



The bridge to possible

Cisco DNAC upgrade best practices

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About me ...

- 12+ years of experience in the IT industry across different roles and multiple technologies
- Currently I'm a Customer success specialist at Cisco , helping our customers to adopt Cisco solutions , and helping our partners when needed , I'm specialised in DNAC and SDA
- Before that I was working as technical instructor (CCSI certified) delivering Cisco official trainings across the EMEA region to Cisco customers and partners
- Before that I was working as an implementation Engineer after being in operations for couple of years in one of the biggest SPs in the world



Cisco Webex App

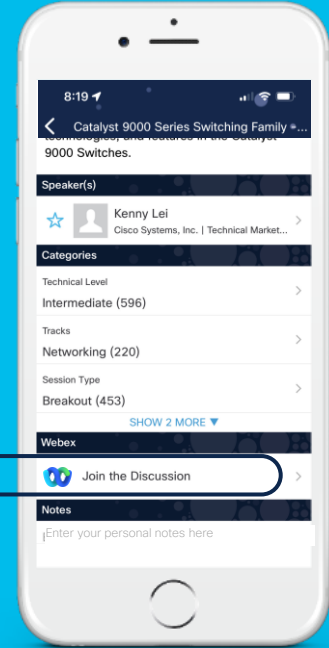
Questions?

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.



<https://ciscolive.ciscoevents.com/ciscolivebot/#BRKDCN-2480a>

What to expect from this session

- DNAC upgrade are very few clicks that you need to do in the GUI .
- But once the upgrade process starts then all what we can do is just wait wait to see how it will go , will it go well ? will it go wrong ?! .. We are waiting and we have no control because the process has started .
- So , It's better to prepare well before starting the upgrade process .
- For this reason, most of what we will discuss in the session today will be on what do you need to do before clicking on the upgrade button , so that when you click on the upgrade button then you are waiting for success.
- It's better be prepared ! And this is what this session is all about .





Agenda

- Why to upgrade DNAC
- Prepare for the upgrade
- DNAC backup
- AURA
- Performing the upgrade
- What to do after the upgrade
- Recovery

Why to upgrade DNAC



Unlock these features and have them in your DNAC

- Wireless 3D Analyzer
- AI Enhanced RRM
- AP performance advisories
- Intel analytics in Client 360
- Client tracking feature
- Worst interferers report
- CLI template compliance
- End of Life (EoX) Report
- Webex integration in Client 360

DNAC upgrade could be also for

- Feature enhancement , scale enhancement , performance improvements , bug fix .
- DNAC upgrade Could allow you for new integrations (ex: Thousand Eyes integration , Webex integration)
- And many more

Prepare for the upgrade

Upgrade Pre-Requisites

- Cluster link interface connected and in “UP” state
- Confirm connectivity to upgrade resources
- Valid Cisco.com account available during upgrade
- SUPER-ADMIN-ROLE permissions required to perform upgrade
- Confirm minimum disk requirements met
 - “/” partition has at least 2GB free space
 - “/data” partition has at least 35GB free space and isn’t more than 70% full
 - Contact TAC for “storage validations failed” error
- 3-node cluster upgrade requires all nodes in cluster to be up
 - All nodes in cluster are upgraded
- Core system package updates must be completed before Application updates

Checking Cluster Link Interface

1. SSH into Cisco DNA Center appliance over port 2222
2. Run command “`ifconfig interface-name`”
 - For 44 core first-generation appliance (Cisco part number DN1-HW-APL), specify **enp10s0** as interface name.
 - For 44 or 56 core second-generation appliance (Cisco part number DN2-HW-APL or DN2-HW-APL-L), specify **enp94s0f1** as interface name.
 - For 112 core second-generation appliance (Cisco part number DN2-HW-APL-XL), specify **enp69s0f1** as interface name.
3. Check last line of output and verify data has been transmitted and received.
 - If interface is up and operational, values will be non-zero

Confirm connectivity to upgrade resources

1. Confirm cloud connectivity to Cisco

- Run command “**maglev catalog settings display**”
- Run command “**maglev catalog settings validate**”

2. Confirm correct ports are open on firewall for internet connectivity

Source port	Source	Destination Port	Destination	Description
Any	Cisco DNA Center	TCP 443	registry.ciscoconnectdna.com	Download Cisco DNA Center package updates
Any	Cisco DNA Center	TCP 443	www.ciscoconnectdna.com	Download Cisco DNA Center package updates
Any	Cisco DNA Center	TCP 443	registry-cdn.ciscoconnectdna.com	Download Cisco DNA Center package updates
Any	Cisco DNA Center	TCP 443	cdn.ciscoconnectdna.com	Download Cisco DNA Center package updates

Checking minimum disk space

- Confirm that the [minimum disk requirements](#) are met:
 - The / partition has at least 2 GB of free space.
 - The /data partition has at least 35 GB of free space and is not more than 70% full

```
$ df -h
```

Filesystem	Size	Used	Avail	Use%	Mounted on
udev	126G	0	126G	0%	/dev
tmpfs	26G	13M	26G	1%	/run
/dev/sda2	47G	24G	21G	54%	/
tmpfs	126G	0	126G	0%	/dev/shm
tmpfs	5.0M	0	5.0M	0%	/run/lock
tmpfs	126G	0	126G	0%	/sys/fs/cgroup
/dev/sdb3	166G	2.8G	155G	2%	/var
/dev/sda4	392G	98G	275G	27%	/data
/dev/sda3	239M	0	239M	0%	/boot/efi
/dev/sdb1	671G	265G	373G	42%	/data/maglev/srv
/dev/sdb2	923G	102G	775G	12%	/data/maglev/srv/maglev-system
/dev/sdc1	3.5T	15G	3.3T	1%	/data/maglev/srv/ndp
glusterfs-brick-0.glusterfs-brick:/default_vol	923G	111G	775G	13%	/mnt/glusterfs/default_vol

Confirm compatibility

Compatibility matrix

- Check the hardware and software versions of all devices to be managed by Cisco DNA Center
- Confirm software compatibility of all integrations
 - ISE
 - Infoblox
 - ServiceNow
- [DNA Center Compatibility Matrix](#)
- [Software Defined Access Compatibility Matrix](#)

Create bootable USB drive with the ISO

This will be needed in case recovery of the appliance will be required.

- Download currently used version of Cisco DNA Center ISO
<https://software.cisco.com/download/home/286316341/type/286318832/release/>
- Create a Bootable USB Drive
https://www.cisco.com/c/en/us/td/docs/cloud-systems-management/network-automation-and-management/dna-center/1-3-3-0/install_guide/2ndGen/b_cisco_dna_center_install_guide_1_3_3_0_2ndGen/b_cisco_dna_center_install_guide_1_3_2_0_M5_chapter_011.html?bookSearch

Software Download

Downloads Home / Cloud and Systems Management / Network Automation and Management / Cisco DNA Center / DNA Center Software- 2.1.2.5

Search...

Expand All Collapse All

Latest Release

2.1.2.5

1.3.3.0

All Release

2

1

Cisco DNA Center

Release 2.1.2.5

Related Links and Documentation

My Notifications

Release Notes for 2.1.2.5

File Information	Release Date	Size		
Cisco DNA Center SW 2.1.2.5 (Refer to Deployment Guide for verifying ISO image)g DNAC-SW-2.1.2.5.iso	19-Jan-2021	22876.63 MB	↓	↗
Cisco signature for the ISO file DNAC-SW-2.1.2.5.iso. (Refer to Deployment Guide for verifying ISO image)g DNAC-SW-2.1.2.5.sig	19-Jan-2021	0.00 MB	↓	↗

Create a **Bootable** USB Drive

Complete one of the following procedures to create a **bootable** USB drive from which you can install the Cisco DNA Center ISO image.

Before you begin:

- Download and verify your copy of the Cisco DNA Center ISO image. See [Verify the Cisco DNA Center ISO Image](#).
- Confirm that the USB flash drive you are using has a capacity of at least 32 GB.
- Using Etcher
- Using the Linux CLI
- Using the Mac CLI

Direct or multi-step upgrade

- You can upgrade directly to Cisco DNA Center 2.3.3.4 from:
 - Release 2.3.3.x (2.3.3.0, 2.3.3.1 or 2.3.3.3)
 - Release 2.3.2.x (2.3.2.1 or 2.3.2.3)
 - Release 2.2.3.x (2.2.3.0, 2.2.3.3, 2.2.3.4, 2.2.3.5 or 2.2.3.6)
 - Release 2.2.2.x (2.2.2.0, 2.2.2.1, 2.2.2.3, 2.2.2.4, 2.2.2.5, 2.2.2.6, 2.2.2.8 or 2.2.2.9)
- Multi-step upgrade for release 2.2.1.x or earlier releases:



- Install all application updates prior to each system update
- Do not use Cisco DNA Center during upgrade process

DNAC Backup

Cisco DNA Center Database Backups

- System backup **highly recommended** before upgrading
 - Backups are only valid for the version the backup is performed on
 - Backup of automation data stored on Remote Sync Storage
 - Data consists of DNA Center databases, credentials, file systems, and files
- Backup of assurance data stored on the NFS storage
 - Data consists of network assurance and analytics data
- Recommended storage space:

Storages	DN2-HW-APL	DN2-HW-APL-L	DN2-HW-APL-XL
Remote Sync Storage	50 GB	100 GB	300 GB
NFS Storage	1.7 TB	3 TB	8.4 TB

Setting up Remote Host

System 360 Software Updates Settings Data Platform Users **Backup & Restore**

Backup & Restore

Backups Schedule Activity **Configure**

DNA Center system (Remote Host) DNA Center system (NFS)

Configured

SSH IP Address*
192.168.139.160

SSH Port* ⓘ
22

Server Path*
/home/cisco/backups/dnac-auto1

Username*
cisco

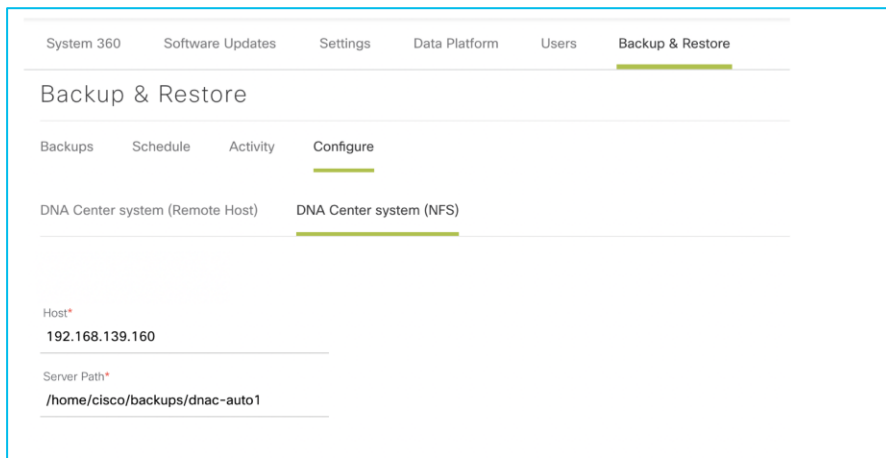
Password* ⓘ

Encryption Passphrase* ⓘ

- Start by choosing the server details link to open the side panel.
- Specify the address and port to the server you wish to save the backup file to.
- Specify the path on the server to save the backup.
- Include the username and password to SSH into your server.
- Include an encryption passphrase to encrypt sensitive components of your backup.

- Remote Server Requirements
- User must have their own external remote server to store backup files.
- Remote server must be set up to Cisco DNA Center before performing the backup/restore.
- Remote server must have ssh and sftp enabled.
- Remote server must have rsync installed.
- Currently must be Linux based remote server. Does not support a windows platform as a remote server.

Setting up NFS (Assurance)



The screenshot shows the 'Backup & Restore' configuration page in the Cisco DNA Center. The top navigation bar includes 'System 360', 'Software Updates', 'Settings', 'Data Platform', 'Users', and 'Backup & Restore'. The 'Backup & Restore' section has sub-tabs for 'Backups', 'Schedule', 'Activity', and 'Configure'. Under 'Configure', there are two options: 'DNA Center system (Remote Host)' and 'DNA Center system (NFS)'. The 'DNA Center system (NFS)' option is selected. Below this, the 'Host*' field is populated with '192.168.139.160' and the 'Server Path*' field is populated with '/home/cisco/backups/dnac-auto1'.

System 360 Software Updates Settings Data Platform Users **Backup & Restore**

Backup & Restore

Backups Schedule Activity **Configure**

DNA Center system (Remote Host) **DNA Center system (NFS)**

Host*
192.168.139.160

Server Path*
/home/cisco/backups/dnac-auto1

Server requirements for Assurance backup:

- Support NFS v4 and NFS v3
- Have read and write permissions on the NFS export directory
- Have a stable network connection between Cisco DNA Center and the NFS server
- Have sufficient network speed between Cisco DNA Center and the NFS server

Performing Backup of DNA Center Database

Steps for quick on-demand backup:

- Step 1 – In the Cisco DNA Center GUI, click the Menu icon and choose **System → Backup & Restore** which takes you to the **Backups** view
 - DNA center requires that a backup server be configured before a backup can be performed
- Step 2 – Click **Create Backup** for the **Create Backup** menu to appear
- Step 3 – In the **Backup Name** field, enter a unique name for the backup
- Step 4 – Choose **Create now** to perform the backup immediately
- Step 5 – Define the scope of the backup
 - Click **Cisco DNA Center (All data)** to back up Automation and Assurance data
 - Click **Cisco DNA Center (without Assurance data)** to back up only Automation data
- Step 6 – Click **Create** to start the backup process

AURA Tool



AURA - Audit & Upgrade Readiness Analyzer

- The AURA tool automatically checks the health of your Cisco DNA Center appliance and creates an easy-to-read report on any issues that may cause problems when performing an upgrade.
- Performs health, scale and upgrade readiness checks for Cisco DNA Center and Fabric
- The tool uses API calls, DB reads & show commands (read only operations) and hence, doesn't affect performance or cause impact to the Cisco DNA Center or the networking devices.
- [Using AURA Tool](#)
- [Link to the AURA Tool](#)

AURA Check Areas

- Cisco DNA Center Scale Test
- Cisco DNA Center Infra Health
- Cisco DNA Center Assurance Health
- WLC/eWLC Assurance Health
- SDA Device CLI Capture
- Fabric Devices Configurations Capture and Compare using inbuilt diff tool
- SDA Control and Security Audit
- Software Bugs Causing Upgrade Failures
- Upgrade Readiness Checks

Local Execution of AURA

Copy the executable AURA file to Cisco DNA Center and run it from the CLI

1. git clone <https://github.com/CiscoDevNet/DNAC-AURA.git>
 - a. https_proxy=https://<your proxy> git clone <https://github.com/CiscoDevNet/DNAC-AURA.git> (for proxy)
2. ./dnac_aura
 - a. chmod 755 dnac_aura (make file executable if necessary)

(USERNAME AND PASSWORD FOR UI)

[administration] username for 'https://kong-frontend.magleb-system.svc.cluster.local:443': <username>

[administration] password for 'admin': <password>

[sudo] password for maglev: <password>

Report and **Logs** can be found at:

Cisco DNA Center **AURA Report** : /data/tmp/dnac_aura/reports/DNAC_AURA_Report_2020-08-04_08_45_28.pdf

Cisco DNA Center **AURA Logs** : /data/tmp/dnac_aura/logs/DNAC_AURA_Logs_2020-08-04_08_45_28.tar.gz

Sample AURA report

Summary

Cisco DNA Center AURA Results- v1.2.4

The Cisco DNA Center AURA (Audit and Upgrade Readiness) tools performs a variety of Health, scale and upgrade readiness check across the Cisco DNA Center and the rest of the Fabric network without affecting any of the devices. This report is auto generated by the script and documents all the checks and logs performed by the script.

Thank you for running it, please reach out to dnac_sda_audit_tool@cisco.com for any feedback.

A total of 114 checks were executed on the setup, found 7 errors and 4 warnings. Please evaluate the Warnings and Errors, ensure the Errors are eliminated prior to proceeding with an upgrade.

Summary of the Results

Cisco DNA Center Device Details:

Model	Serial Number	Software Version	Node IP Address
VMware-56 4d e2 64 e1 e4 fd 33-3f e9 10 2d 75 82 13 0f3			192.168.61.111

Script Execution Time:

Start Time	End Time
2020-09-10_14:31:53	2020-09-10_14:36:09

Cisco DNA Center Infra Health Results:

Checks Executed	Errors Found	Warnings Found
64	6	1

Cisco DNA Center & Device Assurance Results:

Checks Executed	Errors Found	Warnings Found
9	0	0

Cisco DNA Center & Device Upgrade Readiness Results:

Checks Executed	Errors Found	Warnings Found
19	0	3

Cisco DNA Center SD-Access Health Results:

Checks Executed	Errors Found	Warnings Found
4	1	0

Cisco DNA Center Scale Limit Check Results:

Checks Executed	Errors Found	Warnings Found
18	0	0

DNS and NTP

#18:Checking:Number of DNS servers configured in etcd on nodes (<=3)

INFO:DNS server count on node-192.168.61.111 (2) OK

INFO:DNS:ens160-[u'10.88.194.101', u'10.88.194.102']

#19:Checking:Number of /etc/resolv.conf entries (<=4)

INFO:/etc/resolv.conf entries 1 OK

#20:Checking:DNS config - /etc/network/interfaces

#21:Checking:DNS Reachability - DNS : [u'10.88.194.101', u'10.88.194.102']

INFO:DNS Reachability Looks OK

#22:Checking:DNS server can resolve www.ciscoconnectdna.com

INFO:DNS server 10.88.194.101 can resolve OK

INFO:DNS server 10.88.194.102 can resolve OK

#23:Checking:NTP server Sync : [u'171.68.38.66']

INFO:Synced successfully with time server

INFO:NTP Server check Looks OK

DNAC upgrade options



Cisco DNA Center upgrade options

Two ways to upgrade

- Online upgrade
 - Done entirely using Cisco DNA Center GUI
 - Requires Internet connectivity
- Offline (AirGap) upgrade
 - Requires TAC assistance to download the upgrade files
 - Used when appliance is not connected to Internet

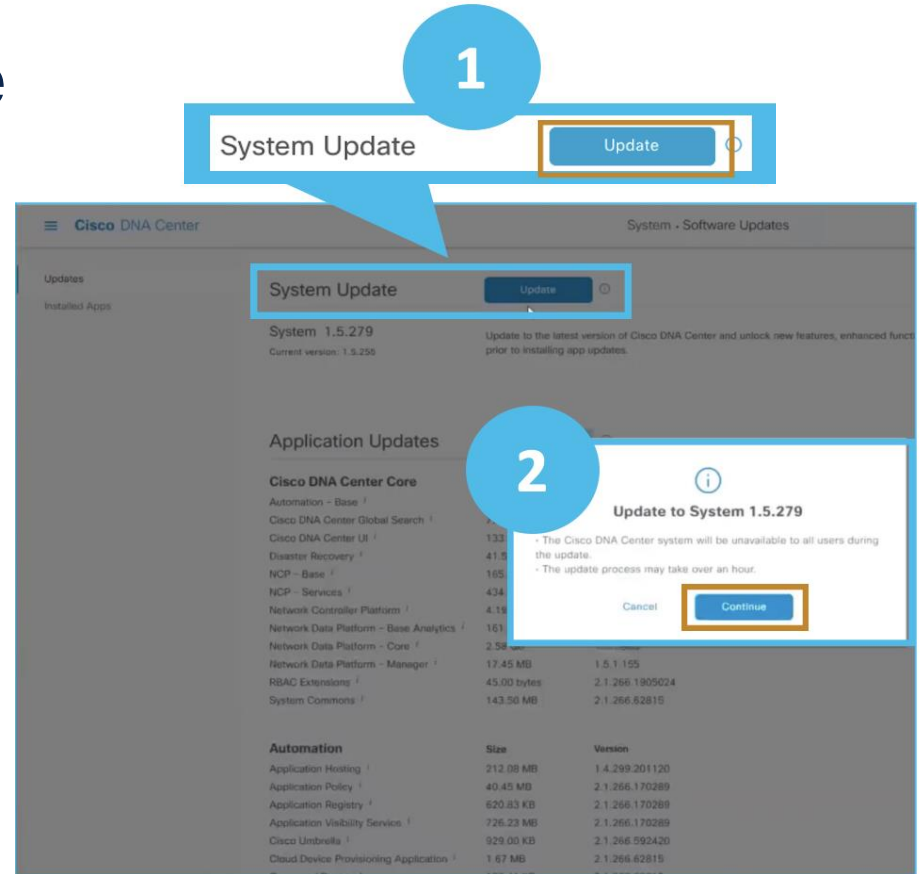
Performing online upgrade

- Step 1 – In DNA Center GUI, click the Menu icon and choose **System → Software Updates**
 - A **Cisco DNA Center 2.x.x.x is Here!** banner appears at the top of the page with a **Switch Now** button. **Switch Now** lets you see the system and application packages that are available to update
- Step 2 – Click **Switch Now**
- Step 3 – At the prompt, click **OK** to proceed with the upgrade
 - Wait for approximately 90 seconds for progress bar to finish and updated system version and banner to display
 - Refresh the page several times if the updated system version and banner do not appear
- Step 4 – A system update appears on the **Software Updates** page. Click **Update**
- Step 5 – After the system update is complete, at the top of the **Application Updates** field, click **Download All**
 - The packages begin downloading
- Step 6 – After the packages are downloaded, at the top of the **Application Updates** field, click **Update All**
 - The packages begin updating

Performing the upgrade

System update

- Login to the GUI
- Go to Settings > Software Updates > Updates
- Perform the system update by clicking Update



Performing the upgrade

Application update

- After performing System Update, Go to **Settings > Software Updates > Updates**
- Perform all Application Updates by clicking **Download All**

System Update

System 1.5.255 ✔ Your system package is up to date. Proceed with Application updates.

Application Updates Download All

Cisco DNA Center Core	Size	Version
Automation - Base <i>i</i>	553.48 MB	2.1.265.62735
Cisco DNA Center UI <i>i</i>	85.64 MB	1.5.1.45
NCP - Base <i>i</i>	165.94 MB	2.1.265.62735
NCP - Services <i>i</i>	434.01 MB	2.1.265.62735
Network Controller Platform <i>i</i>	4.19 GB	2.1.265.62735
Network Data Platform - Base Analytics <i>i</i>	161.03 MB	1.5.1.181
Network Data Platform - Core <i>i</i>	2.58 GB	1.5.1.727
Network Data Platform - Manager <i>i</i>	17.45 MB	1.5.1.151
RBAC Extensions <i>i</i>	45.00 bytes	2.1.265.1905023
System Commons <i>i</i>	147.26 MB	2.1.265.62735

Application Updates Download All ⓘ

Cisco DNA Center Core	Size	Version	
Automation - Base <i>i</i>	553.48 MB	2.1.265.62735	29%
Cisco DNA Center UI <i>i</i>	85.64 MB	1.5.1.45	25%
NCP - Base <i>i</i>	165.94 MB	2.1.265.62735	27%
NCP - Services <i>i</i>	434.01 MB	2.1.265.62735	25%
Network Controller Platform <i>i</i>	4.19 GB	2.1.265.62735	26%
Network Data Platform - Base Analytics <i>i</i>	161.03 MB	1.5.1.181	25%
Network Data Platform - Core <i>i</i>	2.58 GB	1.5.1.727	25%
Network Data Platform - Manager <i>i</i>	17.45 MB	1.5.1.151	25%
RBAC Extensions <i>i</i>	45.00 bytes	2.1.265.1905023	25%
System Commons <i>i</i>	147.26 MB	2.1.265.62735	25%

Performing the upgrade

Application update

- “Update All” button available after download is finished

Application Updates

Update All ⓘ

You can install new packages after you click “Update All” and update the existing packages

Cisco DNA Center Core	Size	Version
Automation - Base ⓘ	553.48 MB	2.1.265.62735
Cisco DNA Center UI ⓘ	85.64 MB	1.5.1.45
NCP - Base ⓘ	165.94 MB	2.1.265.62735
NCP - Services ⓘ	434.01 MB	2.1.265.62735
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Application Updates

Update All ⓘ

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Cisco DNA Center Core	Size	Version	
Automation - Base ⓘ	553.48 MB	2.1.265.62735	● 10%
Cisco DNA Center UI ⓘ	85.64 MB	1.5.1.45	● 10%
NCP - Base ⓘ	165.94 MB	2.1.265.62735	● 10%
NCP - Services ⓘ	434.01 MB	2.1.265.62735	● 10%
Network Controller Platform ⓘ	4.19 GB	2.1.265.62735	● 10%
Network Data Platform - Base Analytics ⓘ	161.03 MB	1.5.1.181	● 10%
Network Data Platform - Core ⓘ	2.58 GB	1.5.1.727	● 10%
Network Data Platform - Manager ⓘ	17.45 MB	1.5.1.151	● 10%
RBAC Extensions ⓘ	45.00 bytes	2.1.265.1905023	● 10%
System Commons ⓘ	147.26 MB	2.1.265.62735	● 10%

Offline (Airgap) upgrade

Download upgrade package

- Open a TAC case to request the upgrade file
- Download the image and SHA512 checksum
- Calculate the checksum and compare it to what was provided
 - Linux: `sha512sum Cisco-DNA-Center-image-filename`
 - Mac: `shasum -a 512 Cisco-DNA-Center-image-filename`
 - Windows: download the [checksum utility](#) from Microsoft

Offline (Airgap) upgrade

Transfer package to cluster

- Leverage SCP or SFTP to transfer the package to the Cisco DNA Center cluster
- For 3-Node cluster only transfer to Catalog Server pod
 - `magctl service status catalogserver | grep Node:`
 - Node: 192.192.192.72/192.192.192.72
- When accessing the DNA Center Command Line use SSH port 2222
 - Username is “maglev” password was the Linux password set during the initial install of Cisco DNA Center

Offline (Airgap) upgrade

Execute the upgrade binary

- On the Catalog Server Node in the cluster
- Give the file execute permission
 - `chmod +x <upgrade file>`
- Execute the binary
 - `sudo ./ <upgrade file>`
- Provide both the maglev password, and the admin GUI credentials

What to do after the upgrade



Validating the Upgrade

- Check about “?” for DNAC version to confirm

The screenshot displays the Cisco DNA Center web interface. At the top, the header shows 'Cisco DNA Center' with a search icon, a help icon (a question mark), and a refresh icon. Below the header, a welcome message 'Welcome, demo' is visible, along with links for 'Take a Tour' and 'Explore'. A notification banner at the top states: 'Learn about new capabilities in this release on the Cisco DNA Center YouTube Channel.' The main content area is titled 'Assurance Summary' and features a 'Health' section with three metrics: '88% Network Devices', '90% Wireless Clients', and '95% Wired Clients'. A 'View Details' link is present for the Wired Clients metric. To the right, the 'Trends and Insights' section shows 'AP Performance Advisories' with a '--' indicator and 'Trend Deviations' with a '5' indicator, also with a 'View Details' link. A modal window is open in the center, displaying 'Cisco DNA Center Version 2.2.3.4' with links for 'Release Notes', 'Packages', 'Serial number', and 'Member ID'. The footer of the modal includes the copyright notice '© 2022 Cisco Systems Inc. All Rights Reserved.' Below the Assurance Summary, a 'Network Snapshot' section is partially visible, showing categories like 'Sites', 'Network Devices', and 'Application QoS Policies'.

Validating the Upgrade

- Confirm successful upgrade of system
 - System → Software Updates → System Update
 - Message should show Your system package is up to date
 - Verify System version matches version in release notes
 - System → Software Updates → Installed Apps
 - System Commons version should match version in release notes

Validating the Upgrade

- Navigate to **System > System 360** and confirm all services on all hosts are running
- Confirm all integrations are still connected

The screenshot displays the Cisco System 360 interface. The top section, titled 'Cluster', shows 'Hosts (1)' with a timestamp 'As of Dec 16, 2021 3:38 PM'. A single host entry for '198.18.129.100' is shown with a green dot, indicating it is healthy. A blue callout bubble points to this host with the text 'Indicates all services are healthy'. Another blue callout bubble points to a 'View 137 Services' link with the text 'Click to view all services and health statuses'. The bottom section, titled 'Externally Connected Systems', shows 'Identity Services Engine (ISE)' with a timestamp 'As of Dec 15, 2021 3:38 PM'. It contains a table with two rows: 'PRIMARY' and 'PXGRID', both with IP address '198.18.133.27'. To the right of each row is a status indicator 'Available' with a green checkmark. A blue 'Update' button is located at the bottom right of this section.

Cluster		
Hosts (1) As of Dec 16, 2021 3:38 PM		
●	198.18.129.100	View 137 Services

Externally Connected Systems		
Identity Services Engine (ISE) As of Dec 15, 2021 3:38 PM		
PRIMARY	198.18.133.27	Available ✓
PXGRID	198.18.133.27	Available ✓
Update		

Post-upgrade Steps

- Check that all devices are reachable and managed
- Check the Network Hierarchy, Image Repository, etc..
- Ensure all external integrations are still working as expected
- Run Integrity Verification application
- Run AURA Tool

Perform another backup after the upgrade

- Perform a new system backup after the upgrade is successful.
- Backups are only valid for the version on which the backup was performed.

The screenshot displays the 'Backup & Restore' interface in Cisco DNA Center. The page title is 'System - Backup & Restore'. Below the title, there's a 'Backup & Restore' section with tabs for 'Backups', 'Schedule', 'Activity', and 'Configure'. The 'Backups' tab is active. A search bar is present with the text 'Find'. Below the search bar is a table of backups.

Date	Backup Name	File Size	Status	Operation	Compatibility	End Date	Action
Friday, Feb 26, 2021, 8:01 PM EDT	dja-weekly-without-assurance ⓘ	11010.68 MB	SUCCESS	BACKUP	● ⓘ	Friday, Feb 26, 2021, 8:07 PM EDT	Restore ⓘ Delete
Friday, Apr 2, 2021, 9:01 PM EDT	dja-weekly-without-assurance ⓘ	11084.06 MB	SUCCESS	BACKUP	●	Friday, Apr 2, 2021, 9:09 PM EDT	Restore Delete

Recovery



Try to fix it first

- At first attempt should be made to fix the reason of failed upgrade
- Due nature of the solution and complexity of underlaying components best approach is to reach out to TAC
- In worst case scenario recovery and reimage of the appliance will be needed

Reimage the appliance

- Find the USB stick prepared earlier
- Follow steps to Reimage the Appliance:

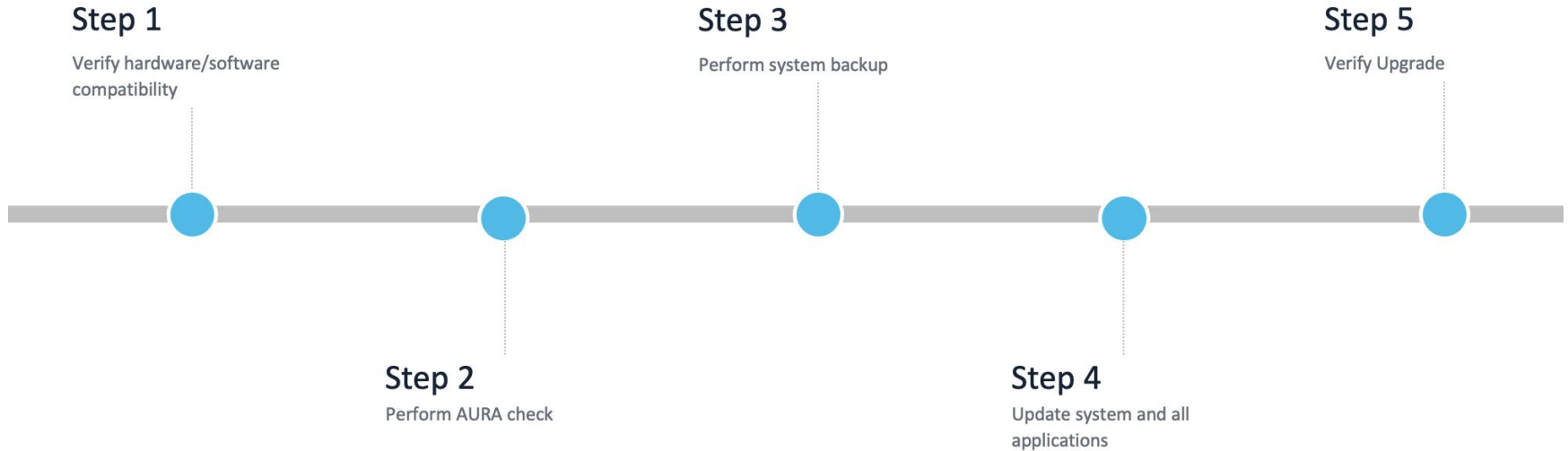
https://www.cisco.com/c/en/us/td/docs/cloud-systems-management/network-automation-and-management/dna-center/1-3-3-0/install_guide/2ndGen/b_cisco_dna_center_install_guide_1_3_3_0_2ndGen/b_cisco_dna_center_install_guide_1_3_2_0_M5_chapter_011.html#task_exk

- Restore backups
- Outage of Cisco DNA Center is not impacting operations/forwarding of network devices

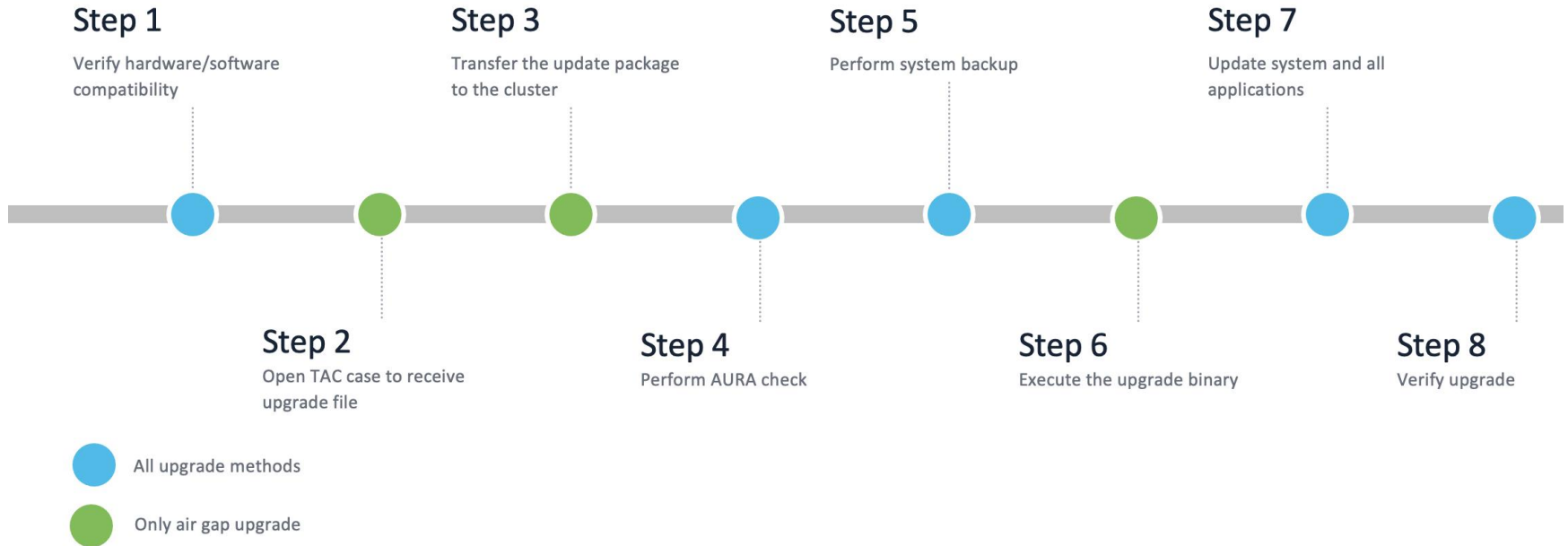
Tips and tricks

- How could we know what is the recommended DNAC version ? From the compatibility matrix
- After you upgrade , you cannot switch back to an earlier release.
- Check the Release notes for new updates and enhancements
- Check the release notes for open bugs
- The exact Steps to follow to do the upgrade might change from one release to other , so please always consult the upgrade guide for exact steps
- You may open proactive TAC case before the upgrade

Online upgrade Summary



Offline upgrade Summary



Resources

- [Cisco DNAC upgrade guide](#)
- [Cisco DNAC Backup guide](#)



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Key takeaways

- DNAC upgrade is easy , but what you do before the upgrade can save you big time , so it's better be prepared .
- Prepare for the upgrade and do the needed pre checks and make sure everything is fine .
- Make sure you have DNAC backup .
- Run the AURA tool and work on any issues .
- Upgrade to the recommended release .
- Validate the upgrade and do the post checks .
- If anything went wrong , please reach out to TAC .



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