



Upgrading Cisco DCNM

This chapter provides information about upgrading Cisco DCNM, and contains the following section:

- [Upgrading Cisco DCNM, on page 1](#)
- [Retaining the CA Signed Certificate, on page 2](#)
- [Performance Manager Data Management before Upgrading to Release 11.4\(1\), on page 3](#)
- [Upgrading to Cisco SAN on OVA/ISO, on page 11](#)

Upgrading Cisco DCNM

Before Cisco DCNM Release 11.0(1), DCNM OVA, and ISO supported SAN functionality. From Cisco DCNM Release 11.3(1), you can install Cisco DCNM for SAN Deployment on both OVA and ISO virtual appliances.

The following table summarizes the type of upgrade that you must follow to upgrade to Release 11.4(1).

Table 1: Type of Upgrade for Cisco DCNM SAN deployments

Current Release Number	Upgrade type to upgrade to Release 11.4(1)
11.3(1)	To Windows—Inline Upgrade To Linux—Inline Upgrade To OVA/ISO—Inline Upgrade
11.2(1)	To Windows—Inline Upgrade To Linux—Inline Upgrade To OVA/ISO— <ol style="list-style-type: none"> 1. Fresh 11.3(1) SAN Only Installation. 2. Migrate Performance Manager Collections to 11.3(1) <div style="margin-left: 20px;"> <p>Note The old Performance Manager data will replace any existing Performance Manager data on 11.3(1).</p> </div> 3. Inline upgrade to 11.4(1)

Current Release Number	Upgrade type to upgrade to Release 11.4(1)
11.1(1)	To Windows—Inline Upgrade To Linux—Inline Upgrade To OVA\ISO— <ol style="list-style-type: none"> 1. Fresh 11.3(1) SAN Only Installation. 2. Migrate Performance Manager Collections to 11.3(1). <p>Note The old Performance Manager data will replace any existing Performance Manager data on 11.3(1).</p> 3. Inline upgrade to 11.4(1)
10.4(2) OVA 10.4(1) OVA	To 11.3(1) OVA\ISO— <ol style="list-style-type: none"> 1. Fresh 11.3(1) SAN Only Installation. 2. Migrate Performance Manager Collections to 11.3(1). <p>Note The old Performance Manager data will replace any existing Performance Manager data on 11.3(1).</p> 3. Inline upgrade to 11.4(1)

Retaining the CA Signed Certificate

Perform this procedure if you need to retain the CA signed SSL Certificate after upgrade.

When you configure a 3-node federation setup and apply external CA certificate, do the following:

1. Stop DCNM servers in Federation.
 - For Windows – Navigate to C:\Program Files\Cisco Systems\dcm\dcnm\bin. Double-click on the StopLANSANServer.bat to stop the services.
 - For Linux – Logon to /root. Execute /root/Stop_DCNM_Servers command to stop services.
2. Generate CA certificates for Primary Servers, and apply the same CA certificate in the three secondary servers.
3. Start the Primary server first, then the secondary, third server thereafter, on Federation.

Note that if you change the keystore password or alias, you need to update it in the **standalone-san.xml** document located at:

```
<DCNM_install_root>\dcm\wildfly-14.0.1.Final\standalone\configuration\standalone-san.xml
```

Update the password in the **keystore** tag and alias:

```
<keystore key-password>="<<storepass-pwd>> key-alias="updated-key-alias"
keystore-password="updated-password"
path="<DCNM_install_root>\dcm\wildfly-14.0.1.Final\standalone\configuration\fmserver.jks">
```



Note <<storepass-pwd>> is the password string generated while installing DCNM Server. This string is located in the <install_dir>/dcm/fm/conf/serverstore.properties directory. Fetch the **dcnm.fmserver.token** value for the **storepass-pwd**.

Procedure

-
- Step 1** Backup the signed certificate from the location:
- For Windows: <DCNM_install_root>\dcm\wildfly-14.0.1.Final\standalone\configuration\fmserver.jks
 - For Linux: <DCNM_install_root>/dcm/wildfly-14.0.1.Final/standalone/configuration/fmserver.jks
- Step 2** Upgrade to Cisco DCNM Release 11.4(1).
- Step 3** After upgrade, copy the certificate to the same location on the upgraded version of the Cisco DCNM.
- Note** You must load the certificates to the same location as mentioned in [Step 1, on page 3](#).
- Step 4** Restart the DCNM Services.
-

Performance Manager Data Management before Upgrading to Release 11.4(1)

While you upgrade Cisco DCNM to Release 11.4(1), all the necessary software components are upgraded when you upgrade the Cisco DCNM. However, the Elasticsearch versions in the previous releases is not compatible with Elasticsearch version in Release 11.4(1), and therefore, the upgrade will not succeed without additional actions.

You can choose to discard the old performance manager (PM) data and continue to upgrade to DCNM Release 11.4(1). For instructions about how to drop performance manager data, see *Dropping Performance Manager Data*. If you choose to retain the old PM data while you upgrade to Release 11.4(1), we recommend that you contact Cisco TAC for further assistance.

Dropping Performance Manager Data in Cisco DCNM SAN Windows Deployment

This section provides instructions about how to drop the performance manager data in from DCNM Release 11.3(1) or earlier, as a pre-requisite to upgrade to DCNM 11.4(1).



Note If you choose to conserve the Performance Manager data when you upgrade to Release 11.4(1), we recommend that you contact Cisco TAC for further assistance.

To drop the Performance Manager (PM) data, perform the following steps:

Before you begin

- Ensure that the DCNM appliance is operational. (for standalone upgrade)
- If you have a Federation setup, ensure that all the nodes in the DCNM Federation setup are operational. (for Federation setup)

Procedure

Step 1 On the Cisco DCNM Web UI, choose **Administration > Performance Setup > SAN Collections**.

Uncheck all the check boxes and click **Apply** to disable all switches and collections.

	Name	ISL/NPV Links	Hosts	Storage	FC Flows	FC Ethernet
1	Fabric_C18-ed-9706	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	Fabric_SiteA-Core	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3	Fabric_sw-9710-47	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4	Fabric_sw-min-1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Step 2 Choose **Administration > Performance Setup > LAN Collections**.

Uncheck all the check boxes and click **Apply** to disable all switches and collections.

Administration / Performance Setup / LAN Collections

For all selected licensed LAN Switches collect: Trunks Access Errors & Discards Temperature Sensor **Apply**

- Default_LAN
- sw172-22-46-221
- sw172-22-46-233

Step 3 Choose **Administration > DCNM Server > Server Status**.

Step 4 Against the **Performance Collector** service, click the stop icon in the Actions column to stop the data collection.

DCNM Server	Actions	Service Name	Status
localhost		Database Server	Running
10.106.228.37		Search Indexer	Last updated: 2020-12-14 10:30:00
10.106.228.37		Performance Collector	Stopped
10.106.228.37	Stop Service	Agent	Running
10.106.228.37	Clean up PM DB stale entry(s)	Elasticsearch	Status:yellow, Docs: pmdb_*=0
0.0.0.0:123		NTPD Server	Running
0.0.0.0:67		DHCP Server	Running
0.0.0.0:2162		SNMP Traps	Running
0.0.0.0:514		Syslog Server	Running

Step 5 Click the delete icon to clean the Performance Manager database.

This action deletes the stale entries in the performance manager database.

Step 6 Click on the reinitialize icon to reindex the Elasticsearch database schema.

This operation cleans the performance manager data in the Elasticsearch database and restarts the performance manager. It may take a few minutes to complete.

Step 7 Click **Continue**.

The status of the Performance Collector service shows **Stopped**.

Step 8 Ensure that you've deleted all the PMDB entries using the following command:

Note You need 'curl' utility to run the commands.

- For upgrading from Release 11.1(1)

```
curl -XDELETE 'https://localhost:9200/pmdb'
```

- For upgrading from Release 11.2(1)

```
curl -XDELETE 'https://localhost:9200/pmdb'
```

- For upgrading from Release 11.3(1)

```
curl -XDELETE 'http://localhost:9200/pmdb'
```

Step 9 Proceed to upgrade the DCNM to Release 11.4(1).

Dropping Performance Manager Data in Cisco DCNM SAN Linux Deployment

This section provides instructions about how to drop the performance manager data in from DCNM Release 11.3(1) or earlier, as a pre-requisite to upgrade to DCNM 11.4(1).



Note If you choose to conserve the Performance Manager data when you upgrade to Release 11.4(1), we recommend that you contact Cisco TAC for further assistance.

To drop the Performance Manager (PM) data, perform the following steps:

Before you begin

- Ensure that the DCNM appliance is operational. (for standalone upgrade)
- If you have a Federation setup, ensure that all the nodes in the DCNM Federation setup are operational. (for Federation setup)

Procedure

Step 1 On the Cisco DCNM Web UI, choose **Administration > Performance Setup > SAN Collections**.

Uncheck all the check boxes and click **Apply** to disable all switches and collections.

	Name	ISL/NPV Links	Hosts	Storage	FC Flows	FC Ethernet
1	Fabric_C18-ed-9706	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	Fabric_SiteA-Core	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3	Fabric_sw-9710-47	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4	Fabric_sw-min-1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Step 2 Choose **Administration > Performance Setup > LAN Collections**.

Uncheck all the check boxes and click **Apply** to disable all switches and collections.

Administration / Performance Setup / LAN Collections

For all selected licensed LAN Switches collect: Trunks Access Errors & Discards Temperature Sensor

- Default_LAN
- sw172-22-46-221
- sw172-22-46-233

Step 3 Choose **Administration > DCNM Server > Server Status**.

Step 4 Against the **Performance Collector** service, click the stop icon in the Actions column to stop the data collection.

DCNM Server	Actions	Service Name	Status
localhost		Database Server	Running
10.106.228.37		Search Indexer	Last updated: 2020-12-14 10:30:00
10.106.228.37		Performance Collector	Stopped
10.106.228.37	Stop Service	Agent	Running
10.106.228.37	Clean up PM DB stale entry(s)	Elasticsearch	Status:yellow, Docs: pmdb_*=0
0.0.0.0:123		NTPD Server	Running
0.0.0.0:67		DHCP Server	Running
0.0.0.0:2162		SNMP Traps	Running
0.0.0.0:514		Syslog Server	Running

Step 5 Click the delete icon to clean the Performance Manager database.

This action deletes the stale entries in the performance manager database.

Step 6 Click on the reinitialize icon to reindex the Elasticsearch database schema.

This operation cleans the performance manager data in the Elasticsearch database and restarts the performance manager. It may take a few minutes to complete.

Step 7 Click **Continue**.

The status of the Performance Collector service shows **Stopped**.

Step 8 Ensure that you've deleted all the PMDB entries using the following command:

Note You need 'curl' utility to run the commands.

- For upgrading from Release 11.1(1)

```
curl -XDELETE 'https://localhost:9200/pmdb'
```

- For upgrading from Release 11.2(1)

```
curl -XDELETE 'https://localhost:9200/pmdb'
```

- For upgrading from Release 11.3(1)

```
curl -XDELETE 'http://localhost:9200/pmdb'
```

Step 9 Proceed to upgrade the DCNM to Release 11.4(1).

Dropping Performance Manager Data

This section provides instructions about how to drop the performance manager data in from DCNM Release 11.3(1) or earlier, as a pre-requisite to upgrade to DCNM 11.4(1).



Note If you choose to conserve the Performance Manager data when you upgrade to Release 11.4(1), we recommend that you contact Cisco TAC for further assistance.

To drop the Performance Manager (PM) data, perform the following steps:

Before you begin

- Ensure that the DCNM appliance is operational. (for standalone upgrade)
- If you have a Federation setup, ensure that all the nodes in the DCNM Federation setup are operational. (for Federation setup)

Procedure

Step 1 Launch the SSH session and run the following command to view the PMDB indices.

Identify the PMDB indices in the performance manager database.

For example:

```
dcnm-root-11-3# curl http://127.0.0.1:33500/_cat/indices?pretty | grep pmdb

  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left     Speed
100 2448    100 2448    0     0   4523      0  --:--:--  --:--:--  --:--:--  4524
green open pmdb_cpumemdata          rb-CJf-NR0my8M3mO-7QkA 5 1  7286  0
1.4mb 760.2kb
green open pmdb_ethintfratedata    P18gMKdPTkCODv0TomYAdw 5 1  9283  0
2.4mb 1.2mb
```

You will see indices prefixed with "pmdb_"

Step 2 On the Cisco DCNM Web UI, choose **Administration > Performance Setup > LAN Collections**.

Uncheck all the check boxes and click **Apply** to disable all switches and collections.

[Administration / Performance Setup / LAN Collections](#)For all selected licensed LAN Switches collect: Trunks Access Errors & Discards Temperature Sensor

Performance Default Polling Interval 5 Mins

- Fab-1-externalfab
 - 9k_aragon
 - C93108TC-FX_116
 - C93108TC-FX_41
 - n3k_72
 - N77-TGEN-195
 - N9k_27
 - N9K-C9232C_28
 - N9K-C9364C_49
 - N9K-C9504_44
 - sugarbowl_56
 - suharbowl_57
- Fab-2-ClassicLAN
 - N3k_Utopia_70
 - switch
- Fab3-otherswitches
 - IND13-P1-A1
 - N6K-96Q-63
- test
- Default_LAN

Step 3 Choose **Administration > DCNM Server > Server Status**.

Step 4 Against the **Performance Collector** service, click the stop icon in the Actions column to stop the data collection.

Administration / DCNM Server / Server Status

Status

DCNM Server	Actions	Service Name	Status
localhost		Database Server	Running
10.106.228.37		dexer	Last updated: 2020-12-13 16:30:00
10.106.228.37		Performance Collector	Stopped
10.106.228.37		Agent	Running
10.106.228.37		Elasticsearch	Status:yellow, Docs: pmdb_*=0
0.0.0.0:123		NTPD Server	Running
0.0.0.0:67		DHCP Server	Running
0.0.0.0:2162		SNMP Traps	Running
0.0.0.0:514		Syslog Server	Running

Step 5 Click the delete icon to clean the Performance Manager database.

This action deletes the stale entries in the performance manager database.

Step 6 Click on the reinitialize icon to reindex the Elasticsearch database schema.

This operation cleans the performance manager data in the Elasticsearch database and restarts the performance manager. It may take a few minutes to complete.

Step 7 Click **Continue**.

The status of the Performance Collector service shows **Stopped**.

Step 8 Ensure that you've deleted all the PMDB entries using the following command:

- For upgrading from Release 11.1(1)


```
curl https://127.0.0.1:33500/_cat/indices?pretty | grep pmdb
```
- For upgrading from Release 11.2(1)


```
curl https://127.0.0.1:33500/_cat/indices?pretty | grep pmdb
```
- For upgrading from Release 11.3(1)


```
curl http://127.0.0.1:33500/_cat/indices?pretty | grep pmdb
```

For example:

```
dcnm-root-11-3# curl http://127.0.0.1:33500/_cat/indices?pretty | grep pmdb

% Total    % Received % Xferd  Average   Speed  Time     Time     Time  Current
           0         0     0         0      0      0         0     0         0         0
100  2244  100  2244    0     0   3638      0  --:--:--  --:--:--  --:--:--  3636
```

Step 9 Proceed to upgrade the DCNM to Release 11.4(1).

Upgrading to Cisco SAN on OVA/ISO

From Release 11.3(1), you can install Cisco DCNM SAN on OVA/ISO. However, you cannot migrate the older release DCNM to Release 11.3(1). Instead, perform a fresh install of Cisco DCNM for SAN on OVA or ISO, and import the Performance Manager data from the older version.



Note Before you start to upgrade, close all instances of DCNM SAN client, both SAN Client and Device Manager running on the server.

To upgrade from Release 11.3(1) to Release 11.4(1), use the Inline Upgrade procedure.

For instructions, see *Inline Upgrade for DCNM Virtual Appliance in Standalone Mode* section.

PM Data Migration

There is no upgrade path to DCNM SAN for OVA/ISO. However, fresh installation of Cisco DCNM 11.3(1) allows you to migrate the Performance Manager data from the following releases:

Use the following upgrade paths to upgrade to Cisco DCNM Release 11.4(1).

- 11.3(1) to 11.4(1) using Inline Upgrade
- 11.2(1) SAN to 11.3(1) SAN OVA/ISO
- 11.1(1) SAN to 11.3(1) SAN OVA/ISO
- 10.4(2) SAN OVA to 11.3(1) SAN OVA/ISO

If you choose to conserve the Performance Manager data when you upgrade to Release 11.4(1), we recommend that you contact Cisco TAC for further assistance.



Note Ensure that you stop Performance Manager on Cisco DCNM 11.3(1) before migrating the performance manager data. You must start performance manager data collection after the upgrade completes.



Note The newly collected data in the Cisco DCNM 11.3(1) will be replaced with migrated Performance Manager collections data.

SAN Insights data from older releases

SAN Insights data from older releases is too large and it is refreshed every two weeks. We recommend that you do not migrate the SAN Insight data to the fresh DCNM 11.3(1) OVA/ISO installation.

If you are using Performance Monitoring on the fabric(s), migrate the Performance Manager data using the procedure in this section. However, this procedure copies everything in the Elasticsearch database. Therefore, before using this procedure, remove the SAN Insights data for each of the switch that is streaming data to DCNM, using the following command:

```
<DCNM Install Location>\dcm\fm\bin\FMGeneric.bat com.cisco.dcbu.analytics.CleanupSanInsightES
<switchname_in_lowercase> <switch_ip_address>
```

```
C:\Program Files\CiscoDCNM\dcm\fm\bin\FMGeneric.bat
com.cisco.dcbu.analytics.CleanupSanInsightES mds9396t-174145 XXX.XX.XXX.XXX
```

The following sections provide instructions to migrate PM data to the newly installed Cisco DCNM 11.3(1) appliance.

Inline Upgrade for DCNM Virtual Appliance in Standalone Mode

Inline upgrade allows you to upgrade DCNM by imposing the new DCNM version to the existing DCNM. After the inline upgrade, ensure that you clear your browser cache before launching the DCNM application. Perform the following task to upgrade the DCNM virtual appliance in standalone mode.

Procedure

Step 1 Log on to the Cisco DCNM appliance console.

Caution If the system requirements do not meet the minimum resource requirements, every time you log on to DCNM via the console or SSH, **SYSTEM RESOURCE ERROR** is displayed. Modify the system requirements logon to DCNM via Console/SSH.

- For OVA Installation: On the OVF template deployed for the host, right click and select **Settings > Launch Web Console**.
- For ISO Installation: Select the KVM console or UCS (Bare Metal) console.

Caution Do not perform an Inline Upgrade from an SSH Session. The session may timeout and result in an incomplete upgrade.

OR

Run the following command to create a screen session.

```
dcnm# screen
```

This creates a session which allows you to execute the commands. The commands continue to run even when the window is not visible or if you get disconnected.

Step 2 Take a backup of the application data using the **appmgr backup** command.

Note Do not perform this step if you have configured SAN Insights feature.

```
dcnm# appmgr backup
```

Copy the backup file to a safe location outside the DCNM server.

Step 3 Log on to the `/root/` directory, by using the **su** command.

```
dcnm# su
Enter password: <<enter-password>>
[root@dcnm] #
```

Note Ensure that you have access to the `/root/` folder before you mount the ISO to the directory.

Step 4 Unzip the `dcnm-va.11.4.1.iso.zip` file and upload the DCNM 11.4(1) ISO file to the `/root/` folder in the DCNM setup that you want to upgrade.

Step 5 Create folder that is named **iso** using the **mkdir /mnt/iso** command.

```
[root@dcnm]# mkdir /mnt/iso
```

Step 6 Mount the DCNM 11.4(1) ISO file on the standalone setup in the `/mnt/iso` folder.

mount -o loop <DCNM 11.4(1) image> /mnt/iso

```
[root@dcnm]# mount -o loop dcnm-va.11.4.1.iso /mnt/iso
```

Step 7 Navigate to `/mnt/iso/packaged-files/scripts/` and run the `./inline-upgrade.sh` script.

```
[root@dcnm]# cd /mnt/iso/packaged-files/scripts/  
dcnm# ./inline-upgrade.sh  
Do you want to continue and perform the inline upgrade to 11.4(1)? [y/n]: y
```

Note The prompt to enter a new sysadmin password appears while you're upgrading from Cisco DCNM Release 11.1(1) or Release 11.2(1) only.

Step 8 Provide the new sysadmin user password at the prompt:

Note The prompt to enter a new sysadmin password appears while you're upgrading from Cisco DCNM Release 11.1(1) or Release 11.2(1) only.

```
Enter the password for the new sysadmin user: <<sysadmin_password>>  
Enter it again for verification: <<sysadmin_password>>
```

After the upgrade is complete, the appliance reboots. After reboot, the SSH \root access is disabled by default. Use **sysadmin** user.

Step 9 Ensure that the DCNM application is functional, by using the **appmgr status all** command.

```
[root@dcnm]# appmgr status all
```

Step 10 To verify that you have successfully installed the Cisco DCNM Release 11.4(1), use the **appmgr show version** command.

```
[root@dcnm]# appmgr show version  
  
Cisco Data Center Network Manager  
Version: 11.4(1)  
Install mode: SAN Only  
Standalone node. HA not enabled.
```

Step 11 Terminate the **screen** session, by using the **exit** command.

```
[root@dcnm]# exit
```

Step 12 Unmount the **dcnm-va-patch.11.4.1.iso** file from the DCNM setup.

Note You must terminate the screen session before unmounting the **.iso** file.

```
[root@dcnm]# umount /mnt/iso
```

What to do next

Log on to the DCNM Web UI with appropriate credentials.



Note In Release 11.3(1), the sysadmin and the root user's password are not identical. When you upgrade to 11.4(1), the sysadmin and root user passwords are preserved.

However, when you perform backup and restore on Cisco DCNM after upgrade, the sysadmin user inherits the password from the root user, and therefore both the users will have the same password. You can change the password for both the users after restore is complete.

Click **Settings** icon and choose **About DCNM**. You can view and verify the Installation type that you have deployed.

To reindex the performance manager data, use the **appmgr es-reindex pmdb** command.

You can choose to discard the old performance manager (PM) data. For instructions about how to drop performance manager data, see [Dropping Performance Manager Data, on page 7](#).

To gracefully onboard Cisco DCNM Release 11.1(1), Release 11.2(1), Release 11.3(1) managed VXLAN BGP EVPN fabric(s) comprising Cisco Nexus 9000 switches post upgrade to Cisco DCNM Release 11.4(1), see [Post DCNM 11.4\(1\) Upgrade for VXLAN BGP EVPN, External, and MSD Fabrics](#).

After upgrading the Cisco DCNM Server 11.3(1) with the SAN Insights data, some data on the DCNM Server 11.4(1) is reprocessed. This causes a lag in the current data that is displayed on a few SAN Insights pages on the Cisco DCNM Web UI.

PM Data Migration from 10.4(x) SAN OVA/ISO/Windows to the New DCNM 11.3(1) OVA/ISO

In Release 10.4(1) OVA or 10.4(2) OVA the performance manager uses RRD as database to store all raw data. Cisco DCNM offers an inline migration process to migrate RRD files to Elastic database.

To migrate 10.4(1) or 10.4(2) OVA data to 11.3(1) OVA\ISO, perform the following steps:

Procedure

-
- Step 1** Stop the DCNM 10.4(1) or 10.4(2) server.
- For Windows – Navigate to `C:\Program Files\Cisco Systems\dcm\dcnm\bin`. Double-click on the `StopLANSANServer.bat` to stop the services.
 - For Linux – Logon to `/root`. Execute `/root/Stop_DCNM_Servers` command to stop services.
- Step 2** Navigate to `/usr/local/cisco/dcm/fm/pm/db` where the RRD files are located.
- Copy the RRD files to a safe location.
- For Windows – Right-click on the RRD files folder and click **Copy**. Paste the contents to a safe directory.
- For Linux – Execute the copy `/usr/local/cisco/dcm/fm/pm/db/<<rrd_directory>>` to copy all the RRD files to a safe directory.
- Step 3** In the new installed DCNM 11.3(1) SAN OVA\ISO server, discover the same fabric.
- Step 4** After fabric discovery, enable SAN Collections to begin Performance Manager collections.

Choose Cisco DCNM **Web UI > Administration > DCNM Server > Server Status > Performance Collector**. Verify the Status column.

Allow the DCNM server for 60 to 70 minutes to ensure that the Performance manager is collecting data from the Cisco DCNM Web UI.

Step 5 Provide root access to the DCNM Server by using **appmgr root-access permit** command.

Step 6 On the 11.3(1) DCNM Server, navigate to `/usr/local/cisco/dcm/fm/pm/db/` directory.

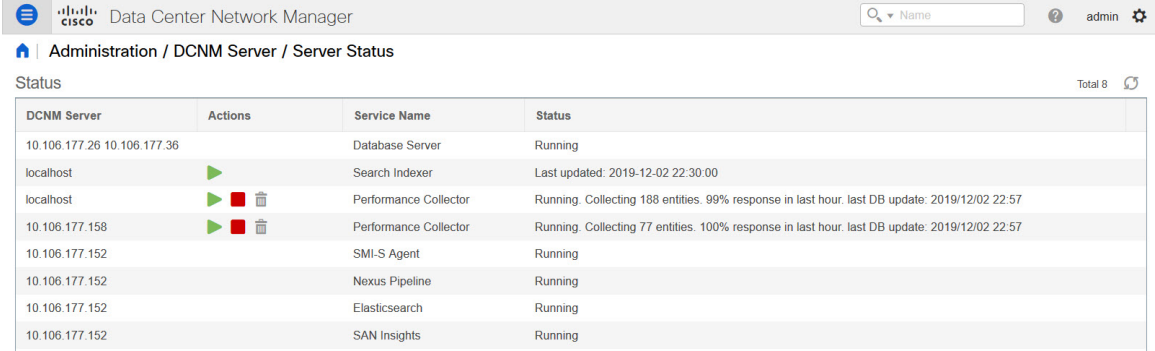
Copy the RRD files from the older DCNM to this directory.

Step 7 Change the read and write permissions to all RRD files using the `chmod -R 777` command.

Step 8 Choose **Administration > DCNM Server > Server Status**.

Identify the Performance Collector Service.

Step 9 Under the **Actions** column, click **Stop Service** icon to stop the performance collector service. Click **Re(Start) Service** icon to start the collections.



The screenshot shows the Cisco Data Center Network Manager (DCNM) Web UI. The breadcrumb navigation is Administration / DCNM Server / Server Status. The page title is Status, and there are 8 items in total. A table lists the services and their status:

DCNM Server	Actions	Service Name	Status
10.106.177.26 10.106.177.36		Database Server	Running
localhost		Search Indexer	Last updated: 2019-12-02 22:30:00
localhost		Performance Collector	Running. Collecting 188 entities. 99% response in last hour. last DB update: 2019/12/02 22:57
10.106.177.158		Performance Collector	Running. Collecting 77 entities. 100% response in last hour. last DB update: 2019/12/02 22:57
10.106.177.152		SMI-S Agent	Running
10.106.177.152		Nexus Pipeline	Running
10.106.177.152		Elasticsearch	Running
10.106.177.152		SAN Insights	Running

Based on the volume of RRD files, the migration can take longer duration. After data migration, all the migrated RRD files is copied to the `db_backup` location. You can view the historical data from the Web UI.

PM Data Migration from 11.1(1) and 11.2(1) Windows to fresh install of 11.3(1) OVA/ISO



Note The data from Windows Federation can't be migrated to Release 11.3(1) SAN OVA\ISO Deployment.

In the fresh install 11.3(1) OVA, discover the same fabric and enable performance manager. When you import the old data to 11.3(1), it replaces the data existing data on 11.3(1).

To migrate 11.1(1) or 11.2(1) DCNM Windows performance manager data to 11.3(1) SAN OVA\ISO deployment, perform the following steps:

Procedure

Step 1 Stop the elastic search service on the older DCNM version.

On the Web UI, choose **Administration > DCNM Server > Server Status**. Stop Performance Manager collections.

Step 2 Take a backup of the Performance Manager collections directory files located at \\DCNM_Install_Directory\dcm\elasticsearch\data\.

Zip all the files and save files to a safe location.

Note The zip file must have the root folder and nodes and all the subfolder with data.

```
[root@dcnm173 ~]# unzip -l nodes.zip
Archive:  nodes.zip
  Length   Date       Time    Name
-----
      0  10-15-2019  04:34  nodes/
      0  10-15-2019  04:34  nodes/0/
      0  10-15-2019  04:34  nodes/0/indices/
      0  10-15-2019  04:34  nodes/0/indices/5AJ72Xv0SXKfXaD9IDMbdw/
      0  10-15-2019  04:34  nodes/0/indices/5AJ72Xv0SXKfXaD9IDMbdw/0/
      0  10-15-2019  04:34  nodes/0/indices/5AJ72Xv0SXKfXaD9IDMbdw/0/index/
    615  10-15-2019  04:33  nodes/0/indices/5AJ72Xv0SXKfXaD9IDMbdw/0/index/segments_11
      0  10-10-2019  00:28  nodes/0/indices/5AJ72Xv0SXKfXaD9IDMbdw/0/index/write.lock
     82  10-15-2019  03:58  nodes/0/indices/5AJ72Xv0SXKfXaD9IDMbdw/0/index/_lay.dii
      .
      ..
      ...
    2037  10-10-2019  00:28  nodes/0/indices/CMzGQjhtS-W3xyPoT1ktnw/_state/state-13.st
      0  10-10-2019  00:12  nodes/0/node.lock
      0  10-15-2019  04:34  nodes/0/_state/
    4668  10-10-2019  00:24  nodes/0/_state/global-7.st
      71  10-10-2019  00:12  nodes/0/_state/node-0.st
-----
129921151                               487 files
[root@dcnm173 ~]#
```

Step 3 On 11.3(1) DCNM server, provide root access to the DCNM Server, by using **appmgr root-access permit** command.

Step 4 Copy the zip file to the freshly installed DCNM 11.3(1) SAN OVA\ISO server.

Note You can copy the zip file contents to any safe directory.

Step 5 Stop the Performance Manager on the DCNM 11.3(1) Windows SAN appliance.

Step 6 Migrate the Performance Manager data using the **appmgr migrate-pm-es-data** command.

Note After the old version DCNM Performance Manager data is migrated, the original 11.3(1) Performance Manager data is erased.

```
dcnm11-3-1# appmgr migrate-pm-es-data nodes.zip
stop elasticsearch
Stopping AFW Applications...
Stopping AFW Server Processes
Stopping AFW Agent Processes
Stopped Application Framework...
Archive:  nodes.zip
  creating: /var/afw/vols/data/elasticsearch_Cisco_afw/usr/share/elasticsearch/data/nodes/
  creating: /var/afw/vols/data/elasticsearch_Cisco_afw/usr/share/elasticsearch/data/nodes/0/
```



```

    creating:
/var/afw/vols/data/elasticsearch_Cisco_afw/usr/share/elasticsearch/data/nodes/0/indices/
    creating:
/var/afw/vols/data/elasticsearch_Cisco_afw/usr/share/elasticsearch/data/nodes/0/indices/5AJ72Xv0SXKfXaD9IDModw/

    creating:
/var/afw/vols/data/elasticsearch_Cisco_afw/usr/share/elasticsearch/data/nodes/0/indices/5AJ72Xv0SXKfXaD9IDModw/0/

    creating:
/var/afw/vols/data/elasticsearch_Cisco_afw/usr/share/elasticsearch/data/nodes/0/indices/5AJ72Xv0SXKfXaD9IDModw/0/index/

    inflating:
/var/afw/vols/data/elasticsearch_Cisco_afw/usr/share/elasticsearch/data/nodes/0/indices/5AJ72Xv0SXKfXaD9IDModw/0/index/segments_11

    extracting:
/var/afw/vols/data/elasticsearch_Cisco_afw/usr/share/elasticsearch/data/nodes/0/indices/5AJ72Xv0SXKfXaD9IDModw/0/index/write.lock

    extracting:
/var/afw/vols/data/elasticsearch_Cisco_afw/usr/share/elasticsearch/data/nodes/0/indices/5AJ72Xv0SXKfXaD9IDModw/0/index/_lay.dii

    inflating:
/var/afw/vols/data/elasticsearch_Cisco_afw/usr/share/elasticsearch/data/nodes/0/indices/5AJ72Xv0SXKfXaD9IDModw/0/index/_lay.dim

    .
    ..
    ...
    ending: inflating:
/var/afw/vols/data/elasticsearch_Cisco_afw/usr/share/elasticsearch/data/nodes/0/indices/CvzGjhtS-WGxyP0tIktrw/_state/state-13.st
extracting:
/var/afw/vols/data/elasticsearch_Cisco_afw/usr/share/elasticsearch/data/nodes/0/node.lock
    creating:
/var/afw/vols/data/elasticsearch_Cisco_afw/usr/share/elasticsearch/data/nodes/0/_state/
    inflating:
/var/afw/vols/data/elasticsearch_Cisco_afw/usr/share/elasticsearch/data/nodes/0/_state/global-7.st
extracting:
/var/afw/vols/data/elasticsearch_Cisco_afw/usr/share/elasticsearch/data/nodes/0/_state/node-0.st
Started AFW Server Processes
Started AFW Agent Processes
dcnm11-3-1#

```

Wait for approximately 30 minutes for the data to be migrated.

Step 7 Verify the status of elastic search by using the `docker ps` command.

```

dcnm11-3-1# docker ps
CONTAINER ID        IMAGE               COMMAND
CREATED            STATUS              PORTS              NAMES
8dfa2935cb0d       127.0.0.1:5000/afwapiproxy:2.0   "/bin/entry.sh"   20
seconds ago        Up 17 seconds      0.0.0.0:443->443/tcp   AfwApiProxy
6839a3d88cb4       127.0.0.1:5001/saninsightpost:1.0   "java -Xms1G -Xmx7..."  20
seconds ago        Up 17 seconds
saninsightpost_Cisco_afw.9hfm7g3g016y7as0f8e4e288m.qk3gw8a4wml1g7pg8k4rsx4qme
6bbdf07fc8a       127.0.0.1:5001/epltwo:2.0         "/bin/sh -c /usr/l..."  22
seconds ago        Up 19 seconds
epttwo_Cisco_afw.9hfm7g3g016y7as0f8e4e288m.0newc0fzplfrqt08i8xjdx5h
896336c7689a       127.0.0.1:5001/saninsightcol:1.0    "/bin/pipeline.sh "    23
seconds ago        Up 20 seconds
saninsightcol_Cisco_afw.9hfm7g3g016y7as0f8e4e288m.vzqkxe8owuf9y18icawns3abw
9bc609916781       127.0.0.1:5001/dcnmelastic:5.6.7_11.2.2   "/docker-entrypoin..."  25
seconds ago        Up 22 seconds      9200/tcp, 9300/tcp
elasticsearch_Cisco_afw.9hfm7g3g016y7as0f8e4e288m.owdosoyelrco3rr4790429zky
ee78966aef89       127.0.0.1:5000/registry:2         "/sbin/entry.sh"      26
seconds ago        Up 23 seconds
registry_cisco_afw.1.xwsd91ty6oajfp7ukfvw2iutd

```

```
cc635ab41796      registry:2          "/sbin/entry.sh"      42
seconds ago      Up 40 seconds      AfwAppRegistry
```

- Step 8** Restart the DCNM Server by using the **appmgr restart all** command.
Wait for 10 minutes for DCNM to stabilize and connect to the new performance manager data.

PM Data Migration from 11.1(1) and 11.2(1) Linux to fresh install of 11.3(1) OVA/ISO



Note The data from Linux Federation can't be migrated to Release 11.3(1) SAN OVA\ISO Deployment.

In the fresh install 11.3(1) OVA, discover the same fabric and enable performance manager. When you import the old data to 11.3(1), it replaces the data existing data on 11.3(1).

To migrate 11.1(1) or 11.2(1) DCNM Linux performance manager data to 11.3(1) SAN OVA\ISO deployment, perform the following steps:

Procedure

- Step 1** Stop the elastic search service on the older DCNM version.
On the Web UI, choose **Administration > DCNM Server > Server Status**. Stop Performance Manager collections.

- Step 2** Take a backup of the Performance Manager collections directory files located at `\\DCNM_Install_Directory\dcm\elasticsearch\data\`.

Zip all the files and save files to a safe location.

Note The zip file must have the root folder and nodes and all the subfolder with data.

```
[root@dcnm]# unzip -l nodes.zip
Archive:  nodes.zip
  Length      Date    Time    Name
-----
         0  10-15-2019  04:34  nodes/
         0  10-15-2019  04:34  nodes/0/
         0  10-15-2019  04:34  nodes/0/indices/
         0  10-15-2019  04:34  nodes/0/indices/5AJ72Xv0SXKfXaD9IDMbdw/
         0  10-15-2019  04:34  nodes/0/indices/5AJ72Xv0SXKfXaD9IDMbdw/0/
         0  10-15-2019  04:34  nodes/0/indices/5AJ72Xv0SXKfXaD9IDMbdw/0/index/
        615  10-15-2019  04:33  nodes/0/indices/5AJ72Xv0SXKfXaD9IDMbdw/0/index/segments_11
         0  10-10-2019  00:28  nodes/0/indices/5AJ72Xv0SXKfXaD9IDMbdw/0/index/write.lock
         82  10-15-2019  03:58  nodes/0/indices/5AJ72Xv0SXKfXaD9IDMbdw/0/index/_lay.dii
         .
         ..
         ...
       2037  10-10-2019  00:28  nodes/0/indices/CMzGQjhtS-W3xyPoT1ktnw/_state/state-13.st
         0  10-10-2019  00:12  nodes/0/node.lock
         0  10-15-2019  04:34  nodes/0/_state/
       4668  10-10-2019  00:24  nodes/0/_state/global-7.st
```

```

          71 10-10-2019 00:12 nodes/0/_state/node-0.st
-----
129921151                               487 files
[root@dcnm]#

```

Step 3 Zip all the files and save files to a safe location, using the **zip -r myPMData.zip ./** command.

Note The zip file must have the root folder and nodes and all the subfolder with data.

```

[root@dcnm]# zip -r nodes.zip nodes
  adding: nodes/ (stored 0%)
  adding: nodes/0/ (stored 0%)
  adding: nodes/0/indices/ (stored 0%)
  adding: nodes/0/indices/CMzGQjhtS-W3xyPoTlktnw/ (stored 0%)
  adding: nodes/0/indices/CMzGQjhtS-W3xyPoTlktnw/3/ (stored 0%)
  adding: nodes/0/indices/CMzGQjhtS-W3xyPoTlktnw/3/index/ (stored 0%)
  adding: nodes/0/indices/CMzGQjhtS-W3xyPoTlktnw/3/index/_114o.fdx (deflated 2%)
  adding: nodes/0/indices/CMzGQjhtS-W3xyPoTlktnw/3/index/_1bsm.fnm (deflated 87%)
  adding: nodes/0/indices/CMzGQjhtS-W3xyPoTlktnw/3/index/_1cs1.si (deflated 23%)
  adding: nodes/0/indices/CMzGQjhtS-W3xyPoTlktnw/3/index/_1bsm.si (deflated 38%)
  .
  ..
  ...
  adding: nodes/0/indices/5AJ72Xv0SXXfXaD9IDMbdw/2/_state/ (stored 0%)
  adding: nodes/0/indices/5AJ72Xv0SXXfXaD9IDMbdw/2/_state/state-0.st (deflated 5%)
  adding: nodes/0/indices/5AJ72Xv0SXXfXaD9IDMbdw/_state/ (stored 0%)
  adding: nodes/0/indices/5AJ72Xv0SXXfXaD9IDMbdw/_state/state-3.st (deflated 9%)
  adding: nodes/0/node.lock (stored 0%)
  adding: nodes/0/_state/ (stored 0%)
  adding: nodes/0/_state/global-7.st (deflated 72%)
  adding: nodes/0/_state/node-0.st (deflated 7%)
[root@dcnm]#

```

Step 4 On 11.3(1) DCNM server, provide root access to the DCNM Server, by using **appmgr root-access permit** command.

Step 5 Copy the zip file to the freshly installed DCNM 11.3(1) SAN OVA/ISO server.

Note You can copy the zip file contents to any safe directory.

Step 6 Stop the Performance Manager on the DCNM 11.3(1) Linux SAN appliance.

Step 7 Migrate the Performance Manager data using the **appmgr migrate-pm-es-data** command.

Note After the old version DCNM Performance Manager data is migrated, the original 11.3(1) Performance Manager data is erased.

```

dcnm11-3-1# appmgr migrate-pm-es-data nodes.zip
stop elasticsearch
Stopping AFW Applications...
Stopping AFW Server Processes
Stopping AFW Agent Processes
Stopped Application Framework...
Archive: nodes.zip
  creating: /var/afw/vols/data/elasticsearch_Cisco_afw/usr/share/elasticsearch/data/nodes/
  creating: /var/afw/vols/data/elasticsearch_Cisco_afw/usr/share/elasticsearch/data/nodes/0/
  creating:
/var/afw/vols/data/elasticsearch_Cisco_afw/usr/share/elasticsearch/data/nodes/0/indices/
  creating:
/var/afw/vols/data/elasticsearch_Cisco_afw/usr/share/elasticsearch/data/nodes/0/indices/5AJ72Xv0SXXfXaD9IDMbdw/
  creating:
/var/afw/vols/data/elasticsearch_Cisco_afw/usr/share/elasticsearch/data/nodes/0/indices/5AJ72Xv0SXXfXaD9IDMbdw/0/

```

```

    creating:
/var/afw/vols/data/elasticsearch_Cisco_afw/usr/share/elasticsearch/data/nodes/0/indices/5AJ72Xv0SXKfXaD9IIMbdw/0/index/

    inflating:
/var/afw/vols/data/elasticsearch_Cisco_afw/usr/share/elasticsearch/data/nodes/0/indices/5AJ72Xv0SXKfXaD9IIMbdw/0/index/segments_11

    extracting:
/var/afw/vols/data/elasticsearch_Cisco_afw/usr/share/elasticsearch/data/nodes/0/indices/5AJ72Xv0SXKfXaD9IIMbdw/0/index/write.lock

    extracting:
/var/afw/vols/data/elasticsearch_Cisco_afw/usr/share/elasticsearch/data/nodes/0/indices/5AJ72Xv0SXKfXaD9IIMbdw/0/index/_lay.dii

    inflating:
/var/afw/vols/data/elasticsearch_Cisco_afw/usr/share/elasticsearch/data/nodes/0/indices/5AJ72Xv0SXKfXaD9IIMbdw/0/index/_lay.dim

    .
    ..
    ...
    ending: inflating:
/var/afw/vols/data/elasticsearch_Cisco_afw/usr/share/elasticsearch/data/nodes/0/indices/0MzQjhtS-W3xyPoTlktw/_state/state-13.st
extracting:
/var/afw/vols/data/elasticsearch_Cisco_afw/usr/share/elasticsearch/data/nodes/0/node.lock
    creating:
/var/afw/vols/data/elasticsearch_Cisco_afw/usr/share/elasticsearch/data/nodes/0/_state/
    inflating:
/var/afw/vols/data/elasticsearch_Cisco_afw/usr/share/elasticsearch/data/nodes/0/_state/global-7.st
extracting:
/var/afw/vols/data/elasticsearch_Cisco_afw/usr/share/elasticsearch/data/nodes/0/_state/node-0.st
Started AFW Server Processes
Started AFW Agent Processes
dcnm11-3-1#

```

Wait for approximately 30 minutes for the data to be migrated.

Step 8 Verify the status of elastic search by using the **docker ps** command.

```

dcnm11-3-1# docker ps
CONTAINER ID        IMAGE                                     COMMAND
CREATED            STATUS              PORTS              NAMES
8dfa2935cb0d       127.0.0.1:5000/afwapiproxy:2.0         "/bin/entry.sh"    20
seconds ago       Up 17 seconds      0.0.0.0:443->443/tcp AfwApiProxy
6839a3d88cb4       127.0.0.1:5001/saninsightpost:1.0      "java -Xms1G -Xmx7..." 20
seconds ago       Up 17 seconds
saninsightpost_Cisco_afw.9hfm7g3g016y7as0f8e4e288m.qk3gw8a4wmlg7pg8k4rsx4qme
6bbdff07fc8a       127.0.0.1:5001/epltwo:2.0              "/bin/sh -c /usr/l..." 22
seconds ago       Up 19 seconds
eptwo_Cisco_afw.9hfm7g3g016y7as0f8e4e288m.0newc0fzplfrqt08i8xjjdx5h
896336c7689a       127.0.0.1:5001/saninsightcol:1.0       "/bin/pipeline.sh "   23
seconds ago       Up 20 seconds
saninsightcol_Cisco_afw.9hfm7g3g016y7as0f8e4e288m.vzqkxe8owuf9y18icawns3abw
9bc609916781       127.0.0.1:5001/dcnmelastic:5.6.7_11.2.2 "/docker-entrypoin..." 25
seconds ago       Up 22 seconds      9200/tcp, 9300/tcp
elasticsearch_Cisco_afw.9hfm7g3g016y7as0f8e4e288m.owdosoyelrco3rr4790429zky
ee78966aef89       127.0.0.1:5000/registry:2              "/sbin/entry.sh"     26
seconds ago       Up 23 seconds
registry_cisco_afw.1.xwsd9lty6oajfp7ukfvw2iutd
cc635ab41796       registry:2                               "/sbin/entry.sh"     42
seconds ago       Up 40 seconds      AfwAppRegistry

```

Step 9 Restart the DCNM Server by using the **appmgr restart all** command.

Wait for 10 minutes for DCNM to stabilize and connect to the new performance manager data.
