

Choosing the Right Cisco Catalyst Center Deployment Model for Your Network

cisco Live !

Lila Rousseaux, Principal Solutions Engineer
@lila_rousseau

Cisco Webex App

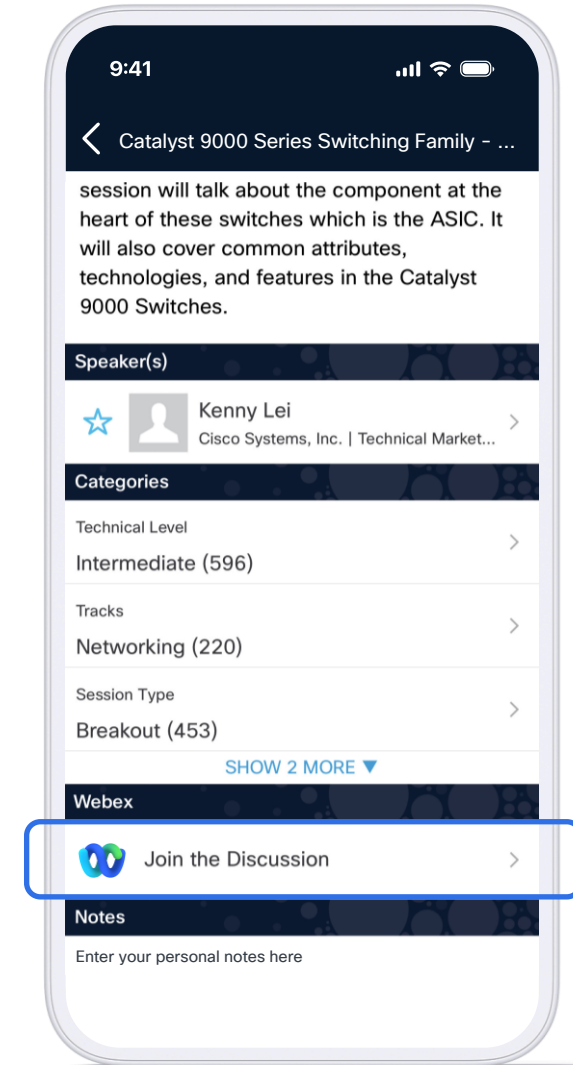
Questions?

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

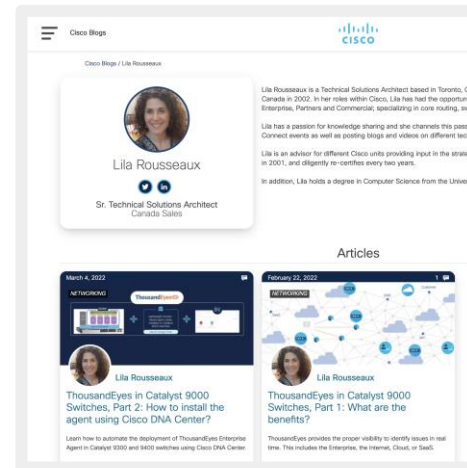
Webex spaces will be moderated by the speaker until 14 November 2025.



<https://ciscolive.ciscoevents.com/ciscolivebot/#BRKOPS-2698>

Who is Lila?

- Principal Solutions Engineer, Americas Networking Sales
 - Based Toronto Canada
 - Joined Cisco in 1999
 - CCIE #6899
 - Content Creation
-
- Mom
 - Fitness
 - Travel



Agenda

- 01 **Physical and virtual appliance options**
- 02 **High availability**
- 03 **Disaster Recovery**
- 04 **Scaling considerations and capacity planning**
- 05 **Catalyst Center Global Manager**
- 06 **Site-based RBAC**
- 07 **Backup and Restore**

Paradox of Choice

AI Generated Image
Prompt: "Produce a photo of an ice cream shop illustrating the paradox of choice with SO many flavours. Leave the whiteboard blank"



Physical and Virtual Appliance Options

Today's Mission: Architect Catalyst Center to Scale, Adapt, and Endure

Guiding Questions from this session:

 **What form factor best fits our needs based on our scale and organizational requirements?**

 **Is a distributed environment necessary? How would we manage it?**

 **Do we need resiliency? How do we design for resiliency and recovery?**

 **How do we future-proof growth – horizontally or vertically?**

Which Catalyst Center Appliance do I need and how many?

Scale Out

Latency (RTT) between Cisco Catalyst Center and devices

200ms RTT

Regional Catalyst
Centers
CCGM

Scale Up

Scaling limits of a Cisco Catalyst Center appliance

Devices,
Site Elements,...

M < L < XL <
Cluster
SB-RBAC

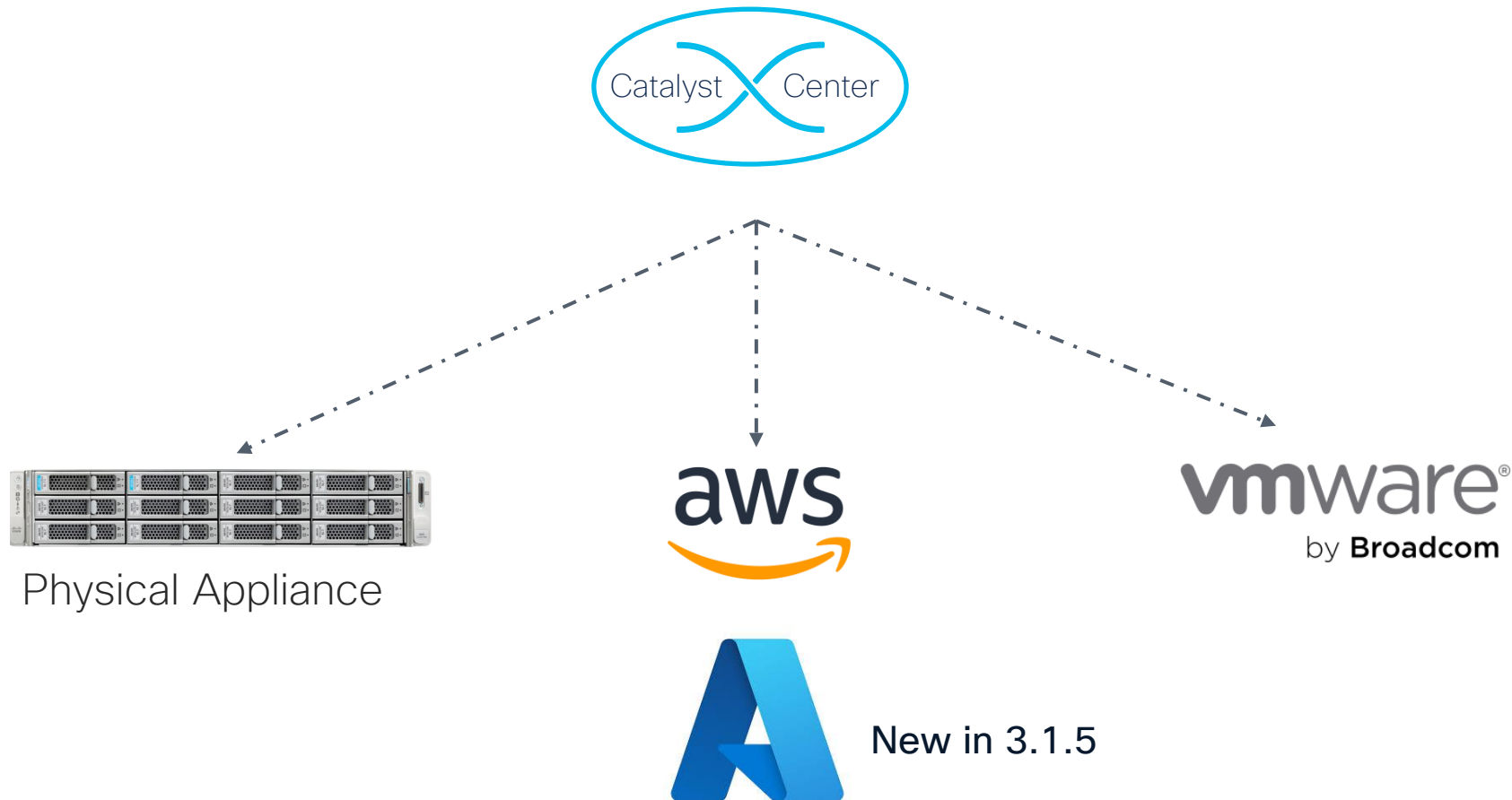
Failover

Availability requirements of
Cisco Catalyst Center

High Availability

Disaster
Recovery

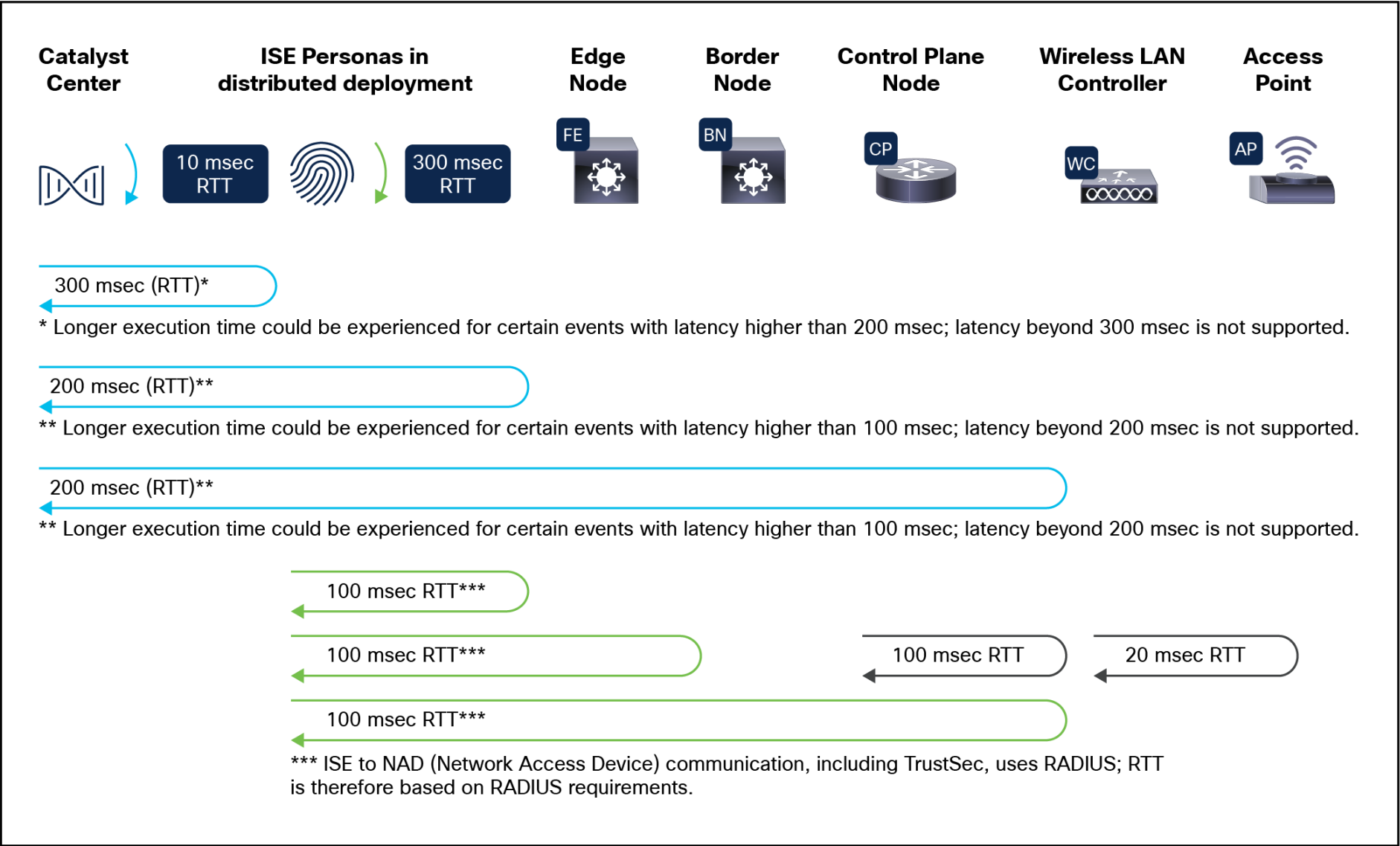
Catalyst Center- Form Factors



Maximum latency supported, roundtrip time.



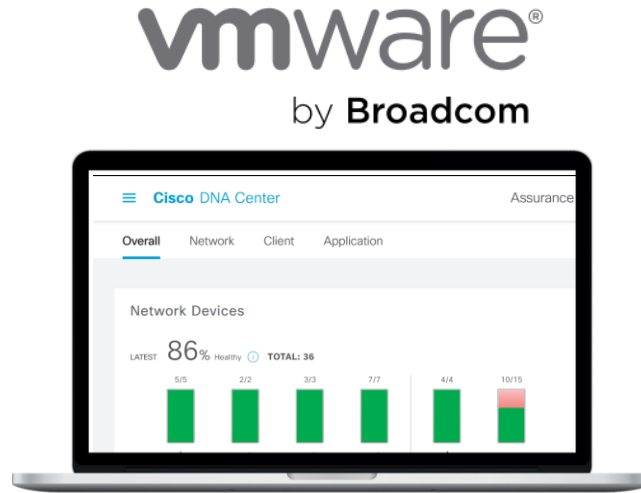
Reference



Catalyst Center Form Factors



- Quicker time to value
Deploy in 90 min
- AWS supported worldwide
15 AWS regions supported; more coming!



- No cost for software (\$0 PID)
- Optional support can be purchased
- Scale parity with M-sized appliance
- 25K End points
 - 1K switches
 - 4K access points
 - 2,500 sites
 - Clustering instances not supported

Physical Appliance



- M-L-XL appliances
- 25K-300K End points
 - 5K-35K devices
 - 2,500-10K sites
 - HA and DR supported

DN2/DN3 Appliance Comparison



DN2-HW-APL (44C) ~1KW 1,236.10BTU/hr

- i6238 2x22C @2.1/3.7Ghz, 2x140W, 256G RAM



DN3-HW-APL (32C) ~1.1KW 1,428.31 BTU/hr

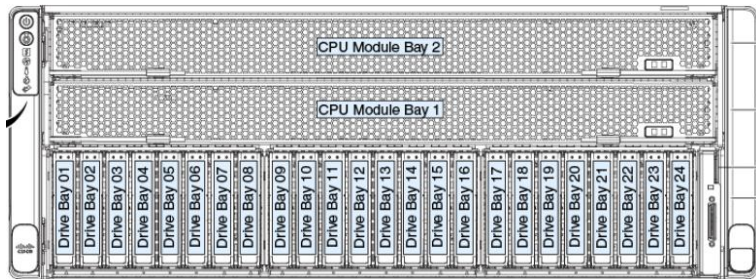
- i6326 2x16C @2.8/4Ghz, 2x185W, 256G RAM

DN2-HW-APL-L (56C) ~1.2KW 1,485.35BTU/hr

- i8280 2x28C@2.7/4Ghz, 2x205W, 384 RAM

DN3-HW_APL-L (56C) ~1.3KW 2,159.40 BTU/hr

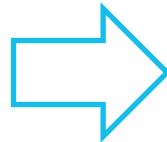
- i6348 2x28C@2.7/4Ghz, 2x235W, 384G RAM



DN2-HW-APL-XL(112C) ~2KW 2,573.32 BTU/hr

- i8276 4x 28C@2.2/4Ghz, 4x165W, 768G RAM

4U



2U



DN3-HW-APL-XL (80C) ~1.9KW 2,107.36BTU/hr

- i8380 2x40C @2.3/4Ghz, 2x270W, 768G RAM

Note: There is no scale difference between DN2 & DN3 appliances

High Availability

Physical Appliance High Availability with Clustering



Physical Appliance



3-node cluster



Software or
Hardware Failure



Active/Active



Near Real-Time
Synchronization



Automation & Assurance
Data Protected



Only XL Cluster provides
extra scale

Physical Appliance High Availability with Clustering



IMPORTANT NOTE:

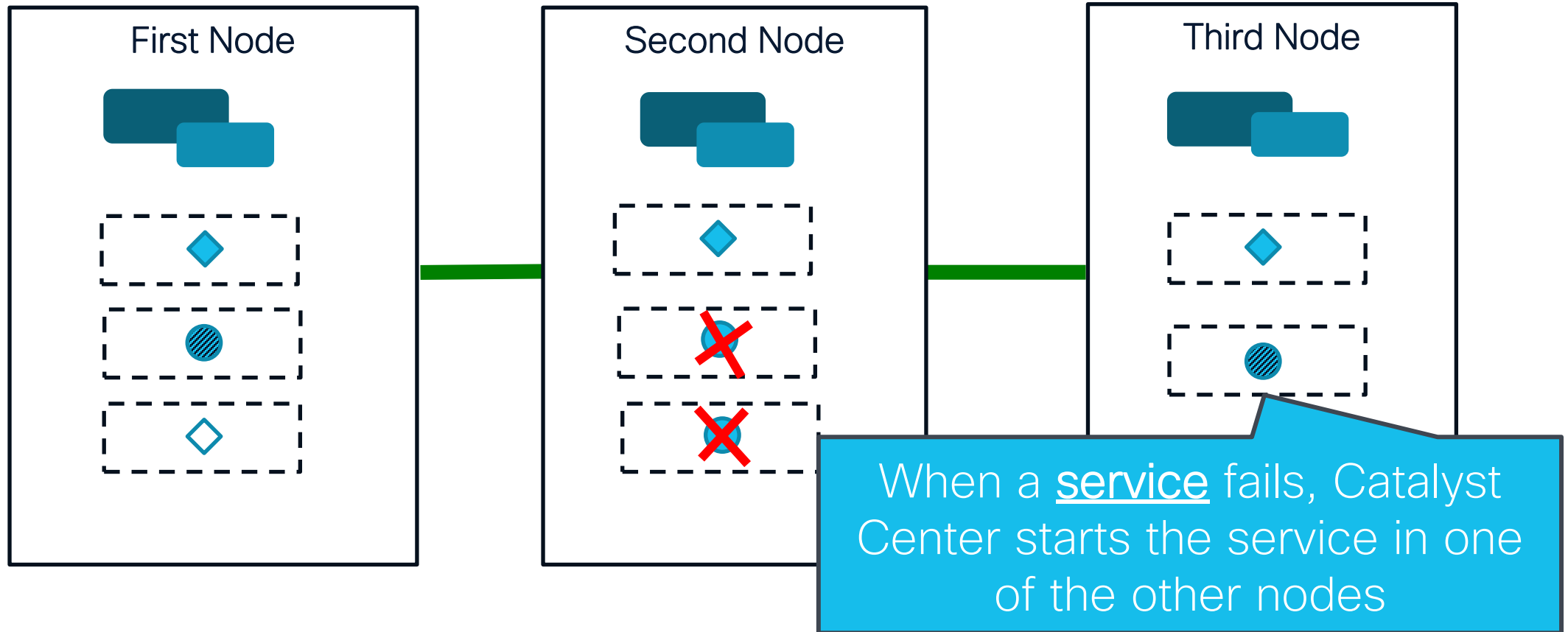
Cisco Catalyst Center is **NOT** part of the network data plane

Physical Appliance High Availability with Clustering



Physical Appliance

Protection Against **Software** Failures

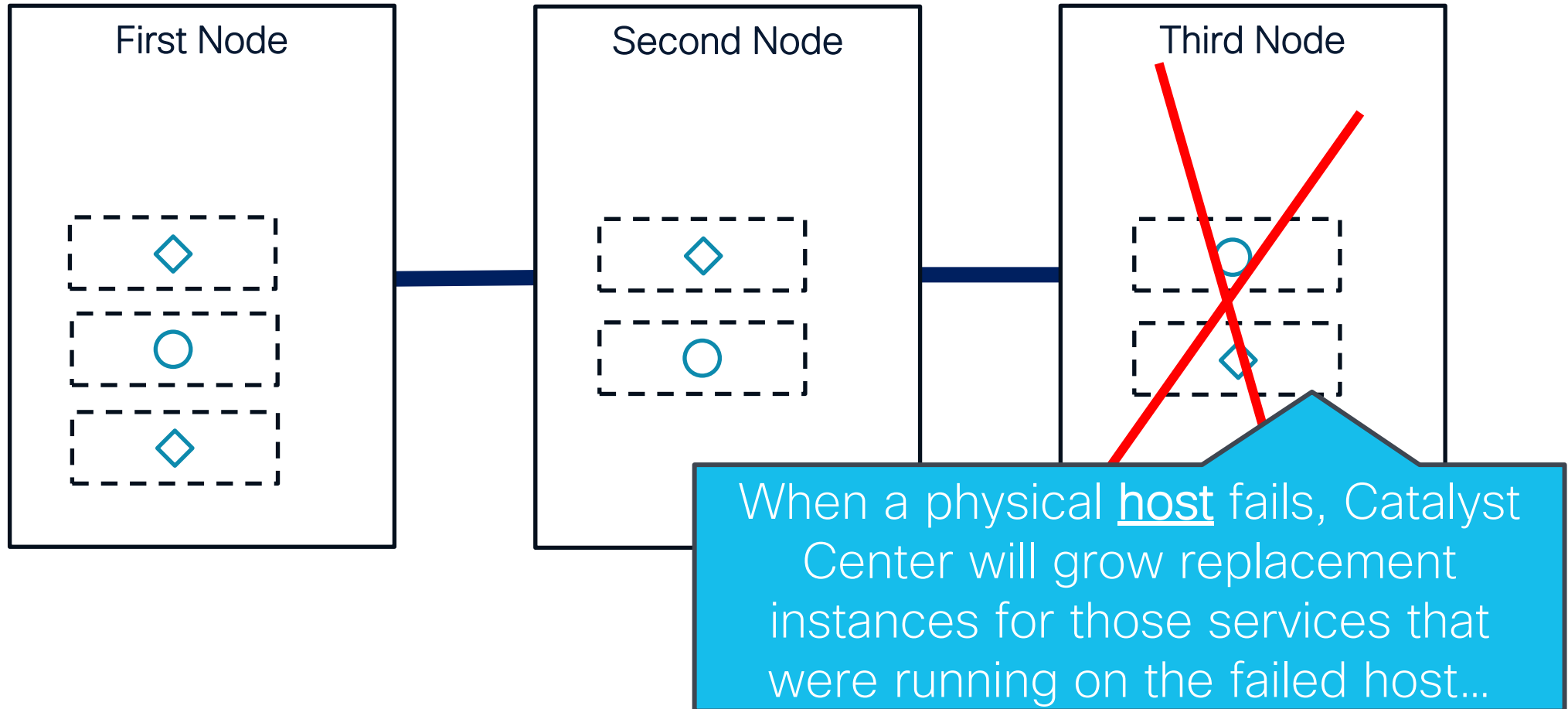


Physical Appliance High Availability with Clustering



Physical Appliance

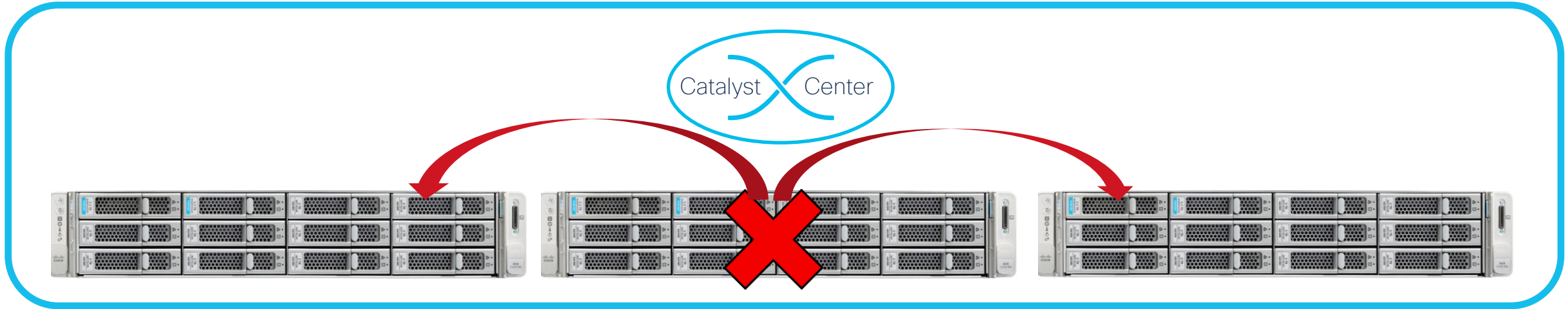
Protection Against **Hardware** Failures



Physical Appliance High Availability with Clustering



Physical Appliance



Automatic service redistribution upon failure



Remaining cluster continues to manage the network

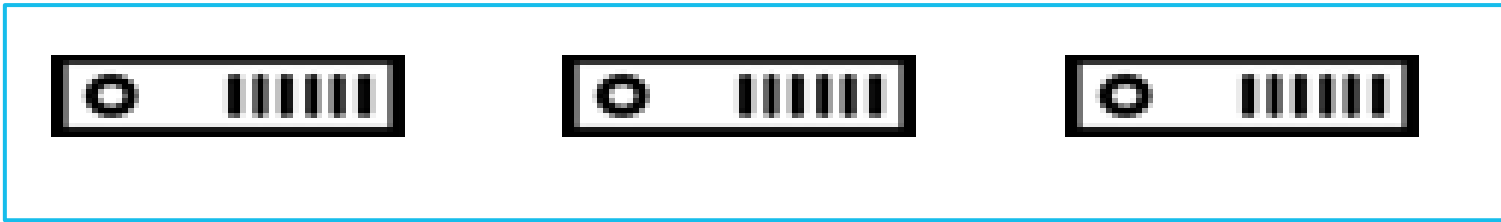


No protection of node failure with 2-nodes

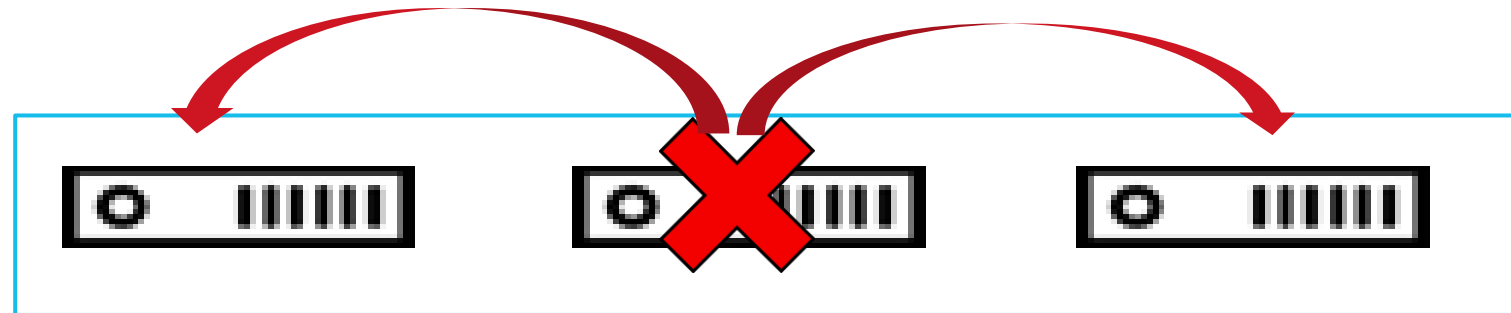
Protection Against Node Failure



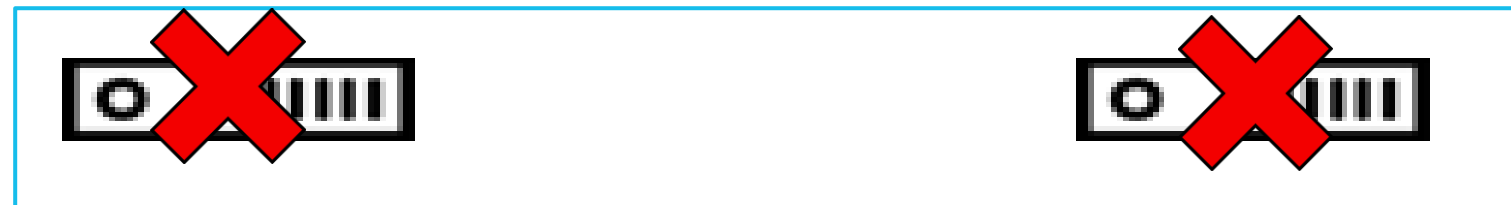
Physical Appliance



- Three node cluster: full clustering. Protection against node failure



- Two node cluster: Management available but no protection from node failure



- Two node cluster: One node failure will lead to stall of the other node

Physical Appliance High Availability with Clustering



Physical Appliance

Considerations

- ✓ Hardware Appliance size needs to match
- ✓ 3-node cluster in same network, same site
- ✓ Nodes communicate via the Intra-cluster 10G interface, L2 network, should not exceed 10ms RTT latency
- ✓ DN2 + DN3 mixed clusters 2.3.7.9

Cisco Catalyst Center- 3 Node Cluster Bring-up Best Practices



Physical Appliance

- Bring up first node: choose “create a cluster”

Node 1 bring up

Single node cluster:
validate configuration

```
Welcome to the Maglev Configuration Wizard!
```

```
The wizard will walk you through the steps to configure this host. Select one of the options below to specify how you would like to configure this host:
```

```
Start a Cisco DNA Center Cluster
```

```
Join a Cisco DNA Center Cluster
```

Cisco Catalyst Center- 3 Node Cluster Bring-up Best Practices



Physical Appliance

- Bring up first node: choose “create a cluster”
- Bring up the second node (“join cluster”)

Node 1 bring up

Single node cluster:
validate configuration

Node 2 bring up

2 node cluster

```
Welcome to the Maglev Configuration Wizard!
```

```
The wizard will walk you through the steps to configure this host. Select one of the options below to specify how you would like to configure this host:
```

```
Start a Cisco DNA Center Cluster
```

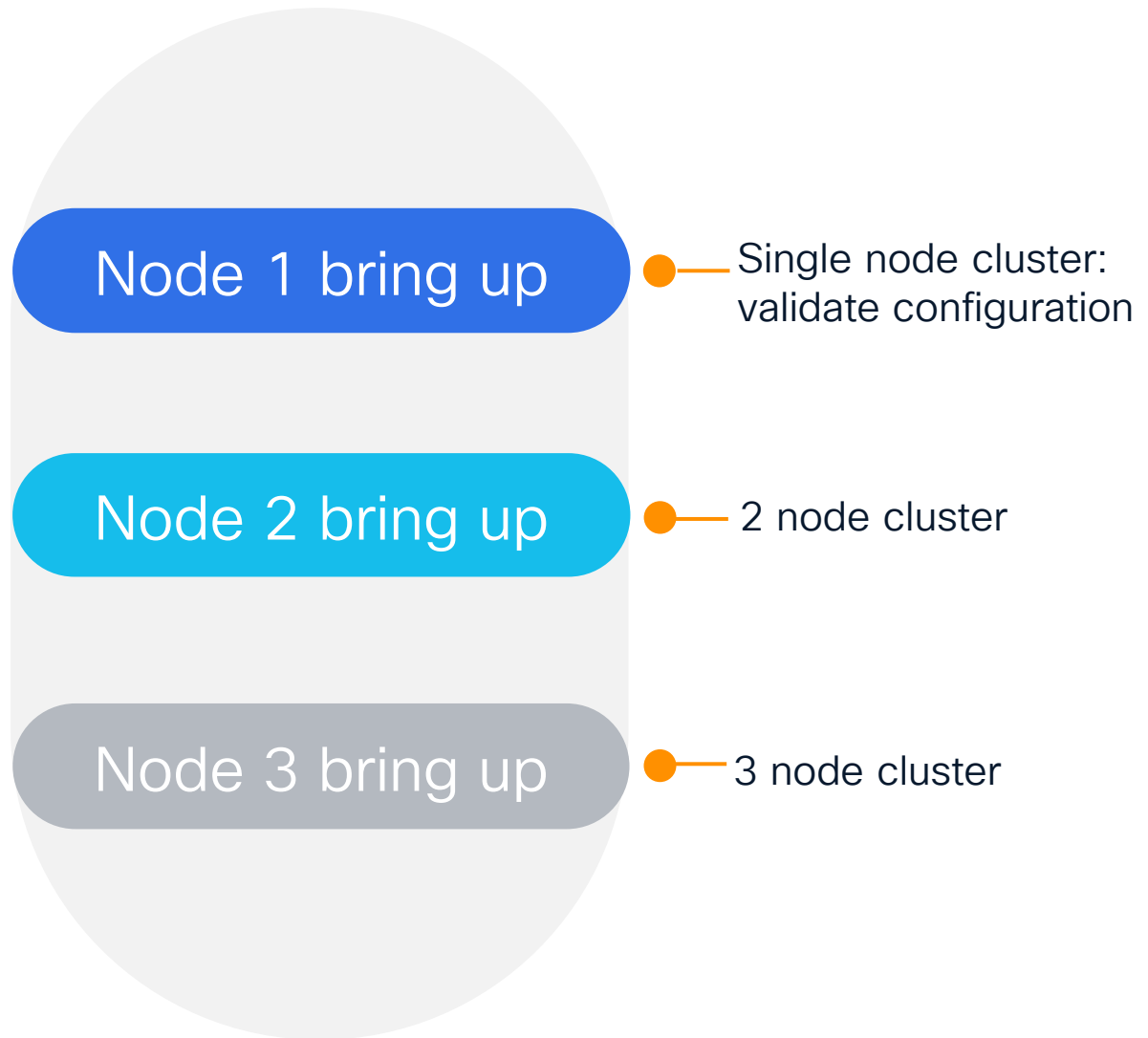
```
Join a Cisco DNA Center Cluster
```

Cisco Catalyst Center- 3 Node Cluster Bring-up Best Practices



Physical Appliance

- Bring up first node: choose “create a cluster”
- Bring up the second node (“join cluster”)
- Bring up the third (“join cluster”)



Activate HA in Catalyst Center



Physical Appliance

High availability is currently unavailable. Visit [System Settings](#) to enable.

Catalyst Center

System / System 360

☆ 🔍 ☁️ ⓘ 🔔 | 👤 admin ▾

System 360

System Health

Service Explorer

System 360

Actions

Cluster

Hosts (3)
As of Jan 7, 2025 9:39 AM

● 169.254.65.11

● 169.254.65.12

● 169.254.65.13

View 123 Services

High Availability
As of Jan 7, 2025 9:39 AM

● Your system meets the requirements for High Availability.

Activate HA

Cluster Tools
As of Jan 7, 2025 9:38 AM

Monitoring

Log Explorer

🔗

🔗

System Management

Software Management
As of Jan 7, 2025 9:39 AM

● Connected to Cisco's software server.

● Your system is up to date

● 12 applications are available for downloading

View

Backups
As of Jan 7, 2025 9:39 AM

● No backups server configured

Configure

Application Health
As of Jan 7, 2025 9:39 AM

● Automation

● Assurance

Windows App

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Catalyst Center HA settings



Physical Appliance

⌵

high

×

System Configuration

High Availability

Settings / System Configuration

High Availability

Activate High Availability to reduce your system's downtime and distribute risk of failure across multiple hosts.

Status

Inactive

●

169.254.65.11

●

169.254.65.12

●

169.254.65.13

Activate High Availability

Catalyst Center HA settings



Physical Appliance

☰

Cisco

Catalyst Center

System / Settings

high

System Configuration

High Availability

Settings / System Configuration

High Availability

Activate High Availability to reduce your system's downtime and distribute risk of failure across multiple hosts.

Status

Active

169.254.65.11

169.254.65.12

169.254.65.13

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BRKOPS-2698

The Cisco logo, consisting of the word "cisco" in a lowercase sans-serif font with a stylized bridge icon above it.

High Availability in Virtual Appliances

Clustering is not supported
with ESXi VM and AWS VA

High Availability is delivered
using the hosting
infrastructure HA features

Edit Cluster Settings | danc-cluster

vSphere HA ☒

Failures and responses | Admission Control | Heartbeat Datastores | Advanced Options

You can configure how vSphere HA responds to the failure conditions on this cluster. The following failure conditions are supported: host, host isolation, VM component protection (datastore with PDL and APD), VM and application.

Enable Host Monitoring ⓘ ☒

> Host Failure Response	Restart VMs ▾
> Response for Host Isolation	Disabled ▾
> Datastore with PDL	Power off and restart VMs ▾
> Datastore with APD	Power off and restart VMs - Conservative restart policy ▾
> VM Monitoring	Disabled ▾

CANCEL

OK

High Availability in ESXi VA

ESXi High Availability
delivered via VMware
vSphere's HA functionality

If a host failure occurs, the
virtual machines restart on
alternate hosts

At least two hosts must
have the unreserved
CPU/Memory resources
required for ESXi VM

Edit Cluster Settings

danc-cluster×

vSphere HA ☒

Failures and responses

Admission Control

Heartbeat Datastores

Advanced Options

You can configure how vSphere HA responds to the failure conditions on this cluster. The following failure conditions are supported: host, host isolation, VM component protection (datastore with PDL and APD), VM and application.

Enable Host Monitoring ⓘ ☒

> Host Failure Response	Restart VMs ▾
> Response for Host Isolation	Disabled ▾
> Datastore with PDL	Power off and restart VMs ▾
> Datastore with APD	Power off and restart VMs - Conservative restart policy ▾
> VM Monitoring	Disabled ▾

CANCEL

OK

High Availability in AWS VA



If a Catalyst Center EC2 (*) instance crashes, AWS brings up another instance automatically

Single-node EC2 HA within an Availability Zone (AZ) is enabled by default.

aws

AWS Account ID * ⓘ

878813814009

Access Key ID * ⓘ

.....

Secret Access Key * ⓘ

.....

⌂

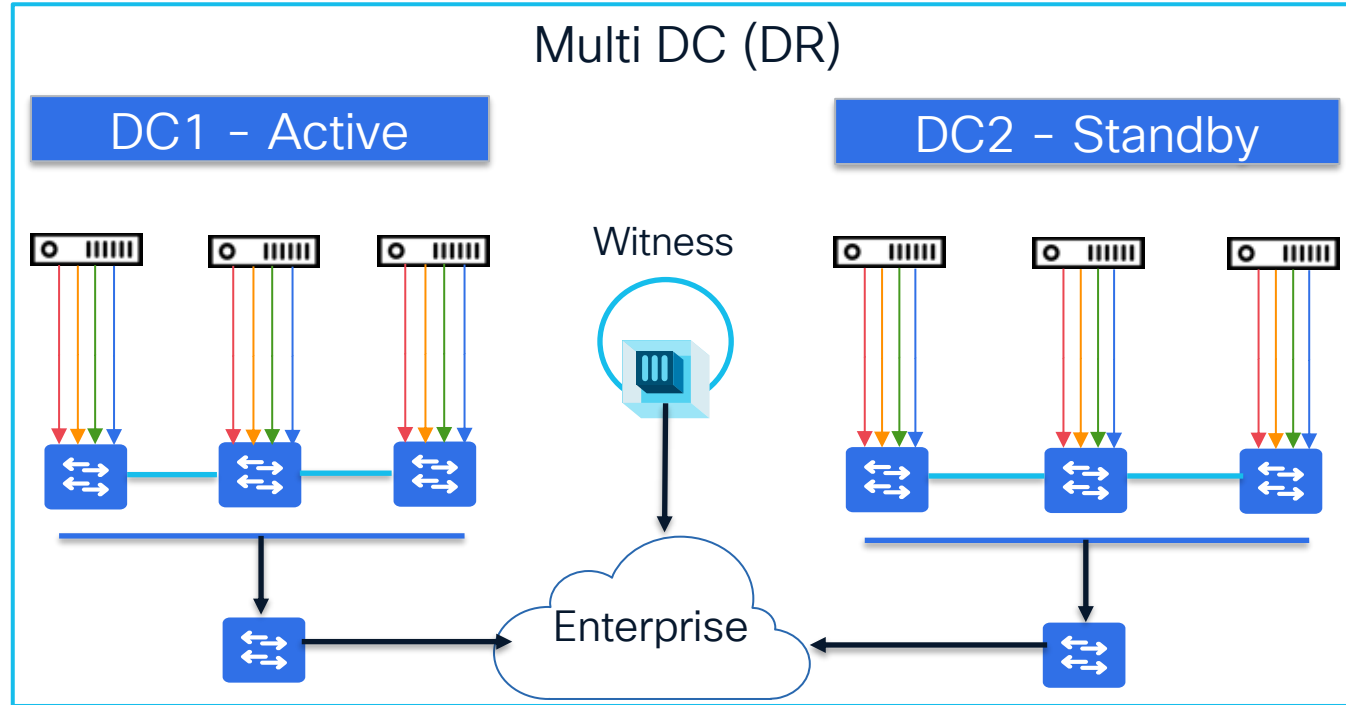
(*) Amazon EC2: Amazon Elastic Compute Cloud

Disaster Recovery

Physical Appliance Disaster Recovery



Physical Appliance

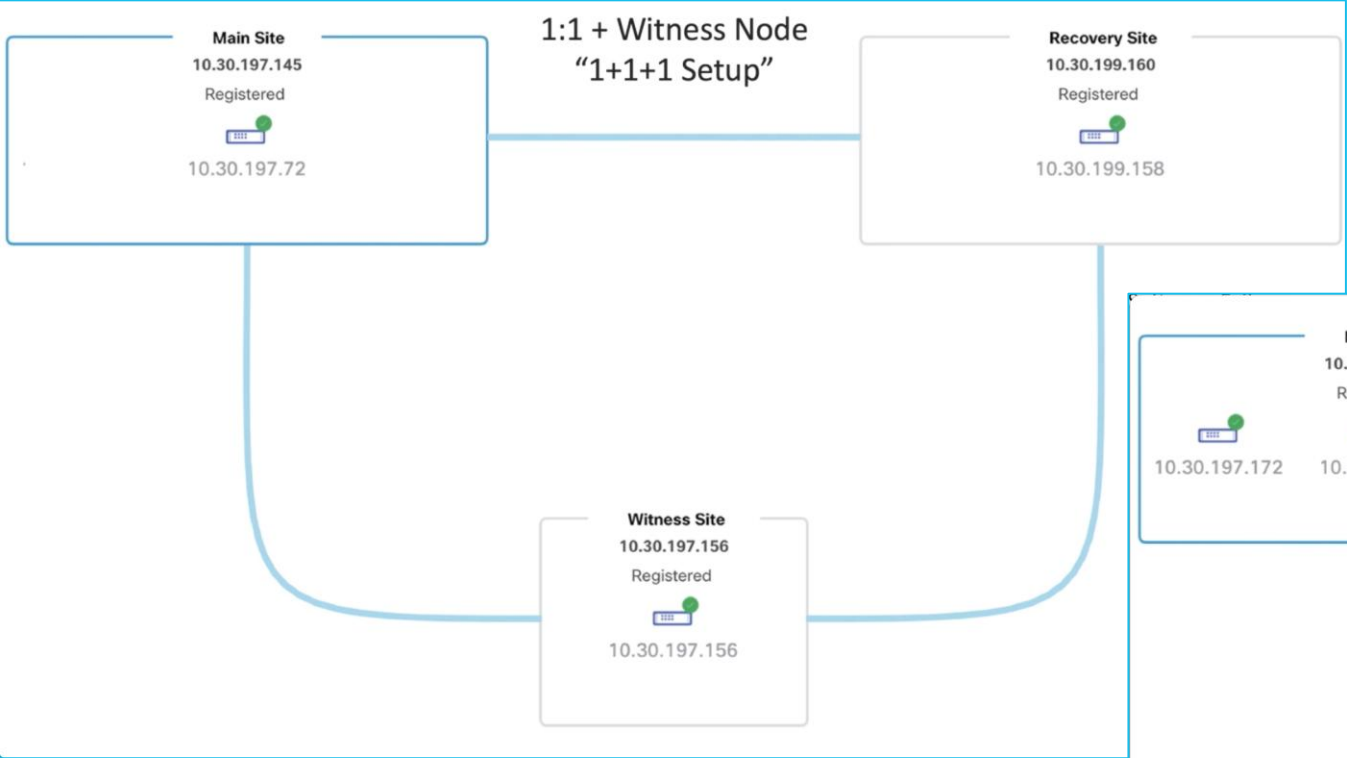


- ✓ Resiliency in Site failure
- ✓ Active/Standby
- ✓ Not all data gets replicated
- ✓ 3+3+1 or 1+1+1 across DC's

Physical Appliance Disaster Recovery



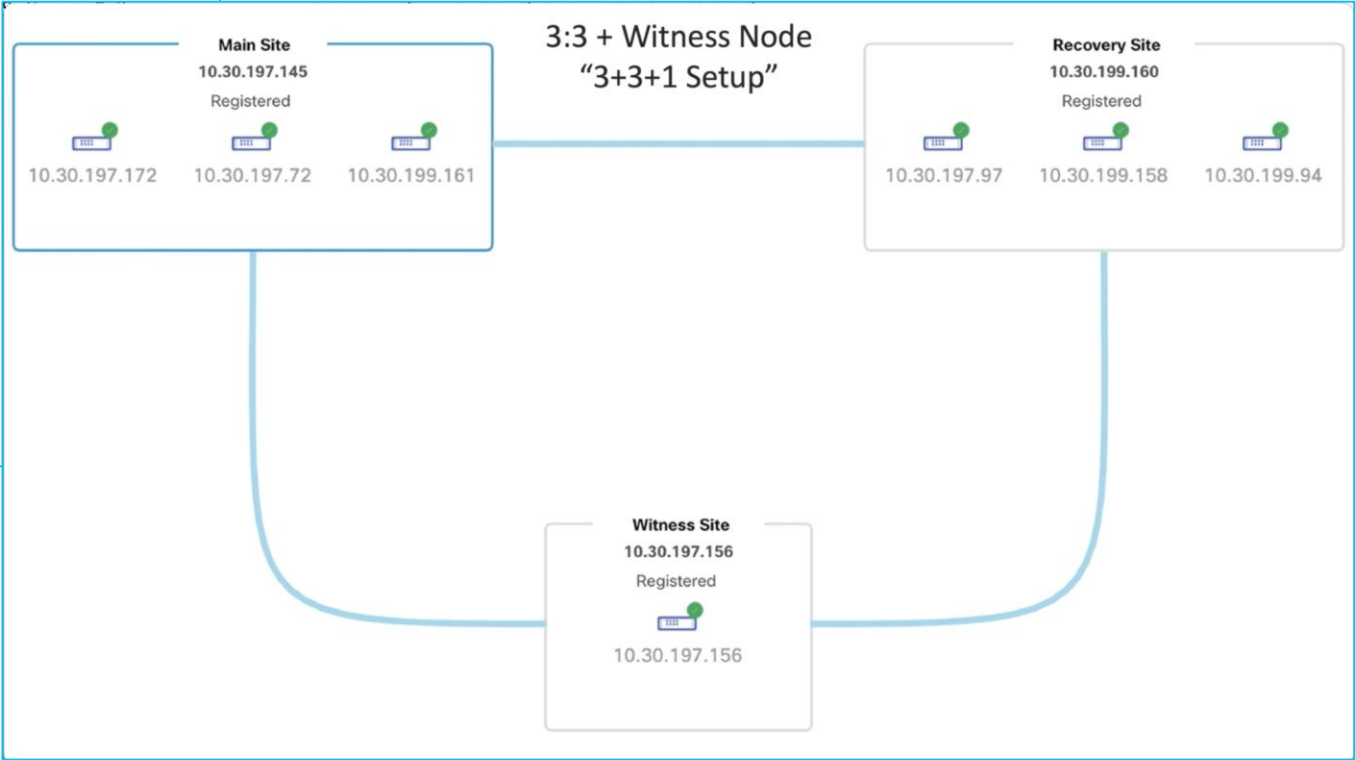
Physical Appliance



✓ 3+3+1 or 1+1+1 across DC's

Witness Node is used to help determine which site is "Active"

Witness Specs: VMware ESXi hypervisor version 7.0 or later with a 2.1-GHz core and two virtual CPUs, 4 GB of RAM, and 15 GB of hard drive space.

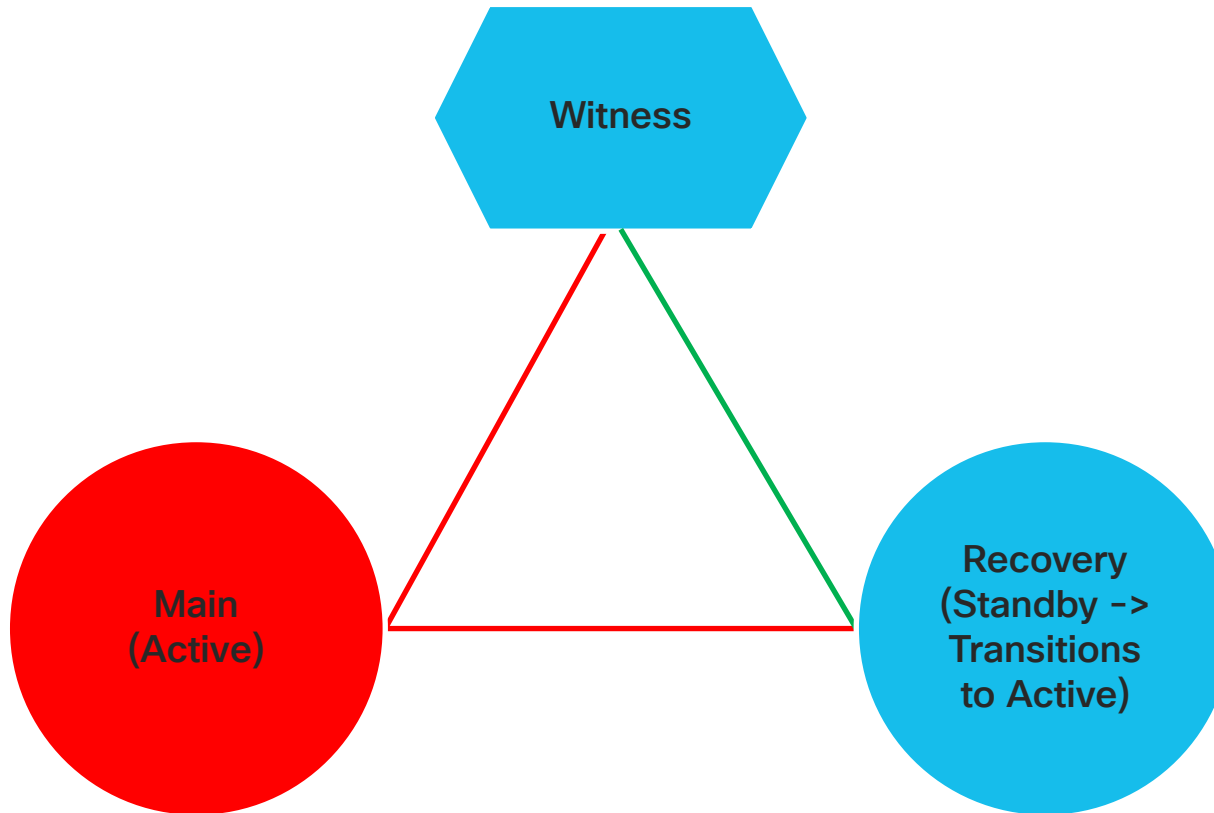


Physical Appliance Disaster Recovery



Physical Appliance

Main Failure Scenarios: **Active is down**



Quorum between passive and witness.

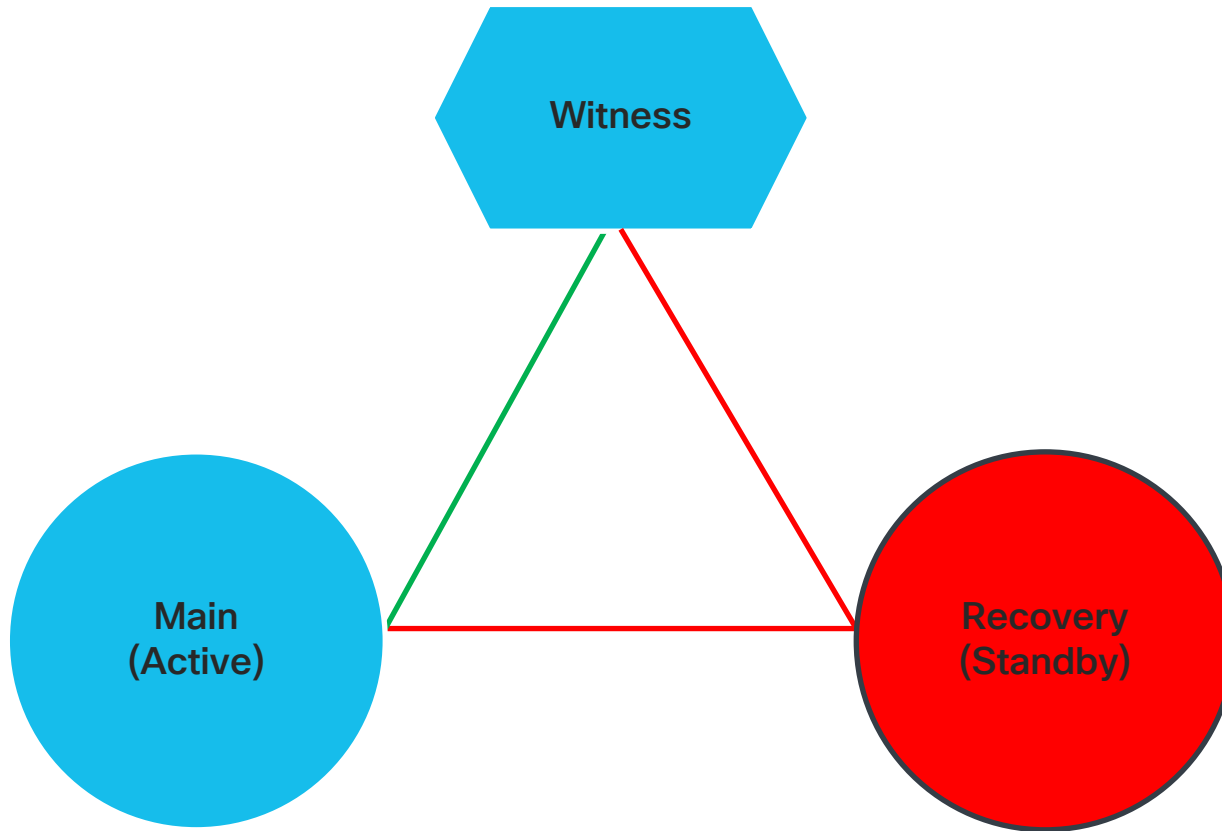
Standby will failover to active and become active, and active will be isolated

Physical Appliance Disaster Recovery



Physical Appliance

Main Failure Scenarios: **Standby is down**



Active and witness still have a quorum. There is no real activity so there's no failover. The active remains active.

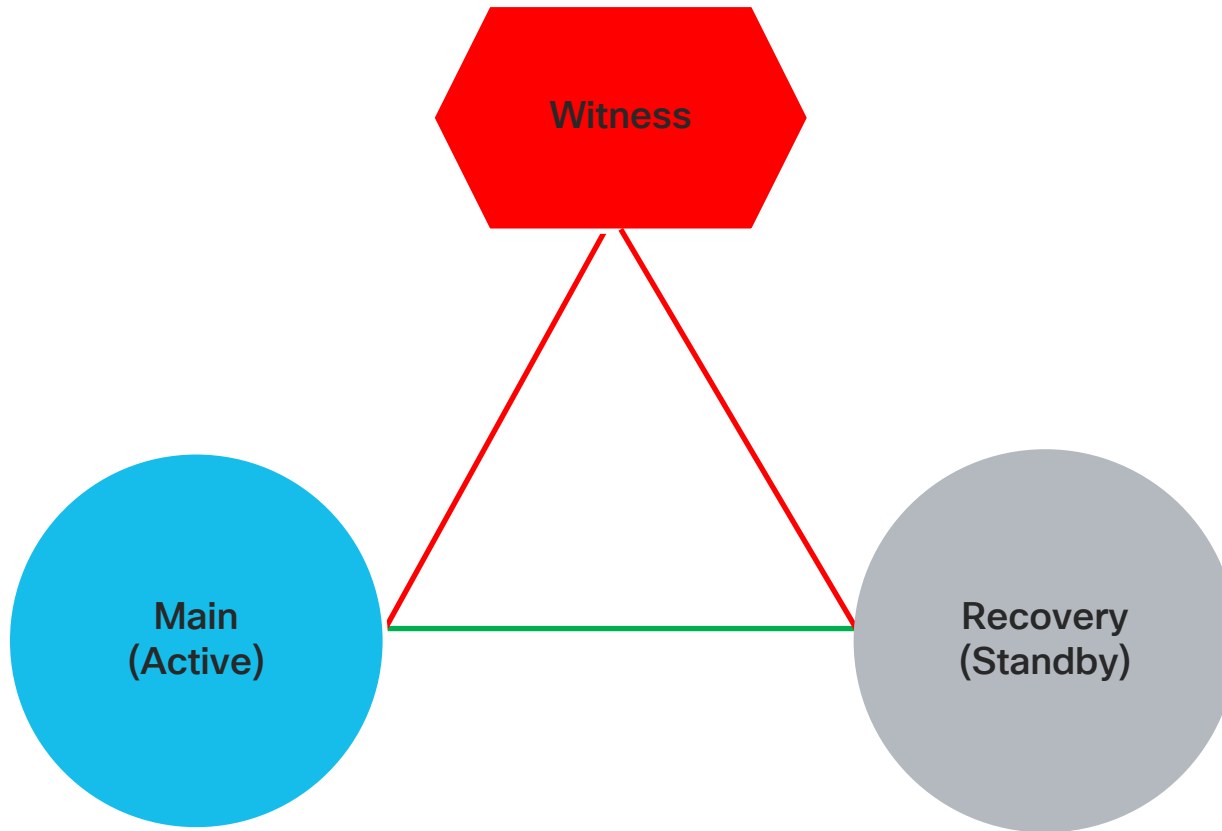
Once the standby comes back up, Standby will need to rejoin DR once back in network

Physical Appliance Disaster Recovery



Physical Appliance

Main Failure Scenarios: **Witness is down**



No possibility for quorum, auto-failover is disabled

When witness comes back up, there's no need for manual re-join, it will come back up in the DR system

Physical Appliance Disaster Recovery

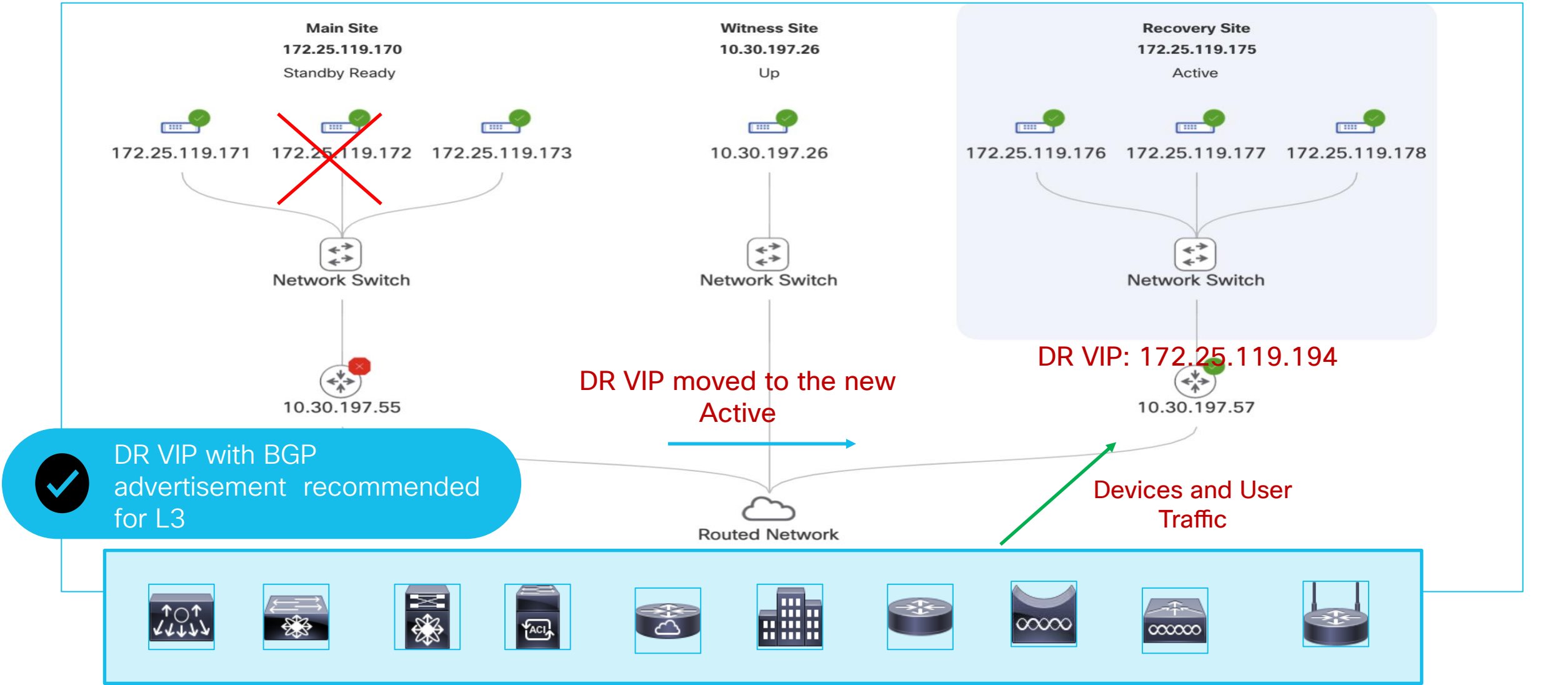
Considerations



Physical Appliance

- ✓ Same number of nodes and same hardware profile
- ✓ Set up witness site in a different location than your main and recovery site
- ✓ Witness site deployment in a public cloud is not supported.
- ✓ At least 1Gbps connection with at most 350msec RTT latency among main, recovery and witness
- ✓ Identical third-party certificates on both DR clusters. Don't use self-signed certs
- ✓ DR VIP with BGP advertisement
** recommended for L3

Physical Appliance Disaster Recovery



Scaling Considerations and Capacity Planning

Catalyst Center platform system scale

As of 2.3.7.x

Description	Medium appliance DN3-HW-APL	Large appliance DN3-HW-APL-L	Extra large appliance DN3-HW-APL-XL	3 XL cluster	Virtual Appliances
Endpoints (concurrent)	25,000	40,000	100,000	300,000	25,000
Network devices	5,000	8,000	25,000	35,000	5,000
APs	4,000	6,000	13,000	25,000	4,000
Sites	2,500	5,000	10,000	10,000	2,500
Access control policies	25,000	25,000	25,000	25,000	25,000
Access contracts	500	500	500	500	500
Per fabric site scale					
Fabric nodes	500	600	1,200	1,200	500
VNs	64	128	256	256	64
IP pools	100	300	1,000	1,000	100

← Latency between Catalyst Center to device: 200ms (RTT) →

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



Cisco Catalyst Center 2.3.7 Data Sheet

Updated: April 30, 2025

Bias-Free Language

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Table of Contents

Introduction

Licensing

Introduction to Smart Licensing

Automation features

Assurance features

SD-Access features

System and platform capabilities

Latency requirements

SD-Access platform scale

Meraki integration

Appliance scale

Hardware appliance specificati...

Virtual appliance requirements



Cisco Certified Remanufactured Equipment for Networking

Upgrade at deeply discounted prices to help ensure secure network transformation.

See offer

Introduction

Cisco Catalyst™ Center, formerly Cisco DNA Center, is a powerful network controller and management dashboard that empowers you to take charge of your network, optimize your Cisco investment, and lower your IT spending. Catalyst Center provides a single dashboard for every fundamental management task to simplify running your network. With this platform, IT can respond to changes and challenges faster and more intelligently.

Design: Design your network using intuitive workflows, starting with locations where your network devices will be deployed. Users of

Reference plan for platform selection



Determine architecture – Is the deployment model fabric or non-fabric?



Evaluate distribution – Choose between distributed or consolidated model based on latency and regional needs



Identify scale driver – Pinpoint the main contributor influencing scalability



Quantify scaling – Provide scaling metrics for the primary contributor



Account for growth – Factor in expected future growth

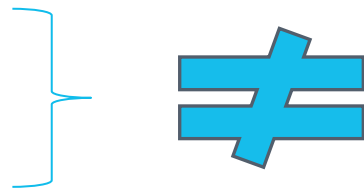


Validate form factor – Ensure the form factor fits secondary contributors as well

How to start scale planning for Catalyst Center



- Fabric or non-fabric deployment model
- Preference to distribute or consolidate (regional models, latency)
- Identify the main contributor for scale decisions. Typically
 - # devices
 - # AP's
 - # endpoints
 - # site elements
 - # fabric sites
- Provide scale numbers for the main contributors
- Factor potential growth



Example -

Financial institution with headquarters in the US, large presence in Canada

- Fabric or non-fabric deployment model **Non fabric**
- Preference to distribute or consolidate (regional models, **Consolidate** latency) **Less than 200msec RTT**
- Identify the main contributor for scale decisions. Typically
 - # devices **Main contributor**
 - # AP's **Main contributor**
 - # endpoints **Probably Not**
 - # site elements **Main contributor**
 - # fabric sites **Not relevant**
- Provide scale numbers for the main contributors **Provided next**
- Factor potential growth **Not available now**

Example -

Financial institution with headquarters in the US, large presence in Canada

Location	Branches / Offices	Switches	Stacks	Members / Stack	AP's
US Offices	30	2,564			3,393
US Branches	960		1	2	3
Canada Offices	20	1,518			2,288
Canada Branches	680		1	2	3

Example -

Financial institution with headquarters in the US, large presence in Canada

Location	Branches / Offices
US Offices	30
US Branches	960
Canada Offices	20
Canada Branches	680

**Distributed
Environment
typically requires
many site elements**

Example -

Financial institution with headquarters in the US, large presence in Canada

How to Estimate Site elements

Location	Branches / Offices
US Offices	30
US Branches	960
Canada Offices	20
Canada Branches	680

- Devices need to be assigned to buildings or floors
- AP's need to be assigned to floors

- For estimate of minimum site elements:
 - Offices -
 - 1 x site element for the building
 - Average 25 floors per building
 - Branches -
 - 1 x site element for the branch building
 - 1 x site element for the branch floor

- For more accurate calculation:
 - Actual floors per building, consider country, province/state, city, etc

Example -

Financial institution with headquarters in the US, large presence in Canada

Large number of site elements identified!

Location	Branches / Offices
US Offices	30
US Branches	960
Canada Offices	20
Canada Branches	680

Offices -> $30 + 20 = 50$

Average of 25 floors

1 x site elements for building + 25 x site elements for floors = 26 site elements

$50 * 26 = \mathbf{1,300 \text{ site elements for offices}}$

Branches -> $960 + 680 = 1,640$

1 x site element for branch + 1 x site element for floor = 2 site elements

$1,640 * 2 = \mathbf{3,280 \text{ site elements for branches}}$

Total ->

$1,300 + 3,280 = \mathbf{4,580 \text{ site elements minimum}}$

Table 14. Scale and hardware specifications

SKU		DN-SW-APL	DN3-HW-APL	DN3-HW-APL-APL-L	DN3-HW-APL-XL
Description		Catalyst Center Virtual Appliance	Cisco UCS® C220 M6 Rack Server 32 cores	Cisco UCS C220 M6 Rack Server 56 cores	Cisco UCS C480 M6 Rack Server 80 cores
Catalyst Center system scale					
Site elements		2500	2500	5000	10,000
Canada Branches	680				

site elements
 $1,640 * 2 = 3,280$ site elements for branches

Total ->
 $1,300 + 3,280 = 4,580$ site elements minimum

Example -

Financial institution with headquarters in the US, large presence in Canada

Location	Branches / Offices	AP's
US Offices	30	3,393
US Branches	960 - 3 per branch	2,880
Canada Offices	20	2,288
Canada Branches	680 - 3 per branch	2,040

AP's

Total ->

$$3,393 + 2,880 + 2,288 + 2,040 = \mathbf{10,601 \text{ AP's}}$$

Updated Datasheet

Device Scale 2.3.7.9

SKU	DN-SW-APL	DN3-HW-APL	DN3-HW-APL-L	DN3-HW-APL-XL
Description	Catalyst Center Virtual Appliance	Cisco UCS® C220 M6 Rack Server 32 cores	Cisco UCS C220 M6 Rack Server 56 cores	Cisco UCS C240 M6 Rack Server 80 cores
Catalyst Center system scale				
Total Network Devices (not to exceed)	5000	5000	8,000	18,000
M Scale Profile 1 (Fabric and Non-fabric)	1000 (Switch, Router, WLC) + 4000 APs		Intentionally Left Blank	Intentionally Left Blank
M Scale Profile 2 (Fabric and Non-fabric)	2000 (Switch, Router, WLC) + 3000 APs		Intentionally Left Blank	Intentionally Left Blank
L and XL Scale Non-fabric	Intentionally Left Blank	Intentionally Left Blank	2000 (Switch, Router, WLC) + 6000 APs	5000 (Switch, Router, WLC) + 13000 APs
L and XL Scale Fabric	Intentionally Left Blank	Intentionally Left Blank	4000 (SW, Router, WLC) + 4000 APs	8000 (SW, Router, WLC) + 10000 APs

Updated Datasheet

Device Scale 2.3.7.9

SKU	DN-SW-APL	DN3-HW-APL	DN3-HW-APL-L	DN3-HW-APL-XL
Description	Catalyst Center Virtual Appliance	Cisco UCS® C220 M6 Rack Server 32 cores	Cisco UCS C220 M6 Rack Server 56 cores	Cisco UCS C240 M6 Rack Server 80 cores
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L and XL Scale Non-fabric	Intentionally Left Blank	Intentionally Left Blank	2000 (Switch, Router, WLC) + 6000 APs	5000 (Switch, Router, WLC) + 13000 APs
L and XL Scale Fabric	Intentionally Left Blank	Intentionally Left Blank	4000 (SW, Router, WLC) + 4000 APs	8000 (SW, Router, WLC) + 10000 APs

Example -

Financial institution w

Canada

Location	Branches / Offices
US Offices	30
US Branches	960 - 3 per branch
Canada Offices	20
Canada Branches	680 - 3 per branch

2,040

SKU	DN-SW-APL	DN3-HW-APL	DN3-HW-APL-L	DN3-HW-APL-XL
Description	Catalyst Center Virtual Appliance	Cisco UCS® C220 M6 Rack Server 32 cores	Cisco UCS C220 M6 Rack Server 56 cores	Cisco UCS C240 M6 Rack Server 80 cores
Catalyst Center system scale				
M Scale Profile 1 (Fabric and Non-fabric)	1000 (Switch, Router, WLC) + 4000 APs		Intentionally Left Blank	Intentionally Left Blank
M Scale Profile 2 (Fabric and Non-fabric)	2000 (Switch, Router, WLC) + 3000 APs		Intentionally Left Blank	Intentionally Left Blank
L and XL Scale Non-fabric	Intentionally Left Blank	Intentionally Left Blank	2000 (Switch, Router, WLC) + 6000 APs	5000 (Switch, Router, WLC) + 13000 APs

Total ->

3,393 + 2,880 + 2,288 + 2,040 = 10,601 AP's

Example -

Financial institution with headquarters in the US, large presence in Canada

Location	Branches / Offices	Stacks
US Offices	30	2,564
US Branches	960 - avg 1x 2-member stack	960
Canada Offices	20	1,518
Canada Branches	680 - avg 1x 2-member stack	680

- For device count, WLC's are not main contributors in this customer design
- Stacks count as single device

Switch Stacks

Total ->

$$2,564 + 960 + 1,518 + 680 = \mathbf{5,722 \text{ Switch Stacks}}$$

Example -

Financial institution in Canada

Location	Branches / Offices	SKU	DN-SW-APL	DN3-HW-APL	DN3-HW-APL-L	DN3-HW-APL-XL
		Description	Catalyst Center Virtual Appliance	Cisco UCS® C220 M6 Rack Server 32 cores	Cisco UCS C220 M6 Rack Server 56 cores	Cisco UCS C240 M6 Rack Server 80 cores
US Offices	30	Catalyst Center system scale				
US Branches	960 1x member stack	M Scale Profile 1 (Fabric and Non-fabric)	1000 (Switch, Router, WLC) + 4000 APs		Intentionally Left Blank	Intentionally Left Blank
		M Scale Profile 2 (Fabric and Non-fabric)	2000 (Switch, Router, WLC) + 3000 APs		Intentionally Left Blank	Intentionally Left Blank
Canada Offices	20	L and XL Scale Non-fabric	Intentionally Left Blank	Intentionally Left Blank	2000 (Switch, Router, WLC) + 6000 APs	5000 (Switch, Router, WLC) + 13000 APs
Canada Branches	680 - avg 1x 2-member stack	680				

Total ->

2,564 + 960 + 1,518 + 680 = 5,722 Switch Stacks

Example -

Financial institution with headquarters in the US, large presence in Canada

Location	Branches / Offices	Stacks
US Offices	30	2,564
US Branches	960 - avg 1x 2-member stack	960
Canada Offices	20	1,518
Canada Branches	680 - avg 1x 2-member stack	680

Table 15. Scale for 3-node DN3-HW-APL-XL cluster	
Description	Supported scale
Devices ¹ (switch, router, wireless controller)	10,000

Total ->

$$2,564 + 960 + 1,518 + 680 = \mathbf{5,722 \text{ Switch Stacks}}$$

Validate the Selected Form Factor



- Validate the non main contributor factors
- If # switches is main contributor or if very large stacks or chassis, check the number of interfaces supported
- If Catalyst Center is managing a wireless environment, validate the number of WLC's

Validate the Selected Form Factor



- Validate the non main contributor factors
- If # switches is main contributor or if very large stacks or chassis, check the number of interfaces supported
- If Catalyst Center is managing a wireless environment, validate the number of WLC's

SKU	DN-SW-APL	DN3-HW-APL	DN3-HW-APL-L	DN3-HW-APL-XL
Description	Catalyst Center Virtual Appliance	Cisco UCS® C220 M6 Rack Server 32 cores	Cisco UCS C220 M6 Rack Server 56 cores	Cisco UCS C480 M6 Rack Server 80 cores
Catalyst Center system scale				
Wireless controllers	500	500	1000	2000

Validate the Selected Form Factor



- Validate the non main contributor factors
- If # switches is main contributor or if very large stacks or chassis, check the number of interfaces supported
- If Catalyst Center is managing a wireless environment, validate the number of WLC's
 - Especially important in environments with distributed WLC's like FIAB+W

Validate the Selected Form Factor



- Validate the non main contributor factors
- If # switches is more than 1000, check the number of WLCs
- If Catalyst Center is used, check the number of WLCs
- Especially important for FIAB+W

SKU	DN-SW-APL	DN3-HW-APL	DN3-HW-APL-L	DN3-HW-APL-XL
Description	Catalyst Center Virtual Appliance	Cisco UCS® C220 M6 Rack Server 32 cores	Cisco UCS C220 M6 Rack Server 56 cores	Cisco UCS C480 M6 Rack Server 80 cores
Catalyst Center system scale				
Wireless controllers	500	500	1000	2000
Catalyst Center SD-Access scale				
Fabric sites ³	500	500	1000	2000

Example -

Financial institution with headquarters in the US, large presence in Canada

- Shared with the customer scale for:

of WLC's

Informed

Concurrent Endpoints

Informed

Transient Endpoints

Informed

SKU	DN-SW-APL	DN3-HW-APL	DN3-HW-APL-L	DN3-HW-APL-XL
Description	Catalyst Center Virtual Appliance	Cisco UCS® C220 M6 Rack Server 32 cores	Cisco UCS C220 M6 Rack Server 56 cores	Cisco UCS C480 M6 Rack Server 80 cores

Catalyst Center system

Concurrent endpoints

Transient endpoints (over 14-day period)

Wireless controllers

Table 15. Scale for 3-node DN3-HW-APL-XL cluster

Description	Supported scale
Concurrent endpoints	300,000
Transient endpoints (over 14-day period)	750,000

Example -

Financial institution with headquarters in the US, large presence in Canada

Switch Ports

Offices -> $2,564 + 1,518 = 4,082$

Half 24-port and Half 48-port

$2,041 * 24 + 2,041 * 48 = 146,952$ physical ports in offices

Branches -> $960 + 680 = 1,640$

1 x 2-member stack; All 48-ports

$1,640 * 2 * 48 = 157,440$ physical ports in branches

Total ->

$146,952 + 157,440 = 304,392$ physical ports

Example -

Financial institution with headquarters in the US, large presence in Canada

Switch Ports

Offices -> 2,564 + 1,518
Half 24-port and Half 48-
 $2,041 * 24 + 2,041 * 48 =$

Branches -> 960 + 680 =
1 x 2-member stack; All 48-ports
 $1,640 * 2 * 48 =$ **157,440 physical ports in branches**

Total ->
 $146,952 + 157,440 =$ **304,392 physical ports**

Table 15. Scale for 3-node DN3-HW-APL-XL cluster

Description	Supported scale
Physical ports ²	768,000

Validate the selected form factor

3

- Consider checking all other scale factors: Netflow, logical ports, etc
- For SD-Access validate architecture specific parameters like # of L3 VN's, #L2 VN's, # devices per fabric site, IP pools, etc

SKU	DN-SW-APL	DN3-HW-APL	DN3-HW-APL-L	DN3-HW-APL-XL
Description	Catalyst Center Virtual Appliance	Cisco UCS® C220 M6 Rack Server 32 cores	Cisco UCS C220 M6 Rack Server 56 cores	Cisco UCS C480 M6 Rack Server 80 cores
Catalyst Center scale per fabric site				
Layer 3 Virtual Networks	64/site	64/site	128/site	256/site
Fabric devices	500/site	500/site	600/site	1200/site
Scalable groups	4000	4000	4000	4000
Access contracts	500	500	500	500
Group-based policies	25,000	25,000	25,000	25,000
IP pools ⁴	100 ⁵	100 ⁵	300 ⁶	1000 ⁷
Layer 2 Virtual Networks ⁴	200 ⁵	200 ⁵	600 ⁶	1000 ⁷

If Required Scale Exceeds the 3-Node XL Scale?

- Consider Regional Catalyst Center Instances
 - For SD-Access, consider using the “Multiple Catalyst Center Solution” (a.k.a mDNAC) to leverage the same ISE cluster with multiple Catalyst Center Clusters
- Consider Catalyst Center Global Manager - CCGM

Reference Plan for Platform Selection



Reference



Determine architecture – Is the deployment model fabric or non-fabric?



Evaluate distribution – Choose between distributed or consolidated model based on latency and regional needs



Identify scale driver – Pinpoint the main contributor influencing scalability



Quantify scaling – Provide scaling metrics for the primary contributor



Account for growth – Factor in expected future growth



Validate form factor – Ensure the form factor fits secondary contributors as well

System Notifications When Capacity is Exceeded

▼

✖

Mar 24, 2025 4:09 PM

Transient client count is 1055654 (exceeds 95% of capacity limit 250000).

State	NOTOK
Domain	System
Sub Domain	System Scale Limits

Scale Validation Tool

System Health / Validation Tool



No Validation Runs Available

Use the "New Validation Run" button below to schedule a new Validation Run

New Validation Run

New Validation Run

Triggering a Validation Run can be a combination of multiple validation sets or at least one validation set.

Name*

May12_2025

Description

Scale Validation

Validation Set(s) Selection*

☐ Appliance Infrastructure Status

☒ Appliance Scale

- Total device count
- Wired device (switches and hubs + routers + wireless controllers) count
- Wireless device (access Points + sensors) count
- Physical port count
- Interface count
- Total client count (concurrent)
- Wired client count (concurrent)
- Wireless client count (concurrent)
- Transient client count
- Site count
- IP pool count
- Netflows count
- Policies count
- Security groups count

Cancel

Run

Scale Validation Tool

Catalyst Center

System Health / Validation Tool

Validation Runs (1)

Search Table

Add

Delete

0 Selected

☐	Name	Description
☐	May12_2025	Scale Validation

1 Record(s)

Validation Run Details

NameMay12_2025

DescriptionScale Validation

StatusCritical

Result

Export

Copy

APPLIANCE SCALE

All

Info

Warning

Critical

In Progress

Search Table

Validation	Status	Duration	Message
Total device count	Info	198 ms	Total device count is 38.
Wired device (switches and hubs + routers + wireless controllers) count	Info	199 ms	Wired device (switches and hubs + routers + wireless controllers) count is 31.
Wireless device (access Points + sensors) count	Info	200 ms	Wireless device (access Points + sensors) count is 7.
Physical port count	Info	109 ms	Physical port count is 1279.
Interface count	Info	112 ms	Interface count is 1565.
Total client count (concurrent)	Info	302 ms	Total concurrent client count is 1.
Wired client count (concurrent)	Info	201 ms	Wired concurrent client count is 1.

Scale Validation Tool

Detailed Validation Results

Appliance Scale

Number	Validation	Message	Status
1	Total device count	Total device count is 38.	Info
2	Wired device (switches and hubs + routers + wireless controllers) count	Wired device (switches and hubs + routers + wireless controllers) count is 31.	Info
3	Wireless device (access Points + sensors) count	Wireless device (access Points + sensors) count is 7.	Info
4	Physical port count	Physical port count is 1279.	Info
5	Interface count	Interface count is 1565.	Info
6	Total client count (concurrent)	Total concurrent client count is 1.	Info
7	Wired client count (concurrent)	Wired concurrent client count is 1.	Info
8	Wireless client count (concurrent)	Wireless concurrent client count is 0.	Info
9	Transient client count	Transient client count is 2.	Info
10	Site count	Site count is 65.	Info
11	IP pool count	IP Address Pools count is 82.	Info
12	Netflows count	Netflows count is 0.	Info
13	Policies count	Policies count is 8.	Info
14	Security groups count	Security groups count is 21.	Info

Summary Results

Found 1 critical issue and 0 warning.

Issues	Critical	Warnings	Info	Skipped
	1	0	17	0

Version
2.3.7.9-70301

End Time
Mon, 12 May 2025 15:05:40 UTC

Catalyst Center Global Manager for multi-site management

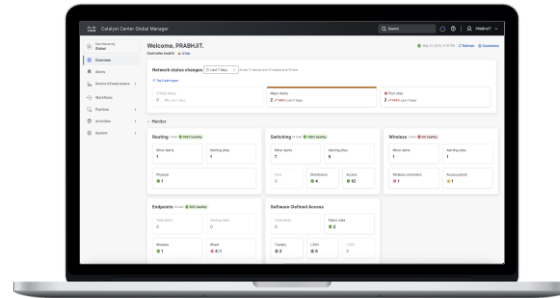
Why Catalyst Center Global Manager (CCGM)?

Single Pane of Glass



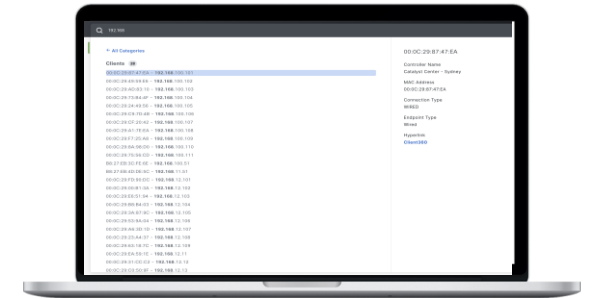
- Catalyst Center
- Unified View
- Enhanced Administrative Efficiency

Issue Monitoring + Cross Launch Site Hierarchy Sync Device Inventory Sync



- Monitors Alerts and Health of Client, Devices, SD-Access Fabric, and Application
- Reports P1/P2/P3 issues from any Catalyst Center
- Cross-launch without requiring additional username and password authentication.
- Consolidated Site Hierarchy view
- Consolidated Device Inventory View

Global Search

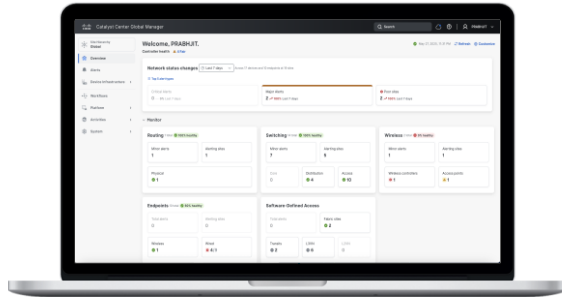


- Global search via IP Address, Hostname, MAC address, Software version, and other metadata.
- Cross-launch into 360 view of the client/device

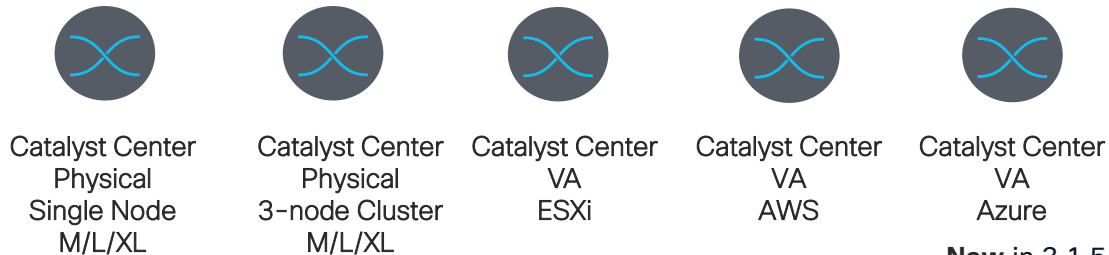
Catalyst Center Requirements

For use with CCGM 1.2.1

Catalyst Center Global Manager
(CCGM)



350 msec



New in 3.1.5

✓ Release 2.3.7.9 or higher

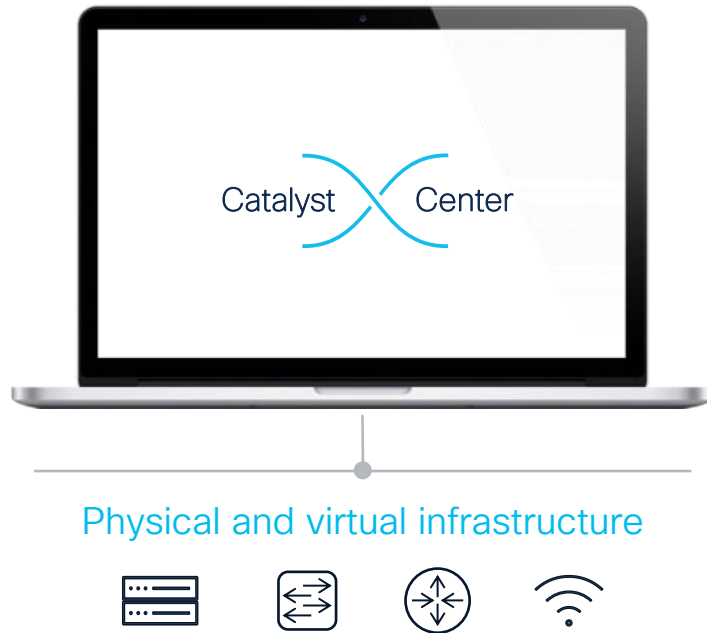
✓ IP Reachability to CCGM

✓ HTTPS/PORT 443 between CCGM and Catalyst Center

✓ No more than 350 msec Latency between CCGM and Catalyst Center

✓ DR, FIPS, or IPv6 are not supported in CCGM today.

CCGM 1.2.1 Requirements



✓ vCenter and ESXi host running 7.0.x or higher

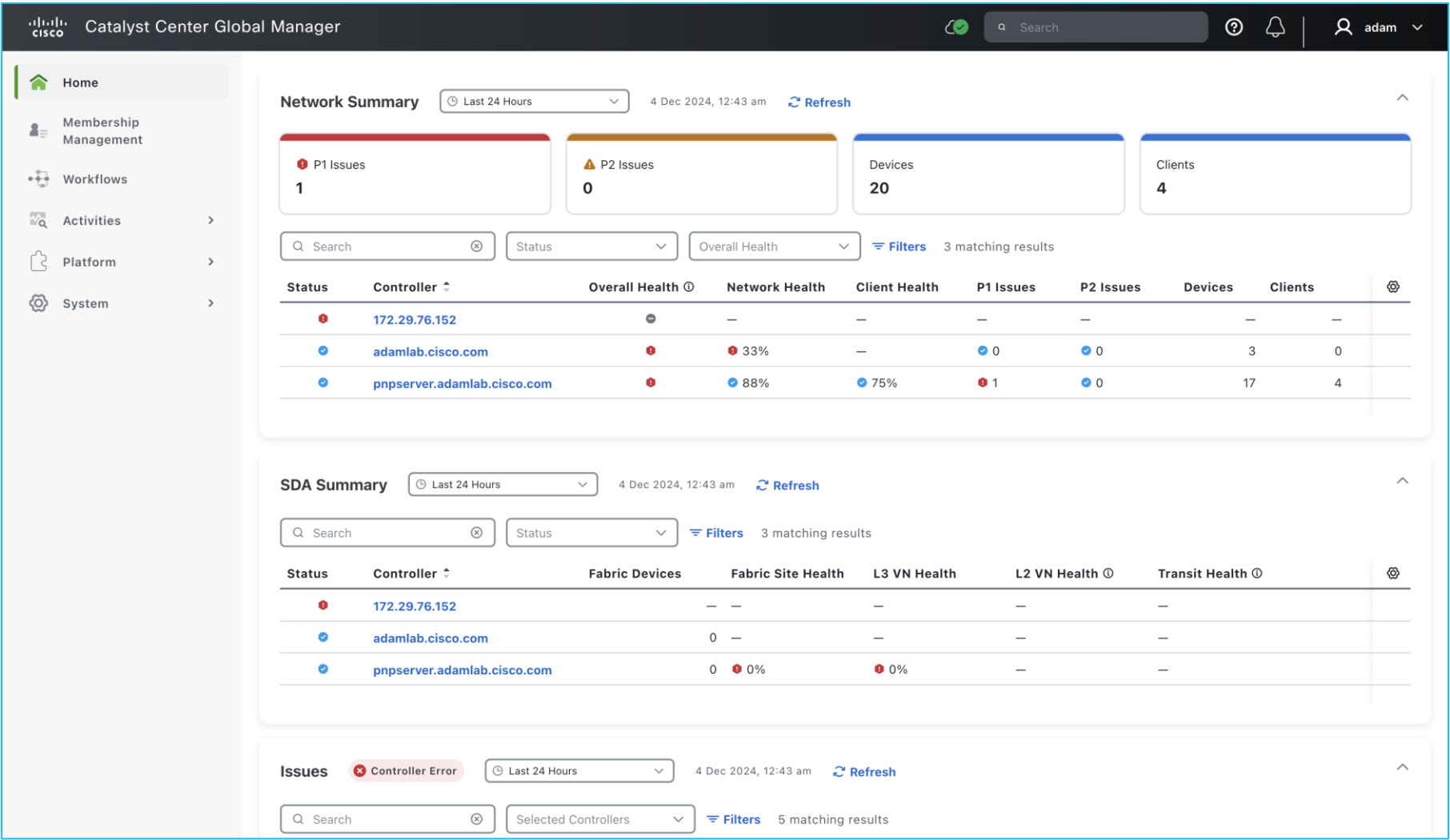
✓ 8 vCPU
16 GB RAM
650 GB storage

✓ 25 Catalyst Center instances can be added to CCGM

✓ 3-node cluster counts as single instance for CCGM

✓ Automatic enrollment based on member-id

Home page



Controller Health

Catalyst Center Global Manager

System / Controllers

Search

admin1

Controllers

Search Health Connectivity Total 8 controllers As of 10:05 AM Refresh

Controller	IP address
17.112.80.201	172.22.229.201
17.112.81.55	172.22.229.55
17.201.80.205	172.22.229.205
17.202.80.206	172.22.229.206
17.203.80.203	172.22.229.203
17.203.80.207	172.22.229.207
17.204.80.204	172.22.229.204
172.28.169.27	172.28.169.27

Catalyst Center Global Manager

System / Controllers

Search

admin1

Controllers

Search Health Connectivity Total 8 controllers

Controller	IP address	Health	Connectivity
17.112.80.201	172.22.229.201	Fair	Reachable
17.112.81.55	172.22.229.55	Poor	Reachable
17.201.80.205	172.22.229.205	Fair	Reachable
17.202.80.206	172.22.229.206	Fair	Reachable
17.203.80.203	172.22.229.203	Fair	Reachable
17.203.80.207	172.22.229.207	Fair	Reachable
17.204.80.204	172.22.229.204	Poor	Reachable
172.28.169.27	172.28.169.27	Poor	Reachable

Controller Details

View controller details, or cross launch to controller for further details.

Controller name

17.112.80.201

View details

System 360

IP address

172.22.229.201

Connectivity

Reachable

Health status

Fair

System health

Description

The following URLs are not reachable directly: ...
A newer Cisco trusted certificate bundle is available...

Type of controller

Catalyst Center

Enterprise VIP

172.22.229.201

Management VIP

17.112.80.201

Cluster configuration

single-node

Node hostname

ncpft201.cisco.com

Node health

Good

Enterprise IP

172.22.229.201

Node serial number

VMware-42 05 19 05 30 65 50 fa-50 19 46 23 68 f7 12 99

Cancel

Edit

Global Search

Global Search: Devices, Endpoints, Users (client users), Sites or Applications

Catalyst Center Global Manager

Membership Management

Search

admin1

Home

Membership Management

Member

Search

Health

Connectivity

Type

Total 10 controllers

Not Secure https://192.168.116.202/cd/membership

AP

Clients

F1:E4:D9:CD:48:67 - 7YS8AP

F1:9C:94:8F:9E:4E - APHICQ

F1:DB:26:9A:C4:01 - 2Z44AP

F1:84:1E:99:78:29 - 6GAPIV

F1:E4:D9:CD:48:67 - 7YS8AP

More results...

Network Device(s)

ap_1 (3)

ap_breakdown_ewlc_1

ap_comparison_ap_1 (2)

ap_comparison_ap_2 (2)

ap_comparison_ewlc_1 (3)

More results...

ap_comparison_ewlc_1

3 Instances

Controller Name

CatC7-VA

MAC Address

F3:B0:C5:A8:83:70

Status

SUCCESS

Controller Name

CatC8-VA

MAC Address

F3:24:CD:77:1F:90

Status

SUCCESS

Serial Number

Cross Launch

This is a friendly reminder that the system will cross launch the related CatC7-VA page. The page will be opened in a new tab.

Cancel Confirm

Global Search

Q 5

User:

Applications

58-city (25)

aed-512 (25)

at-5 (25)

ax25 (25)

h225 (25)

More results...

Devices

00:08:E3:DC:F1:A5 (5)

0344c6d9-9f42-4f55-a6b5-d7a5b2426558 (5)

0438bd07-0bd0-4671-b8c0-645aab84ab7f (5)

10.123.143.165 (3)

10.129.103.185 (3)

More results...

User

wired-client-5 (5)

wireless-Username-5 (5)

wireless-Username-52 (5)

USERNAME-0f5b39d

USERNAME-9b4cee5

More results...

Endpoints

6C:58:E7:D0:A3:E0 - 1.150.86.20 (5)

6F:0F:B3:15:FE:80 - 1.152.86.10 (5)

BC:4A:BA:04:14:42 - 1.152.86.50 (5)

B6:2F:5B:A4:AF:78 - 1.156.86.32 (5)

7E:60:7D:97:FA:85 - 1.156.86.38 (5)

More results...

Sites

5G2 TW1 (4)

5G2 TW2 (5)

B5 (5)

C5 (5)

D5 (7)

More results...

wired-client-5

4 Instances

Controller Name

192.168.116.82

User Id

wired-client-5

Hyperlink

User360

Controller Name

192.168.116.71

User Id

wired-client-5

Hyperlink

User360

Controller Name

192.168.116.86

User Id

wired-client-5

0

0

7.2k

2k/2.2k

Wireless

Wired

Transits

L3VN

L2VN

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BRKOPS-2698

Global Search

Site:

Q 5

Applications

58-city (25)

aed-512 (25)

at-5 (25)

ax25 (25)

h225 (25)

More results...

Devices

00:08:E3:DC:F1:A5 (5)

0344c6d9-9f42-4f55-a6b5-d7a5b2426558 (5)

0438bd07-0bd0-4671-b8c0-645aab84ab7f (5)

10.123.143.165 (3)

10.129.103.185 (3)

More results...

User

wired-client-5 (5)

wireless-Username-5 (5)

wireless-Username-52 (5)

USERNAME-0f5b39d

USERNAME-9b4cee5

More results...

Endpoints

6C:58:E7:D0:A3:E0 - 1.150.86.20 (5)

6F:0F:B3:15:FE:80 - 1.152.86.10 (5)

BC:4A:BA:04:14:42 - 1.152.86.50 (5)

B6:2F:5B:A4:AF:78 - 1.156.86.32 (5)

7E:60:7D:97:FA:85 - 1.156.86.38 (5)

More results...

Sites

5G2 TW1 (4)

5G2 TW2 (5)

B5 (5)

C5 (5)

D5 (7)

More results...

5G2 TW1

4 Instances

Controller Name

192.168.116.86

Site Name

5G2 TW1

Site Type

building

Site Hierarchy

Global/Malaysia/Presint 5/5G2 TW1

Member Count

0

Hyperlink

Network Hierarchy

Network Settings

Controller Name

192.168.116.71

Site Name

5G2 TW1

Site Type

building

7.2k

2k/2.2k

Wireless

Wired

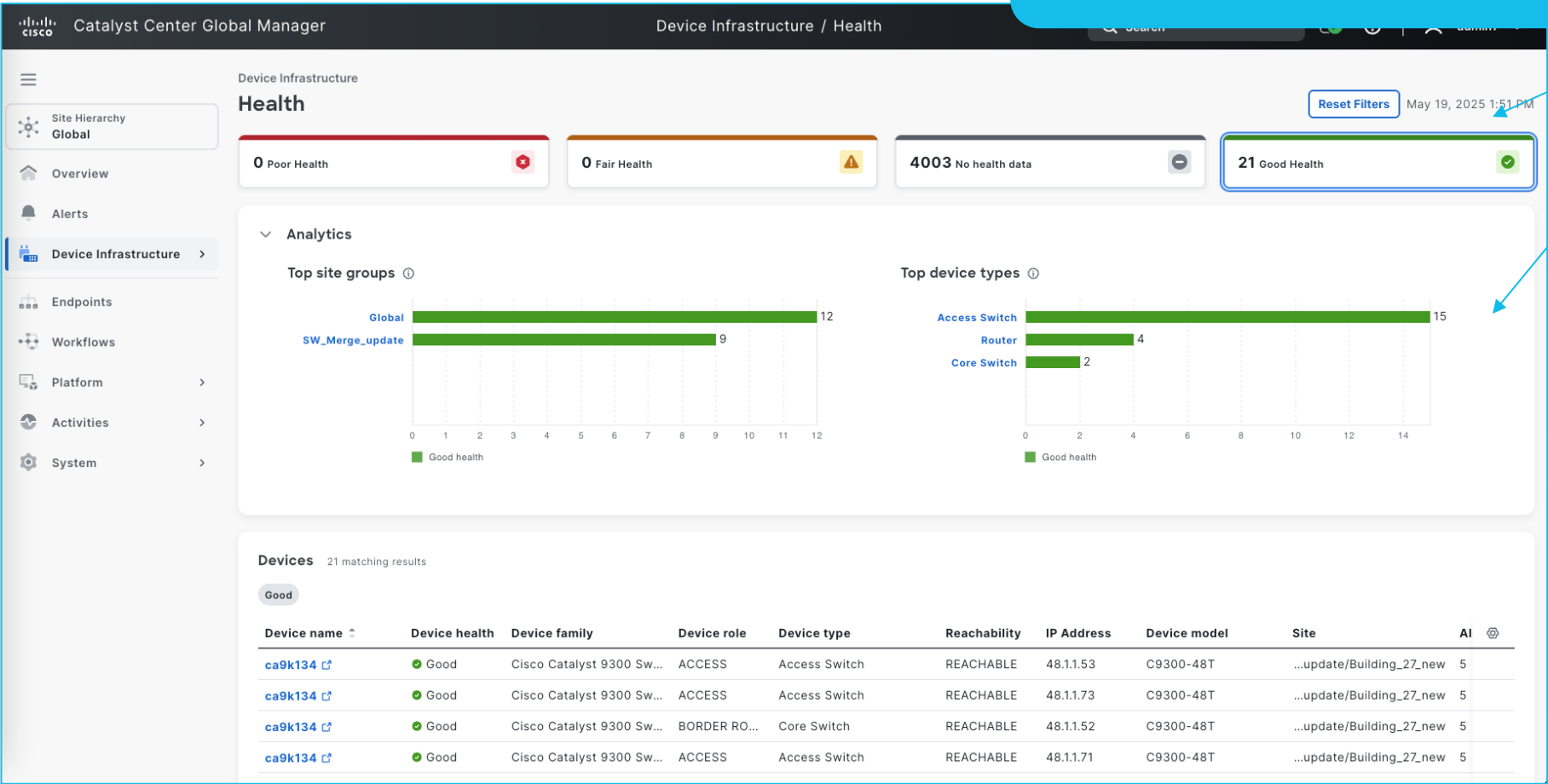
Transits

L3VN

L2VN

Device Health View (Device Infrastructure > Health)

Analytics section based on selected “Good Health” summary



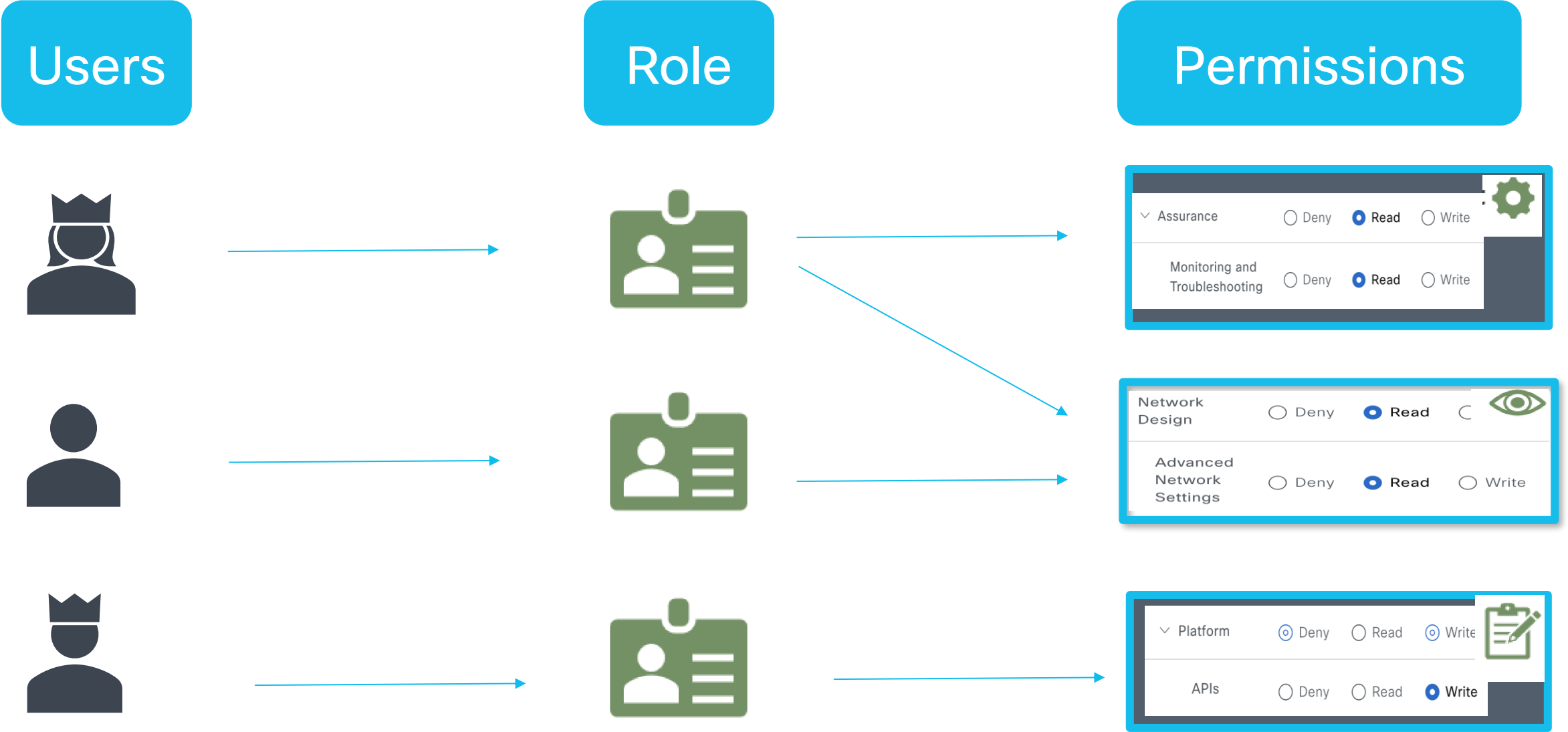
Site-Based RBAC

Available in Catalyst Center 3.1

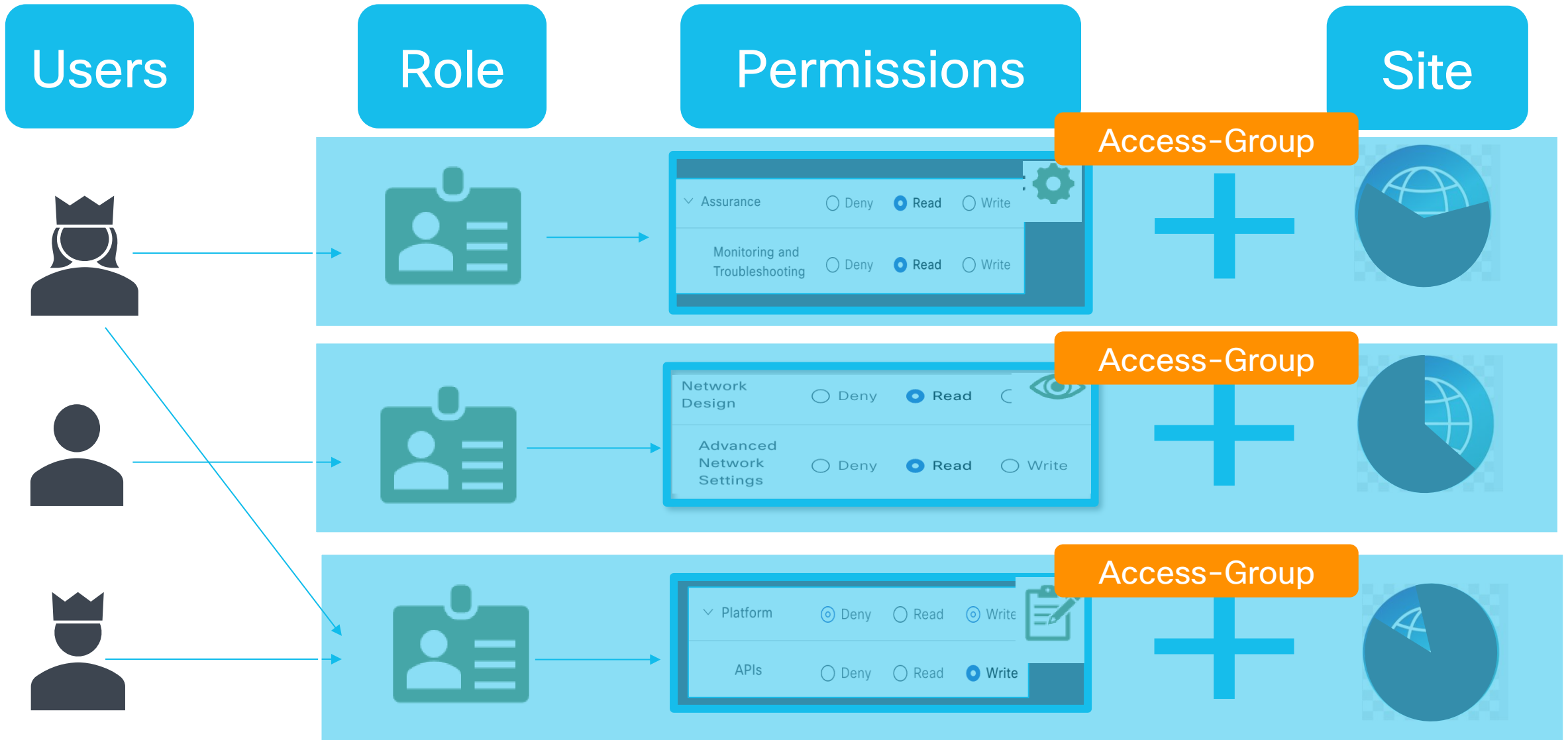
BRKOPS-2566: Catalyst Center Migration from 2.3.7 to 3.1.x

Tuesday 11th 5-6pm, Room 204

Catalyst Center - Current RBAC



New in Catalyst Center 3.1.x- Site based RBAC



New in Catalyst Center 3.1.x– Site based RBAC

Create an RBAC Role



Define the Access

i These permissions enable different capabilities in Catalyst Center, some of which are inter-dependent. Before making the selections, please ensure you understand the details of what each of these permissions allow. Click here to [Learn More](#). ×

Define the **Cisco-Live-Operator(v2)** role. Custom roles permit or restrict user access to certain Catalyst Center functions. By default, roles are configured with Read permission, which is an Observer role. If a role is configured with Deny permission, all related content for that capability is removed from the GUI.

Extensions	☐ Deny	☒ Read	☐ Write	and third-p
Network Design	☐ Deny	☒ Read	☐ Write	Configure n repository.
Network Management	☒ Deny	☒ Read	☐ Write	Discover an
Discovery	☐ Deny	☒ Read	☐ Write	Discover ne
Hierarchy	☐ Deny	☒ Read	☐ Write	Create a ne location. Th
Inventory	☐ Deny	☒ Read	☐ Write	Add, update manage net
License	☒ Deny	☐ Read	☐ Write	Manage sof This permis Group if se

Role Created Successfully.

Any changes made should take effect immediately.

Cisco-Live-Operator has been created.

What's Next?

[Add Access Group](#)

[Back to Roles Page](#)

[Workflows Home](#)

New in Catalyst Center 3.1.x– Site based RBAC

Create an
Access
Group
(Associated to
Role)



Create Your Access Group

Let's start by naming the access group and we recommend to give a brief description of the group which could be helpful to other administrators. From there you can select the level of access and which site to apply it to.

Name*
TBRANCH-CL-Operator

Description

Role*

Assurance-Only

Cisco-Live-Operator

Scope *

Search Hierarchy

Search Help

- Global
- APAC
- APJC
- Canada
- EMEA
- LBC-Canada-Ontario
- Loblaw - George Weston

- Access Group = Role + Scope

New in Catalyst Center 3.1.x– Site based RBAC

Create an
Access
Group
(Associated to
Role)



Create Your Access Group

Let's start by naming the access group and we recommend to give a brief description of the group which could be helpful to other administrators. From there you can select the level of access and which site to apply it to.

Create Your Access Group

Let's start by naming the access group and we recommend to give a brief description of the group which could be helpful to other administrators. From there you can select the level of access and which site to apply it to.

Name*

TBRANCH-CL-Operator

Description

Role*

Cisco-Live-Operator

Scope *

Q tbr|



[Search Help](#)

- ✓ ☐ Global
- ✓ ☐ Canada
 - ✓ ☐ Ontario
 - ✓ ☐ Toronto
 - > ☐ TBRANCH
 - ☒ TBRANCH-NORTH-YORK
 - ☐ TBRANCH-SCARBOROUGH

- Access Group = Role + Scope
- A scope is a SINGLE site, but includes children

New in Catalyst Center 3.1.x– Site based RBAC

Create an
Access
Group
(Associated to
Role)



Create Your Access Group

Let's start by naming the access group and we recommend to give a brief description of the group which could be helpful to other administrators. From there you can select the level of access and which site to

Create Your Access Group

Let's start by naming the access group and we recommend to give a brief description of the group which could be helpful to other administrators. From there you can select the level of access and which site to apply it to.

Name*

TBRANCH-CL-Operator

Description

Scope *

Q tbrl



[Search Help](#)

- Global
- Canada
 - Ontario
 - Toronto
 - TBRANCH
 - TBRANCH-NORTH-YORK**
 - TBRANCH-SCARBOROUGH

Done! Access Group created Successfully.

Any changes made should take effect immediately.

What's Next?

Add Users

[Back to Access Group](#)

New in Catalyst Center 3.1.x– Site based RBAC

Add user &
assign
Access
Group



User Management
Catalyst Center uses Users, Roles and Access Groups

Search Table

Filter Edit

	Username	First Name
☐	ciscotac	Cisco
☐	crwickha	Craig
☐	demouser	
☐	donnyo	Don

Update Internal User

First Name
Lila

Last Name
Rousseaux

Email
lroussea@cisco.com

Username
lila

Access Group*

SUPER-ADMIN_GLOBAL x

Tbranch-Assurance x

TBRANCH-CL-Operator x

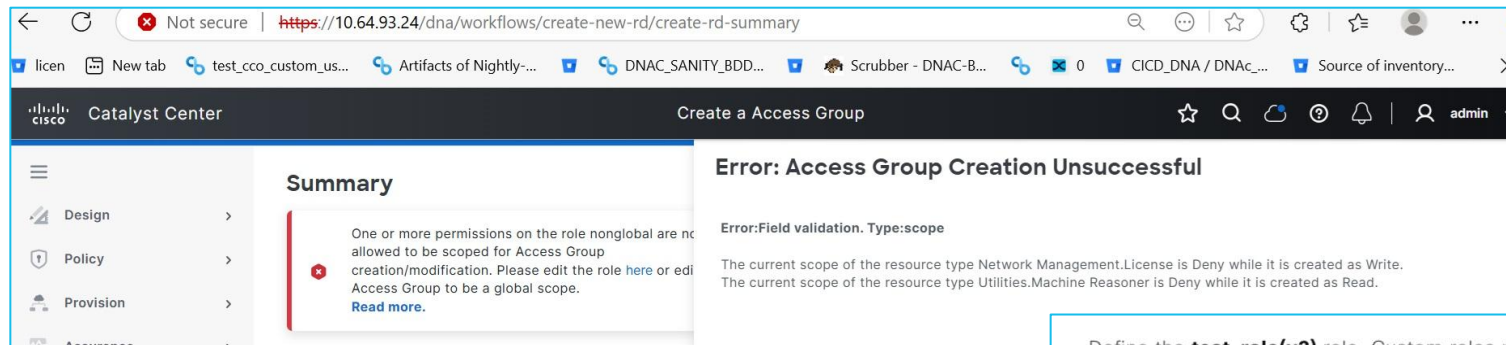
A user can have multiple Access Groups: user selects the access-group, No logout/login required. Context change

Internal and external users are supported. For SBRBAC the access-group needs to be configured in your AAA server

Example: Cisco-avpair=ags=TBRANCH-Operator

Dependencies

Dependency Selection: If for an App A to work, App B is needed to be given permissions, when App A is selected all dependencies of A will be automatically configured



There are permissions that are not allowed to be site scoped so you'll get an error message.

Define the **test-role(v2)** role. Custom roles permit or restrict user access to certain Catalyst Center functions. By default, roles are configured with Read permission, which is an Observer role. If a role is configured with Deny permission, all related content for that capability is removed from the GUI.

Inventory	☐ Deny	☒ Read	☐ Write	Add, update, or delete devices on your network. Manage device attributes, view and manage network topology and configurations.
License	☐ Deny	☐ Read	☒ Write	Manage software and network assets relative to license usage and compliance. This permission set cannot be assigned to a site scoped(Non Global) Access Group if set to Write
Network-				Configure network-wide settings to monitor your network and device

Backup & Restore

Backup and Restore - Appliance, AWS VA, ESXi VA



Physical Appliance

vmware[®]
by Broadcom



Types of backup



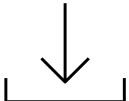
Backups can be On-Demand or Scheduled

Backup and Restore - Appliance, AWS VA, ESXi VA



Physical Appliance





Types of backup

Create Backup

BASICS

Backup Name*
10oct2023

☐ Create now ☐ Schedule daily ☒ Schedule weekly

Repeat weekly on:
☒ S ☐ M ☐ T ☐ W ☐ T ☐ F ☐ S

At this time:
🔒
12 : 00 : AM

SCOPE

☒ Cisco DNA Center (All data) ⓘ
☐ Cisco DNA Center (without Assurance data) ⓘ

Use this option to back up only automation data. With this option, Assurance data is not backed up.

Create Backup

BASICS

Backup Name*
10oct2023

☐ Create now ☐ Schedule daily ☒ Schedule weekly

Repeat weekly on:
☒ S ☐ M ☐ T

At this time:
🔒
12 : 00 : AM

SCOPE

☒ Cisco DNA Center (All data) ⓘ
☐ Cisco DNA Center (without Assurance data) ⓘ

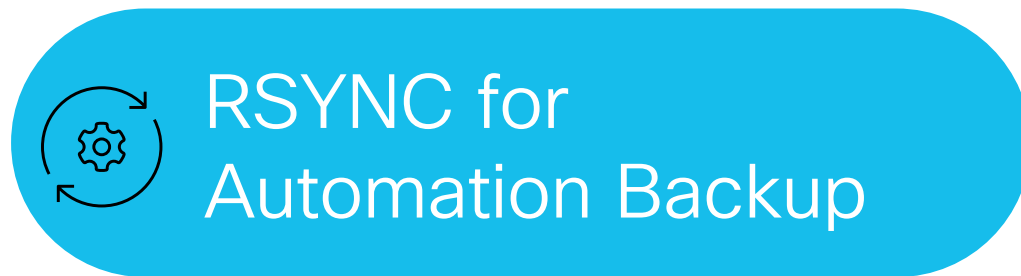
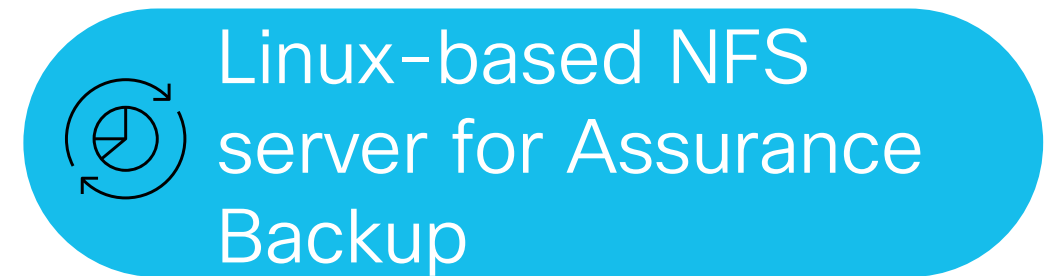
Use this option to back up automation and Assurance data. You must have two backup directories:
-One backup location is an external NFS server for Assurance data;
-One backup location is an external remote sync (rsync) target location for automation and system data;

Backup and Restore - Appliance, AWS VA

Up to version 2.3.7



Physical Appliance



Backup and Restore - Appliance, AWS VA

Up to version 2.3.7



Physical Appliance



☰

cisco

DNA Center

System / Backup & Restore

Backup & Restore

Backups

Schedule

Activity

Configure

Cisco DNA Center (Remote Host) *i*

Cisco DNA Center (NFS) *i*

✔

Configured

SSH IP Address*

10.85.54.179

SSH Port*

22

Hint

Server Path*

/home/netadmin/TRN6_DNAC_Backups/

Username*

netadmin

Password*

Encryption Passphrase*

Hint

☰

cisco

DNA Center

Backup & Restore

Backups

Schedule

Activity

Configure

Cisco DNA Center (Remote Host) *i*

Cisco DNA Center (NFS) *i*

✔

Configured

Host*

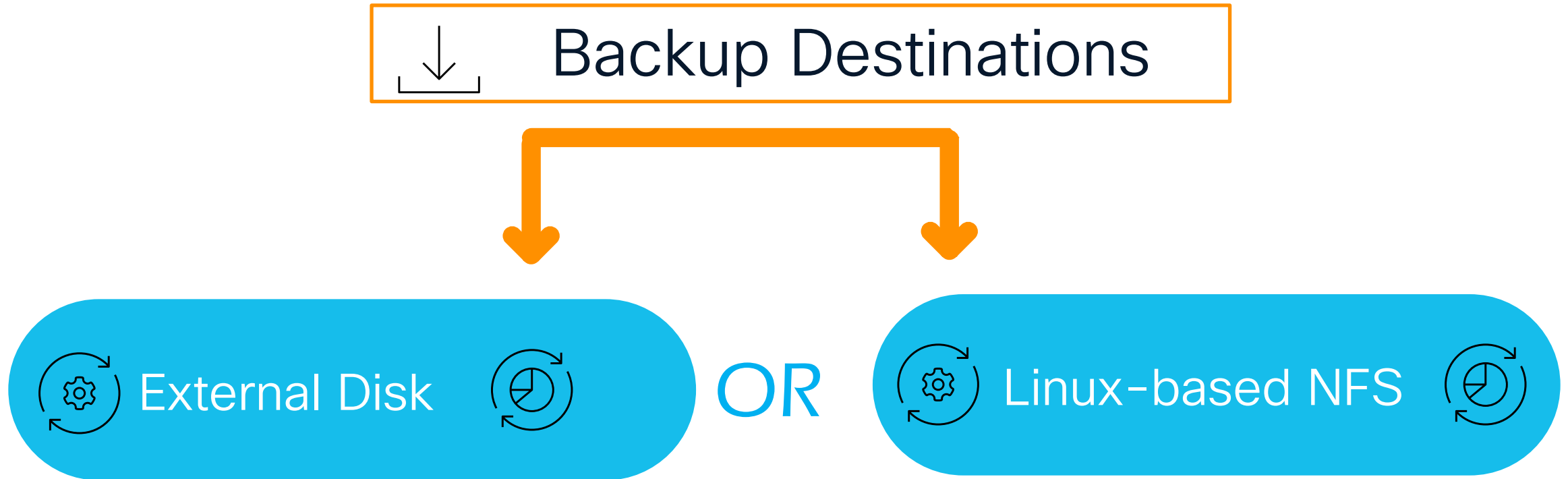
10.85.54.179

Server Path*

/home/netadmin/TRN6_DNAC_Backups/



Backup and Restore - ESXi Virtual Appliance



Single destination for System, Automation and Assurance & ability to schedule data retention

Backup and Restore - ESXi Virtual Appliance

DNA Center

System / Settings

Admin

Search

System Configuration

Proxy

Debugging Logs

High Availability

Backup Configuration

Login Message

Trust & Privacy

System Certificates

Settings / System Configuration

Backup Configuration

Physical Disk Cisco DNA Center Virtual Appliance provides an option to mount an external disk to the Virtual Machine for Assurance and Automation backups. Note: Physical Disk option is only supported for single node Virtual Machines.

Network File System (NFS) Cisco DNA Center creates the backup files and posts them to a remote server. Each backup is uniquely stored using the UUID as the directory name. For information about the remote server requirements, see Backup Server Requirements listed in the Administrator Guide. [Backup Server Requirements](#)

☐ Physical Disk

☒ NFS

[View NFS](#) | [Add NFS](#)

Mount Path*

Encryption passphrase*

Backup Retention (in number of backups)*

Reset

Submit

Add NFS

Server Host*

Source Path*

NFS Version*

Port

Port Mapper

Cancel

Save

New in 3.1.5 - Backup and Restore - Appliance, AWS VA



Physical Appliance



Catalyst Center

System / Settings

☆ 🔍 📁 ? 🔔 16 99+

Design

Policy

Provision

Assurance

Workflows

Energy Management

Tools

Platform

Activities

Reports

System

Explore

Q Search

Certificates

System Certificates

Trusted Certificates

Certificate Authority

Device Certificates

Cisco Accounts

PnP Connect

Cisco.com Credentials

Smart Account

Smart Licensing

SSM Connection Mode

Device Settings

Image Distribution Servers

PnP Device Authorization

Device Controllability

Network Resync Interval

SNMP

ICMP Ping

PnP AP Location

Device EULA Acceptance

Device Prompts

Settings > System Configuration

Backup Configuration

Physical Disk: Catalyst Center Virtual Appliance provides an option to mount an external disk to the Virtual Machine for Assurance and Automation backups. For information about configuring an external disk, see the [Add a Physical Disk for Backup and Restore](#) section in the Administrator Guide.

Network File System (NFS): Catalyst Center creates the backup files and posts them to a remote server. Each backup is uniquely stored using the UUID as the directory name. For information about configuring NFS, see the [NFS Backup Server Requirements](#) section in the Administrator Guide.

☐ Physical Disk

☒ Network File System (NFS)

View NFS List

Add NFS

Mount Path*

10.85.54.179:/home/netadmin/TRN6_DNAC_Assurance

Refresh

Encryption Passphrase*

Passphrase Configured

Update Passphrase

Backup Retention (in number of backups)*

14

More Information

Reset

Submit

Single NFS Backup destination for both Automation and Assurance

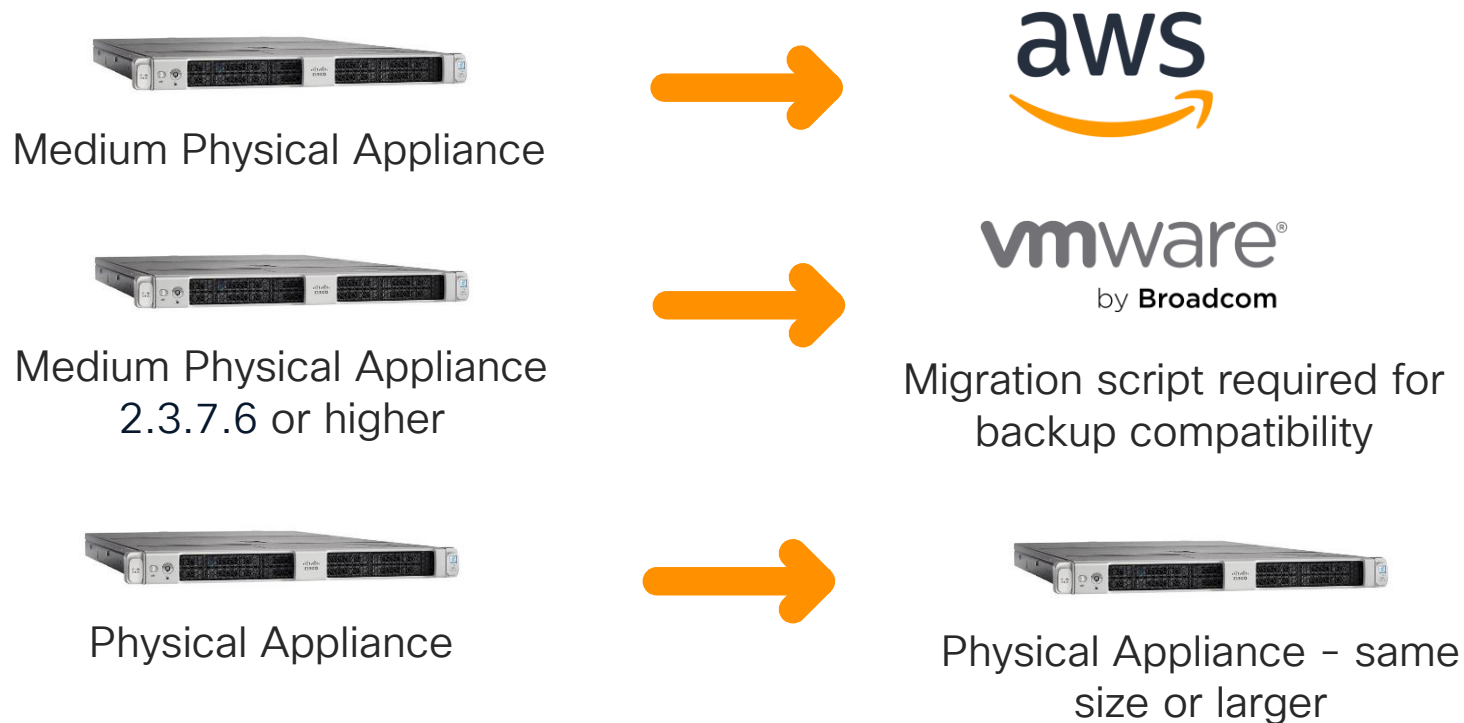
Backup Retention



Migration

Physical Appliance to Physical Appliance or AWS VA

- Migration is based on B&R
- Supports migration from: physical to physical or physical to virtual



Closing and Q&A

Today's Mission: Architect Catalyst Center to Scale, Adapt, and Endure

Guiding Questions from this session:

 **What form factor best fits our needs based on our scale and organizational requirements?**

 **Is a distributed environment necessary? How would we manage it?**

 **Do we need resiliency? How do we design for resiliency and recovery?**

 **How do we future-proof growth – horizontally or vertically?**

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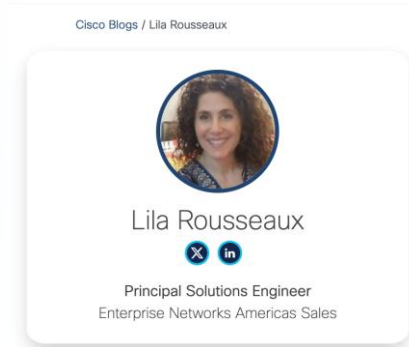
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