



The bridge to possible

Tips and Tricks for Prime Infrastructure to Cisco DNA Center Migration

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BRKOPS-2077

Cisco Webex App

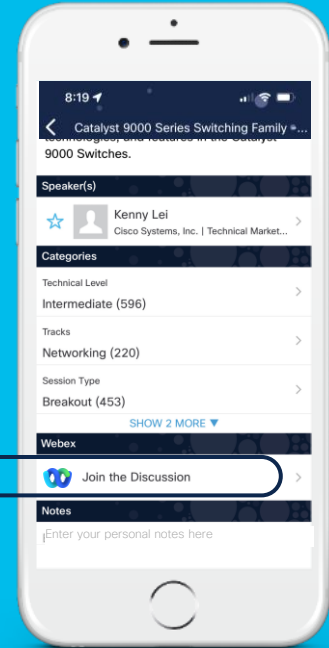
Questions?

Use Cisco Webex App to chat with the speaker after the session

How

- 1 Find this session in the Cisco Live Mobile App
- 2 Click “Join the Discussion”
- 3 Install the Webex App or go directly to the Webex space
- 4 Enter messages/questions in the Webex space

Webex spaces will be moderated until February 24, 2023.



Agenda

- Why migrate to Cisco DNA Center?
- Planning migration
- Assess Cisco DNA Center Readiness based on current Cisco Prime Infrastructure deployment
- Automate the data migration into Cisco DNA Center
- "Doing Prime things the new way"
- Deployment options
- Call to Action

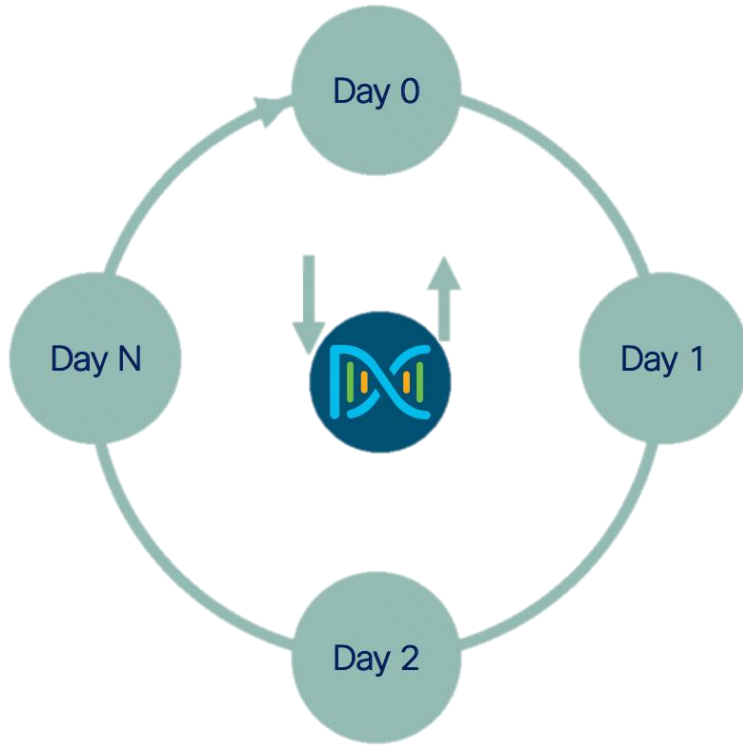




Why migrate to Cisco DNA Center?



Why migrate to Cisco DNA Center





Planning migration



Sequential Approach to Prime Migration






Assess Cisco DNA Center Readiness



Prime to DNA Center Readiness Assessment PDART Tool

Cisco PDART - A Cisco DNA Center Readiness tool for the Cisco Prime Infrastructure

 Translations
  Download
  Print

Updated: August 8, 2021 Document ID: 217059

Contents

Introduction

Prerequisites

- Requirements
- Components Used

Tool Requirements

How to Execute the Tool

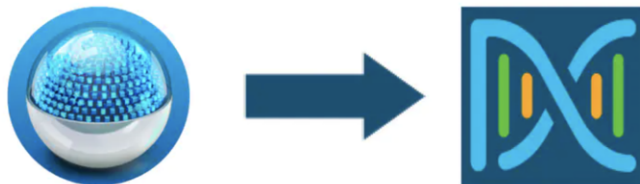
- Option 1: Execute the PDART executable from CLI
- Option 2: Execute the PDART via Updated Bundle File (UBF patch)

Sample Report

Issues with the tool

Introduction

The Cisco PDART (Cisco Prime Infrastructure Cisco DNA Center Assessment & Readiness Tool) analyzes a Cisco Prime Infrastructure deployment and assesses whether Cisco DNA Center supports the current deployment.



The PDART assesses the Cisco Prime Infrastructure from the following perspectives:

Cisco DNA Center Ready			
Current Cisco Prime Infrastructure Version : 3.9.0			
Recommended Cisco DNA Center Version : 2.1.2.6			
Devices			
518 Total	517 Supported	0 Requires SW Upgrade	1 Unsupported
Use Cases			
48 Used / In Use	26 Supported	8 Unsupported	13 Roadmap
Reports			
0 Used / In Use	0 Supported	0 Unsupported	0 Roadmap
Scale			
Professional Appliance in Use		DN2-HW-APL Recommended Appliance	
Platform			
csg-bgl18-00a-pi01 Hostname		7 Total Checks Run	

PDART Installation

Administration / Licenses and Software Updates / Software Update

Use this page to install the latest published updates. You can download the latest updates from cisco.com or upload an update file to your server.

Status of Updates

Updates Files

Name	Type	Version	Status	Date	User
PI 3.10 DNA Center Assessment and Readiness...	Critical Fixes	3.0.0	Installed	2022-09-22 07:30 EDT	root

Administration / Licenses and Software Updates / Software Update

Use this page to install the latest published updates. You can [download](#) the latest updates from cisco.com or [upload](#) an update file to your server.

Status of Updates

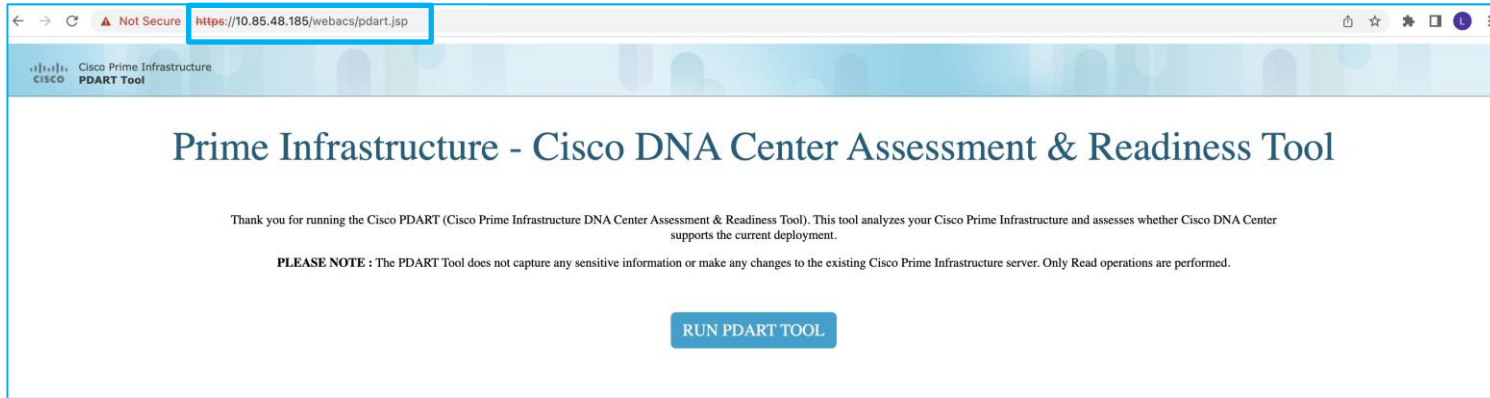
Updates Files

Software Update Files

Delete

FileName	In Use	Corresponding Updates	Out of Box	User	Error
<input type="checkbox"/> DNACAssessmentReadiness_3_10_Upda...	Yes	PI 3.10 DNA Center Assessment and Readiness ...	No	root	

Running PDART



A screenshot of a web browser displaying the PDART tool interface. The browser's address bar shows the URL `https://10.85.48.185/webacs/pdart.jsp`. The page header includes the Cisco logo and the text "Cisco Prime Infrastructure PDART Tool". The main heading is "Prime Infrastructure - Cisco DNA Center Assessment & Readiness Tool". Below the heading, there is a thank-you message and a "PLEASE NOTE" section. A prominent blue button labeled "RUN PDART TOOL" is centered on the page.

← → ↻ Not Secure `https://10.85.48.185/webacs/pdart.jsp` 🏠 ☆ ⚙️ □ 🔒 ⋮

CISCO Cisco Prime Infrastructure
PDART Tool

Prime Infrastructure - Cisco DNA Center Assessment & Readiness Tool

Thank you for running the Cisco PDART (Cisco Prime Infrastructure DNA Center Assessment & Readiness Tool). This tool analyzes your Cisco Prime Infrastructure and assesses whether Cisco DNA Center supports the current deployment.

PLEASE NOTE : The PDART Tool does not capture any sensitive information or make any changes to the existing Cisco Prime Infrastructure server. Only Read operations are performed.

[RUN PDART TOOL](#)



A screenshot of the PDART tool interface after a successful execution. The browser's address bar shows the URL `https://10.85.48.185/webacs/pdart.jsp`. The page header includes the Cisco logo and the text "Cisco Prime Infrastructure PDART Tool". The main heading is "Prime Infrastructure - Cisco DNA Center Assessment & Readiness Tool". Below the heading, there is a "Console Output" section displaying "EXECUTION SUCCESSFUL". Three buttons are visible: "Download PDART Report", "Download PDART TarBall", and "Back to Main Page".

CISCO Cisco Prime Infrastructure
PDART Tool

Prime Infrastructure - Cisco DNA Center Assessment & Readiness Tool

Console Output : **EXECUTION SUCCESSFUL**

[Download PDART Report](#) [Download PDART TarBall](#) [Back to Main Page](#)

`https://10.85.48.185/webacs/pdart.jsp`

CLI installation reference slide

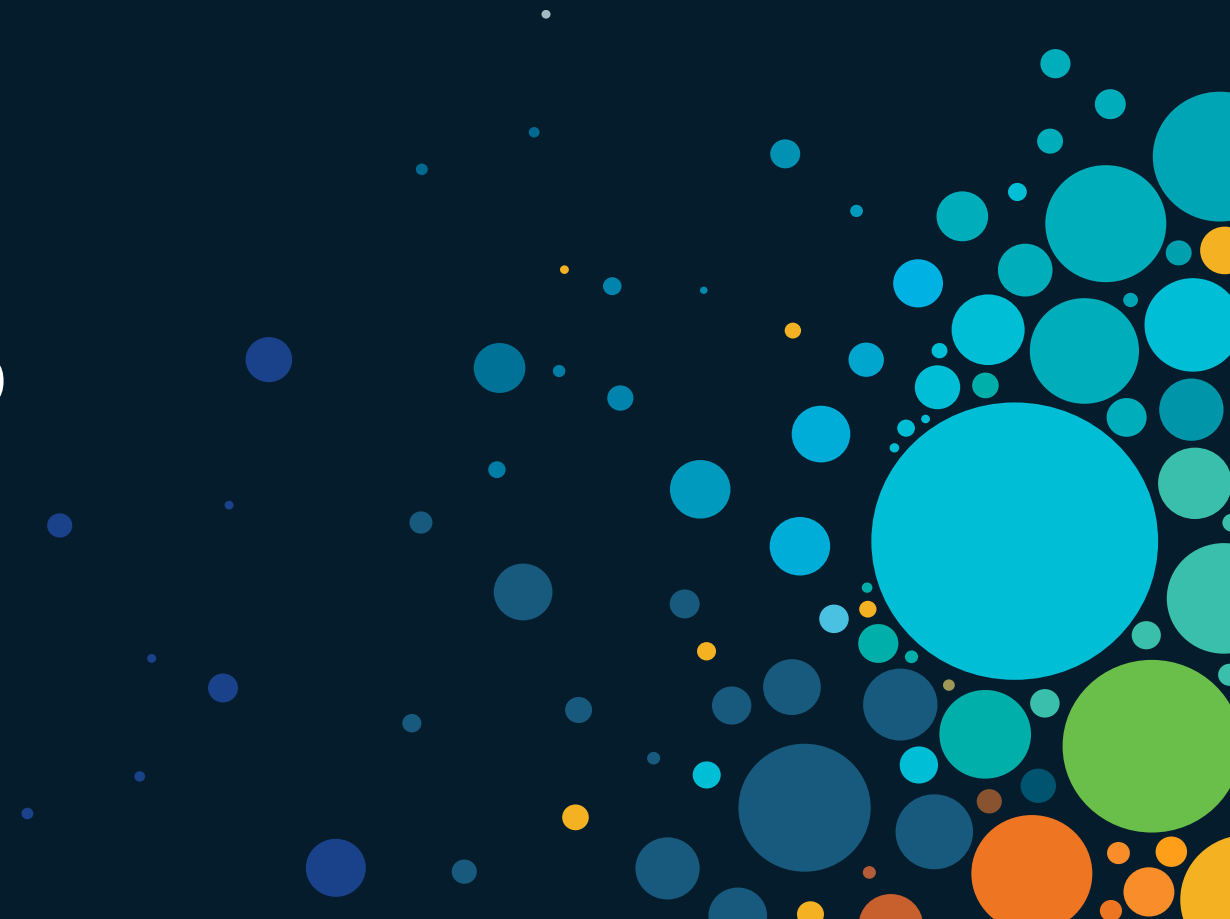
```
[root@pi31 ~]# wget https://github.com/CiscoDevNet/PDART/raw/main/pdart
--2022-12-08 09:09:35-- https://github.com/CiscoDevNet/PDART/raw/main/pdart
Resolving github.com (github.com)... 192.30.255.112
Connecting to github.com (github.com)|192.30.255.112|:443... connected.
HTTP request sent, awaiting response... 302 Found
Location: https://raw.githubusercontent.com/CiscoDevNet/PDART/main/pdart [following]
--2022-12-08 09:09:41-- https://raw.githubusercontent.com/CiscoDevNet/PDART/main/pdart
Resolving raw.githubusercontent.com (raw.githubusercontent.com)... 185.199.110.133, 185.199.108.133, 185.199.109.133, ...
Connecting to raw.githubusercontent.com (raw.githubusercontent.com)|185.199.110.133|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 14562800 (14M) [application/octet-stream]
Saving to: 'pdart.1'

100%[=====>] 14,562,800 --.-K/s in 0.1s

2022-12-08 09:09:43 (96.9 MB/s) - 'pdart' saved [14562800/14562800]

[root@pi31 ~]# chmod 755 pdart
[root@pi31 ~]# ./pdart
< execution begins >
```

PDART Demo





Automate the data migration into Cisco DNA Center



Deployment with Cisco Prime and Cisco DNA Center

Co-Existence

Cisco Prime and DNA Center Managed Network

- Run Cisco DNA Center and Prime together in the network
- Cisco DNA Center is used for Automation or Assurance or both for parts of the network

The network administrator needs to make sure that only one system makes changes to the network

Full Migration

Cisco DNA Center Managed Network

- One-time migration from Prime to Cisco DNA Center
- Cisco DNA Center is used for Day 0 and Day N.

Co-Existence model examples

Migration for Assurance all locations



Locations:

Amsterdam
Barcelona
Paris
Lisbon

Migrate for Assurance only

Co-Existence model examples

Migration for Assurance all locations



Prime Automation

Amsterdam
Barcelona
Paris
Lisbon

Migrate for
Assurance only



DNAC Read-Only
for Automation

Amsterdam
Barcelona
Paris
Lisbon

Co-Existence model examples

Migration for Assurance per location



Locations:

Amsterdam
Barcelona

Paris

Lisbon

Migrate for Assurance only

Co-Existence model examples

Migration for Assurance per location



Migrate for
Assurance only



Prime Automation

Amsterdam
Barcelona

Paris

Lisbon

DNAC Read-Only for
Automation

Amsterdam
Barcelona

Co-Existence model examples

Migration for Automation & Assurance per location



Locations:

Amsterdam
Barcelona

Paris

Lisbon

Migrate for Automation & Assurance

Co-Existence model examples

Migration for Automation & Assurance per location



Migrate for
Automation &
Assurance

Prime Read-Only for
Automation

Amsterdam
Barcelona

Prime Automation

Paris

Lisbon



DNAC Automation

Amsterdam
Barcelona

Deployment with Cisco Prime and Cisco DNA Center

Co-Existence

Cisco Prime and DNA Center Managed Network

- Run Cisco DNA Center and Prime together in the network
- Cisco DNA Center is used for Automated Assurance or both for parts of the network

Temporary solution

The network administrator needs to make sure that only one system makes changes to the network

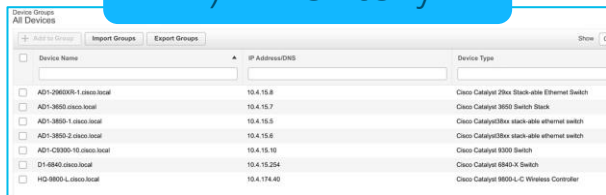
Full Migration

Cisco DNA Center Managed Network

- One-time migration from Prime to Cisco DNA Center
- Cisco DNA Center is used for Day 0 and Day N.

Prime Data Migration Tool (PDMT)

2) Inventory

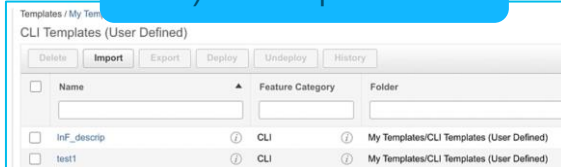


Device Name	IP Address/DNS	Device Type
AD1-2060R-1.cisco.local	10.4.15.8	Cisco Catalyst 20k Stack-able Ethernet Switch
AD1-3602.cisco.local	10.4.15.7	Cisco Catalyst 3602 Switch Stack
AD1-3601-1.cisco.local	10.4.15.5	Cisco Catalyst36k stack-able ethernet switch
AD1-3602-2.cisco.local	10.4.15.6	Cisco Catalyst36k stack-able ethernet switch
AD1-C9300-10.cisco.local	10.4.15.10	Cisco Catalyst 9300 Switch
D1-6840.cisco.local	10.4.15.254	Cisco Catalyst 6840-X Switch
HQ-9800-L.cisco.local	10.4.174.40	Cisco Catalyst 9800-L-C Wireless Controller

3) Maps

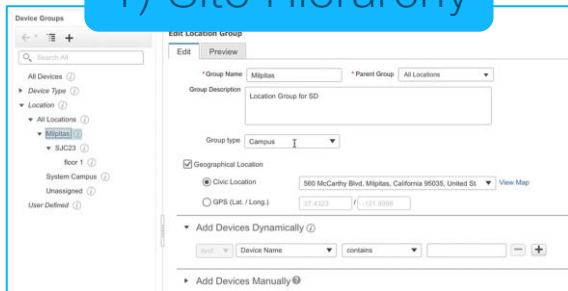


4) Templates



Name	Feature Category	Folder
Inf_descip	CLI	My Templates/CLI Templates (User Defined)
test1	CLI	My Templates/CLI Templates (User Defined)

1) Site Hierarchy



Edit Location Group

Group Name: Mjlpitas Parent Group: All Locations

Group Description: Location Group for SD

Group type: Campus

Geographical Location: Civic Location 580 McCaffrey Blvd, Milpitas, California 95033, United St

GPS (lat./Long.) 37.4523 121.8996

Add Devices Dynamically

Device Name	contains
-------------	----------

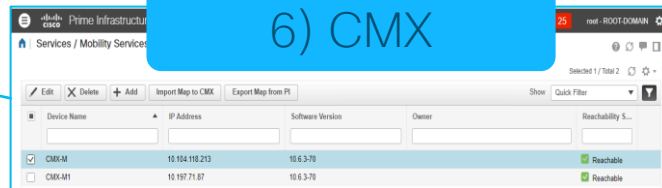
Add Devices Manually

5) ISE



Server Address	Port	Retries	Version	Status
10.126.244.19	443	1	2.7.0.356	Reachable

6) CMX



Device Name	IP Address	Software Version	Owner	Reachability S.
CMX-M	10.104.118.213	10.6.3-70		Reachable
CMX-M1	10.197.71.87	10.6.3-70		Reachable



PDMT Demo

The screenshot displays the Cisco Prime Infrastructure Administration interface. On the left is a navigation menu with categories: Dashboard, Monitor, Configuration, Inventory, Maps, Services, Reports, Administration, and Prime Data Migration Tool. The main content area is titled 'Settings / Getting Started' and includes sections for 'System Setup', 'Manage Network', and 'Homepage Setup'. The 'Homepage Setup' section contains two dashboard preview cards: 'Network Summary Dashboard' and 'Overview Dashboard', each with a 'Save and Launch Homepage' button. The URL at the bottom of the browser window is <https://172.29.58.160/webac/loginAction.do?action=login&product=ics&selectedCategory=renmen...>

Question #1 - Do I need to configure the device for DNA Center Assurance?

```
!
telemetry ietf subscription 1011
  encoding encode-tdl
  filter tdl-uri /services;serviceName=ewlc/wlan_config
  source-address 10.4.174.40
  stream native
  update-policy on-change
  receiver ip address 10.4.48.171 25103 protocol tls-native profile sdn-network-infra-iban
telemetry ietf subscription 1012
  encoding encode-tdl
  filter tdl-uri /services;serviceName=ewlc/wlanpolicies
  source-address 10.4.174.40
  stream native
  update-policy on-change
  receiver ip address 10.4.48.171 25103 protocol tls-native profile sdn-network-infra-iban
telemetry ietf subscription 1013
  encoding encode-tdl
  filter tdl-uri /services;serviceName=ewlc/wlanpolicies;policy_profile_name=temp_policy_profile/atfpolicymap
  source-address 10.4.174.40
  stream native
  update-policy on-change
  receiver ip address 10.4.48.171 25103 protocol tls-native profile sdn-network-infra-iban
telemetry ietf subscription 1014
  encoding encode-tdl
  filter nested-uri /services;serviceName=ewlc/policylist
  source-address 10.4.174.40
  stream native
  update-policy on-change
  receiver ip address 10.4.48.171 25103 protocol tls-native profile sdn-network-infra-iban
telemetry ietf subscription 1016
  encoding encode-tdl
  filter tdl-uri /services;serviceName=ewlc/site_tag_config
  source-address 10.4.174.40
  stream native
  update-policy on-change
  receiver ip address 10.4.48.171 25103 protocol tls-native profile sdn-network-infra-iban
telemetry ietf subscription 1051
  encoding encode-tdl
  filter tdl-uri /services;serviceName=ewlc/wlan_config
  source-address 10.4.174.40
  stream native
  update-policy periodic 360000
  receiver ip address 10.4.48.171 25103 protocol tls-native profile sdn-network-infra-iban
telemetry ietf subscription 1052
  encoding encode-tdl
  filter tdl-uri /services;serviceName=ewlc/wlanpolicies
  source-address 10.4.174.40
```

```
snmp-server trap-source Vlan174
snmp-server packet-size 5000
snmp-server enable traps snmp authentication linkdown linkup coldstart warmstart
snmp-server enable traps wireless AP wireless_mobility
snmp-server enable traps config
snmp-server enable traps rf
snmp-server host 10.4.48.171 cisco
snmp-server host 10.4.48.171 version 2c cisco
```

Question #2 – Is the device removed from Prime after migration?

The screenshot shows the Cisco Prime Infrastructure interface. The breadcrumb navigation is: Home | Inventory / Device Management / Network Devices. The current view is for 'Network Devices' under the 'Unified AP' group. The location path is 'All Locations / Milpitas / SJC 23'. The table below shows devices on 'Floor 1'.

	Reachability	Admin Status	Device Name	IP Address	
<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
<input type="checkbox"/>	✓	Managed	AD1-2960XR-1.cisco.lo...	10.4.15.8	(i) 10
<input type="checkbox"/>	✓	Managed	AD1-3650.cisco.local	10.4.15.7	(i) 10
<input type="checkbox"/>	✓	Managed	AD1-3850-1.cisco.local	10.4.15.5	(i) 10
<input type="checkbox"/>	✓	Managed	AD1-3850-2.cisco.local	10.4.15.6	(i) 10
<input type="checkbox"/>	✓	Managed	D1-6840.cisco.local	10.4.15.254	(i) 10
<input type="checkbox"/>	✓	Managed	HQ-9800-L	10.4.174.40	(i) 10

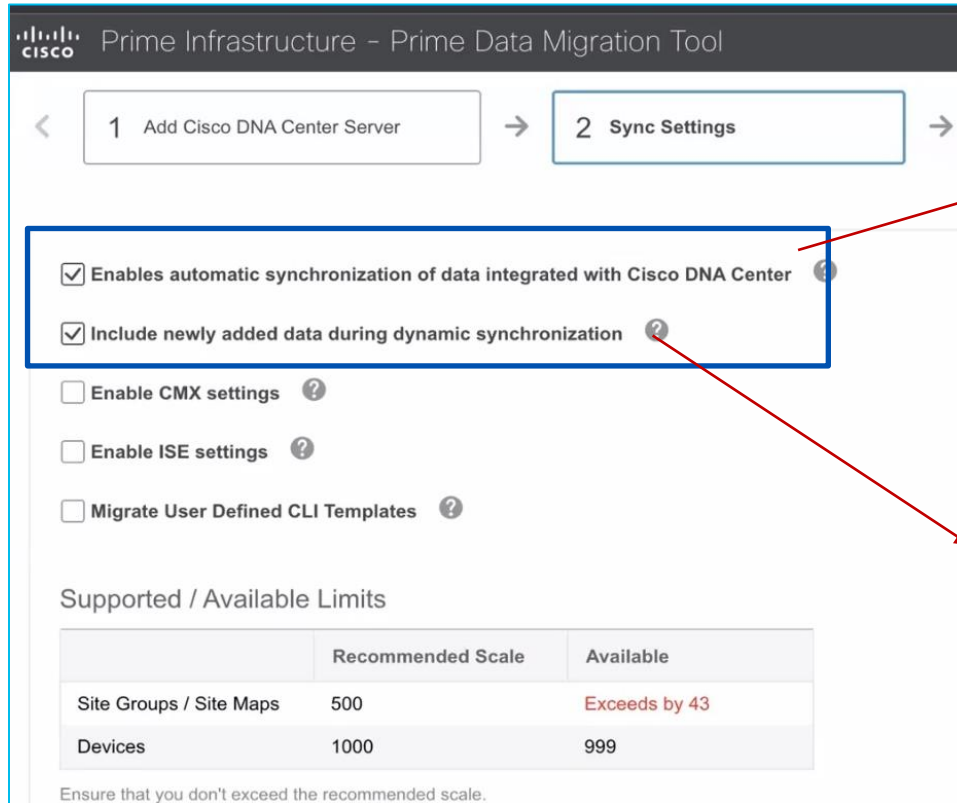
Question #2 - Is the device removed from Prime after migration?

```
telemetry ietf subscription 27799734
encoding encode-tdl
filter tdl-uri /services;serviceName=ewlcevent/ewlcclientevent
stream native
update-policy on-change
receiver ip address 10.4.48.162 20830 protocol cntp-tcp
telemetry ietf subscription 310937588
encoding encode-tdl
filter tdl-uri /services;serviceName=ewlc_oper/mesh_sec_stats
stream native
update-policy periodic 180000
receiver ip address 10.4.48.162 20830 protocol cntp-tcp
telemetry ietf subscription 345449941
encoding encode-tdl
filter tdl-uri /services;serviceName=ewlc_oper/mesh_q_stats
stream native
update-policy periodic 180000
receiver ip address 10.4.48.162 20830 protocol cntp-tcp
telemetry ietf subscription 509015629
encoding encode-tdl
filter tdl-transform ApBleBeacon
stream native
update-policy on-change
receiver ip address 10.4.48.162 20830 protocol cntp-tcp
telemetry ietf subscription 527712612
encoding encode-tdl
filter tdl-transform LradIfChannelInterference
stream native
update-policy periodic 180000
receiver ip address 10.4.48.162 20830 protocol cntp-tcp
telemetry ietf subscription 589334059
encoding encode-tdl
filter tdl-transform LradIfPhyTxPower
stream native
update-policy on-change
```

Ensure either
Prime or
DNAC
configures the
devices, not
both

```
snmp-server trap-source Vlan174
snmp-server packetsize 5000
snmp-server enable traps snmp authentication linkdown linkup coldstart warmstart
snmp-server enable traps wireless AP wireless_mobility
snmp-server enable traps config
snmp-server enable traps ospf
snmp-server host 10.4.48.162 isco
snmp-server host 10.4.48.171 version 2c cisco
```

Question #3 - How to automate coexistence?



Prime Infrastructure - Prime Data Migration Tool

1 Add Cisco DNA Center Server → 2 Sync Settings →

- Enables automatic synchronization of data integrated with Cisco DNA Center
- Include newly added data during dynamic synchronization
- Enable CMX settings
- Enable ISE settings
- Migrate User Defined CLI Templates

Supported / Available Limits

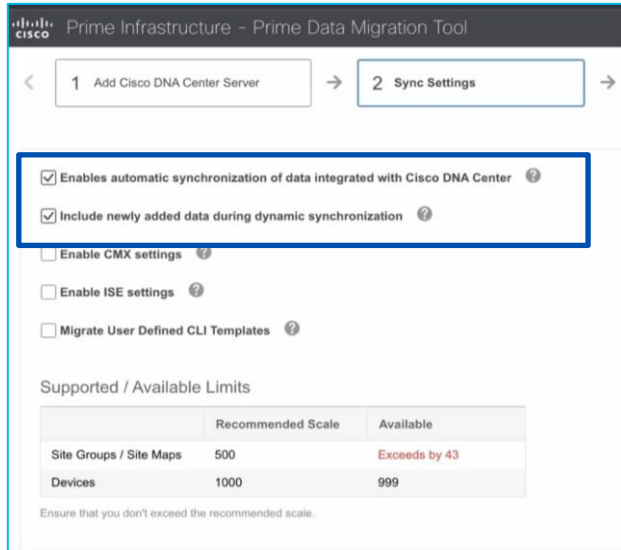
	Recommended Scale	Available
Site Groups / Site Maps	500	Exceeds by 43
Devices	1000	999

Ensure that you don't exceed the recommended scale.

Synchronizes the migrated groups and devices from Prime to DNA Center automatically post-migration

Migrates newly created groups and devices using dynamic synchronization automatically post-migration

Question #3 - How to automate coexistence?



Prime Infrastructure - Prime Data Migration Tool

1 Add Cisco DNA Center Server → 2 Sync Settings →

- Enables automatic synchronization of data integrated with Cisco DNA Center ?
- Include newly added data during dynamic synchronization ?
- Enable CMX settings ?
- Enable ISE settings ?
- Migrate User Defined CLI Templates ?

Supported / Available Limits

	Recommended Scale	Available
Site Groups / Site Maps	500	Exceeds by 43
Devices	1000	999

Ensure that you don't exceed the recommended scale.

Auto Sync is an incremental:

Dynamic synchronization of the data from PI to DNAC based on the earlier selection

Any changes to groups association and device credentials will be synced

CMX, ISE, CLI Templates and Maps are not in scope of auto sync and need to be triggered via the Force Sync option

Co-Existence model examples



Locations:

Amsterdam
Barcelona

Paris

Lisbon

Migrate for Assurance only



Co-Existence model examples



Migrate for Assurance only



Prime Automation

Amsterdam
Barcelona

Paris
Lisbon



PDMT with
coexistence
check

DNAC RO for Automation

Amsterdam
Barcelona

- Enables automatic synchronization of data integrated with Cisco DNA Center ?
- Include newly added data during dynamic synchronization ?

Co-Existence model examples



Locations:

Amsterdam
Barcelona

Paris

Lisbon



Migrate for Automation & Assurance

Co-Existence model examples



Migrate for
Automation &
Assurance



Prime RO Automation

Amsterdam
Barcelona

PDMT without
coexistence
check

DNAC Automation

Amsterdam
Barcelona

Prime Automation

Paris

Lisbon

- Enables automatic synchronization of data integrated with Cisco DNA Center ?
- Include newly added data during dynamic synchronization ?

Question #4 - Is Geo Location mandatory for migration?

DNA Center requires a valid Geo location, Prime Groups with empty/invalid/Null can't be migrated

The screenshot shows the Cisco Prime Infrastructure interface for editing a location group. The breadcrumb path is: Inventory / Group Management / Network Device Groups. The current page is titled "Edit Location Group" for the "Promineral" group under the "Azores" location. The "Group Name" is "Promineral" and the "Parent Group" is "Azores". The "Group Description" is "Location Group for SD". The "Group type" is set to "Building". A checkbox labeled "Geographical Location" is present and is highlighted with a blue box. Below it, there is a section for "Add Devices Dynamically".

Question #4 - Is Geo Location mandatory for migration?

PDMTv4 provides a pop-up window to enter a valid Geo location - mandatory to proceed with the migration

Update Civic Location

PI Group Hierarchy	Group Name	Address	Latitude	Longitude
Location/All Locations/Portugal/Azores	Promineral	Er Tambores 10, 9675-032 Fumas, /	37.771904	-25.297799

Save Cancel

*Enter Geo locations to proceed with migration

Save Cancel

Question #5 – What happens if the building already exists in DNA Center?

Cisco DNA Center Design - Network Hierarchy

Find Hierarchy

Global

Milpitas

San Jose Bldg 23

Pleasanton

San Jose

San Jose Bldg 23

Building Name: San Jose Bldg 23

Hierarchy: Global > Milpitas > San Jose Bldg 23

Address: 560 Mccarthy Boulevard, Milpitas, California 95035, United States

Geolocation: Lat 37.41953, Long -121.91872

Edit Building | Delete Building | View Devices | View Settings | Add Floor | Import Ekahau... | Sync: DNA Spa... | Export Maps | Show Floors

DEVICES (1)

focus: Inventory

Filter | Add Device | Tag Device | Actions | Take a Tour

Device Name	IP Address	Device Family	Reachability	Manageability	Compliance	Health Score	MAC Address	Device Role	Image
pnp-9800-40.cisco.local	0.4.174.46	Wireless Controller	Reachable	Managed	Compliant	10	80:2d:bf:91:c6:0b	ACCESS	17.6

Global

Unassigned Devices

Milpitas

San Jose Bldg 23

Pleasanton

San Jose

Question #5 – What happens if the building already exists in DNA Center?

Prime Infrastructure

Inventory / Group Management / Network Device Groups

Device Groups

Device Groups / Location / All Locations / Milpitas
San Jose Bldg 23
Edit Location Group

Group Name: San Jose Bldg 23 Parent Group: Milpitas

Group Description: Location Group for SD

Group type: Default

Geographical Location

Civic Location: 560 Mccarthy Boulevard, Milpitas, California 95035, Unit: [View Map](#)

GPS (Lat. / Long.): 37.41953 / -121.91872

DNAC Site Builder

Replicate Parent Hierarchy

Prime Infrastructure Location Groups

- All Locations
 - Milpitas - *Marked for migration!*
 - San Jose Bldg 23 - *Marked for migration!*
 - Floor 1 - *Marked for migration!*
 - Floor 2 - *Marked for migration!*
- System Campus

Group Movement Log

PI Group Hierarchy	DNAC Group Hierarchy	Status
Location/All Locations/Milpitas/San Jose Bldg ...	Global/Milpitas/San Jose Bldg 23/Floor 2	Marked for migration
Location/All Locations/Milpitas/San Jose Bldg ...	Global/Milpitas/San Jose Bldg 23/Floor 1	Marked for migration
Location/All Locations/Milpitas	Global/Milpitas	Marked for migration
Location/All Locations/Milpitas/San Jose Bldg 23	Global/Milpitas/San Jose Bldg 23	Marked for migration

Question #5 – What happens if the building already exists in DNA Center?

Global

- Unassigned Devices (1)
- Milpitas
 - San Jose Bldg 23
 - Floor 1
 - Floor 2
 - Pleasanton
 - San Jose

FOCUS: Inventory

Filter | Add Device | Tag Device | Actions | Take a Tour

As of: 2:27 PM | Export | Refresh

Device Name	IP Address	Device Family	Reachability	Manageability	Compliance	Health Score	MAC Address	Device Role	Image Version
AD1-3650.cisco.local	10.4.15.7	Switches and Hubs	Reachable	Managed	Non-Compliant	NA	00:35:1a:1d:f5:80	ACCESS	16.9.6
AD1-3850-2.cisco.local	10.4.15.6	Switches and Hubs	Reachable	Managed	Non-Compliant	10	bc:c4:93:b2:87:00	ACCESS	16.9.5
AP0CD0.F894.2824	10.4.8.20	Unified AP	Reachable	Managed	N/A	6	0c:d0:f8:95:a7:80	ACCESS	17.6.1.13
AP005D.7344.5DEE	10.4.2.23	Unified AP	Reachable	Managed	N/A	6	4c:77:6d:ca:14:60	ACCESS	17.6.1.13
AP28AC.9EDC.2370	10.4.72.21	Unified AP	Reachable	Managed	N/A	1	70:79:b3:2b:fd:e0	ACCESS	17.6.1.13
AP7069.5AEC.41B6	10.4.2.24	Unified AP	Reachable	Managed	N/A	6	70:79:b3:1d:18:c0	ACCESS	17.6.1.13
D1-6840.cisco.local	10.4.15.254	Switches and Hubs	Reachable	Managed	Compliant	10	bc:1f:f2:60:8f:2f	DISTRIBUTION	15.5(1)SY6
HQ-9800-L.cisco.local	10.4.174.40	Wireless Controller	Reachable	Managed	Non-Compliant	10	f4:bd:9e:56:0d:cb	ACCESS	17.6.1
pnp-9800-40.cisco.local	10.4.174.46	Wireless Controller	Reachable	Managed	Compliant	10	80:2d:bf:91:c6:0b	ACCESS	17.6.2

Question #6 - Can I migrate Prime Templates?

Prime Infrastructure - Cisco DNA Center Coexistence

1 Add Cisco DNA Center Server → 2 Sync Settings → 3 Select Groups → 4 ISE & CMX Server → 5 Select CLI Templates

Non-Migrated Templates | Migrated Templates

Following are the templates available in Prime Infrastructure to be migrated to Cisco DNA Center.

Name	Type	Description
<input type="checkbox"/> Test_Chad_temp (IOS)	CLI	
<input type="checkbox"/> Test_Chad_temp (IOS-XE)	CLI	
<input checked="" type="checkbox"/> WLC9880-1 (IOS-XE)	CLI	Template for Cisco WLC9800
<input type="checkbox"/> Loopbck10 (IOS)	CLI	
<input type="checkbox"/> Loopbck10 (IOS-XE)	CLI	

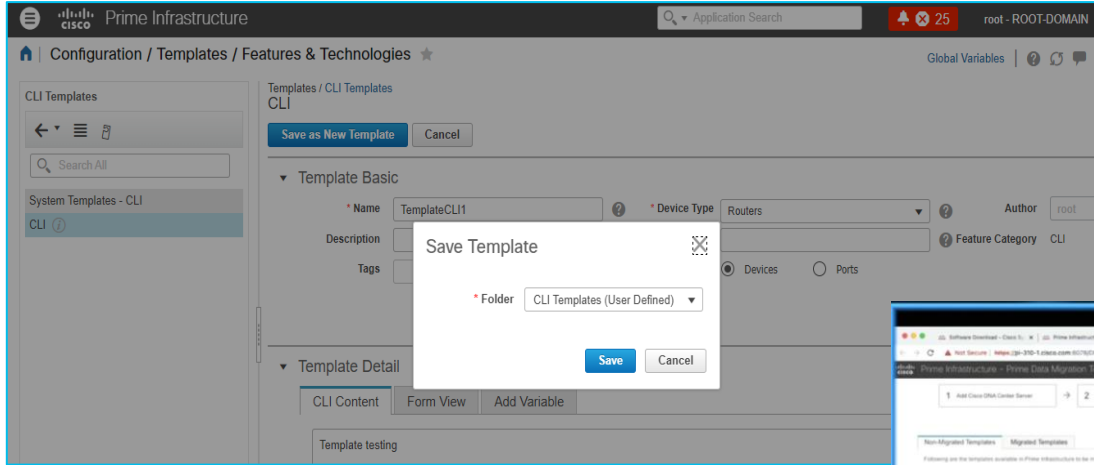
- **Supported:** User Defined CLI templates with variables and composite templates

- **Not Supported:** System Defined CLI templates

- User can select the templates which they want to migrate to DNA Center
- Templates will be migrated to DNA Center under the template project named "Prime Migrated Templates"

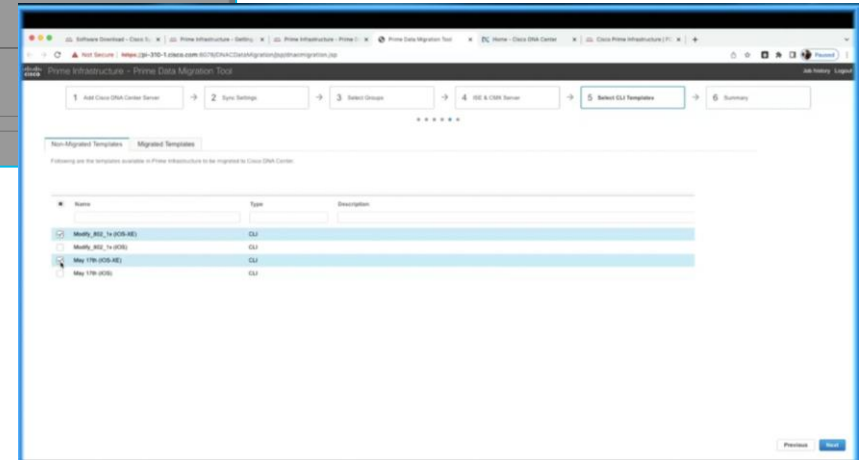
Question #6 - Can I migrate Prime Templates?

Trick to Migrate System Defined CLI Templates

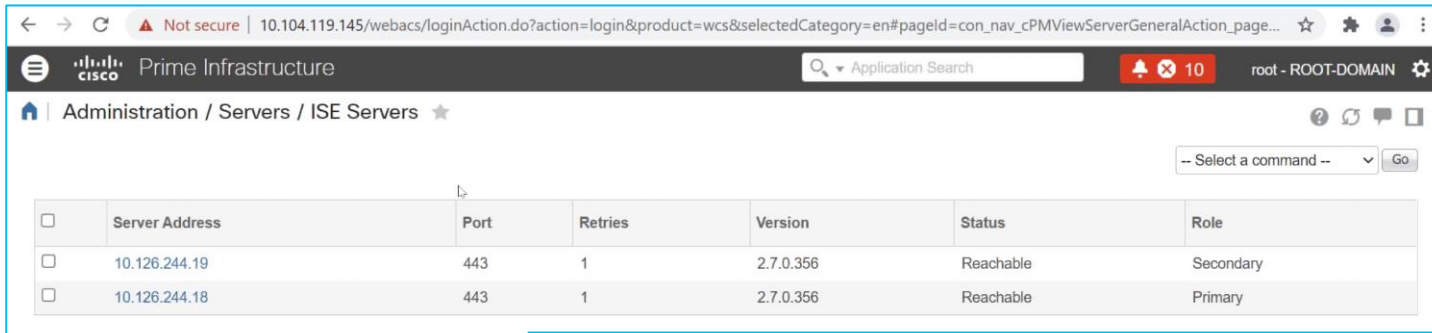


Step 1) Save as “New”

Step 2) Provision the template in devices to migrate

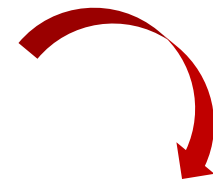


Question #7 - How does ISE migration work?

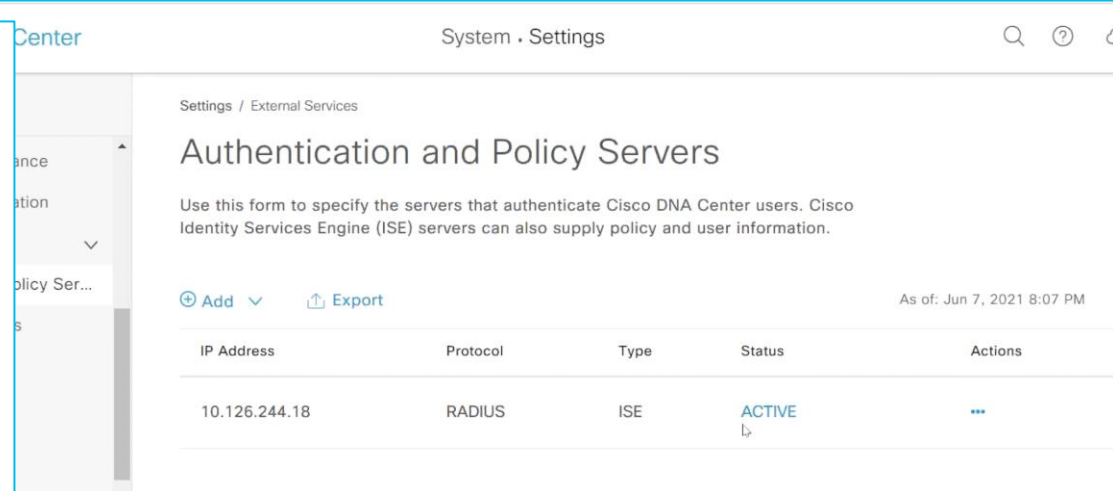


The screenshot shows the Cisco Prime Infrastructure interface. The breadcrumb navigation is "Administration / Servers / ISE Servers". A table lists two ISE servers:

	Server Address	Port	Retries	Version	Status	Role
<input type="checkbox"/>	10.126.244.19	443	1	2.7.0.356	Reachable	Secondary
<input type="checkbox"/>	10.126.244.18	443	1	2.7.0.356	Reachable	Primary



- ISE is Migrated as “Authentication and Policy Servers”.
- Only one ISE server can be migrated
- Not assigned to any site in the Network Settings.



The screenshot shows the Cisco DNA Center System Settings page for "Authentication and Policy Servers". The page title is "System · Settings" and the sub-page is "Settings / External Services". The main heading is "Authentication and Policy Servers". Below the heading, there is a description: "Use this form to specify the servers that authenticate Cisco DNA Center users. Cisco Identity Services Engine (ISE) servers can also supply policy and user information." There are "Add" and "Export" buttons. The table below shows one server configuration:

IP Address	Protocol	Type	Status	Actions
10.126.244.18	RADIUS	ISE	ACTIVE	⋮

Question #7 - How does ISE migration work?

ISE CMX

Server Status	Server IP	Port	FQDN	Username	Shared secret	Timeout	Retries
✓	10.197.71.145	443	pi-system-145.cisco.com	admin	*****	20	1

Note: Please ensure the following on the ISE server prior to migration

1. PXGrid needs to be activated on ISE
2. ERS needs to be enabled on ISE
3. ISE CLI and GUI password needs to be the same

Before Migration:

- Activate PXGrid on ISE
- Enable ERS on ISE
- ISE's CLI and GUI password must be the same

During Migration

- The FQDN, Username & Shared Secret Key values shouldn't be empty
- Timeout value shouldn't exceed 20 sec

Question #8 - How does CMX migration work?

Prime Infrastructure - Prime Data Migration Tool

1 Add Cisco DNA Center Server → 2 Sync Settings → 3 Select Groups → 4 ISE & CMX Server → 5 Select CLI Templates

ISE CMX

CMX Servers

You can integrate CMX server with Cisco DNA Center. Once integrated, the CMX for the selected site maps will not be managed by Prime Infrastructure.

Credential Status	Server IP	Server Name	Username	Owner	SSH Username	SSH Password
✓	10.104.119.145	qacmx	admin		cmxadmin	*****

- CMX migration is a “move”
- Prime will lose its sync with CMX once migrated to DNAC
- Changes in Prime will not be updated if CMX is migrated
- After migration, DNA Center will track the location data for assigned groups.
- Best Practice: CMX migration to be done at last

Question #9 - Does DNA Center supports legacy devices?

Adding Legacy Device Support

Cisco Prime Legacy Device Compatibility Matrix

Note: The devices for which Recommended and Compatible Releases are not shown are EOL devices. SWIM images might not be listed in COO, hence SWIM is not applicable for these device series.

Download Excel Format

Device Series	Device Model	Recommended Release	Compatible Release	Min. Cisco DNA Center Release	Inventory	Topology	SWIM	Config Change Audit (CCA)	Template Provisioning
Cisco 2010 Connected Grid Router	CISCO CGR 2010/K9 CISCO CGR 2010/K9 China	IOS-15.9.3M4	IOS-15.1.4M	2.3.2.0	L	L	L	L	NA
Cisco 2900 Series Integrated Services Routers G2	CISCO2911/K9	IOS-15.6.2T3	IOS-15.0.1M9	2.3.2.0	L	L	L	L	NA
Cisco 2921 Integrated Services Router G2	CISCO2921/K9	IOS-15.6.2T3	IOS-15.0.1M9	2.3.2.0	L	L	L	L	NA
Cisco 2951 Integrated Services Router G2	CISCO2951/K9	IOS-15.6.2T3	IOS-15.0.1M9	2.3.2.0	L	L	L	L	NA
Cisco 3750 Stackable Switches	C3750	-	-	2.3.2.0	L	L	NA	L	L
Cisco 3825 Integrated Services Router	CISCO3825 C3825-35UC/K9 C3825-BIAB-24/K9 C3825-BIAB-24K9-BF	-	-	2.3.2.0	L	L	NA	L	NA

L - Device with limited support. For details, see the product documents.
 NA - Device and Application functionality combination is not applicable for a given device.
 N - Device is not supported. Y - Device is supported.

Cisco Prime Legacy Device Compatibility Matrix:

https://www.cisco.com/c/dam/en/us/td/docs/Website/enterprise/prime_legacy_device_compatibility_matrix/index.html

DNA Center Compatibility Matrix:

https://www.cisco.com/c/dam/en/us/td/docs/Website/enterprise/dnac_compatibility_matrix/index.html



Question #10 - What is the difference between limited and fully supported devices?

Support Type

Shows the device support level:

- **Supported:** The device pack is tested for all applications on Cisco DNA Center. You can open a service request if any of the Cisco DNA Center functionalities for these devices do not work.
- **Limited:** The device pack for legacy devices is tested only for the following features on Cisco DNA Center.
 - Discovery
 - Topology
 - Device Reachability
 - Config Change Audit
 - Inventory
 - Software Image Management (Software images may not be available for EOL devices on cisco.com. Not recommended for EOL devices.)
 - Template Provisioning (Applicable only for switches.)

For more information, see the [Cisco DNA Center Compatibility Matrix](#).

- **Unsupported:** All remaining Cisco and third-party devices that are not tested and certified on Cisco DNA Center. You can try out various functionalities on Cisco DNA Center for these devices, as a best effort. However, you cannot raise a service request or a bug if Cisco DNA Center features do not work as expected.

Cisco Prime Legacy Device Compatibility Matrix

https://www.cisco.com/c/dam/en/us/td/docs/Website/enterprise/prime_legacy_device_compatibility_matrix/index.html

DNA Center Compatibility Matrix

https://www.cisco.com/c/dam/en/us/td/docs/Website/enterprise/dnac_compatibility_matrix/index.html

Device Support Explanation:

https://www.cisco.com/c/en/us/td/docs/cloud-systems-management/network-automation-and-management/dna-center/2-3-4/user_guide/b_cisco_dna_center_ug_2_3_4/b_cisco_dna_center_ug_2_3_4_chapter_011.html

Question #10 - What is the difference between limited and fully supported devices?

Provision / Inventory

All Routers **Switches** Wireless Controllers Access Points Sensors

Devices (12) Focus: Select

Q Filter devices

0 Selected Tag Actions

<input type="checkbox"/>	Device Name	IP Address	Device Family	Platform	Support Type
<input type="checkbox"/>	SF-A3850-1 3850WLC	10.0.100.103	Switches and Hubs	WS-C3850-12X48U-S	Supported
<input type="checkbox"/>	C3560C.cisco.com	192.168.157.130	Switches and Hubs	WS-C3560C-8PC-S	Limited
<input type="checkbox"/>	C9200L-1.cisco.com	192.168.159.131	Switches and Hubs	C9200L-24P-4G	Supported
<input type="checkbox"/>	C9300_PLS.cisco.com	192.168.158.130	Switches and Hubs	C9300-24U	Supported

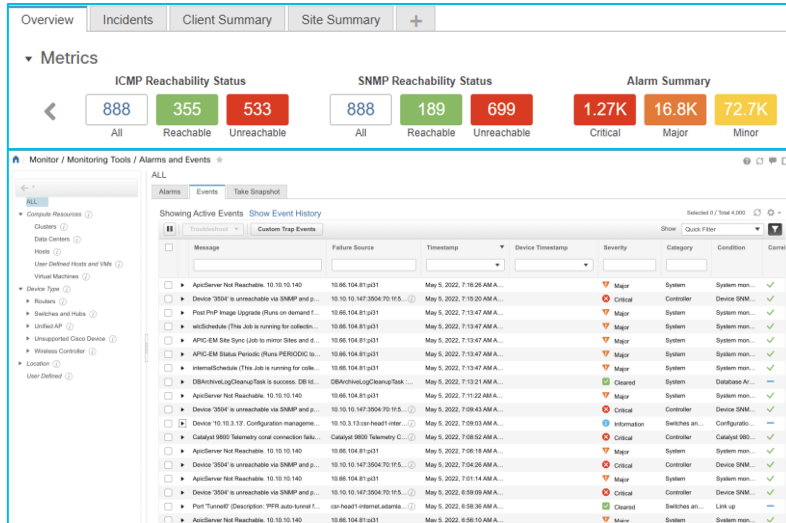


"Doing Prime things
the new way"



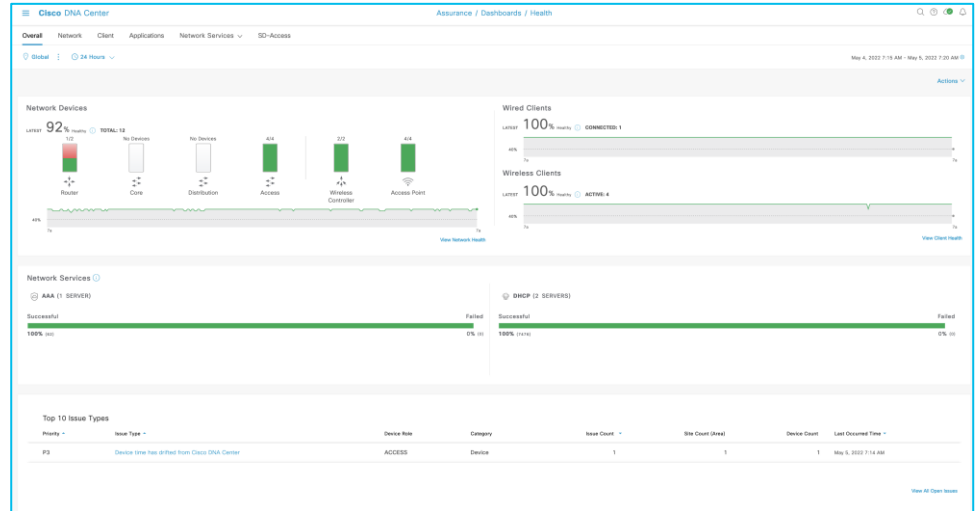
#1 Alarms vs Health/Issues

Cisco Prime Infrastructure



Alarms sent via email or upstream SNMP trap

Cisco DNA Center



Health is primary abstraction:

- Events
- Issues
- Notifications

Cisco DNA Center Events

Client / Client 360

10/10 CLIENT DETAILS

Device: Sensor-Client-18005 OS: Fortinet FortiGate-50B or 310B firewall (accuracy 90%) MAC: 70:F3:5A:7C:89:11 IPv4: 192.168.200.210 IPv6: fe80::72f3:5aff:fe7c:b Status: Connected Capability: 11ac Last seen: Jun 9, 2022 3:10:00 PM Connected Network Device: 1800-colo SSID: 9800 View All Details

Issues Onboarding Path Trace Application Experience Device Info Connectivity

> Issues

> Onboarding Jun 9, 2022 3:12 PM

Event Viewer

Filter Export EQ Find

Jun 9, 2022			
>	Onboarding	3:09:15.117 PM - 3:09:15.157 PM	AP:1800-colo WLAN:9800
>	DHCP	3:08:52.718 PM	AP:1800-colo WLAN:9800
∨	Authenticating	3:05:32.318 PM - 3:05:32.320 PM	Due to Group Key Update Timeout AP:pnp1852 WLAN:9800
	Deleted	3:05:32.320 PM	Group Key Update Timeout
	Authenticating	3:05:32.320 PM	Client Connect Timeout
	Authenticating	3:05:32.318 PM	Key Exchange
>	DHCP	3:04:21.073 PM	AP:pnp1852 WLAN:9800

Cisco DNA Center Assurance / Dashboards / Issues and Events

Issues Events

Global 24 Hours Dec 7, 2022 7:30 AM - Dec 8, 2022 7:30 AM

Router 7:30a 7:30p
Switch
Wireless Controller
AP
Wireless Endpoints
Wireless Endpoints

Events (2870)

Category Type Devices Endpoints Router: 379 Switch: 2092 Wireless Controller: 228 AP: 171

Filter Table Export

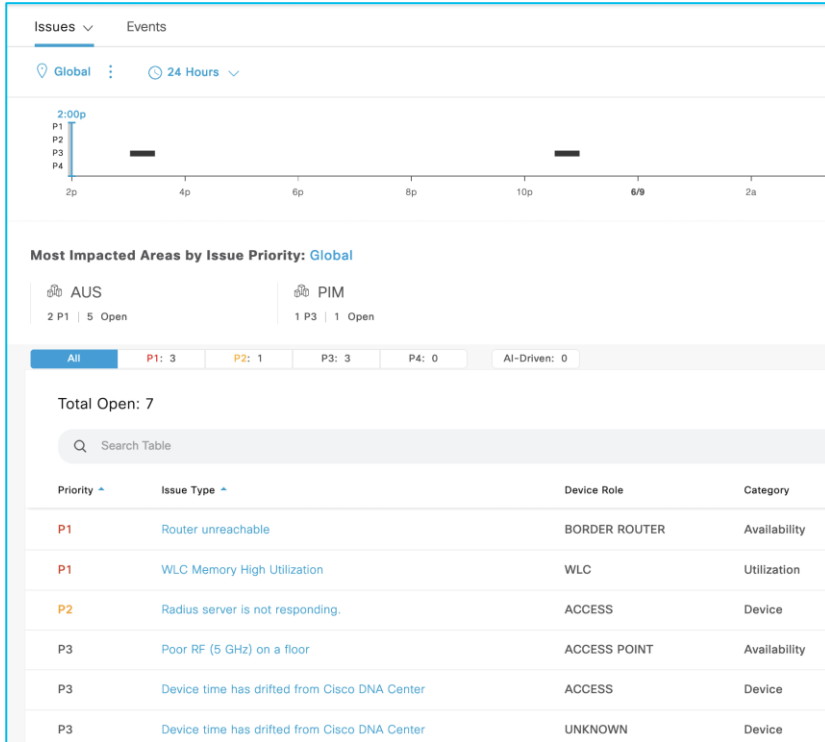
0 Selected

Event Name	Status	Severity	Timestamp	Device Name	Event Type	Device IP
DEVICE_AVAILABILITY_REACHABLE	●	Warning	Dec 8, 2022 7:05:53.095 AM	csr1000k.adamlab.cisco.com	Device Event	10.10.10.115
DEVICE_AVAILABILITY_REACHABLE	●	Warning	Dec 8, 2022 7:00:03.871 AM	trad-4331.adamlab.cisco.com	Device Event	10.10.5.2
DEVICE_AVAILABILITY_REACHABLE	●	Warning	Dec 8, 2022 6:57:16.388 AM	C1100	Device Event	10.10.3.74

Events are syslog/trap/telemetry data sent to Cisco DNA Center

- Viewable in context for device/user 360 or globally.
- Client events are filterable in 2.3.4.x

Cisco DNA Center Issues



An issue represents a problem condition that was detected

- Based on events or other metrics
 - Example: memory/CPU
- Customizable (trigger, severity, location)
- Can be generated by AI tools
- Can leverage MRE for root cause

Cisco DNA Center Issues

- Issues Can leverage MRE for root cause analysis

The screenshot displays the Cisco DNA Center interface for a network device. The main view shows the health of the device 'Switch C9K-BRANCH-STACK' over a 24-hour period. A graph indicates a health event at 4:15 PM. Below the graph, the 'Issues' section shows a single issue: 'Connectivity P1 Interface "GigabitEthernet1/0/24" (Interface description: ***** Uplink #1 to C3650 DISTRI *****) Instance Count: 1'. The issue occurred on Sep 2, 2022 at 4:18 PM. A 'Run Commands' button is visible in the top right corner.

The 'Issues (1)' section details the following:

- Issue:** Connectivity P1 Interface "GigabitEthernet1/0/24" (Interface description: ***** Uplink #1 to C3650 DISTRI *****) Instance Count: 1
- Last Occurred:** Sep 2, 2022 4:13 PM
- Root Cause Analysis:** The interface GigabitEthernet1/0/47 on the device 10.85.54.17 is in an administratively down state.
- Suggested Action:** Please re-enable the interface using "no shutdown". Then retry automated Root Cause Analysis.
- Additional Information:** The TDR cable diagnostics for the interface GigabitEthernet1/0/24 on device 10.85.54.54 does not indicate any physical cable error(s) as the cause for interface down. Please investigate further to determine why the link went down or contact Cisco TAC for further assistance.

Custom Issues – 2.3.5.x

Try New Feature - User Defined Issue
Use "User Defined Issue" to create your own syslog-based issues that are tailored to your own needs and receive notifications on demand.

Create an Issue

Create a user defined issue based of syslog details.

Issue Name*
Create an Issue Name

Description*
Add description here

Syslog Detail

Severity*
4 - Warning

Facility*
CDP

Mnemonic*
NATIVE_VLAN_MISMATCH

Create an Issue

Message Pattern

Syslog Message*
31130: 031134: Dec 5 19:29:36.939:

Preview:
31130: 031134: Dec 5 19:29:36.939: Native VLAN mismatch discovered on GigabitEthernet1/0/47 (100), with 3650-patch-panel GigabitEthernet1/0/4 (8).

Number of Occurrences & Duration

Occurrences*
1

Duration*
0 min

Enabled Priority **P1** Notification

Please configure/subscribe to 'User Defined Issue Notification' in [Manage Subscription](#).
Enabling Notification in current page alone will not be sufficient to receive notification

Custom issues from Syslog messages
Occurrences/Duration to trigger

Cisco DNA Center Notifications

Step 2 - Select Channels

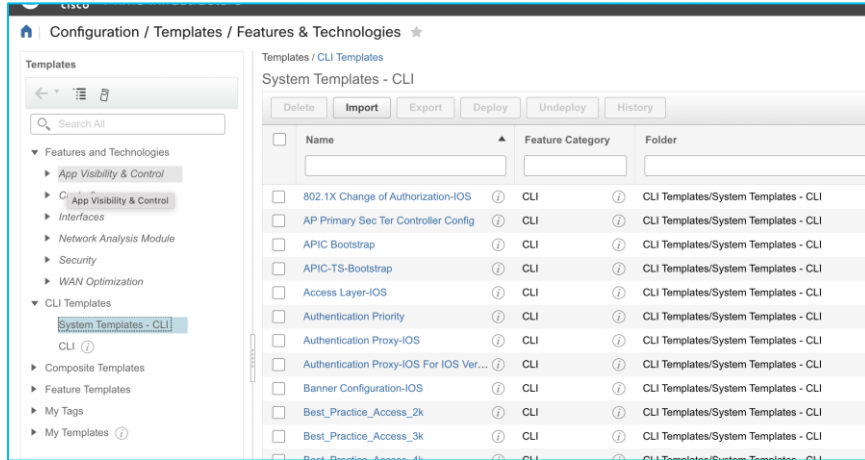
Choose the notification channels

Channel	Description	Supported Events
EMAIL	Send an Email notification	Supported Events (192/209)
PAGERDUTY	POST Cisco DNA Center Event Notifications to Pagerduty	Supported Events (209/209)
REST	Send the data via HTTP push API	Supported Events (208/209)
SNMP	Send data via an SNMP trap	Supported Events (23/209)
SYSLOG	Send data to a Syslog server	Supported Events (205/209)
WEBEX	POST Cisco DNA Center Event Notifications to WEBEX	Supported Events (209/209)

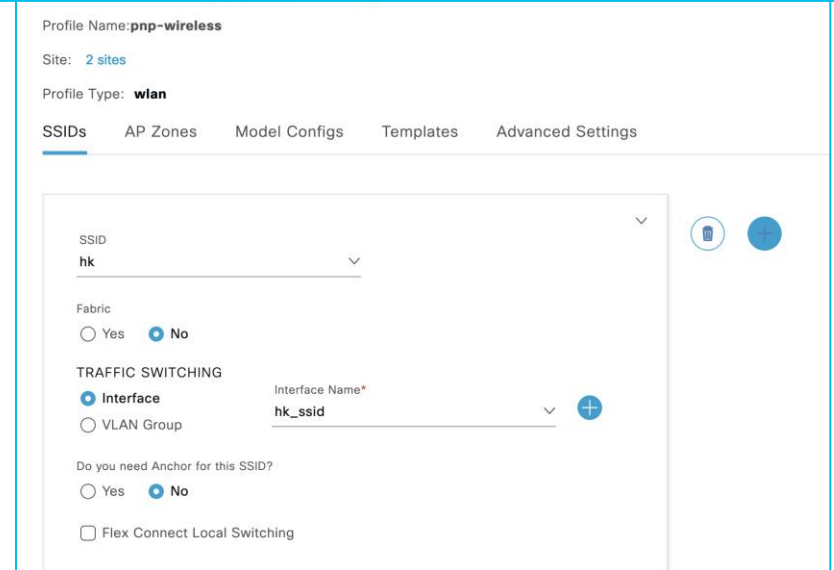
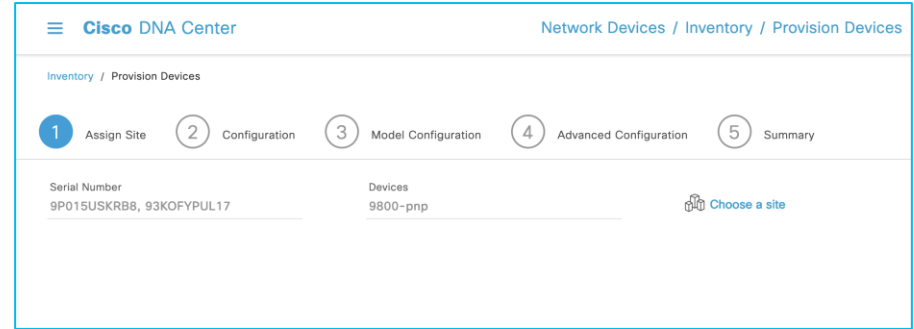
209 issues (2.3.5.x) can be sent to different channels as a notification

#2 Templates vs Intent

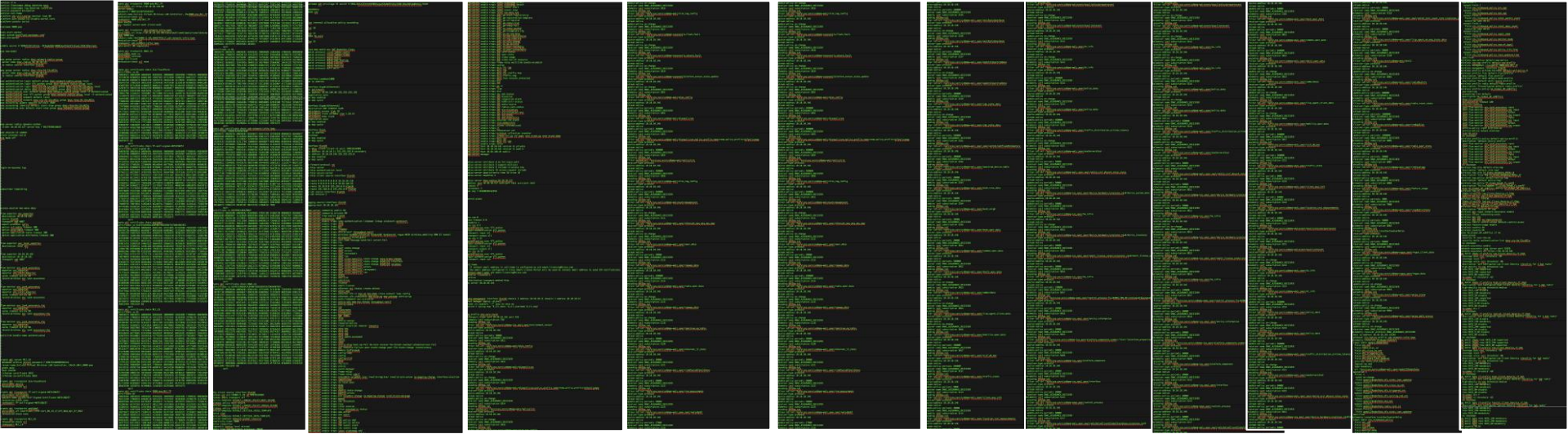
Cisco Prime Infrastructure



Cisco DNA Center



Why Intent?



1600 lines of configuration on a 9800:

- One SSID on one AP in one site.
- Full telemetry and management
- Only "cli" config was 7-line template - to configure the OBM interface + routes

#3 Compliance

Cisco Prime Infrastructure

Tab	Tab Area	Field	Value
Rule Information		Rule Title	snmp-server community having non-standard entries
Platform Selection			Cisco IOS Devices, Cisco IOS-XE Devices
Condition 1			
Condition Details	Condition Scope Details	Condition Scope	Configuration
	Block Options	Block Start Expression (This field will be enabled only when Parse as Blocks checkbox is selected)	*snmp-server community .*
	Condition Match Criteria	Operator	Matches the expression
		Value	snmp-server community (*.*)
Action Details	Select Match Action	Select Action	Continue
	Select Does Not Match Action	Select Action	Does Not Raise a Violation
Condition 2			
Condition Details	Condition Scope Details	Condition Scope	Previously Matched Blocks
	Block Options	Block Start Expression (This field will be enabled only when Parse as Blocks checkbox is selected)	*snmp-server community .*
	Condition Match Criteria	Operator	Matches the expression
		Value	snmp-server community ((public RO) (private RW))
Action Details	Select Match Action	Select Action	Continue
	Select Does Not Match Action	Select Action	Raise a Violation
		Violation Message Type	User Defined Violation Message
		Violation Text	Detected unauthorized community string <1.1>.

Manually define the compliance policy rules and these are platform specific
Raw parsing of entire CLI (1600 lines)

Cisco DNA Center

Compliance Summary View Preference

Next Compliance check is scheduled on September 16, 2022 6:25 PM [Run Compliance Check](#)

⚠️ EoX - End of Life

Compliance last run on: Sep 16th, 2022, 01:20:45 PM

Module : ▲ **Compliant**

Software : ● **Compliant**

Hardware : ● **Compliant**

❌ Startup vs Running Configuration

Compliance last run on: Sep 16th, 2022, 01:20:44 PM

1 day since out of sync

Lines added: **1**

Lines removed: **2**

Lines modified: **0**

❌ Network Profiles

Non-Compliant since Sep 16th, 2022, 03:08:31 PM

Compliance last run on: Sep 16th, 2022, 01:20:46 PM

1 Open Violations

CLI Template: 1

✅ Application Visibility

Compliant since Sep 16th, 2022, 01:30:09 PM

Compliance last run on: Sep 16th, 2022, 01:30:09 PM

0 Open Violations

✅ Software Image

Compliant since May 2nd, 2022, 03:53:28 PM

Compliance last run on: Sep 16th, 2022, 01:20:44 PM

17.08.01 Golden Image

Running Version: **17.8.1**

Stack Member Status: **Up to Date**

✅ Critical Security Advisories

Compliant since May 7th, 2022, 08:01:15 PM

Compliance last run on: Sep 16th, 2022, 01:20:45 PM

0 Open Violations

Compliance Summary / Network Profiles

CLI Template (1) Wireless (2)

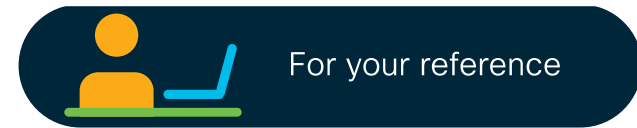
CLI Deviations As of: Jun 9, 2022 6:40 PM

Search Table

Template	Realize Template: pnp1-config
pnp1-config	<pre> 1 # add the OBM management interface. L3 2 int g1 3 1 no switchport 4 #ip address 10.66.104.98 255.255.255.192 5 ip address 10.66.104.86 255.255.255.192 6 2 7 3 ip route 0.0.0.0 0.0.0.0 10.66.104.65 </pre>

Native compliance based on DNA Center capabilities

Compliance: Network Profiles – Switches



Cisco DNA Center

All Devices / C9K-BRANCH-STACK

C9K-BRANCH-STACK Run Commands View 360 Last updated: 3:01 PM

Reachable Managed IP Address: 10.85.54.54 Device Model: Cisco Catalyst 9300 Switch Role: ACCESS Uptime: 122 days 23 hrs 9 mins Site: Global/Canada/Ontario/Toronto/TBRANCH

DETAILS

- Interfaces
 - Ethernet Ports
 - Native VLANs
- Hardware & Software
- Configuration
- Power
- Fans
- SFP Modules
- User Defined Fields
- Config Drift
- Stack

SECURITY

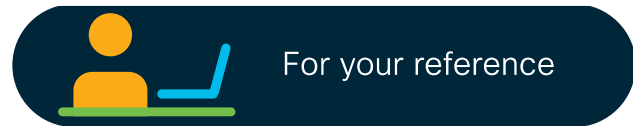
- Advisories

Compliance Summary

No events detected to trigger compliance check [Run Compliance Check](#)

Compliance Item	Status	Last Run	Details
Startup vs Running Configuration	Compliant	Sep 2nd, 2022, 03:01:30 PM	4 mins since out of sync Lines added: 0 Lines removed: 1 Lines modified: 0
Network Profiles	Non-Compliant	Sep 2nd, 2022, 03:01:45 PM	1 Changes CLI Template: 1
Software Image	Compliant	Sep 2nd, 2022, 03:01:30 PM	17.08.01 Golden Image Version Running Version: 17.8.1
Critical Security Advisories	Compliant	Sep 2nd, 2022, 03:01:30 PM	0

Compliance: Network



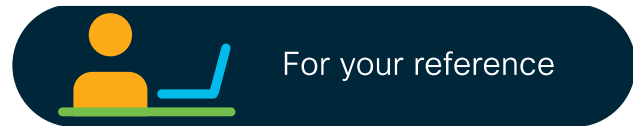
Config pushed by DNA Center via templates:

```
interface GigabitEthernet1/0/7
  description Description pushed by DNAC Template -- lan
!
interface GigabitEthernet1/0/8
  description Description pushed by DNAC Template -- lan
```

Out of band changes:

```
C9K-BRANCH-STACK#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
C9K-BRANCH-STACK(config)#int gig 1/0/8
C9K-BRANCH-STACK(config-if)#no description
```

Compliance: Network



Config pushed by DNA Center via templates:

```
interface GigabitEthernet1/0/7
  description Description pushed by DNAC Template -- lan
!
interface GigabitEthernet1/0/8
  description Description pushed by DNAC Template -- lan
```

Out of band changes:

```
C9K-BRANCH-STACK#conf t
Enter configuration comm
C9K-BRANCH-STACK(config)
C9K-BRANCH-STACK(config-
```

Compliance Summary / Network Profiles

CLI Template (1)

CLI Deviations As of: May 26, 2022 2:25 PM

Search Table

Template

PDESCRIPTION

1 Records Show Records: 10 1 - 1

Realize Template: PDESCRIPTION

2	2		description Description pushed by DNAC Temp
3	3	late -- lan	
4	4		interface GigabitEthernet1/0/8
5	5	late -- lan	description Description pushed by DNAC Temp
6	6		
7	7		
8	8		alias exec showntp show nto status

The highlighted text in red are the missing CLIs.

Compliance: Network Profiles – Wireless

Cisco DNA Center

All Devices / STL01-C9800-CL.dlab.local

STL01-C9800-CL.dlab.local [Run Commands](#) [View 360](#) Last updated: 11:16 AM [Refresh](#)

Reachable | Managed | IP Address: 172.16.255.35 | Device Model: Cisco Catalyst 9800-CL Wireless Controller for Cloud | Role: ACCESS | Uptime: 22 hrs 56 mins | Site: Global/Canada/Quebec/Saint-Lambert/STL01

DETAILS

- Interfaces
 - Ethernet Ports
 - Virtual Ports
- Hardware & Software
- User Defined Fields
- Config Drift
- Wireless Info
- Mobility

SECURITY

- Advisories

COMPLIANCE

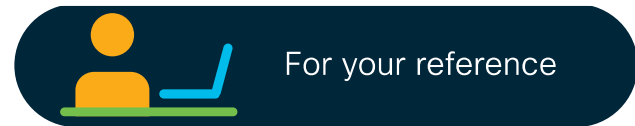
- Summary

Compliance Summary

No events detected to trigger compliance check [Run Compliance Check](#)

- Startup vs Running Configuration** (Info)
 - Compliance last run on: Apr 2nd, 2022, 11:16:36 AM
 - 1 hr since out of sync
 - Lines added: 2
 - Lines removed: 2
 - Lines modified: 0
- Network Profiles** (Info) Non-Compliant since Feb 9th, 2022, 02:38:20 AM
 - Compliance last run on: Apr 2nd, 2022, 11:16:36 AM
 - 3 Changes [+1 more](#)
 - Model Config: 1
 - Wireless: 1
- Application Visibility** (Info)
 - Compliant since Apr 2nd, 2022, 11:16:54 AM
 - Compliance last run on: Apr 2nd, 2022, 11:16:54 AM
 - 0 Changes
- Software Image** (Info)
 - Compliant since Feb 3rd, 2022, 05:10:45 PM
 - Compliance last run on: Apr 2nd, 2022, 11:16:36 AM
 - 17.07.01 Golden Image Version
 - Running Version: 17.7.1
- Critical Security Advisories** (Info)
 - Compliant since Feb 8th, 2022, 07:00:11 PM
 - Compliance last run on: Apr 2nd, 2022, 11:16:36 AM
 - 0

Compliance: Network Profiles – Wireless



Cisco DNA Center

All Devices / STL01-C9800-CL.dlab.local

STL01-C9800-CL.dlab.local Run Commands View 360 Last updated: 11:16 AM Refresh

Reachable Managed IP Address: 172.16.255.35 Device Model: Cisco Catalyst 9800-CL Wireless Controller for Cloud Role: ACCESS Uptime: 22 hrs 56 mins Site: Global/Canada/Quebec/Saint-Lambert/STL01

DETAILS

Interfaces

- Ethernet Ports
- Virtual Ports
- Hardware & Software
- User Defined Fields
- Config Drift
- Wireless Info
- Mobility

SECURITY

- Advisories

COMPLIANCE

- Summary

Compliance Summary / Network Profiles

CLI Template (1) Model Config (1) **Wireless (1)**

Search Table

Model Name	Attribute	Status	Intended Value	Actual Value
Wlan/BestCorpWi_Global_NF_e5f0c407	FT Adaptive	Changed	Adaptive	Disabled

Showing 1 of 1

Compliance: Network Profiles – Wireless



Cisco DNA Center

All Devices / STL01-C9800-CL.dlab.local

STL01-C9800-CL.dlab.local Run Commands View 360 Last updated: 11:16 AM Refresh

Reachable Managed IP Address: 172.16.255.35 Device Model: Cisco Catalyst 9800-CL Wireless Controller for Cloud Role: ACCESS Uptime: 22 hrs 56 mins Site: Global/Canada/Quebec/Saint-Lambert/STL01

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- Interfaces
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SECURITY

- Advisories

COMPLIANCE

- Summary

Compliance Summary / Network Profiles

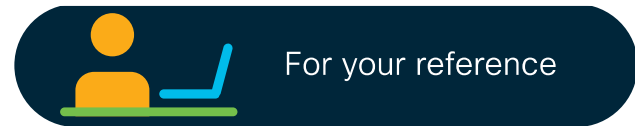
CLI Template (1) **Model Config (1)** Wireless (1)

Search Table

Model Name	Attribute	Status	Intended Value	Actual Value
Policy_Profile/BestCorpWi_Global_NF_e5f0c407	IPv4 DHCP Required	Changed	YES	NO

Showing 1 of 1

Compliance: Network Profiles – Wireless



Cisco DNA Center

All Devices / STL01-C9800-CL.dlab.local

STL01-C9800-CL.dlab.local Run Commands View 360 Last updated: 11:16 AM Refresh

Reachable Managed IP Address: 172.16.255.35 Device Model: Cisco Catalyst 9800-CL Wireless Controller for Cloud Role: ACCESS Uptime: 22 hrs 56 mins Site: Global/Canada/Quebec/Saint-Lambert/STL01

DETAILS

Interfaces

- Ethernet Ports
- Virtual Ports
- Hardware & Software
- User Defined Fields
- Config Drift
- Wireless Info
- Mobility

SECURITY

- Advisories

COMPLIANCE

- Summary

Compliance Summary / Network Profiles

CLI Template (1) Model Config (1) Wireless (1)

CLI Deviations As of: Apr 2, 2022 11:18 AM

Search Table

Template

- Enabling SI

1 Records Show Records: 10 1 - 1

Realize Template: Enabling SI

1	1	ap dot11 24ghz SI
2		ap dot11 5ghz SI

Config Drift

The screenshot displays the Cisco DNA Center Configuration Changes interface. On the left is a navigation menu with categories: Ethernet Ports, VLANs, Hardware & Software, Configuration, Power, Fans, SFP Modules, User Defined Fields, REP Rings, Stack, SECURITY (Advisories), and COMPLIANCE (Summary). The 'Config Drift' option is highlighted in a red box.

The main content area shows configuration changes saved on the internal Cisco DNA Center server. It indicates that 15 total config drifts and 1 total labelled config will be saved. A 'Change History (Running Config)' section allows filtering by 'Config Drift Date Range' from Sep 30, 2022, to Oct 15, 2022.

A line graph titled 'Config Drift Days' plots the 'No. of Lines' (y-axis, 400-900) against time (x-axis, Oct 14 11:39-11:46). The graph shows an 'In-band Config Drift' (blue dot) at approximately 450 lines and an 'Out-of-band Config Drift' (purple dot) at approximately 850 lines. A 'Labelled Config' (orange dot) is also present at the start of the timeline.

Below the graph, a 'Config Drift Version' dropdown is set to 'CCA_C9K-TBRANCH-Std-Config', with a 'Remove Label' button and an edit icon. To the right, a 'Config Drift Version' for 'October 14, 2022 11:48 AM' is shown, with a 'Running Config (784 Lines)' view. A red box highlights a portion of this config, showing lines 25 through 29:

```
25 avc sd-service
26 segment AppRecognition
27 controller
28 address 10.85.54.177
29 destination-ports sensor-exporter 21730
```

Out-of-band Config Drift

Config version with changes made outside of Cisco DNA Center since it's previous version.

Lines Added:	322
Lines Removed:	0
Lines Modified:	0
Triggered By:	Config Change Event
Terminal Name:	vtty2
Login IP:	10.24.150.225
Username:	lila
Config Method:	console

October 14, 2022 11:48 AM

#4 - Reports - Other places to get data...

1

The screenshot shows the 'Connectivity RSSI' dashboard. At the top, there are filter options for 'Top Location', 'Top Access Point', 'Top Host Device Type', and 'Top SSID'. Below these are four horizontal bars representing the top items for each category. A 'Show more' link is visible. The current data is selected for 'Jun 9, 2022 12:05 AM - 12:10 AM'. A search bar is present above a table. An 'Export' button is highlighted with a red box.

Identifier	Device Type	Health	AP Name	RSSI	Avg RSSI	Location	Last Seen	SSID
1800s	Sensor-Client-1800S	10	pmp1802	-15 dBm	-13 dBm	AUS/PERS/F4	Jun 9, 12:10 AM	9800
new1800s	Sensor-Client-1800S	10	1800-colo	-25 dBm	-24 dBm	AUS/PERS/F4	Jun 9, 12:09 AM	9800
1rad	RaspberryPi-Device	10	pmp1802	-20 dBm	-19 dBm	AUS/PERS/F4	Jun 9, 12:06 AM	dot1x

2

The screenshot shows a page with three sections: 'Applications', 'Clients', and 'Compliance'. Each section contains a table of API endpoints with columns for Method, Name, Description, URL, and Actions.

Method	Name	Description	URL	Actions
GET	Applications ^{HTTP}	Intent API to get a list of applications for a specific site, a device, or a client device's MAC address. For a combination of a specific application with...	/application-health	--

Method	Name	Description	URL	Actions
GET	Get Overall Client Health ^{HTTP}	Returns Overall Client Health information by Client type (Wired and Wireless) for any given point of time	/client-health	--
GET	Client Proximity ^{HTTP}	This Intent API will provide client proximity information for a specific wireless user. Proximity is defined as presence on the same floor at the same time as...	/client-proximity	--
GET	Get Client Enrichment Details ^{HTTP}	Enriches a given network End User context (a network user-id or end user's device Mac Address) with details about the user, the devices that the user is...	/client-enrichment-details	--
GET	Get Client Detail ^{HTTP}	Returns detailed Client information retrieved by Mac Address for any given point of time.	/client-detail	--

Method	Name	Description	URL	Actions
GET	Get Compliance Detail Count ^{HTTP}	Return Compliance Count Detail	/compliance/detail/count	--
GET	Compliance Details of Device ^{HTTP}	Return compliance detailed report for a device.	/compliance/{deviceUuid}/detail	--
GET	Device Compliance Status ^{HTTP}	Return compliance status of a device.	/compliance/{deviceUuid}	--

Most Dashlets in assurance can be downloaded

Use API directly to get some data

#4 Reports

Prime Parity related reports added to DNA Center



Examples ... not an exhaustive list



Network Compliance Report



EoX Data Report



Port Reclaim report



Worst Interferers Report



AP Detail Report



AP Report (Traffic and Client Breakdown)



Busiest Clients Report



Client Detail Report



Client Sessions Report



Client Trend Report



Detailed VLAN Report



Device CPU and Memory Utilization Report



Executive Summary Report



Network Devices Availability Report



PoE and Power Budget Report



Port Capacity Report - Network Interface utilization Report



Reports - 12-month data retention



Rogue reporting



Schedule Reports as email attachment



Channel Change Count Report



Transmit Power Change Count Report

Custom Reports DNAC 2.3.5.x

Cisco DNA Center Flexible Report

Name Your Report and Select a Time Range for Flexible Report

Let's give your report a meaningful name and target time range.

Report Name*
Flexible Report - Dec 07 2022 at 07:40

TIME RANGE

- Last 3 Hours
- Last 24 Hours
- Last 7 Days
- Last 30 Days
- Custom

Create a Subreport

Compose the content of this report one subreport at a time. Start by giving the subreport a name and selecting a report type. Click on the info icon to learn more about the difference between report types.

Subreport Name*
Sub report 1

Select an entity

- AP
- Client**
- Network Device

Create a Subreport

Compose the content of this report one subreport at a time. Start by giving the subreport a name and selecting a report type. Click on the info icon to learn more about the difference between report types.

Subreport Name*
Sub report 1

Select an entity
Client

⚠ Client entity data available for past 360 days.

Report Type Top N

- Trend
- Summary
- Top N
- Distribution

Top N*

Attributes available for this report type (43)

#5 Accessing Client Information

The screenshot shows the Cisco DNA Center interface for Client Devices. A blue box labeled '1' highlights the 'Client' tab in the top navigation bar. Another blue box labeled '2' highlights the 'Export' button in the top right corner of the client list area. A text box on the right side of the page provides instructions: 'Trend: Shows all clients for the window: 24h/7d', 'Export: dump all fields, all data in csv', and 'Fields: Add additional information'. The main content area shows a table of client devices with columns for Identifier, IPv4 Address, Device Type, Health, Tracked, Usage, AP Name, Band, RSSI, Location, Last Seen, and Capability. The table contains four records.

1

2

Trend: Shows all clients for the window: 24h/7d
Export: dump all fields, all data in csv
Fields: Add additional information

Client Devices (4)

LATEST TREND

TYPE Wireless Wired OVERALL HEALTH All Poor Fair Good Inactive No Data

DATA Onboarding Time >= 10s Association >= 5s DHCP >= 5s Authentication >= 5s RSSI <= -72 dBm SNR <= 9 dB

0 Selected Actions

Identifier	IPv4 Address	Device Type	Health	Tracked	Usage	AP Name	Band	RSSI	Location	Last Seen	Capability
brad	192.168.200.216	RaspberryPI-Device	10	No	3.98 kB	pnp1852	5 GHz	-18 dBm	AUS/PER5/F4	Nov 22, 10:25 AM	11ac
new1800s	192.168.200.211	Sensor-Client-1800S	10	No	--	pnp1852	5 GHz	-24 dBm	AUS/PER5/F4	Nov 22, 10:24 AM	11ac
1800s	192.168.200.210	Sensor-Client-1800S	10	No	7.78 kB	pnp3802	5 GHz	-26 dBm	AUS/PER5/F4	Nov 22, 10:23 AM	11ac
pi3	192.168.200.214	Linux-Workstation	10	No	2.74 kB	pnp3802	2.4 GHz	-17 dBm	AUS/PER5/F4	Nov 22, 10:23 AM	11ac

4 Records Show Records: 10 1 - 4

Extra client fields

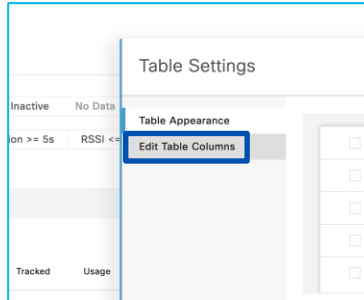


Table Settings

Select which columns to display.

Column Name	Toggle
Hostname	<input type="checkbox"/>
UserID	<input type="checkbox"/>
MAC Address	<input type="checkbox"/>
IPv4 Address	<input checked="" type="checkbox"/>
IPv6 Address	<input type="checkbox"/>
Device Type	<input checked="" type="checkbox"/>
Health	<input checked="" type="checkbox"/>
Tracked	<input checked="" type="checkbox"/>
Onboarding Health	<input type="checkbox"/>
Connected Health	<input type="checkbox"/>
Usage	<input checked="" type="checkbox"/>
AP Name	<input checked="" type="checkbox"/>
AP Mode	<input type="checkbox"/>
AP IP Address	<input type="checkbox"/>
AP MAC	<input type="checkbox"/>
WLC Name	<input type="checkbox"/>
Connection Status	<input type="checkbox"/>

Band	<input checked="" type="checkbox"/>
RSSI	<input checked="" type="checkbox"/>
Avg RSSI	<input type="checkbox"/>
SNR	<input type="checkbox"/>
Avg SNR	<input type="checkbox"/>
Location	<input checked="" type="checkbox"/>
Last Seen	<input checked="" type="checkbox"/>
AP Group	<input type="checkbox"/>
SSID	<input type="checkbox"/>
OS	<input type="checkbox"/>
Auth Type	<input type="checkbox"/>
VLAN ID	<input type="checkbox"/>
VNID	<input type="checkbox"/>
Last Onboarded	<input type="checkbox"/>
Onboarding Time	<input type="checkbox"/>
Last Associated	<input type="checkbox"/>
Association Time	<input type="checkbox"/>
Last Auth Time	<input type="checkbox"/>
Authentication Time	<input type="checkbox"/>

Last Auth Time	<input type="checkbox"/>
Authentication Time	<input type="checkbox"/>
Authentication Server	<input type="checkbox"/>
Last DHCP Request	<input type="checkbox"/>
DHCP Response Time	<input type="checkbox"/>
DHCP Server	<input type="checkbox"/>
Roaming Time	<input type="checkbox"/>
Session Duration	<input type="checkbox"/>
Tx	<input type="checkbox"/>
Rx	<input type="checkbox"/>
Data Rate	<input type="checkbox"/>
Association	<input type="checkbox"/>
Retries	<input type="checkbox"/>
Capability	<input checked="" type="checkbox"/>
Bridge-Mode Virtual Machine	<input type="checkbox"/>

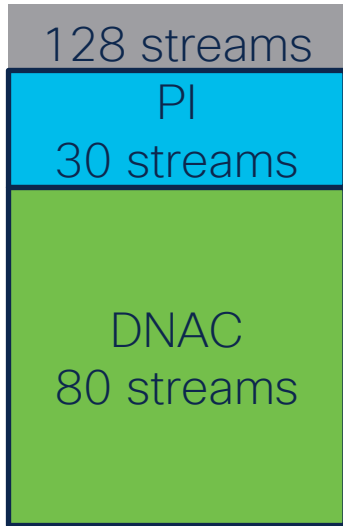
Cancel Reset All Settings Apply

Don't forget to apply when changing

#6 Network settings and credentials

The screenshot shows the Cisco DNA Center interface. The top navigation bar includes the Cisco logo, the text 'Cisco DNA Center', and the current page path 'Design / Network Settings'. Below this is a secondary navigation bar with tabs for 'Network', 'Device Credentials', 'IP Address Pools', 'SP Profiles', 'Wireless', 'Telemetry', and 'Security and Trust'. The main content area is titled 'Network Settings' and contains a search bar, a 'Find Hierarchy' dropdown, and a 'Search Help' link. A left-hand navigation pane shows a tree structure of devices, including 'Global', 'AUS', 'brownfield', 'C', 'CLMEL', 'f1', 'DC - syd', 'deak', 'EK', 'flex_area', 'HongKong', 'nirvana', and 'N7'. The main content area displays configuration options for an 'AAA Server', including checkboxes for 'Network' and 'Client/Endpoint', radio buttons for 'ISE' and 'AAA', and a text field for the IP address '10.66.104.67'. A modal dialog box titled 'Add Servers' is open in the foreground, featuring a close button (X) in the top right corner. The dialog contains three checked checkboxes: 'AAA', 'NTP', and 'Stealthwatch Flow Destination', and one unchecked checkbox: 'Image Distribution'. At the bottom of the dialog are 'Cancel' and 'OK' buttons.

#7 DNAC + PI telemetry in 9800 WLC



Telemetry streams supported:

- 100 streams < 17.6, **128 streams in 17.6+**

```
WLC#function removeall() {  
  for id in `sh run | grep telemetry | cut -f4 -d' '`  
  do  
    conf t  
    no telemetry ietf subscription $id  
  exit  
done  
}  
WLC#removeall
```

Be careful, this removes all streams

<https://www.cisco.com/c/en/us/products/collateral/wireless/catalyst-9800-series-wireless-controllers/guide-c07-743627.htm>

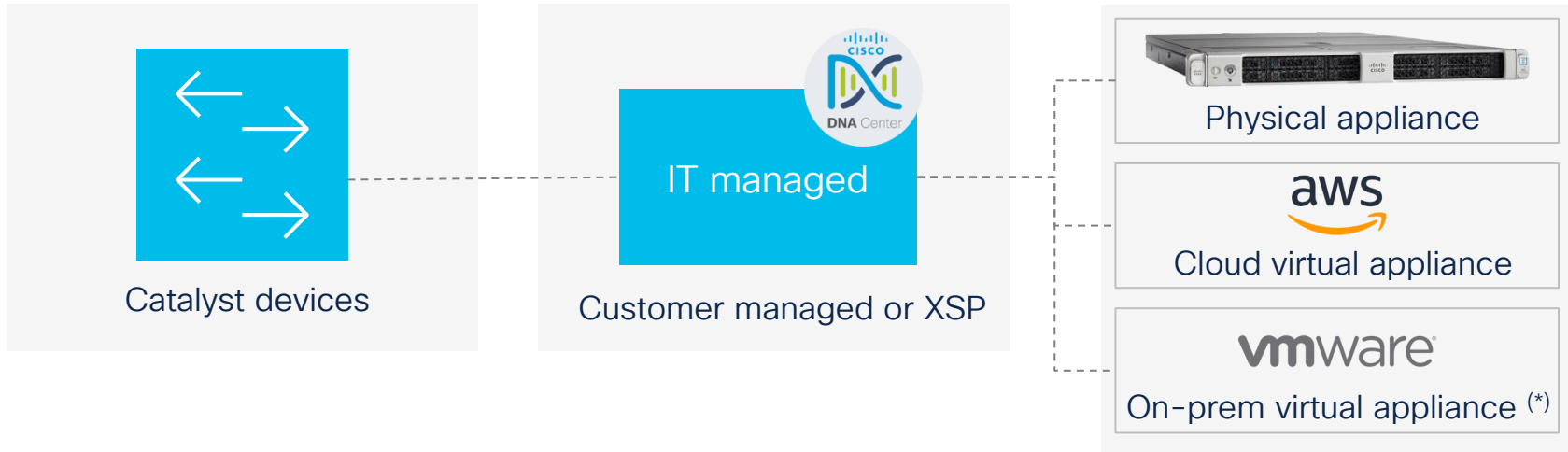
<https://www.cisco.com/c/en/us/support/docs/wireless/catalyst-9800-series-wireless-controllers/214286-managing-catalyst-9800-wireless-controll.html>



Deployment Options




Cisco DNA Center Form Factors



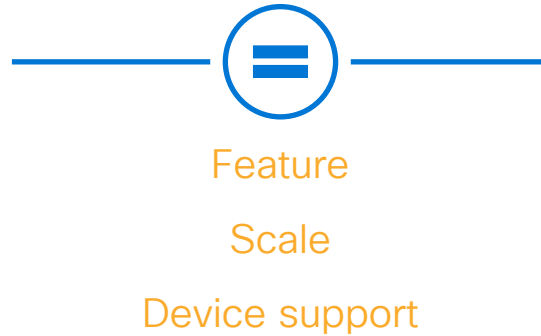
(*) Future

Features, scale, device support


DN2-HW-APL
(44 core appliance)



A photograph of a Cisco DN2-HW-APL hardware appliance, a rack-mountable server with a silver and black finish, featuring multiple drive bays and a Cisco logo on the front panel.




Cloud
virtual appliance



The AWS logo, featuring the word "aws" in a dark blue, lowercase, sans-serif font, with a curved orange arrow underneath it pointing from the 'a' to the 's'.

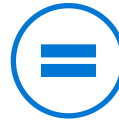
On prem
virtual appliance



The VMware logo, featuring the word "vmware" in a dark grey, lowercase, sans-serif font.

Features, scale, device support

DN2-HW-APL
(44 core appliance)



Automation
Assurance
SD-Access
Integrations
25K End points
5K Devices

Cloud
virtual appliance



On prem
virtual appliance



Physical Appliance Scale Considerations - 2.3.3

Attribute	DN2-HW-APL 44 cores	DN2-HW-APL-L 56 cores	DN2-HW-APL-XL 112 cores	DN2-HW-APL-XL (3-node)
Devices (routers, switches, WLC's)	1,000	2,000	5,000	24,000 overall 10K non-APs + 6K AP's or 6K non-AP's + 18K APs
AP's	4,000	6,000	13,000	
Number of elements in hierarchy (areas, buildings, and floors)	1500	3000	6000	6000
Endpoints (concurrent)	25,000	40,000	100,000	300,000

(*) Scale for non-fabric deployments

(*) For all attributes related to scale check the DNA Center Datasheet:

<https://www.cisco.com/c/en/us/products/collateral/cloud-systems-management/dna-center/nb-06-dna-center-data-sheet-cte-en.html>

Virtual Appliance specifications

VA Form Factor	Specifications	Features and Scale
DNAC Virtual Appliance on AWS	<ul style="list-style-type: none">Type: AMICPU: 32vCPUMem: 256GBStorage: 4TBStorage Bandwidth: 180Mbps (bi-directional max)IOPS: 2000-2500Instance Type: r5a.8xlarge	<ul style="list-style-type: none">Feature Parity from 2.3.3.x release and above across:<ul style="list-style-type: none">Automation, Assurance, System, SPA, SDA and integrationsScale parity with current DN2-HW-APL(44 core appliance):<ul style="list-style-type: none">25K End points5K Devices1500 sites
DNAC Virtual Appliance On premise	<ul style="list-style-type: none">Type: OVACPU: 32vCPUMem: 256GBStorage: 4TBStorage Bandwidth: 180Mbps (bi-directional max)IOPS: 2000-2500	<ul style="list-style-type: none">Feature Parity from 2.3.5.x release and above across:<ul style="list-style-type: none">Automation, Assurance, System, SPA, SDA and integrationsScale parity with current DN2-HW-APL(44 core appliance):<ul style="list-style-type: none">25K End points5K Devices1500 sites

Cisco DNA Center Virtual Appliance - AWS



No additional CAPEX associated, OPEX-based costs



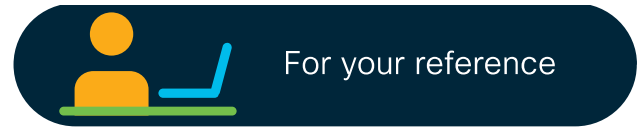
Quicker time to value



Attractive for Prime to DNA Center migration



No cluster deployment option: High availability using AWS features



Deployment models

DNAC physical Appliance	Capex	Cisco hardware	3 x sizes	Today
DNAC VA Cloud Hosted	Opex	Public cloud	1 x size	GA: Mar '23**
DNAC VA On premise	Capex	Customer hardware	1 x size	GA: H2CY23**

Cisco DNAC Virtual Appliance will be a \$0 PID

** Dates subject to change



Call to Action



Call to action

- Learn more about DNA Center:
 - Sign up for The Cisco DNA Center Demo Series
 - cs.co/CiscoDNACDemo
 - Check out the comprehensive YouTube video library:
 - cs.co/dnac-youtube
- Run the PDART Tool to understand their readiness to migrate
- Work on the migration plan including device compatibility, form factor, use case analysis, co-existence plan, etc.
- When ready for migration, engage Cisco or Partner SE for support
- Share the success stories

To Learn More ...



cisco.com/go/dnacenter



cs.co/dnac-youtube



cs.co/dnac-resources



cs.co/CiscoDNACDemo



dcloud.cisco.com

Complete your Session Survey

- Please complete your session survey after each session. Your feedback is important.
- Complete a minimum of 4 session surveys and the Overall Conference survey (open from Thursday) to receive your Cisco Live t-shirt.
- All surveys can be taken in the Cisco Events Mobile App or by logging in to the Session Catalog and clicking the "Attendee Dashboard" at



<https://www.ciscolive.com/emea/learn/sessions/session-catalog.html>

Continue Your Education



Visit the Cisco Showcase for related demos.



Book your one-on-one Meet the Engineer meeting.



Attend any of the related sessions at the DevNet, Capture the Flag, and Walk-in Labs zones.



Visit the On-Demand Library for more sessions at ciscolive.com/on-demand.



The bridge to possible

Thank you

CISCO *Live!*

CISCO *Live!*

ALL IN