Migrate Cisco Prime Infrastructure Data to Cisco DNA Center Using Prime Data Migration Tool Update 02

This chapter provides information on migrating data and important points related to migrating Cisco Prime Infrastructure to Cicso DNA Center using the Prime Data Migration Tool Update 02.

Prerequisites for Using Prime Data Migration Tool Update 02

This section lists the prerequisites for using the Prime Data Migration Tool Update 02 in PI 3.8.x Prime Data Migration Tool Update 02.

Before you use the Prime Data Migration Tool, you must ensure that you run the Cisco DNA Center AURA command line tool. The AURA tool performs a variety of health, scale and upgrade readiness checks for the Cisco DNA Center and the rest of the Fabric network. AURA ensures that Cisco DNA Center and its component services are all healthy and available before you start a migration.

For more information on using Cisco DNA Center AURA tool, see Enhanced Visibility into the Cisco DNA Center using AURA.

Prerequisites for Using PI 3.9.x Prime Data Migration Tool Update 02

Ensure that:

- You install Cisco Prime Infrastructure PI 3.9.1 or PI 3.9 + PI 3.9 Oracle Patch + PI 3.9.1 on upgrade .If you need support for Catalyst 9800 16.12.x version, you will need to install **PI_3_9_Oct_Oracle_patch-1.0.8.ubf** patch before you install PI 3.9.1. For instructions to install the Oracle Patch, see Installing Cisco Prime Infrastructure System Patch 3.9 section in the Cisco Prime Infrastructure 3.9 Administrator Guide.

- You have Root or Super Users access privileges of Cisco Prime Infrastructure.

- You have access credentials of Cisco DNA Center.

- Refer the Cisco Prime Infrastructure and Cisco Catalyst Center Compatibility Matrix.

Prerequisites for Using PI 3.8.x Prime Data Migration Tool Update 02

Ensure that:

- You install Cisco Prime Infrastructure 3.8.1 update 01 or PI 3.8.x Prime Data Migration Tool Update 01 or PI 3.8.x Prime Data Migration Tool Hotfix.

- You have Root or Super Users access privileges of Cisco Prime Infrastructure.

- You have access credentials of Cisco DNA Center.

- Refer the Cisco Prime Infrastructure and Cisco Catalyst Center Compatibility Matrix.

Prerequisites for Using PI 3.7.x Prime Data Migration Tool Update 02

Ensure that:

- You install Cisco Prime Infrastructure 3.7.1 update 05 or PI 3.7.x Prime Data Migration Tool Update 01.

- You have Root or Super Users access privileges of Cisco Prime Infrastructure.

- You have access credentials of Cisco DNA Center.

- Refer the Cisco Prime Infrastructure and Cisco Catalyst Center Compatibility Matrix.

Migrating Data from Cisco Prime Infrastructure to Cisco DNA Center using Prime Data Migration Tool Update 02

This section helps you to migrate your Cisco Prime Infrastructure data from:

- PI 3.9.1 to Cisco DNA Center using PI 3.9.x Prime Data Migration Tool Update 02.

- PI 3.8.1 update 01, PI 3.8.x Prime Data Migration Tool Update 01, PI 3.8.x Prime DataMigration Tool Hotfix to Cisco DNA Center using PI 3.8.x Prime Data Migration Tool Update 02.

- PI 3.7.1 update 05 , PI 3.7.x Prime Data Migration Tool Update 01 to Cisco DNA Center using PI 3.7.x Prime Data Migration Tool Update 02.

Follow this procedure to access the Cisco Prime Infrastructure to Cisco DNA Center migration by logging in to Cisco Prime Infrastructure:

Step 1   Choose **Administration** > **Settings** > **System Settings** > **General** > **Cisco DNA Center coexistence**, and then click **Launch Cisco DNA Center coexistence** to open **Prime Infrastructure - Cisco DNA Center Coexistence** page.

For 3.9.1, you can either:

Click **Cisco DNA Center coexistence** in the **Mega Menu** page.

Or

Launch Cisco DNA Center coexistence from the Getting Started page. Choose **Settings** > **Getting Started** > **Cisco DNA Center coexistence**, and then click **Launch Cisco DNA Center coexistence** to open **Prime Infrastructure - Cisco DNA Center Coexistence** page.

Step 2   Click **Add Cisco DNA Center** Server.

Step 3   Enter the following Cisco DNA Center server details:

a) Server IP Address or Hostname.
b) Username
c) Password
d) Confirm Password

Note   You can integrate only one Cisco DNA Center server at a time.

Step 4   Click **Save**, to check server reachability.

Step 5   Click **Next** to go to **Sync Settings**.

Step 6   In the **Sync Settings** window:

a) You can check for the Supported/Available Limits of the Cisco DNA Center server for the **Site Groups/Site Maps** and **Devices**. Supported/Available Limits of Cisco DNA Center will vary based on the Cisco DNA Center server core(s) count.

The Supported/Available limits are specified in the below table:

Table 1: Supported/Available Limits

DNAC Core	Site Groups/Site Maps	Devices	Templates
44-Core	500	1000	1000
56-Core	1000	4000	1000
112-Core	2000	5000	1000

b) Select the **Enables automatic synchronization of data integrated with Cisco DNA Center** check box to synchronize already migrated data set for the groups and devices from Prime Infrastructure to Cisco DNA Center automatically post modification.
c) Select the **Include newly added data during dynamic synchronization** checkbox to move newly created groups and newly added devices during dynamic synchronization if any, from Prime Infrastructure to Cisco DNA Center automatically post addition.

Note   Dynamic Synchronization does not support add, update or delete operations for the already migrated data and will not synchronize the data automatically for the following components:

- Maps
- CLI Templates
- ISE Server

Maps, CLI templates, and ISE server migration is achieved only by Force Sync.

- This check box is enabled only if you select the **Enables automatic synchronization of data integrated with Cisco DNA Center** check box.

- During force synchronization, if the **Enables automatic synchronization of data integrated with Cisco DNA Center** check box is enabled, any modifications that are made through force synchronization to the Location Group and Devices entities are dynamically synced in Cisco DNA Center.

- If the **Enables automatic synchronization of data integrated with Cisco DNA Center** check box is selected, CMX is dynamically assigned to Cisco DNA Center floor groups, when Cisco Prime Infrastructure imports maps to CMX. (Pre Req.: CMX dynamic sync works only on already migrated floor groups and CMX should exist in Cisco DNA Center server for CMX dynamic sync.)

d)   If you select the **Enable CMX settings** check box, CMX will be pushed with floor groups. If you do not select the **Enable CMX settings** check box, CMX data will not be pushed to the Cisco DNA Center server.

e)   If you select the **Enable ISE settings** check box, ISE server details will be pushed. If you do not select the **Enable ISE settings** check box, ISE data will not be pushed to the Cisco DNA Center server.

f)   Select the **Migrate User Defined CLI Templates** check box to migrate the user defined CLI and/or Composite Templates to Cisco DNA Center.

Step 7   Click **Next** to go to the **Select Groups** page.

Step 8   In the **Select Groups** window:

Expand the **Usage Details** section to view a summary of the site and device count details such as **Recommended**, **Selected for Migration**, and **Available**.

a)   If you want to move an entire group hierarchy to Cisco DNA Center, check the **Replicate Parent Hierarchy** check box and select the location groups from the **Prime Infrastructure Location Groups** pane.

By default, when you select Site Groups, the buildings, floors, and associated maps are also selected.

Click **Select DNAC Parent** below the **Prime Infrastructure Location Groups** pane to open the **Cisco DNA Center Site Groups** window.

Marked for Deletion label appears when you unselect an already migrated group.

Select **Global** from the **Cisco DNA Center Site Groups** pane under which you want to move the PI groups and click **OK**. The selected groups will be added in the **Group Movement Log** pane with the label as **Marked for Migration**.

b)   If you want to move only a building or a floor to Cisco DNA Center under a different campus or area, click **Select DNAC Parent** below the **Prime Infrastructure Location Groups** pane to open the **Cisco DNA Center Site Groups** window.

Select a campus or an area from **Cisco DNA Center Site Groups** under which you need to move the building and select a building from Cisco DNA Center Site Groups under which you need to move the floor and click **OK**. The selected groups will be added in the **Group Movement Log** pane with the label as **Marked for Migration**.

If you click the **Close** or **Cancel** buttons in the **Cisco DNA Center Site Groups** window, the window closes without selecting any groups for migration and the **Group Movement Log** pane is not updated with the selected groups.

After you move the groups from Prime Infrastructure to Cisco DNA Center, **Marked for Migration** label appears on the moved groups.

Already migrated groups from Prime Infrastructure to Cisco DNA Center appear with the label as **Migrated** in the **Prime Infrastructure Location Groups** pane as well as the **Group Movement Log** pane.

The count of selected groups for migration appears as **Selected for Migration** under Sites. The count of selected devices for migration appears as **Selected for Migration** under Devices in **Usage details**.

Available groups count in Cisco DNA Center appears in the **Available** section under Sites and available devices count in Cisco DNA Center appears in the **Available** section under Devices in **Usage details**.

The **Prime Infrastructure Location Groups** pane lists all the Cisco Prime Infrastructure groups irrespective of any virtual domain.

Note	Cisco Prime Infrastructure does not migrate devices assigned in a "Campus" to the Cisco DNA Center, when the co-existence tool is used.
	As a workaround, you can assign your devices to a "Building" or "Floor" type location group before using the co-existence tool.

Note	Devices assigned in the Location groups with 'Default' Group type are not migrated to Cisco DNA Center.

To create sites directly in Cisco DNA Center so that you can move your sites from Prime Infrastructure to Cisco DNA Center, click **DNAC Site Builder**.

In the **DNAC Site Builder** window, if you select the **Area** radio button, enter the following information:

- **Site Name**: Site name that you can create in Cisco DNA Center.

- **Parent Site**: Cisco DNA Center parent under which you can create the site.

In the **DNAC Site Builder** window, if you select the **Building** radio button to create a building in the Cisco DNA Center Area, enter the following information:

- **Site Name**: Building name that you can create in Cisco DNA Center.

- **Parent Site**: Cisco DNA Center parent under which you can create the building.

- **Civic Location**: Enter the civic location details under which you want to create the building.

- **GPS (Latitude/Longitude)**: These co-ordinates are auto-populated.

Click **Add** to create a site or building in Cisco DNA Center.

Step 9   Click **Next**.

Step 10   In the **ISE & CMX Credentials** window:

a) Click the **ISE** tab to view the ISE server details that are present in Prime Infrastructure such as:

- Server Status

  • Server IP

  • Port

  • Server Name

  • Username

  • Shared Secret: You must ensure that this shared secret field is not empty.

  • Timeout: This value must not exceed 20.

  • Retries

If no ISE server is present in Prime Infrastructure, a **No data available** message appears.

b) Click the **CMX** tab to can view the list of associated CMX servers for selected groups with the following details:

  • Credential Status

  • Server IP address

  • Device Name

  • Username

  • Password

  • SSH Username

  • SSH Password

You must update the **SSH Username** and **SSH Password**, if it is not available for the respective CMX.

If the associated CMX is not found, then click **Next**

Note	When the Cisco Prime Infrastructure – Cisco DNA Center migration tool is active and auto sync is enabled, then CMX will be dynamically pushed to Cisco DNA Center floor groups. Cisco DNA Center will there by track the location data for assigned groups.

Step 11 If you check the **Migrate User Defined CLI Templates** check box in the **Sync Settings** page, then a new page **Select CLI Templates** appears after the CMX page.

Step 12 In the **Select CLI Templates** window:

a) Non-Migrated templates list all the applicable user defined CLI and, or , or both Composite templates for the device types in the selected groups for migration to Cisco DNA Center.

b) Migrated templates list all the migrated templates available in Cisco DNA Center. You can either update or delete these templates.

Note	By default all the rows are selected. Selected templates from the list are updated and the deselected templates are deleted from Cisco DNA Center.

Step 13 Click **Next**.

Step 14 In the **Summary** window:

a) You can view the overall summary of selected location groups, devices, associated maps, user-defined templates, CMX sesrvers, and ISE servers before migrating to the Cisco DNA Center.

  b) You can also view the groups, devices, maps, ISE, and CMX that are added, updated and deleted under each respective tab.

  c) Click the **CLI templates** tab to view the selected CLI templates listed here. Based on the device selection in the groups you can Add/Update or Delete the CLI/Composite user defined Templates in Cisco DNA Center.

  d) In the **Sync Settings** tab, you can view the summary of the sync status.

Step 15 Click **Force Sync** to push data to the Cisco DNA Center server after the first migration.

A confirmation message appears **DNAC data will be overwritten by PI data by the Force Sync**. Click **Yes** to proceed or **No** to stop Force Sync.

A success message appears after the successful completion of the Force Sync operation.

What to do next

1. If you want to revert the site hierarchy in Cisco DNA Center, uncheck the migrated groups in the Prime Data Migration tool and click **Force Sync**. This step deletes the migrated groups in Cisco DNA Center.

 If you want to revert the device assignment (devices will be unassigned from Cisco DNA Center sites and assigned to migrated groups if the same devices are present both in Cisco Prime Infrastructure groups and Cisco DNA Center sites), perform the following steps:

  • Uncheck the migrated groups in the Prime Data Migration tool and click **Force Sync**. This step deletes the migrated groups and devices in Cisco DNA Center.

  • Add and assign or provision the devices in Cisco DNA Center in the required sites.

 The pre-migration site hierarchy appears in Cisco DNA Center.

 To migrate your Cisco Prime Infrastructure data again using the Prime Data Migration Tool Update 02, unassign the devices in Cisco Prime Infrastructure for the required groups and migrate the data.

2. Prime Data Migration Tool Update 02 provides support for Multi-DNAC support. This feature allows you to migrate to multiple DNAC clusters (one DNAC server at a time) and retain the migration data for each DNAC server. For more information, see Multi-DNAC Support.

Multi-DNAC Support

In earlier releases, you can only integrate one Cisco DNA Center server with one Cisco Prime Infrastructure server.

Multi-DNAC support allows you to migrate to multiple Cisco DNA Center clusters (one Cisco DNA Center server at a time) and retain the migration data for each Cisco DNA Center server.

You can take backup of the migration data of a Cisco DNA Center server. These backup files are available at **/opt/CSCOlumos/multiDNAC** and contain information about migrated groups, site locations, templates, ISE server, and CMX server. You can restore the archive files anytime.

In Prime Infrastructure, you must use a script for the multi-DNAC support. To invoke the script, go to **/opt/CSCOlumos/bin** and execute the command: **. run_command.sh multi-dnac**.

The script provides the following options:

1. List available DNAC archives: Displays the list of archives available.

2. Backup the current paired DNAC server: Cisco DNA Center server that is in the migration tool and its details are backed up.

3. Backup current paired DNAC server and load DNAC archive: Current Cisco DNA Center server and its details are backed up and you are prompted to load any other available archive by entering the IP address.

4. Delete DNAC archives: Enter the IP address of the DNAC archive to delete its backup details.

5. Quit

The stored Cisco DNA Center archives are available with the Cisco DNA Center server's IP address as the prefix. The command allows one archive per Cisco DNA Center server and you can backup the data any number of times. The latest configuration overwrites with the existing archive. The maximum number of archives depends on the disk storage and there are no restrictions on the limit.

Note The backup files do not restore any sync settings. You can perform a backup only if force sync was done in the migration tool.

Important Notes

This section contains important notes about Cisco Prime Infrastructure - Cisco DNA Center migration:

- You can integrate only one Cisco DNA Center server at a time.

- When you remove the existing DNAC server and add it again, the Migrated label for all the DNAC migrated groups/sites is removed and the groups appear as non-migrated groups/sites, even though the groups/sites are migrated.

- Only CMX version 10.6.2 or above is supported for migration.

- Before you start the next migration, you must refresh the Prime Data Migration tool to display the accurate groups and site maps.

- For the first time ISE migration, ISE can be migrated only along with Sites and Groups, from the next migration onwards, you can migrate ISE alone.

- You use a single session of the migration at a time for the same Cisco Prime Infrastructure server and Cisco DNA Center server pair.

- Once the CMX is migrated to Cisco DNA Center, it will not be managed by Cisco Prime Infrastructure.

- Cisco DNA Center will not migrate the location and civic data of any building which has no floor.

- Any legacy devices that are not supported by Cisco DNA Center chosen for migration will be added to Cisco DNA Center inventory under Device Type column "Unsupported Cisco Device".

- Any devices managed only with SNMP V1 credentials in Cisco Prime Infrastructure cannot be migrated to Cisco DNA Center, whereas SNMP V2 and V3 can be migrated to Cisco DNA Center.

- Only the basic information of the groups will be migrated, but not the rules and profiles assigned to group.

- After integration, while upgrading Cisco DNA Center to an unsupported version, an `Unsupported Version` error appears and migration will stop.

- Access Points positioned in the maps in Cisco Prime Infrastructure will migrate to Cisco DNA Center, only if we manage its WLC devices with CLI Credentials.

- For Composite template Migration - The associated template should not be System template. If any composite template with system template will not get migrated.

- During composite template migration all the associated template in composite template should be having the same device type. Otherwise migration will fail.

- Specific composite templates migration is not recommended till Cisco DNA Center 1.3.3.8 and 2.1.1.3. However it works in later DNAC versions.

- DNAC Version 2.2.1.0 specific update:

  - Civic location is mandatory for Location Groups / Site groups migration especially for Cisco DNA Center 2.2.1.0 version.

  - If any one selected group does not have civic location configured, then all the selected Location Groups/Site groups migration will fail.

Open Caveats for Prime Data Migration Tool Update 02

The following table lists the open caveats in Prime Data Migration Tool Update 02.

Table 2: Open Caveats

Identifier	Description
CSCvz14104	Prime Infrastructure Data Migration Tool Update 02 fails to migrate maps if there is a validation error, such as duplicate AP names in any locations, including APs created by planning mode.
CSCvz39645	If a campus, building, floor, or location group's name has "/" in it, Prime Infrastructure Data Migration Tool Update 02 marks that group as invalid and blocks the migration activities.