

Cisco UCS Director Upgrade Guide, Release 6.9

First Published: 2024-05-07

Last Modified: 2024-10-15

Upgrading Cisco UCS Director to Release 6.9

Overview of the Upgrade to Cisco UCS Director, Release 6.9

The upgrade process to Cisco UCS Director, Release 6.9 depends on the current version of the software that is installed on your system. For information on supported upgrade paths, see [Supported Migration Paths to Cisco UCS Director, Release 6.9\(0.0\)](#), on page 1.

Cisco UCS Director, Release 6.9 is installed on two disks in the virtual machine (VM). One disk hosts the operating system and the Cisco UCS Director application. The second disk hosts the Cisco UCS Director database. See [Prerequisites for Migrating to Cisco UCS Director Release 6.9](#), on page 6.



Note While deploying the OVA in a **Customize template** window, if no default passwords are populated for root and shelladmin, please enter the default password **cisco123** for **root** and **changeme** for **shelladmin**.

Supported Migration Paths to Cisco UCS Director, Release 6.9(0.0)

The following are the supported migration paths for the Cisco UCS Director Release 6.9:

- From Release 6.7(4.3) to Release 6.9(0.0)
- From Release 6.8(0.0) to Release 6.9(0.0)
- From Release 6.8(1.0) to Release 6.9(0.0)
- From Release 6.8(2.0) to Release 6.9(0.0)
- From Release 6.8(3.0) to Release 6.9(0.0)
- From Release 6.8(4.0) to Release 6.9(0.0)
- From Release 6.8(5.0) to Release 6.9(0.0)
- From Release 6.8(6.0) to Release 6.9(0.0)
- From Release 6.8(7.0) to Release 6.9(0.0)
- From Release 6.8(8.0) to Release 6.9(0.0)



Note Before migrating from Release 6.7(4.3)/6.8(x.x) to Release 6.9, in progress service requests (SRs) must be in completed state (no in progress service requests) because you cannot complete the service requests after migrating to Release 6.9.

Supported Migration Paths for Bare Metal Agent Release 6.9(0.0)

The following are the supported migration paths for the Bare Metal Agent Release 6.9:

- From Release 6.7(4.2) to Release 6.9(0.0)
- From Release 6.8(0.0) to Release 6.9(0.0)
- From Release 6.8(1.0) to Release 6.9(0.0)
- From Release 6.8(2.0) to Release 6.9(0.0)
- From Release 6.8(3.0) to Release 6.9(0.0)
- From Release 6.8(4.0) to Release 6.9(0.0)
- From Release 6.8(5.0) to Release 6.9(0.0)
- From Release 6.8(6.0) to Release 6.9(0.0)
- From Release 6.8(7.0) to Release 6.9(0.0)
- From Release 6.8(8.0) to Release 6.9(0.0)

Supported Migration Paths for Cisco UCS Director, Patch Release 6.9(1.0)

The following are the supported migration paths for the Cisco UCS Director, Patch Release 6.9(1.0):

- From Release 6.7(4.3) to Release 6.9(1.0)
- From Release 6.8(0.0) to Release 6.9(1.0)
- From Release 6.8(1.0) to Release 6.9(1.0)
- From Release 6.8(2.0) to Release 6.9(1.0)
- From Release 6.8(3.0) to Release 6.9(1.0)
- From Release 6.8(4.0) to Release 6.9(1.0)
- From Release 6.8(5.0) to Release 6.9(1.0)
- From Release 6.8(6.0) to Release 6.9(1.0)
- From Release 6.8(7.0) to Release 6.9(1.0)
- From Release 6.8(8.0) to Release 6.9(1.0)
- From Release 6.8(9.0) to Release 6.9(1.0)

Migration from Versions Prior to Release 6.8

- If you have a Cisco UCS Director version prior to Release 6.7(4.3) installed, refer [Cisco UCS Director Upgrade Guide, Release 6.8](#) for the migration paths.

Supported Upgrade Paths to Cisco UCS Director, Patch Release 6.9(1.0)

The following are the supported upgrade paths for Cisco UCS Director, Patch Release 6.9(1.0):

Upgrade Paths from Release 6.9

- From Release 6.9 to Release 6.9(1.0)

Supported Migration Paths for Cisco UCS Director Bare Metal Agent, Patch Release 6.9(1.0)

The following are the supported migration paths for the Cisco UCS Director Bare Metal Agent, Patch Release 6.9(1.0):

- From Release 6.7(4.2) to Release 6.9(1.0)
- From Release 6.8(0.0) to Release 6.9(1.0)
- From Release 6.8(1.0) to Release 6.9(1.0)
- From Release 6.8(2.0) to Release 6.9(1.0)
- From Release 6.8(3.0) to Release 6.9(1.0)
- From Release 6.8(4.0) to Release 6.9(1.0)
- From Release 6.8(5.0) to Release 6.9(1.0)
- From Release 6.8(6.0) to Release 6.9(1.0)
- From Release 6.8(7.0) to Release 6.9(1.0)
- From Release 6.8(8.0) to Release 6.9(1.0)
- From Release 6.8(9.0) to Release 6.9(1.0)

Migration from Versions Prior to Release 6.8

If you have a Cisco UCS Director Bare Metal Agent version prior to Release 6.7(4.2) installed, refer [Cisco UCS Director Upgrade Guide, Release 6.8](#) for the migration paths.

Supported Upgrade Paths for Bare Metal Agent, Patch Release 6.9(1.0)

The following are the supported upgrade paths for the Bare Metal Agent, Patch Release 6.9(1.0):

- From Release 6.9 to Patch Release 6.9(1.0)

Digitally Signed Images

Cisco UCS Director images are delivered in digitally signed zip files. These signed zip files are wrapped in a container zip file that includes the following:

- Digitally signed zip file—Contains the Cisco UCS Director installation image
- Verification program—Verifies the certificate chain and signature. During certificate chain validation, the program verifies the authenticity of the end-entity certificate using Cisco's SubCA and root CA certificates. Then, the authenticated end-entity certificate is used to verify the signature.
- Digital signature file—Contains the signature that you can verify before installation.
- Certificate file—Enables you to verify the digital signature. This Cisco-signed x.509 end-entity certificate contains a public key that can be used to verify the signature. This certificate is chained to the Cisco root posted on <http://www.cisco.com/security/pki/certs/crcam2.cer>.
- ReadMe file—Provides the information and instructions required to verify the digitally signed zip file.

Verify the image offline. Once the image is verified, you can begin the installation of Cisco UCS Director.



Note For migrating to Release 6.9, you can verify the digital signature of the patch manually and then use the `Apply Patch` option. See [Verifying a Digitally Signed Image, on page 4](#).

Requirements for Verifying Digitally Signed Images

Before you verify a Cisco UCS Director digitally signed image, ensure that you have the following on your local machine:

- Connectivity to <https://www.cisco.com> during the verification process
- Python 3.4.0 or later
- OpenSSL

Verifying a Digitally Signed Image

Before you begin

Download the Cisco UCS Director image from [Cisco.com](https://www.cisco.com).

Procedure

- Step 1** Unzip the file you downloaded from [Cisco.com](https://www.cisco.com) and verify that it contains the following files:
- ReadMe file
 - Digitally signed zip file, for example `CUCSD_6_9_1_0_69306_VMWARE_GA.zip` or `CUCSD_6_9_1_0_69306_HYPERV_GA.zip`

- Certificate file, for example `UCS_GENERIC_IMAGE_SIGNING-CCO_RELEASE.cer`
- Digital signature generated for the image, for example
`CUCSD_6_9_1_0_69306_VMWARE_GA.zip.signature` or
`CUCSD_6_9_1_0_69306_HYPERV_GA.zip.signature`
- Signature verification program, for example `cisco_x509_verify_release.py3`

Step 2 Review the instructions in the ReadMe file.

Note If there are any differences between these instructions and those in the ReadMe, follow the ones in the ReadMe.

Step 3 Run the signature verification program from the directory where you have unzipped the downloaded content.

Example: Signature Verification for VMware OVA Installation

```
python3 cisco_x509_verify_release.py3 -e UCS_GENERIC_IMAGE_SIGNING-CCO_RELEASE.cer -i
CUCSD_6_9_1_0_69306_VMWARE_GA.zip -s CUCSD_6_9_1_0_69306_VMWARE_GA.zip.signature -v dgst
-sha512
```

Example: Signature Verification for Hyper-V VHD Installation

```
python cisco_x509_verify_release.py3 -e UCS_GENERIC_IMAGE_SIGNING-CCO_RELEASE.cer -i
CUCSD_6_9_1_0_69306_HYPERV_GA.zip -s CUCSD_6_9_1_0_69306_HYPERV_GA.zip.signature -v dgst
-sha512
```

Step 4 Review the output and ensure that the verification has succeeded.

Example: Expected Output for VMware OVA Installation

```
Retrieving CA certificate from http://www.cisco.com/security/pki/certs/crcam2.cer ...
Successfully retrieved and verified crcam2.cer.
Retrieving SubCA certificate from http://www.cisco.com/security/pki/certs/innerspace.cer
...
Successfully retrieved and verified innerspace.cer.
Successfully verified root, subca and end-entity certificate chain.
Successfully fetched a public key from UCS_GENERIC_IMAGE_SIGNING-CCO_RELEASE.cer.
Successfully verified the signature of CUCSD_6_9_1_0_69306_VMWARE_GA.zip using
UCS_GENERIC_IMAGE_SIGNING-CCO_RELEASE.cer
```

Example: Expected Output for Hyper-V VHD Installation

```
Retrieving CA certificate from http://www.cisco.com/security/pki/certs/crcam2.cer ...
Successfully retrieved and verified crcam2.cer.
Retrieving SubCA certificate from http://www.cisco.com/security/pki/certs/innerspace.cer
...
Successfully retrieved and verified innerspace.cer.
Successfully verified root, subca and end-entity certificate chain.
Successfully fetched a public key from UCS_GENERIC_IMAGE_SIGNING-CCO_RELEASE.cer.
Successfully verified the signature of CUCSD_6_9_1_0_69306_HYPERV_GA.zip using
UCS_GENERIC_IMAGE_SIGNING-CCO_RELEASE.cer
```

What to do next

Install or upgrade Cisco UCS Director.

Migrating to Cisco UCS Director

Prerequisites for Migrating to Cisco UCS Director Release 6.9



Important Follow the migration process documented for Cisco UCS Director 6.9 for migrating from Cisco UCS Director Release 6.7(4.3)/6.8(x.x) to Cisco UCS Director 6.9(1.0).

Complete the following prerequisites before you upgrade or migrate from your current Cisco UCS Director software to Release 6.9.

Ensure that BigData Personality is Disabled

The Cisco UCS Director 6.9(1.0) does not have BigData personality, so it is mandatory to disable the BigData personality in Cisco UCS Director 6.7(4.3)/6.8(x.x) or 6.9(0.0) before you proceed with the migration or upgrade process. For more information on disabling the BigData personality, see [Cisco UCS Director Administration Guide](#).



Note If you proceed with the migration or upgrade process to Cisco UCS Director 6.9(1.0) with the BigData personality enabled in Cisco UCS Director 6.7(4.3)/6.8(x.x) or 6.9(0.0), the following error message is displayed:

```
ERROR: Cisco UCS Director personality mismatch. Configure correct personality for current appliance ant try migration.
Exiting the migration process.
```

Plan a Maintenance Window

The upgrade to Release 6.9 requires that you stop all Cisco UCS Director services during the upgrade. It is recommended to plan a maintenance window of between 2 and 8 hours. Prior to upgrade, the length of the maintenance window depends on the size of your database. For example, if the infradb size is of 50 GB, it will take approximately 3 hours to migrate (includes backup and restore), and if the infradb is 85 GB, it will take approximately 4 hours to migrate (backup and restore).



Note Backup and restore depends upon the read and write speed of the disk.

Download Cisco UCS Director, Release 6.9 and Verify the Signed Image

Download the Cisco UCS Director, Release 6.9 software patch from <http://www.cisco.com> and then verify the digitally signed image. See [Digitally Signed Images, on page 4](#).

Verify that the Services and UI are Running

Ensure that the services and UI are up and running in Releases 6.7.4.3/6.8.x.x and Release 6.9(0.0).

If the report indicates any compatibility issues, resolve these issues in your Release 6.9 system after migration. See [Upgrading Custom Tasks, on page 30](#).

To resolve the incompatibilities, refer to [Cisco UCS Director Troubleshooting Guide](#).

Checking the Disk Size Requirements

Offline Standalone Migration--Backup

Before performing an offline backup Release 6.7.4.3/6.8.x.x, validate that the root (/) disk size has 6% more than infra-DB size. The following table provides examples of disk size requirements.

Used Infra-DB size (GB) in Release 6.7.4.3/6.8.x.x	Free space required in root disk size (GB) in Release 6.7.4.3/6.8.x.x
20	22
50	53
70	75
90	96
100	106

Offline Restore

Before performing an offline restore on Cisco UCS Director 6.9(0.0), validate that the infra-DB (/infradb) disk size and root (/) disk size in Cisco UCS Director 6.9(0.0) has 6% more than infra-DB size in UCSD 6.7.4.3/6.8.x.x. The following table provides examples of disk size requirements.

Used Infra-DB size (GB) in Release 6.7.4.3/6.8.x.x	Free space required in Infra-DB disk size (GB) in Release 6.9(0.0)	Free space required in root disk size (GB) in Release 6.9(0.0)
20	22	22
50	53	53
70	75	75
90	96	96
100	106	106

Online Standalone Migration

Before performing online migration on Release 6.9(0.0), validate that the root (/) disk size in Cisco UCS Director 6.7.4.3/6.8.x.x has 6% more than infra-DB size in Release 6.7.4.3/6.8.x.x. It must also be validated that the infra-DB (/infradb) disk size and root (/) disk size in UCSD 6.9(0.0) has 6% more than DB size in Release 6.7.4.3/6.8.x.x. The following table provides examples of disk size requirements.

Used Infra-DB size (GB) in Release 6.7.4.3/6.8.x.x	Free space required in root disk size (GB) in Release 6.7.4.3/6.8.x.x	Free space required in Infra-DB disk size (GB) in Release 6.9(0.0)	Free space required in root disk size (GB) in Release 6.9(0.0)
20	22	22	22

Used Infra-DB size (GB) in Release 6.7.4.3/6.8.x.x	Free space required in root disk size (GB) in Release 6.7.4.3/6.8.x.x	Free space required in Infra-DB disk size (GB) in Release 6.9(0.0)	Free space required in root disk size (GB) in Release 6.9(0.0)
50	53	53	53
70	75	75	75
90	96	96	96
100	106	106	106

Offline Dual Node Migration--Offline Backup

Before performing an offline backup on primary node of Cisco UCS Director 6.7.4.3/6.8.x.x, validate if the root (/) disk size in primary node of Release 6.7.4.3/6.8.x.x has 6% more than infra-DB size in DB Node of Release 6.7.4.3/6.8.x.x. The following table provides examples of disk size requirements.

Used Infra-DB size (GB) in Release 6.7.4.3/6.8.x.x	Free space required in root disk size (GB) in Primary Node of Release 6.7.4.3/6.8.x.x
20	22
50	53
70	75
90	96
100	106

Dual Node Offline Restore

Before performing offline restore on primary node of Release 6.9(0.0), validate if the infra-DB (/infradb) disk size in DB node of Release 6.9(0.0) and root (/) disk size in primary node of Cisco UCS Director 6.9(0.0) has 6% more than infra-DB size in DB Node of Release 6.7.4.3/6.8.x.x.

Used Infra-DB size (GB) in Release 6.7.4.3/6.8.x.x	Free space required in Infra-DB disk size (GB) in Primary Node of Release 6.9(0.0)	Free space required in root disk size (GB) in in DB Node of Release 6.9(0.0)
20	22	22
50	53	53
70	75	75
90	96	96
100	106	106

Online Dual Node Migration

Before performing an online migration on primary node of Release 6.9(0.0), validate if the root (/) disk size in DB and primary node of Release 6.7.4.3/6.8.x.x has 6% more than infra-DB size in DB node of Cisco UCS Director 6.7.4.3/6.8.x.x. Validate that the infra-DB (/infradb) disk size in DB Node of Release 6.9(0.0) and

root (/) disk size in primary node of Release 6.9(0.0) has 6% more than infra-DB size in DB node of Release 6.7.4.3/6.8.x.x.

Used Infra-DB size (GB) in Release 6.7.4.3/6.8.x.x	Free space required in root disk size (GB) in DB Node of Release 6.7.4.3/6.8.x.x	Free space required in root disk size (GB) in Primary Node of Release 6.7.4.3/6.8.x.x	Free space required in Infra-DB disk size (GB) in Primary Node of Release 6.9(0.0)	Free space required in root disk size (GB) in DB Node of Release 6.9(0.0)
20	22	22	22	22
50	53	53	53	53
70	75	75	75	75
90	96	96	96	96
100	106	106	106	106

Expand the Disk Space

Refer to [High Primary Disk Utilization](#) to perform the steps for root volume expansion.

Refer to [High Database Disk Utilization](#) to perform steps to expand the database volume.



Important Changes made to vCPU Allocation, Memory Allocation, Memory Reservation in Release 6.7.4.3/6.8.x.x must be made in Release 6.9(0.0) instance also. Any Release 6.7.4.3/6.8.x.x configuration changes made to InfraMgr Memory Allocation in the `/opt/infra/bin/inframgr.env` file and MySQL Parameters in the `/etc/my.cnf` file must be reconfigured in Release 6.9(0.0) to achieve the same performance.

Data Migration

Data Migration script is used to migrate the data from Cisco UCS Director 6.7.4.3/6.8.x.x to Cisco UCS Director 6.9(0.0). Migration is supported for both standalone and optimised multi-node.

The supported migration paths are 6.7.4.3 and 6.8.0.0 (6.8.0.0, 6.8.1.0, 6.8.2.0, 6.8.3.0, 6.8.4.0, 6.8.5.0, 6.8.6.0, 6.8.7.0, 6.8.8.0, 6.8.9.0).

Data Migration has the following options:

- **Online Migration:** The backup and restore will happen at the same time during online migration from 6.7.4.3/6.8.x.x to 6.9(0.0) using the following command:

```
./performMigration.sh
```



Note In case of optimized multi-node migration, execute the command `/performmigration.sh` in the primary node.

- **Offline Migration:** The backup taken from 6.7.4.3/6.8.x.x can be copied to any remote location and restored to 6.9(0.0). This can be followed by three steps.

- Command to copy migration script to Cisco UCS Director 6.7.4.3/6.8.x.x from Cisco UCS Director 6.9(0.0) for taking the backup is **./performMigration.sh offline copyMigrationScript**.
- Command to copy to local or remote location and take the backup is **./performMigration.sh offline backup**.
- Command to restore the backup taken from local or remote anytime is **./performMigration.sh offline restore**.

**Note**

- If any configuration changes for enabling HTTP are made in shelladmin using the **Enable/Disable HTTP** option in Cisco UCS Director Release 6.7.4.3/6.8.x.x, you must enable HTTP again after migrating to Cisco UCS Director, Release 6.9.
- As part of migration, only UCSD hostname is migrated. Other hosts entries in the **/etc/hosts/** file must be updated manually by the user after migration in 6.9(0.0) appliance.

Data Migration Scripts

Following operations are to be followed for Data Migration

- DB backup from existing Cisco UCS Director (6.7.4.3/6.8.x.x)
- Import into Cisco UCS Director 6.9(0.0)
- Backup and restore Open Automation and Script Modules, report builder
- Migrate Property Files (Compare and merge old and new values based on key)
 - idaccessmgr/auth.properties
 - inframgr/vmware.properties
 - inframgr/ucsMaxSession.properties
 - idaccessmgr/service.properties
 - web_cloudmgr/apache-tomcat/bin/service.properties
 - controller/service.properties
 - eventmgr/service.properties
 - connectormgr/service.properties
 - networkServices/service.properties
 - usageMgr/service.properties
 - inframgr/service.properties
 - inframgr/apic.properties
 - inframgr/f5lb_tls_version.properties
 - inframgr/ucsCentralInventoryconfigurations.properties

- `inframgr/UcsCentralSessionPoolConfig.properties`
- `inframgr/UCSFeatureTimeouts.properties`
- `inframgr/ucsMaxSession.properties`
- `inframgr/ucsServerAssociationTimeout.properties`
- `inframgr/VMWareVNCKeyMap.properties`
- Backup and restore Open Automation and Script Modules, report builder.
- Migrate configuration files
 - `/opt/infra/inframgr/networkCollector/deviceprofile/cisco_asa_device.xml`
 - `/opt/infra/inframgr/networkCollector/deviceprofile/cisco_nexus_device.xml`
 - `/opt/infra/inframgr/resources/MSM/multisite_config.xml`

Standalone Node Migration Process

Online Migration-Standalone Node

Procedure

-
- Step 1** Deploy UCSD 6.9(0.0).
- Step 2** Login to UCSD 6.9(0.0) as root user.
- Step 3** Navigate to the folder `/opt/infra/migration` and run the migration script using the command `./performMigration.sh`
- Step 4** Provide IP address and root password for the Cisco UCS Director 6.7.4.3/6.8.x.x application
- It will stop the services in 6.7.4.3/6.8.x.x and Cisco UCS Director 6.9(0.0) application.
- It will take the DB backup form Cisco UCS Director 6.7.4.3/6.8.x.x appliance and restore into Cisco UCS Director 6.9(0.0) appliance.
- It will take the application configuration files, reports, open automation, script module from Cisco UCS Director 6.7.4.3/6.8.x.x appliance to Cisco UCS Director 6.9(0.0) appliance.
- The following information will be displayed:
- ```
[root@localhost migration]# ./performMigration.sh

***** UCS Director 6.9.0.0 Migration *****

Current UCSD Version : 6.9.0.0
Deployment Type : standalone
Note: Before migrating to the latest version of Cisco UCS Director, ensure that you run the
 CSA tool in the current version to identify and resolve the incompatibilities.
Have you resolved the incompatibilities [y/n]?
```
- Step 5** Enter `y` and press **Enter**.

The following information will be displayed:

```
Services will be stopped before migration. Any existing data in this appliance database
will be deleted as part of migration.
Do you want to continue [y/n]? :
```

**Step 6** Enter **y** and press **Enter**.

The following information will be displayed:

```
Enter UCS-Director 6.7.4.3/6.8.x.x appliance IP address (Primary node in case of multi-node
installation) : xx.xx.xx.xx
```

**Step 7** Specify the IP address and press **Enter**.

```
Enter root password for xx.xx.xxx.xxx :
Trying to connect to database on xx.xx.xxx.xxx : UP
```

```
***** STARTING MIGRATION STEP (1/8) *****
```

```
Checking for available free disk space to take database backup in 6.7.4.3/6.8.x.x appliance
Disk space required for backup in partition "/dev/mapper/centos-root" : 2849 MB
Available free space in partition "/dev/mapper/centos-root" on xx.xx.xxx.xxx : 85692 MB
```

```
Checking for available free disk space to restore database backup in 6.9.0.0 appliance
Disk space required for restore in both partitions "/dev/mapper/infradb_vg-infradb_lv" and
"/dev/mapper/almalinux-root" : 2849
MB
```

```
Available free space in partition "/dev/mapper/almalinux-root" : 84826 MB
Available free space in partition "/dev/mapper/infradb_vg-infradb_lv" : 98906 MB
```

```
Initiating database backup on remote node. This process will take some time depending on
the database size.
```

```
..... done
```

```
Extracting the database backup archive file to validate the DB files.
. done
```

```
Validating the exported file is complete.
Exported database successfully.
```

```
***** COMPLETED MIGRATION STEP (1/8) *****
***** STARTING MIGRATION STEP (2/8) *****
```

```
Started decrypting connector properties file using dynamic AES key... This will take some
time. Please wait...
```

```
.....
..... done
```

```
***** COMPLETED MIGRATION STEP (2/8) *****
***** STARTING MIGRATION STEP (3/8) *****
```

```
Restoring database. This process will take some time depending on the database size.
Extracting database backup archive /opt/infra/migration/backup-ucsd/database_backup.tar.gz...
Initializing Database...
```

```
..... done
```

```
Restoring data from db_private_admin*.sql
```

```
..... done
```

```
Restoring data from confmgr_production.sql
```

```
. done
```

```
Database restored successfully.
```

```
***** COMPLETED MIGRATION STEP (3/8) *****
```

```

***** STARTING MIGRATION STEP (4/8) *****

Migrated property files successfully.
Updating multisite xml file...
Migration in progress... InventoryThreads data processing
Migration in progress... PodType data processing
Migration in progress... HttpTimeout data processing
Migration in progress... specialCharacters data processing
Migration in progress... HttpDelay data processing
Migration in progress... PatchAPIUpdate data processing
Migration in progress... ToggleUpdatePatch data processing
Migration in progress... ReadWriteVersion data processing
Updating multisite xml file... completed
Restore Open automation files...
Changing Hostname for the appliance from localhost.localdomain to localhost.localdomain
Changed Hostname Successfully
Hosts file updated successfully with localhost.localdomain

***** COMPLETED MIGRATION STEP (4/8) *****
***** STARTING MIGRATION STEP (5/8) *****

Running database migration scripts [Source : 6.8.1.0]
Upgrading database query..
Ending database upgrade process...

***** COMPLETED MIGRATION STEP (5/8) *****
***** STARTING MIGRATION STEP (6/8) *****

The database schema initialization has been triggered. This will take some time. Please
wait until schema initialization is complete.
.....
done
Schema Initialization has been completed.

***** COMPLETED MIGRATION STEP (6/8) *****
***** STARTING MIGRATION STEP (7/8) *****

Started encrypting all password field using dynamic AES key.
.....
done
Completed encrypting all password field using dynamic AES Key.

***** COMPLETED MIGRATION STEP (7/8) *****
***** STARTING MIGRATION STEP (8/8) *****

Started updating DB Table MAILSETTINGS.
Completed updating DB Table MAILSETTINGS.
Starting services. Use the "Display Services Status" option to check the status.

***** COMPLETED MIGRATION STEP (8/8) *****

Migration completed successfully.
Migration log file available at /var/log/ucsd/migrateAlmaLinux9.log

```

## Offline Migration-Standalone Node

### Procedure

- Step 1** Deploy UCSD 6.9(0.0).
- Step 2** Login to Cisco UCS Director 6.9(0.0) as root user.
- Step 3** Navigate to the folder `/opt/infra/migration` and run the migration script `./performMigration.sh offline copyMigrationScript`.
- Step 4** Copy migration scripts to UCSD 6.7.4.3/6.8.x.x using the command.
- The following information will be displayed:
- ```
[root@localhost migration]# ./performMigration.sh offline copyMigrationScript
*****
***** UCS Director 6.9.0.0 Migration *****
*****

Current UCSD Version      : 6.9.0.0
Deployment Type           : standalone
Note: Before migrating to the latest version of Cisco UCS Director, ensure that you run the
      CSA tool in the current version to identify and resolve the incompatibilities.
Have you resolved the incompatibilities [y/n]?
```

- Step 5** Enter **y** and press **Enter**.

The following information will be displayed:

```
Have you resolved the incompatibilities [y/n]? y
Please proceed to migration.....
Enter UCS-Director 6.7.4.3/6.8.x.x appliance IP address (Primary node in case of multi-node
installation) : xx.xx.xxx.xxx
Enter root password for xx.xx.xxx.xxx :
***** STARTING MIGRATION STEP (1/1) *****

Transferred Almalinux 9 migration files successfully.

***** COMPLETED MIGRATION STEP (1/1) *****
```

- Step 6** Login as root user in Cisco UCS Director 6.7.4.3/6.8.x.x appliance.

- Step 7** Run the script `./performMigration.sh offline backup` from the location `/opt/infra/migration`.

The script will stop the services, take the DB backup, application configuration files, reports, open automation, script module Cisco UCS Director 6.7.4.3/6.8.x.x appliance and store in **tar.gz** format.

The script provides an option to copy the **backup.tar.gz** in Cisco UCS Director 6.9(0.0) or any remote location by SFTP/SCP/FTP.

CLI Information for Offline Backup via SFTP

```
[root@UCSD6810-SR279 migration]# ./performMigration.sh offline backup
*****
***** UCS Director 6.9.0.0 Migration *****
*****

Current UCSD Version      : 6.8.8.0
Deployment Type           : standalone
Note: Before migrating to the latest version of Cisco UCS Director, ensure that you run the
      CSA tool in the current version to identify and resolve the incompatibilities.
Have you resolved the incompatibilities [y/n]?
```

Step 8 Enter **y** and press **Enter**.

The following information will be displayed:

```
Please proceed to migration.....
Services will be stopped before migration. Do you want to continue [y/n]? :
```

Step 9 Enter **y** and press **Enter**.

The following information will be displayed:

```
Services will be stopped before migration. Do you want to continue [y/n]? : y
***** STARTING MIGRATION STEP (1/2) *****

hostname Stored Successfully
Copying config files...
Starting config file migration...
No Open Automation feature found in existing appliance.
Disk space required in partition "/dev/mapper/centos-root" : 3404 MB
Available free space in partition "/dev/mapper/centos-root" : 78571 MB
Initiating database backup on remote node. This process will take some time depending on
the database size.
Taking backup of db_private_admin database..... done
Taking backup of confmgr_production database.... done
Creating database backup archive... done
Database backup archive: /opt/infra/migration/backup-ucsd/database_backup.tar.gz
LOG_FILE=/var/log/ucsd/migrateAlmaLinux9.log
Extracting the database backup archive file to validate the DB files.
.. done

Validating the exported file is complete.
Exported database successfully.
Migrating script module process...
Generated /opt/infra/migration/backup-ucsd/backup-ucsd.tar.gz file with the backup contents.

***** COMPLETED MIGRATION STEP (1/2) *****
***** STARTING MIGRATION STEP (2/2) *****

Do you want to copy the UCSD backup file to a remote location [y/n]? :
```

Step 10 Enter **y** and press **Enter**.

The following information will be displayed:

```
Specify the transfer mode [FTP/SFTP/SCP]: SFTP
Specify the login credentials
Server IP Address: xx.xx.xx.xx
Server Login: root
Server Password:
Sub-directory (from Home directory) to store the file. Press enter to select the Home
directory: /tmp
File is copied successfully

***** COMPLETED MIGRATION STEP (2/2) *****
```

Step 11 Login as root user in Cisco UCS Director 6.9(0.0) appliance.

Step 12 Provide IP address and root password for the Cisco UCS Director 6.9(0.0) application.

- It will stop the services in UCSD 6.7.4.3/6.8.x.x and Cisco UCS Director 6.9(0.0) application.
- It will take the DB backup form Cisco UCS Director 6.7.4.3/6.8.0.0 appliance and restore it in Cisco UCS Director 6.9(0.0) appliance.

- It will take application configuration files, reports, open automation, script module from UCSD 6.7.4.3/6.8.x.x appliance to Cisco UCS Director 6.9(0.0) appliance.

Step 13 Run the script `./performMigration.sh offline restore` from the location `/opt/infra/migration` in Cisco UCS Director 6.7.4.3/6.8.x.x pointing to the `backup.tar.gz`.

CLI Information for Offline Restore via SFTP

```
[root@localhost migration]# ./performMigration.sh offline restore
*****
***** UCS Director 6.9.0.0 Migration *****
*****

Current UCSD Version      : 6.9.0.0
Deployment Type           : standalone
Note: Before migrating to the latest version of Cisco UCS Director, ensure that you run the
      CSA tool in the current version to identify and resolve the incompatibilities.
Have you resolved the incompatibilities [y/n]?
```

Step 14 Enter `y` and press **Enter**.

The following information will be displayed:

```
Please proceed to migration.....
```

```
Services will be stopped before migration. Any existing data in this appliance database
will be deleted as part of migration.
Do you want to continue [y/n]? :
```

Step 15 Enter `y` and press **Enter**.

The following information will be displayed.

```
Do you want to copy the UCSD backup file from a remote location [y/n]? :
```

Step 16 Enter `n` and press **Enter**.

The following information will be displayed:

```
Specify the transfer mode [FTP/SFTP/SCP]: sftp
```

```
Specify the login credentials
```

```
Server IP Address: xx.xx.xx.xx
```

```
Server Login: root
```

```
Server Password:
```

```
Remote Backup File (Absolute Path to File backup-ucsd.tar.gz ): /tmp/backup-ucsd.tar.gz
```

```
Warning: Permanently added 'xx.xx.xx.xx' (ED25519) to the list of known hosts.
```

```
File is fetched successfully.
```

```
Extracting the backup archive file....
```

```
Disk space required for restore in both partitions "/dev/mapper/infradb_vg-infradb_lv" and
"/dev/mapper/almalinux-root" : 2849 MB
```

```
Available free space in partition "/dev/mapper/infradb_vg-infradb_lv" : 98880 MB
```

```
Available free space in partition "/dev/mapper/almalinux-root" : 84809 MB
```

```
***** COMPLETED MIGRATION STEP (1/8) *****
***** STARTING MIGRATION STEP (2/8) *****
```

```
Started decrypting connector properties file using dynamic AES key... This will take some
time. Please wait...
```

```
.....
done
```



```

***** COMPLETED MIGRATION STEP (2/8) *****
***** STARTING MIGRATION STEP (3/8) *****

Restoring database. This process will take some time depending on the database size.
Extracting database backup archive /opt/infra/migration/backup-ucsd/database_backup.tar.gz...
Initializing Database...
..... done
Restoring data from db_private_admin*.sql
..... done
Restoring data from confmgr_production.sql
. done
Database restored successfully.
Migrating config files...
Migrating open automation files...
Migration in progress... InventoryThreads data processing
Migration in progress... PodType data processing
Migration in progress... HttpTimeout data processing
Migration in progress... specialCharacters data processing
Migration in progress... HttpDelay data processing
Migration in progress... PatchAPIUpdate data processing
Migration in progress... ToggleUpdatePatch data processing
Migration in progress... ReadWriteVersion data processing
Multisite merge ... completed
Changing Hostname for the appliance from localhost.localdomain to localhost.localdomain
Changed Hostname Successfully
Hosts file updated successfully with localhost.localdomain

***** COMPLETED MIGRATION STEP (3/8) *****
***** STARTING MIGRATION STEP (4/8) *****

Running database migration scripts [ Source : 6.8.1.0 ]
Upgrading database query..
Ending database upgrade process...

***** COMPLETED MIGRATION STEP (4/8) *****
***** STARTING MIGRATION STEP (5/8) *****

The database schema initialization has been triggered. This will take some time. Please
wait until schema initialization is complete.
.....
done
Schema Initialization has been completed.

***** COMPLETED MIGRATION STEP (5/8) *****
***** STARTING MIGRATION STEP (6/8) *****

Imported workflow successfully

***** COMPLETED MIGRATION STEP (6/8) *****
***** STARTING MIGRATION STEP (7/8) *****

Started encrypting all password field using dynamic AES key.
.....
done
Completed encrypting all password field using dynamic AES Key.

***** COMPLETED MIGRATION STEP (7/8) *****
***** STARTING MIGRATION STEP (8/8) *****

Started updating DB Table MAILSETTINGS.
Completed updating DB Table MAILSETTINGS.

```

Starting services. Use the "Display Services Status" option to check the status.

```
***** COMPLETED MIGRATION STEP (8/8) *****
Migration completed successfully.
Migration log file available at /var/log/ucsd/migrateAlmaLinux9.log
```

Optimized Multi-Node Migration Process

Online Migration-Optimized Multi-Node

Procedure

-
- Step 1** Deploy optimized multi-node setup from **UCSD 6.9(0.0) OVA**.
- Step 2** Login to Primary Node of Cisco UCS Director 6.9(0.0) as root user.
- Step 3** Navigate to the folder with the following command
- ```
/opt/infra/migration
```
- Step 4** Run the script **performMigration.sh** or **./performMigration.sh**.
- Step 5** Provide IP address and root password for the Cisco UCS Director 6.7.4.3/6.8.x.x application.
- It will stop the services in Cisco UCS Director 6.7.4.3/6.8.x.x and Cisco UCS Director 6.9(0.0) application.
- It will take the DB backup form Database Node in Cisco UCS Director 6.7.4.3/6.8.x.x appliance and restore it to the Database node in Cisco UCS Director 6.9(0.0) appliance.
- It will take the application configuration files, reports, open automation, and script module from Cisco UCS Director 6.7.4.3/6.8.x.x appliance to Cisco UCS Director 6.9(0.0) appliance.
- The following information will be displayed:
- ```
[root@localhost migration]# ./performMigration.sh
*****
***** UCS Director 6.9.0.0 Migration *****
*****

Current UCSD Version      : 6.9.0.0
Deployment Type           : Primary
Note: Before migrating to the latest version of Cisco UCS Director, ensure that you run the
    CSA tool in the current version to identify and resolve the incompatibilities.
Have you resolved the incompatibilities [y/n]?
```
- Step 6** Enter **y** and press **Enter**.
- The following information will be displayed:
- ```
Please proceed to migration.....

Services will be stopped before migration. Any existing data in this appliance database
will be deleted as part of migration.
Do you want to continue [y/n]? :
```
- Step 7** Enter **y** and press **Enter**.
- The following information will be displayed:

Enter UCS-Director 6.7.4.3/6.8.x.x appliance IP address (Primary node in case of multi-node installation) :

**Step 8** Specify the Cisco UCS Director 6.7.4.3/6.8.x.x Primary Node IP address, root password and press **Enter**.

Enter UCS-Director 6.7.4.3/6.8.x.x appliance IP address (Primary node in case of multi-node installation) : xx.xx.xx.xx

Enter root password for xx.xx.xx.xx

**Step 9** Specify the root password for Cisco UCS Director 6.7.4.3/6.8.0.0 Database Node and press **Enter**.

```
***** STARTING MIGRATION STEP (1/8) *****
Checking for available free disk space to take database backup in 6.7.4.3/6.8.x.x appliance
```

```
Disk space required for backup in partition "/dev/mapper/centos-root" : 5467 MB
Available free space in partition "/dev/mapper/almalinux-root" : 84815 MB
Available free space in partition "/dev/mapper/centos-root" on xx.xx.xxx.xxx : 88157 MB
```

Trying to connect to database on xx.xx.xx.xx : UP

**Step 10** Specify the root password for Cisco UCS Director 6.9(0.0) Database Node and press **Enter**.

Enter root password for UCSD 6.9.0.0 database node (xx.xx.xx.xx):  
Checking for available free disk space to restore database backup in 6.9.0.0 appliance

```
Disk space required for restore in both partitions "/dev/mapper/infradb_vg-infradb_lv" and
"/dev/mapper/almalinux-root" : 5467 MB
Available free space in partition "/dev/mapper/infradb_vg-infradb_lv" on xx.xx.xxx.xxx:
98863 MB
Available free space in partition "/dev/mapper/almalinux-root" on xx.xx.xxx.xxx: 84818 MB
```

Initiating database backup on remote node. This process will take some time depending on the database size.

```
.....
done
Extracting the database backup archive file to validate the DB files.
..... done
```

Validating the exported file is complete.  
Exported database successfully.  
Trying to connect to database on xx.xx.xxx.xxx : UP

```
***** COMPLETED MIGRATION STEP (1/8) *****
***** STARTING MIGRATION STEP (2/8) *****
```

Started decrypting connector properties file using dynamic AES key... This will take some time. Please wait...

```
.....
done
```

```
***** COMPLETED MIGRATION STEP (2/8) *****
***** STARTING MIGRATION STEP (3/8) *****
```

Restoring database. This process will take some time depending on the database size.

```
.....
Validating Legacy hostname of DB Node
Hostname is not changed as Legacy xx.xx.xx.xx contains default hostname
```

```
***** COMPLETED MIGRATION STEP (3/8) *****
***** STARTING MIGRATION STEP (4/8) *****
```

Migrated property files successfully.  
Updating multisite xml file...  
Migration in progress... InventoryThreads data processing

```

Migration in progress... PodType data processing
Migration in progress... HttpTimeout data processing
Migration in progress... specialCharacters data processing
Migration in progress... HttpDelay data processing
Migration in progress... PatchAPIUpdate data processing
Migration in progress... ToggleUpdatePatch data processing
Migration in progress... ReadWriteVersion data processing
Updating multisite xml file... completed
Restore Open automation files...
Starting to update database node IP...
Hostname is not changed as Legacy xx.xx.xxx.xxx contains default hostname

***** COMPLETED MIGRATION STEP (4/8) *****
***** STARTING MIGRATION STEP (5/8) *****

Running database migration scripts [Source : 6.7.4.3]
Upgrading database query...
Ending database upgrade process...

***** COMPLETED MIGRATION STEP (5/8) *****
***** STARTING MIGRATION STEP (6/8) *****

The database schema initialization has been triggered. This will take some time. Please
wait until schema initialization is co
.....
done
Schema Initialization has been completed.

***** COMPLETED MIGRATION STEP (6/8) *****
***** STARTING MIGRATION STEP (7/8) *****

Started encrypting all password field using dynamic AES key.
.....
done
Completed encrypting all password field using dynamic AES Key.

***** COMPLETED MIGRATION STEP (7/8) *****
***** STARTING MIGRATION STEP (8/8) *****

Started updating DB Table MAILSETTINGS.
Completed updating DB Table MAILSETTINGS.
Starting services. Use the "Display Services Status" option to check the status.

***** COMPLETED MIGRATION STEP (8/8) *****

Migration completed successfully.
Migration log file available at /var/log/ucsd/migrateAlmaLinux9.log

```

## Offline Migration-Optimized Multi-Node

### Procedure

- 
- Step 1** Deploy Optimized Multi-Node from **UCSD 6.9(0.0)**.
  - Step 2** Login to Primary Node of Cisco UCS Director 6.9(0.0) as root user.
  - Step 3** Navigate to the folder using the following command:

```
/opt/infra/migration
```

**Step 4** Copy migration scripts from Primary Node of Cisco UCS Director 6.9(0.0) to Primary Node of Cisco UCS Director 6.7.4.3/6.8.x.x using the command **./performMigration.sh offline copyMigrationScript**.

The following information will be displayed:

```
[root@localhost migration]# ./performMigration.sh offline copyMigrationScript

***** UCS Director 6.9.0.0 Migration *****

Current UCSD Version : 6.9.0.0
Deployment Type : primary
Note: Before migrating to the latest version of Cisco UCS Director, ensure that you run the
 CSA tool in the current version to identify and resolve the incompatibilities.
Have you resolved the incompatibilities [y/n]? y
Please proceed to migration.....
Enter UCS-Director 6.7.4.3/6.8.x.x appliance IP address (Primary node in case of multi-node
 installation) : xx.xx.xx.xx
Enter root password for xx.xx.xxx.xxx :
Transferred Almalinux 9 migration files successfully.
```

**Step 5** Login to Primary Node of Cisco UCS Director 6.7.4.3/6.8.x.x appliance as root user.

**Step 6** Run the script **./performMigration.sh offline backup** from the location **/opt/infra/migration**.

The script will stop the services, take the DB backup, application configuration files, reports, open automation, script module Cisco UCS Director 6.7.4.3/6.8.x.x appliance and store in **tar.gz** format.

The script provides an option to copy the **backup.tar.gz** in Primary Node of Cisco UCS Director 6.9(0.0) or any remote location by SFTP/SCP/FTP options.

**CLI Information for Offline Backup via SFTP**

```
[root@localhost migration]# ./performMigration.sh offline restore

***** UCS Director 6.9.0.0 Migration *****

Current UCSD Version : 6.9.0.0
Deployment Type : standalone
Note: Before migrating to the latest version of Cisco UCS Director, ensure that you run the
 CSA tool in the current version to identify and resolve the incompatibilities.
Have you resolved the incompatibilities [y/n]?
```

**Step 7** Enter **y** and press **Enter**.

The following information will be displayed.

```
Please proceed to migration.....
```

**Step 8** Enter **y** and press **Enter**.

The following information will be displayed.

```
Services will be stopped before migration. Do you want to continue [y/n]? :
```

**Step 9** Enter **y** and press **Enter**.

The following information will be displayed:

```
***** STARTING MIGRATION STEP (1/2) *****
hostname Stored Successfully
```

```
Copying config files...
Starting config file migration...
No Open Automation feature found in existing appliance.
Enter root password for database node (xx.xx.xx.xx):
```

**Step 10** Enter root password for Database Node and press **Enter**.

The following information will be displayed:

```
Trying to connect to database on xx.xx.xx.xx : UP
Checking for available free disk space for database backup for database node

Disk space required for backup in partition "/dev/mapper/centos-root" : 4270 MB
Available free space in partition "/dev/mapper/almalinux-root": 85443 MB
Available free space in partition "/dev/mapper/centos-root" on xx.xx.xx.xx : 85854 MB

Initiating database backup on remote node. This process will take some time depending on
the database size.
..... done
Extracting the database backup archive file to validate the DB files.
..... done

Validating the exported file is complete.
Exported database successfully.
Migrating script module process...
Generated /opt/infra/migration/backup-ucsd/backup-ucsd.tar.gz file with the backup contents.

***** COMPLETED MIGRATION STEP (1/2) *****
***** STARTING MIGRATION STEP (2/2) *****

Do you want to copy the UCSD backup file to a remote location [y/n]? :
```

**Step 11** Enter **y** and press **Enter**.

The following information will be displayed:

```
Specify the transfer mode [FTP/SFTP/SCP]: SFTP
Specify the login credentials
Server IP Address: xx.xx.xx.xx
Server Login: root
Server Password:
Sub-directory (from Home directory) to store the file. Press enter to select the Home
directory: /tmp
Warning: Permanently added 'xx.xx.xx.xx' (ECDSA) to the list of known hosts.
File is copied successfully

***** COMPLETED MIGRATION STEP (2/2) *****
```

**Step 12** Login to Primary Node of Cisco UCS Director 6.8.0.0 appliance as root user.

**Step 13** Run the script `./performMigration.sh offline restore` from the location `/opt/infra/migration` in UCSD 6.8.0.0 pointing to the `backup.tar.gz`.

#### CLI Information for Offline Restore via SFTP

```
[root@localhost migration]# ./performMigration.sh offline restore

***** UCS Director 6.9.0.0 Migration *****

Current UCSD Version : 6.9.0.0
Deployment Type : standalone
```

Note: Before migrating to the latest version of Cisco UCS Director, ensure that you run the CSA tool in the current version to identify and resolve the incompatibilities. Have you resolved the incompatibilities [y/n]?

**Step 14** Enter **y** and press **Enter**.

The following information will be displayed:

```
Please proceed to migration.....
```

```
Services will be stopped before migration. Any existing data in this appliance database
will be deleted as part of migration.
Do you want to continue [y/n]? :
```

**Step 15** Enter **y** and press **Enter**.

The following information will be displayed:

```
***** STARTING MIGRATION STEP (1/8) *****
```

```
Do you want to copy the UCSD backup file from a remote location [y/n]? :
```

**Step 16** Enter **y** and press **Enter**.

The following information will be displayed:

```
Specify the transfer mode [FTP/SFTP/SCP]: sftp
```

```
Specify the login credentials
```

```
Server IP Address: xx.xx.xx.xx
```

```
Server Login: root
```

```
Server Password:
```

```
Remote Backup File (Absolute Path to File backup-ucsd.tar.gz):
/opt/infra/migration/backup-ucsd/backup-ucsd.tar.gz
```

```
File is fetched successfully.
```

```
Extracting the backup archive file...
```

```
Enter root password for UCSD 6.9.0.0 database node (xx.xx.xx.xx):
```

```
Checking for available free disk space for database restore for database node
```

```
Disk space required for restore in both partitions "/dev/mapper/infradb_vg-infradb_lv" and
"/dev/mapper/almalinux-root" : 4270 MB
```

```
Available free space in partition "/dev/mapper/infradb_vg-infradb_lv" on xx.xx.xxx.xxx:
95316 MB
```

```
Available free space in partition "/dev/mapper/almalinux-root" on xx.xx.xxx.xxx: 84827 MB
```

```
***** COMPLETED MIGRATION STEP (1/8) *****
```

```
***** STARTING MIGRATION STEP (2/8) *****
```

```
Started decrypting connector properties file using dynamic AES key... This will take some
time. Please wait...
```

```
.....
done
```

```
***** COMPLETED MIGRATION STEP (2/8) *****
```

```
***** STARTING MIGRATION STEP (3/8) *****
```

```
Restoring database. This process will take some time depending on the database size.
```

```
.....
done
```

```
Validating Legacy hostname of DB Node
```

```

Changing Hostname for xx.xx.xxx.xxx from localhost.localdomain to localhost.localdomain
Changed Hostname for DB Node SuccessfullyHosts file updated successfully with
localhost.localdomain
Migrating config files...
Migrating open automation files...
Migration in progress... InventoryThreads data processing
Migration in progress... PodType data processing
Migration in progress... HttpTimeout data processing
Migration in progress... specialCharacters data processing
Migration in progress... HttpDelay data processing
Migration in progress... PatchAPIUpdate data processing
Migration in progress... ToggleUpdatePatch data processing
Migration in progress... ReadWriteVersion data processing
Multisite merge ... completed
Changing Hostname for the appliance from localhost.localdomain to localhost.localdomain
Changed Hostname Successfully
Hosts file updated successfully with localhost.localdomain
Starting to update database node IP...

***** COMPLETED MIGRATION STEP (3/8) *****
***** STARTING MIGRATION STEP (4/8) *****

Running database migration scripts [Source : 6.8.1.0]
Upgrading database query...
Ending database upgrade process...

***** COMPLETED MIGRATION STEP (4/8) *****
***** STARTING MIGRATION STEP (5/8) *****

The database schema initialization has been triggered. This will take some time. Please
wait until schema initialization is complete.
.....
done
Schema Initialization has been completed.

***** COMPLETED MIGRATION STEP (5/8) *****
***** STARTING MIGRATION STEP (6/8) *****

Imported workflow successfully

***** COMPLETED MIGRATION STEP (6/8) *****
***** STARTING MIGRATION STEP (7/8) *****

Started encrypting all password field using dynamic AES key.
.....^Csignal INT received and
ignored.
.....
done
Completed encrypting all password field using dynamic AES Key.

***** COMPLETED MIGRATION STEP (7/8) *****
***** STARTING MIGRATION STEP (8/8) *****

Started updating DB Table MAILSETTINGS.
Completed updating DB Table MAILSETTINGS.
Starting services. Use the "Display Services Status" option to check the status.

***** COMPLETED MIGRATION STEP (8/8) *****
Migration completed successfully.
Migration log file available at /var/log/ucsd/migrateAlmaLinux9.log

```



# Upgrading Cisco UCS Director to Release 6.9(1.0)

## Prerequisites for Upgrading to Cisco UCS Director, Release 6.9(1.0)

Complete the following prerequisites before you upgrade your current Cisco UCS Director software to Release 6.9(1.0).

### Plan a Maintenance Window

The upgrade to Release 6.9(1.0) requires that you stop all Cisco UCS Director services during the upgrade. It is recommended to plan a maintenance window of between 2 and 6 hours. Prior to upgrade, the length of the maintenance window depends on the size of your database.

### Download Cisco UCS Director, Release 6.9(1.0) and Verify the Signed Image

Download the Cisco UCS Director, Release 6.9(1.0) software patch from <http://www.cisco.com> and then verify the digitally signed image. See [Digitally Signed Images](#).

### Place the Verified Release 6.9(1.0) Software Patch on a Server

Place the Release 6.9(1.0) software patch on the FTP or HTTP server that you plan to use to install the upgrade.

### Analyze Your Custom Scripts and Ensure Compatibility

If your existing Cisco UCS Director, Release 6.x(x.x) deployment includes custom tasks, download and run the Custom Task Script Analyzer. The analyzer evaluates all the custom scripts in the Cisco UCS Director database without executing any tasks and then outputs an analysis report on your custom tasks.

If the report indicates any compatibility issues, resolve these issues in your Release 6.x(x.x) system before completing the upgrade. See [Upgrading Custom Tasks, on page 30](#).

### Take a Snapshot of the Current Cisco UCS Director VM

It is recommended to take a snapshot of the current Cisco UCS Director VM before you begin the upgrade. Before you take the VM snapshot, make sure the services and the OS are shutdown gracefully and the VM is in powered off state. If you do this, you do not need to back up the existing configuration database through an FTP server.

## Upgrading a Single Node Setup to Release 6.9(1.0)

### Procedure

---

- Step 1** Log in to the Cisco UCS Director ShellAdmin.
- Step 2** To upgrade Cisco UCS Director to Release 6.9(1.0), choose Apply Signed Patch.
- Step 3** At the Services will be stopped before applying patch. Do you want to continue [y/n]?, enter **y**.

When all services are stopped, the upgrade continues.

**Step 4** At the `Do you want to take database backup before applying patch [y/n]?` prompt, enter one of the following:

- **y** to back up the Cisco UCS Director database.
- **n** if you took a snapshot of the VM before you started and do not want to take an additional backup.

**Step 5** At the `Specify the Transfer mode` prompt, enter one of the following:

- **HTTP**—Enter the URL for the location where you stored the upgrade file.
- **SFTP**—Enter the SFTP server IP address, server login name and password, and the path to the location where you have stored the upgrade file.
- **SCP**—Enter the SCP server IP address, server login name and password, and the path to the location where you have stored the upgrade file.
- **FILE**—Enter the path to the local directory where you have stored the upgrade file.
- **FTP**—Enter the FTP server IP address, server login name and password, and the path to the location where you have stored the upgrade file. For example, if you stored the patch file on an FTP server, enter **ftp://username:password@hostname|IP\_address/software\_location\_and\_name**

**Step 6** Wait for the patch file to download to the Cisco UCS Director VM.

**Step 7** Wait for the patch upgrade to complete.

The upgrade process performs extra steps including the following:

- Unpacks the patch file.
- Installs the Release 6.9(1.0) files.
- Initializes the database schema.
- Reboots the Cisco UCS Director appliance. The Cisco UCS Director services start automatically.

Depending upon the size of your database, the upgrade process can take several minutes to complete.

**Note** The patch process is not complete or successful until all Cisco UCS Director services have been started, Cisco UCS Director is available, the login screen is displayed, and the administrator can log in to Cisco UCS Director.

All Cisco UCS Director services must be started before you attempt to perform other ShellAdmin procedures, such as apply additional patches, take a database backup, or restore a database from a backup.

**Step 8** When the upgrade is complete, verify that the version and build in the Cisco UCS Director ShellAdmin match the version and build of the patch that you downloaded from Cisco.com.

You can find the version and build in the following locations:

- Beneath the title of the Shell menu
- From the `Show Version` option in ShellAdmin

**Step 9** After upgrading the software, you must delete all zip files and extracted files from the `/opt/infra/install` folder. Use the `Clean-up Patch files` option in the Shell Admin console to delete these files. For information on using this Shell Admin option, see [Cisco UCS Director Shell Guide](#).

## Upgrading Optimized Multi-Node Setup

### Before you begin

Login to the primary node and from the Shell Admin console, choose **Stop Services** to halt all services running on the primary node.

### Procedure

---

- Step 1** Login to the database node.
  - Step 2** From the Shell Admin console, choose **Apply Signed Patch** to upgrade the node to Release 6.9(1.0).
  - Step 3** Login to the primary node, and from the Shell Admin console, choose **Apply Signed Patch** to upgrade the node to Release 6.9(1.0).
  - Step 4** Choose **Start Services** to start all the services on the primary node.
- 

## Upgrading Cisco UCS Director Bare Metal Agent

### Upgrading Bare Metal Agent to Release 6.9(1.0) from Release 6.9

#### Before you begin

Upgrade Cisco UCS Director to Release 6.9(1.0).

- Upgrade Cisco UCS Director to Release 6.9(1.0)
- Delete the `patch` folder from the `/tmp` directory, if available

### Procedure

---

- Step 1** Download the Bare Metal Agent, Release 6.9(1.0) patch to the existing Bare Metal Agent VM.
  - Step 2** Log on to the Bare Metal Agent VM using SSH client as 'shelladmin' user.
  - Step 3** Choose **Apply Signed Patch** to apply the signed patch. For more information about how to apply signed patch, see the [Cisco UCS Director Shell Guide](#).
- 

## Upgrading Cisco UCS Director PowerShell Agent

### Downloading PowerShell Agent from Cisco UCS Director

Download the installer for PowerShell Agent from Cisco UCS Director to your native Windows machine.

## Procedure

- 
- Step 1** Choose **Administration > Virtual Accounts**.
- Step 2** Click **PowerShell Agents**.
- Step 3** Click **Download Installer**.
- Step 4** Review the list of installation requirements on the **Download Agent Installer** page. Ensure that you have them available on the Windows machine where you plan to install the PowerShell Agent.
- Step 5** Click **Submit**.
- The `PSASetup.exe` file is downloaded to your native Windows machine default download folder.
- 

### What to do next

Install Cisco UCS Director PowerShell Agent on your Windows machine.

## Installing Cisco UCS Director PowerShell Agent



- 
- Note** If you get the **Error 1001** error message while uninstalling the PowerShell agent, delete the PSA registry folders.
- To delete the PSA registry folders, do the following:
1. Open the Windows Registry Editor (**Start > Run > regedit.exe**).
  2. In the left pane of the Registry Editor, right-click and choose **Find**.
  3. In the **Find What** field, enter **PSAServiceNew** and click **Find Next** to view the PSA registry folders.
  4. Right-click and choose **Delete** to delete the PSA registry folders.
- 



- 
- Note** If you do not install the current version of PowerShell Agent for Cisco UCS Director on the Windows machine, some tasks or options on the **PowerShell Agents** tab are not available.
- 

### Before you begin

- You need system administrator privileges to complete this task.
- Enable WinRM.
- Configure Firewall.

### Procedure

---

- Step 1** If necessary, copy the `PSASetup.exe` file that you downloaded from Cisco UCS Director to your target Windows machine.
- Step 2** Double-click the `PSASetup.exe` file.
- Step 3** In the **Cisco PSA Service - InstallShield Wizard** screen, click **Next**.
- Step 4** In the **Ready to install the Program** screen, click **Install**.
- The **Installing Cisco PSA Service** screen displays during the installation. When the installation is complete, the **InstallShield Wizard Completed** message is displayed.
- Step 5** Click **Finish**.
- The PowerShell Agent is installed to the `C:\Program Files (x86)\Cisco Systems\Cisco PSA Service` folder. This folder is referred to as `%AGENT_INSTALL_FOLDER%` in the remainder of the document.
- Step 6** Verify that the Cisco PSA Service is running on the Windows machine by checking the Resource Monitor.
- 

## Upgrading Cisco UCS Director SDKs

### Upgrading Cisco UCS Director Open Automation to Release 6.9

The following procedure assumes that you are using an Eclipse development environment. If you use a different development environment for your Open Automation projects, perform the appropriate steps for that environment.

### Procedure

---

- Step 1** Download the Cisco UCS Director SDK Bundle, Release 6.9 from [Cisco.com](https://www.cisco.com).
- Step 2** Import the project into Eclipse.
- Step 3** Execute the examples available to understand the Open Automation execution. The examples are located at `com.cisco.cuic.api.examples`.
- 

### Upgrading Cisco UCS Director REST API to Release 6.9

The following procedure assumes that you are using an Eclipse development environment. If you use a different development environment for your REST API projects, perform the appropriate steps for that environment.

**Procedure**

- 
- Step 1** Download the Cisco UCS Director SDK Bundle, Release 6.9 from [Cisco.com](#).
  - Step 2** Import the project into Eclipse.
  - Step 3** Execute the examples available to understand the REST API execution. You can download the OA zip file from the CCO link, unzip the file, and import the OA examples into eclipse.
- 

## Upgrading Custom Tasks

### Custom Task Script Analyzer

The Custom Task Script Analyzer analyses all the classes and methods in the Cloupiascripts that are embedded in a custom task, and provides complete signatures for the methods being used in the Cloupiascript. The analyzer evaluates all the custom scripts in the Cisco UCS Director database without executing any tasks, and then it outputs an analysis report.

The analysis report includes the custom task status (for example, Executed or Not executed), a list of methods used in the custom task, and a list of methods that are not compatible with the methods of the current version. You can use the analysis file to detect potential incompatibilities in the Cloupiascripts before you upgrade.

### Configuring the Custom Task Script Analyzer

The Custom Task Script Analyzer is included with Cisco UCS Director as a zipped tar file named `script-analyzer.tgz`.

**Procedure**

- 
- Step 1** Download the `script-analyzer.tgz` tar file from the [Cisco software download](#) area.
  - Step 2** Copy the `script-analyzer.tgz` tar file to the `/opt` directory.
- Note** If you chose to copy the tar file to any directory other than `/opt`, ensure that you create the folders for saving the tar file and generated report under the same directory.
- Step 3** Create a folder (for example, `csatool`) under the `/opt` directory.
  - Step 4** Untar the `script-analyzer.tgz` tar file into the `csatool` folder using the following command:

```
[root@localhost opt]# tar -zxvf script-analyzer.tgz -C csatool
```

The following files are unpacked into the `csatool` folder:

- `data` folder—This folder contains the API definition file in the JSON format. The Custom Task Script Analyzer uses this file to identify the methods that are not compatible with the methods of the current version.
- `jre1.8.0_121` folder

- lib folder
- analyzer\_config.properties file
- run-analyzer.sh file
- script-analyzer.jar file

**Important** From Cisco UCS Director, Release 6.8(3.0), you can skip Step 5 and Step 6 and directly run the run-analyzer.sh file. For more information, see [Analyzing Custom Tasks with the Custom Task Script Analyzer, on page 31](#).

**Step 5** Edit the analyzer\_config.properties file and configure the following properties:

```
Path for the inframgr.jar file
inframgrJarPath=/opt/infra/inframgr/inframgr.jar
Path for the lib directory where all dependencies could be found.
From Cisco UCS Director release 6.5, the libDirPath is /opt/infra/lib.
For releases prior to 6.5, the libDirPath is /opt/infra/inframgr.
libDirPath=/opt/infra/inframgr
Path for the API definition file in the JSON format which is available in the data folder.
For releases prior to 6.5, the inframgr_6500.json file is the API definition file.
For the release 6.5.0.2, the inframgr_6502.json file is the API definition file.
inframgrJSONDefinitionPath=data/inframgr_6502.json
Directory where the generated analysis report would be written
reportDirPath=output
Directory for the JavaScript files. The JavaScript files containing the
CloupiaScripts are fetched using the --fetch-scripts command.
jsFileOrDirPath=javascrpts
JDBC connection URL
db.url=jdbc:mysql://localhost:3306/db_private_admin?verifyServerCertificate=false&useSSL=true
Database user
db.username=root
For releases prior to 6.5, use the default database password cloupia.
For Cisco UCS Director release 6.5, use the reset MySQL password.
You have to reset the database password in Cisco UCS Director Shell as a shell admin,
after bringing up all the services and first successful login to Cisco UCS Director.
db.password=cloupia
JDBC driver
db.driver=com.mysql.jdbc.Driver
```

**Note** This is supported only for version prior to Cisco UCS Director, Release 6.5.0.2.

**Note** To run the analyzer on a Primary Node on a Multi Node Environment, edit the analyzer\_config.properties file and configure the following:

```
JDBC connection URL
```

```
db.url=jdbc:mysql://<ip address of the inventory node>:3306/db_private_admin
```

**Step 6** Save and close the analyzer\_config.properties file.

## Analyzing Custom Tasks with the Custom Task Script Analyzer

You can connect to Cisco UCS Director through a terminal and then run the Custom Task Script Analyzer from the terminal. To view the commands that are available to run the Custom Task Script Analyzer, run the following command:

```
[root@localhost csatool]# ./run-analyzer.sh --help
```

The following commands are available:

- `fetch-scripts`—Fetches scripts from the database. By default, this option is set to `True`.
- `file`—Specify the path of the JavaScript file to be processed.
- `help`—Displays the command line menu options.

## Procedure

**Step 1** Open a terminal and connect to Cisco UCS Director.

**Step 2** To generate an analysis report for all custom tasks, execute the Custom Task Script Analyzer with the `--fetch-scripts` command as follows:

```
[root@localhost csatool]# ./run-analyzer.sh --fetch-scripts
```

On execution of this command, you will get:

- JavaScript files for all Cloupiascripts in your custom tasks and any tasks that were created with the Execute Cloupia Script library task. The JavaScript files are saved along with the corresponding byte code text files in the `javascripts` folder identified in the `jsFileOrDirPath` key of the `analyzer_config.properties` file.
- The analysis report in the `output` folder identified in the `reportDirPath` key of the `analyzer_config.properties` file.

By default, these folders are created in `/opt/csatool/`, or whichever path you configured in the `analyzer_config.properties` file.

**Note** The `javascripts` and the reports within the `output` folder are suffixed with the time stamp if:

- The `--fetch-scripts` command is executed more than once.
- The `javascripts` and `output` folders already exist in the `csatool` folder and the folders are not empty.

**Step 3** To generate an analysis report for all JavaScript files in the `javascripts` folder, execute the Custom Task Script Analyzer with the `--file` command as follows:

```
[root@localhost csatool]# ./run-analyzer.sh --file javascripts
```

This command generates an analysis report for all JavaScripts in the `javascripts` folder and saves the analysis report in the `output` folder as configured in the `analyzer_config.properties` file.

**Step 4** To generate an analysis report for a JavaScript file in the `javascripts` folder, execute the Custom Task Script Analyzer with the `--file` command as follows:

```
[root@localhost csatool]# ./run-analyzer.sh --file javascripts/Change_VM_Max_Boot_Wait_Time.js
```

Where, the `Change_VM_Max_Boot_Wait_Time.js` is a javascript file in the `javascripts` folder. This command generates an analysis report for the `Change_VM_Max_Boot_Wait_Time.js` in the `javascripts`



folder and saves the analysis report in the output folder as configured in the `analyzer_config.properties` file.

The analysis report includes the following details:

- `taskLabel`—Name of the custom task that was analyzed by the Custom Task Script Analyzer.
- `workflowList`—List of workflows in which the custom task is used.
- `status`—Executed or Not executed. If any of the workflows in the `workflowList` was executed at least once, the status is displayed as Executed.
- `usedMethodsList`—List of methods that are used in the custom task.
- `incompatibleMethodsList`—List of methods that are not compatible with the methods of the current version.

The following is a sample analysis report:

```
{
 "taskLabel": "Change_VM_Max_Boot_Wait_Time",
 "workflowList": [
 "Provision_VM",
 "UpdateVM"
],
 "status": NotExecuted,
 "usedMethodsList": [
 "public static com.cloupia.service.cIM.inframgr.profiles.PrivateCloudSystemProfile
com.cloupia.service.cIM.inframgr.InfraPersistenceUtil.getPrivateCloudSystemProfile(java.lang.String)
throws java.lang.Exception",
 "public int
com.cloupia.service.cIM.inframgr.profiles.PrivateCloudSystemProfile.getLinuxVMMaxBootTime()",
 "public void
com.cloupia.service.cIM.inframgr.profiles.PrivateCloudSystemProfile.setWindowsVMMaxBootTime(int)",
 "public static boolean
com.cloupia.service.cIM.inframgr.InfraPersistenceUtil.modifyPrivateCloudSystemProfile
(com.cloupia.service.cIM.inframgr.profiles.PrivateCloudSystemProfile) throws
java.lang.Exception",
 "public void
com.cloupia.service.cIM.inframgr.profiles.PrivateCloudSystemProfile.setLinuxVMMaxBootTime(int)"
],
 "incompatibleMethodsList": [
 "public static com.cloupia.service.cIM.inframgr.profiles.PrivateCloudSystemProfile
com.cloupia.service.cIM.inframgr.InfraPersistenceUtil.getPrivateCloudSystemProfile(java.lang.String)
throws java.lang.Exception",
 "public void
com.cloupia.service.cIM.inframgr.profiles.PrivateCloudSystemProfile.setWindowsVMMaxBootTime(int)"
]
}
```

The following is a sample analysis report:

```
{
"taskLabel" : "ReadFromCSVFile",
"workflowList" : [],
"status" : "Notexecuted",
"usedMethods" : [
```

```
"public void
com.cloupia.service.cIM.inframgr.customactions.CustomActionLogger.addError(java.lang.String)",
"public void
com.cloupia.service.cIM.inframgr.customactions.CustomActionTriggerContext.setFailed(java.lang.String)",
"public void
com.cloupia.service.cIM.inframgr.customactions.CustomActionLogger.addInfo(java.lang.String)",
"public void com.cloupia.service.cIM.inframgr.customactions.CustomActionTriggerContext.exit()"
],
"incompatibleMethods" : [
"Note:UCSD 6.8 Inframgr running as non-root user - This custom task might not succeed due
to the recent security measures to disallow a custom task from performing operations that
require root privileges.
For information about operations that require root privileges, please refer to the UCS
Director Troubleshooting Guide."
],
"warningMethods" : { },
"fileOperationFlag" : true
},
```

---

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