure that the length of ZENworks Object names in the zone does not exceed 900 bytes. For more information, see <https://technet.microsoft.com/en-us/library/ms191241%28v=sql.105%29.aspx>.

2 Appliance Migration

To migrate a ZENworks 2017 Appliance to ZENworks 2020 , you need to copy the ZENworks data and appliance network settings from the ZENworks 2017 Appliance, deploy the ZENworks 2020 Appliance, and then transfer the ZENworks 2017 data to the ZENworks 2020 Appliance.

In a multi-appliance ZENworks system, the order of migration is important only if you are using the embedded PostgreSQL database. In this case, you need to migrate the appliance with the database first, followed by any other appliances. If you are using an external database, you can migrate appliances in any order.

IMPORTANT: If you are on a ZENworks 2017 Update x version and want to migrate to ZENworks 2020, before starting the migration, you need to ensure that the ZENworks 2020 Products or Suite licenses available in the Micro Focus Customer Center match the ZENworks 2017 Products or Suite licenses that are “Active” in the ZENworks 2017 zone. For more details, refer to TID [7023323](#) in the Micro Focus Knowledgebase.

To change the license state of a product, perform any of the following:

For Suite License: If you have Suite License Key, perform the following:

- 1 In ZCC, click **Configuration**.
- 2 In the **Licenses** panel, click **ZENwork Suite** if you have a suite license key.
- 3 Specify the license key in the Suite License Key, and click **Apply**.

OR

For a Product License Click a product to provide a product license key or to turn on the product evaluation before starting the Appliance migration.

For more information, see [ZENworks Product Licensing Reference](#).

The following sections provide information on how to migrate ZENworks 2017 Virtual Appliance to ZENworks 2020, Virtual Appliance:

- ♦ [Section 2.1, “Preparing the ZENworks 2017 Appliance for Migration,” on page 34](#)
- ♦ [Section 2.2, “Deploying and Configuring the ZENworks 2020 Appliance,” on page 34](#)
- ♦ [Section 2.3, “Migrating ZENworks 2017 Data to ZENworks 2020 Appliance,” on page 36](#)
- ♦ [Section 2.4, “Post migration,” on page 37](#)
- ♦ [Section 2.5, “Replacing Primary Servers,” on page 37](#)
- ♦ [Section 2.6, “Moving a Primary Server to an Appliance,” on page 37](#)
- ♦ [Section 2.7, “Running the Cleanup Utility,” on page 37](#)

2.1 Preparing the ZENworks 2017 Appliance for Migration

Complete the following steps to prepare the appliance for migration:

- 1 Verify the health of the database by running ZDC. Depending on your ZENworks version, download the ZDC from the Micro Focus Download site. For more information, see [Downloading and Extracting ZDC](#) in the [ZENworks Command Line Utilities Reference](#).
- 2 Ensure that at least 40 GB of free space is available in the `/vastorage` disk for ZENworks 2017 Appliance.
- 3 If you are using Sybase database, then migrate the data to PostgreSQL before migrating to ZENworks 2020. For more information, see the [Database Migration from Sybase to PostgreSQL](#) document.
- 4 Run the `novell-zenworks-prereq.zip` to prepare and copy the zone properties for the appliance migration.
 - 4a Download `novell-zenworks-prereq.zip` from ZENworks 2020 Download site.
 - 4b Extract the `novell-zenworks-prereq.zip`
 - 4c Copy the `novell-zenworks-prereq.sh` file to a temporary location on each ZENworks 2017 Appliance Primary Server.
 - 4d Log into the ZENworks 2017 Appliance Primary Server with root user.
 - 4e Add the execute permissions by running the `chmod novell-zenworks-prereq.sh` command.
 - 4f Run the `sh novell-zenworks-prereq.sh` command.
- 5 Power off the ZENworks 2017 Appliance.
- 6 (Optional) If the ZENworks 2017 Appliance was configured with an additional or external disk for content repository, then ensure that you mount the disk on the ZENworks 2020 Appliance. For example, `/dev/sdb1` mounted to `/var/opt/novell/zenworks`

NOTE: If there is a snapshot of ZENworks 2017 or any earlier versions on the virtual disk, then ensure that you remove the snapshot so that the virtual disk (`vastorage`) includes only a standalone file while copying the disk to the ZENworks 2020 Appliance.

- 7 Copy the ZENworks 2017 Appliance virtual disk (`vastorage`).

It is recommended to copy the ZENworks 2017 Appliance virtual disk and attach it to the ZENworks 2020 Appliance. Ensure that you maintain the same folder structure in the ZENworks 2020 appliance.

NOTE: If the `novell-zenworks-prereq.sh` is not executed properly, or volume is not copied to the ZENworks 2020 Appliance, then an error message will be displayed.

2.2 Deploying and Configuring the ZENworks 2020 Appliance

You need to deploy the ZENworks 2020 Appliance to migrate the existing appliance and then configure the ZENworks 2020 Appliance with the ZENworks 2017 data and network settings.

IMPORTANT: The ZENworks 2020 Appliance should be hosted on the same network as the ZENworks 2017 appliance.

1 To deploy the appliance,

- 1a** Download the ZENworks 2020 Appliance file from the Software Licensing and Downloads portal (SLD) or download the multi-part ZENworks Appliance ZIP files and create the open virtualization archive (OVA) file.

Based on your hypervisor, download the relevant file:

- ♦ **VMware ESXi:** Download the `.ova` file.
- ♦ **Microsoft Hyper-V:** Download the `.vhd` or `.vhdx` file.
- ♦ **Xen Server on SLES 12:** Download the `xen.tar.gz` file.
- ♦ **Citrix Hypervisor (formerly XenServer):** Download the `xva.tar.gz` file.

NOTE: On a Windows device, use the native support for `tar` to extract the `xva.tar.gz` file. To extract the file, on the command prompt, specify the following:

```
tar -xjvf <xva.tar.gz file>
```

- 1b** Deploy the ZENworks Appliance to the hypervisor by downloading and extracting the file (`.ova`, `.vhd`, `.vhdx`, `.xva` or `.raw`).

Do NOT power on the appliance at this time.

- 2** Attach the migration hard disk (`/vastorage`) that was copied in [Step 7 of “Preparing the ZENworks 2017 Appliance for Migration” on page 34](#), to the ZENworks 2020 Appliance.
- 3** Power on the ZENworks 2020 Appliance and wait till credential screen appears.
- 4** Specify the `root` and `zenadmin` passwords for the ZENworks 2020 Appliance.

The Appliance Configuration utility automatically populates the identity and network details for the ZENworks 2020 Appliance from the ZENworks 2017 data and continues booting the appliance. When the process is complete, on the Appliance console the URL is displayed.

- 5** If the ZENworks 2017 Appliance was using an external content repository, then attach the corresponding disk to ZENworks 2020 Appliance.

To configure the external disk, perform the following:

- 5a** After restarting the ZENworks 2020 Appliance, log into the appliance as `root` and stop the ZENworks services.

If the appliance hosts the Embedded PostgreSQL, then PostgreSQL service (`zenpostgresql`) should be running. Run the following command to check the status of the PostgreSQL service:

```
systemctl status zenpostgresql
```

- 5b** Mount the disk partition on the ZENworks 2020 Appliance in the original structure.

- 5c** After the hard disk is mounted, ensure that `/etc/fstab` is updated with mounted partition correctly. You may use YaST partitioner to mount the disk partition to correct ZENworks directory.

For information about mounting a content repository, see [Creating a Permanent Mount](#) in the [ZENworks Primary Server and Satellite Reference](#).

5d Ensure that new mounted directory has required permissions. To modify the permissions, run the `permissions.sh` script.

The `permissions.sh` is available in the `/opt/novell/zenworks/bin/` location.

6 Take note of the URLs displayed in the console, then continue with the next task, [Migrating ZENworks 2017 Data to ZENworks 2020 Appliance](#).

2.3 Migrating ZENworks 2017 Data to ZENworks 2020 Appliance

After you have deployed and configured the ZENworks 2020 Appliance, you are ready to migrate ZENworks 2017 data to the appliance.

NOTE: After upgrading the zone, ZooKeeper is enabled on the Primary Server that is first updated. For more information see, [Post migration](#).

1 In a supported browser, launch the URL that is displayed in the Appliance console.

For example, `https://<FQDN>:9443`

2 Log in to ZENworks Appliance with the `root` or `zenadmin` credentials as configured in [Step 4 on page 35](#).

3 Verify that all of the migration requirements are met, select the **I have verified that all necessary steps have been completed** check box, then click **Next** to display the ZENworks Management Zone credential screen.

If all the migration requirements are not met, click **Cancel**, complete the requirements, then log into the ZENworks Appliance console again to complete the migration.

IMPORTANT

If the appliance is a second Primary Server and the database is Embedded PostgreSQL, then you must ensure that the PostgreSQL service (`zenpostgresql`) on the first Primary Server is started.

4 Specify the ZENworks administrator credentials to access the ZENworks Management Zone.

NOTE: While migrating the Appliance, the administrator user name might be case sensitive. For more information, see the [ZENworks 2020 Readme](#).

5 In the **ZENworks Licensing** page, enter the ZENworks 2020 product license, and then click **Finish**.

The ZENworks migration begins and it might take several minutes. The migration process will continue in the background even if you close the browser or if the session times out.

6 When the ZENworks migration is finished, click **Close** to display the ZENworks Appliance configuration summary screen.

7 Click **Open ZENworks Control Center** to see your migrated data and to continue managing your ZENworks system.

2.4 Post migration

- ♦ Run ZDC to verify the migrated ZENworks 2020 Appliance System.

For more information, see [ZENworks Diagnostic Center](#) in [ZENworks Command Line Utilities Reference](#),

- ♦ Ensure that all ZENworks services are running: `novell-zenworks-configure -c SystemStatus`
- ♦ Ensure that the ZooKeeper service is up and running at all times to enable proper functioning of various ZENworks components. To verify the status of the ZooKeeper service, see the Diagnostics page in ZCC. For more information on the ZooKeeper component, see [ZENworks Server](#) in the [ZENworks Primary Server and Satellite Reference](#).

You also need to ensure that the firewall allows client connections from other Primary Servers to the ZooKeeper services on port 6789. If the Primary Servers in your zone are unable to access the ZooKeeper service, then to open the ports, you can run the following Configure action on the server in which ZooKeeper is enabled.

```
novell-zenworks-configure -c ClusterFirewallConfigureAction -  
Doperation=add -Dservice=zookeeper
```

However, if the Primary Server that is within the DMZ is unable to access the ZooKeeper service within the corporate network, then you need to manually open the port 6789 in the corporate firewall.

For more information on the ZooKeeper ports, see [ZENworks 2020 TCP and UDP Ports](#).

2.5 Replacing Primary Servers

The first Primary Server in your one can be replaced with the second Primary Server, or you can replace an existing Primary Server with a new Primary Server. For more information on replacing Primary Servers, see the [Replacing Primary Servers](#) in the [ZENworks Disaster Recovery Reference](#).

2.6 Moving a Primary Server to an Appliance

An existing Windows or Linux Primary Server can be moved to an Appliance server. For more information, see [Moving from a Windows or Linux Primary Server to Appliance](#) in the [ZENworks Primary Server and Satellite Reference](#).

2.7 Running the Cleanup Utility

After appliance migration, the ZENworks server configuration will be copied from the old Novell file path to the new Micro Focus file path. However, the ZENworks server binaries and old configuration in the old file path is retained during the upgrade process. After verifying whether the upgraded version of the ZENworks Server is working as expected, you can run the cleanup utility provided with the build, to remove the retained server data. For more information, see [Running Cleanup Utility on a Linux or Appliance Server](#).

3 Updating Satellites and Managed Devices to ZENworks 2020

To update the managed devices and Satellite Servers to ZENworks 2020 , review the following sections:

- ♦ [Section 3.1, “Prerequisites for Updating Satellite Servers or Managed Devices,” on page 39](#)
- ♦ [Section 3.2, “Supporting ZENworks 2017 Device Upgrades,” on page 40](#)
- ♦ [Section 3.3, “Supporting ZENworks 11 SP3 and 11 SP4 Device Upgrades,” on page 40](#)
- ♦ [Section 3.4, “Updating Satellite Servers and Managed Devices,” on page 40](#)

3.1 Prerequisites for Updating Satellite Servers or Managed Devices

Before updating a Satellite Server or managed device from a supported ZENworks version to ZENworks 2020 , you must complete the following tasks:

NOTE: For information about the supported versions, see the [System Requirements](#) guide.

- ♦ Ensure that the device meets the minimum system requirements for ZENworks.
For more information on managed device requirements, see [System Requirements](#).
- ♦ Ensure that the Microsoft .NET 4.5, or later framework and its latest updates are installed and running on the device.
- ♦ Ensure that the Windows Installer 4.5 or later version is installed.
- ♦ Ensure that all the Primary Servers in the zone have been upgraded to ZENworks 2020 Update 1.
- ♦ If you choose to deploy the System Update in stages, ensure that the stage that you create contains at least one stage member (an individual device and a group that contain devices).
- ♦ Ensure that the Update for ZENworks 2020 Update 1 displays in the Available System Updates list in ZCC. If it is not available, then run the following command to import the update:

```
zman sui <Path of the system update zip file>
```
- ♦ Agents with Windows XP would have to remain on ZENworks 11, as Windows XP is not supported from ZENworks 2017 onwards.

3.2 Supporting ZENworks 2017 Device Upgrades

If you have ZENworks 2017 managed devices or Satellite Servers in your network and want to register the devices to a new ZENworks 2020 Management Zone so that they can be automatically upgraded to ZENworks 2020, you must import the ZENworks 2020 System Update into the zone from the ZENworks 2020 installation media.

From ZENworks 2020 onwards, promoting a 32-bit device as a Satellite Server is not supported.

3.3 Supporting ZENworks 11 SP3 and 11 SP4 Device Upgrades

If you have ZENworks 11 SP3 or 11 SP4 managed devices in your network and want to register the devices to a new ZENworks 2020 Management Zone so that they can be automatically upgraded to ZENworks 2020, you must import the ZENworks 2020 System Update into the zone from the ZENworks 2020 installation media.

3.4 Updating Satellite Servers and Managed Devices

To update Satellite Servers or managed devices, use the System Update feature. For detailed information, see the [ZENworks System Updates Reference](#).

If you encounter any issues while deploying the ZENworks update on the managed devices, see the following log files:

Windows: `installation_path\novell\zenworks\logs\system-update\5020000000fc50000000002019100412\system-update.log`

Linux: `/var/opt/novell/log/zenworks/system-update/5020000000fc50000000002019100412/system-update.log`

In the upgrade log file path, 5020000000fc50000000002019100412 indicates the System Update GUID.

NOTE

- ♦ After updating from an older version of ZENworks on which ZENworks Patch Management is installed, DAU might fail on newly added devices until the next Patch Management subscription is updated.

After the DAU bundle is updated by the subscription and the version is incremented by the same, this issue will be resolved. This issue does not impact the existing ZENworks agents as they already have the `analyze.exe` module installed on them. Therefore, they continue to execute the old DAU and receive an updated patch agent when the subscription service updates the DAU bundle.

- ♦ If you demote a Satellite Server before performing an update, you need to ensure that the demotion is successful before you proceed with the update.
-

4 Replacing a ZENworks Primary Server with Another Server (Windows, Linux and Appliance)

To replace a ZENworks Primary Server with another server (Windows, Linux and Appliance), depending on your first Primary Server platform, select any of the following:

If you want to retain the server identity:

- ♦ Replacing a Windows server with another Windows server by retaining the original identity.
- ♦ Replacing a Linux server or Appliance with another Linux server or Appliance by retaining the original identity.

In this case, you can replace the same version of the operating system. For example:

- ♦ You can replace Appliances with other Appliances that has the same SLES versions and same ZENworks versions.

For example:

ZENworks 2020 Appliance can be replaced with other ZENworks 2020 appliances.

ZENworks 2020 Update 1 Appliance can be replaced with other ZENworks 2020 Update 1 appliances.

However, replacing ZENworks 2017 Appliances with ZENworks 2020 appliances with the above approach is not supported. Ensure that you follow the [Chapter 2, “Appliance Migration,” on page 33](#).

- ♦ You cannot replace a server with one major version with a server with another major version. However, you can replace servers with the same major version, but different minor versions.

For example: A SLES 12 server cannot be replaced with a SLES 15 server, but SLES 12 SP 1 server can be replaced with SLES 12 SP 4.

Perform the steps mentioned in the following document:

[Replacing an Existing Primary Server with a New Primary Server](#) in the [ZENworks Disaster Recovery Reference](#).

If you do not want to retain the server Identity:

- ♦ Replacing a Windows server with another Windows server without retaining the original identity.
- ♦ Replacing a Windows server with a Linux server or Appliance without retaining the original identity.
- ♦ Replacing a Linux server or Appliance with another Linux server or Appliance without retaining the original identity.

Replacing a Linux server or Appliance with a Windows server without retaining identity.

Perform the steps mentioned in the following document:

[Replacing the First Primary Server with the Second Primary Server in the ZENworks Disaster Recovery Reference.](#)

Unsupported scenarios:

- ♦ Replacing a Windows server with a Linux server or Appliance by retaining the original identity.
- ♦ Replacing a Linux server or Appliance with a Windows server by retaining the original identity.



Documentation Updates

This section contains information on documentation content changes that were made in this Upgrade for ZENworks Configuration Management. The information can help you to keep current on updates to the documentation.

The documentation for this product is provided on the Web in two formats: HTML and PDF. The HTML and PDF documentation are both kept up-to-date with the changes listed in this section.

If you need to know whether a copy of the PDF documentation that you are using is the most recent, the PDF document includes a publication date on the title page.

The documentation was updated on the following date:

