



Backup Management

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Backup and Import in Cisco UCS Central

Cisco UCS Central enables you to backup and restore Cisco UCS Central and the registered UCS domains. You can schedule a backup and restore policy or, you can perform an immediate backup operation. There are two types of scheduled and immediate backup operations.

You can schedule the following backup policies separately for both Cisco UCS Central and Cisco UCS domains:

- **Full state backup policy:** Backs up database.
- **Config all export policy:** Backs up the configuration in XML format.

For a UCS domains, these policies can either be defined locally or defined in Cisco UCS Central

Scheduled backup policies are disabled by default. If you want to backup Cisco UCS Central or the registered UCS domains, you must enable the backup state for both. Backup process does not interrupt or impact any server or network traffic. You can perform a backup while the domain is up and running. The backup operation saves information from the management plane.

Remotely configured policies are restricted to use the Cisco UCS Central repository for backups which is internally mounted by Cisco UCS Manager.

When you schedule regular backups, the backup repository can start accumulating data. To manage the backup archives, you can specify the maximum number of backup versions that are saved. Use policy specifications to indicate the number of backups to maintain for each Cisco UCS domain.

**Note**

The maximum number does not impact the number of backup image files you can store on a remote location.

You can view the list of backups for each Cisco UCS domain from the Cisco UCS Central and you can also delete saved or unused backup directories and configurations.

**Important**

- You must have a user account that includes the admin role to create and run backup and import operations.
 - You can delete backups only after a Cisco UCS domain (from which the backup has been taken) has been unregistered.
 - Config-all, config-logical and config-system type backups are only supported in Cisco UCS Central on demand back up.
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Backup Image Files

You can save the database or configuration backup files in the following locations:

- **Local File System:** In a local file system.
- **Remote Location:** Remote locations using any one of the protocol such as, TFTP, FTP, SCP, or SFTP.

**Important**

You must have Cisco UCS Manager, release 2.2(2x) in registered Cisco UCS domains to specify a global backup policy with the option to store the image file in a remote location. If you do not have Cisco UCS Manager, release 2.2(2x) in the Cisco UCS domain, the global backup policy with remote backup will not work.

When you schedule the backup, you can also specify the maximum number of backup files you want to save for either system.

Restoring Configuration

You can use the saved configuration from the backup repository to restore and configure any of the managed Cisco UCS domains. Make sure to use full-state backup for recovery situations. Use TFTP protocol to access the backup configurations. You can use both Cisco UCS Central GUI or CLI to copy the backup file URL and use it to configure a new domain.

Considerations and Recommendations for Backup Operations

Before you create a backup operation, consider the following:

Backup Locations

The backup location is the destination or folder on the network to which you want Cisco UCS Central to export the backup file. You can maintain only one backup operation for each location where you plan to save a backup file.

Potential to Overwrite Backup Files

If you rerun a backup operation without changing the filename, Cisco UCS Central overwrites the existing file on the server. To avoid overwriting existing backup files, change the filename in the backup operation or copy the existing file to another location.

Multiple Types of Backups

You can run and export more than one type of backup to the same location. Change the backup type before you rerun the backup operation. We recommend that you change the filename for easier identification and to avoid overwriting the existing backup file.

Scheduled Backups

You can create a backup operation in advance and leave the admin state disabled, until you are ready to run the backup. Cisco UCS Central does not run the backup operation, save, or export the configuration file until you set the admin state of the backup operation to enabled.

Incremental Backups

You cannot perform incremental backups.

Encryption of Full State Backups

Full state backups are encrypted so that passwords and other sensitive information are not exported as clear text.

Backup Types

You can perform one or more of the following types of backups in Cisco UCS Central:

- **Full-state**— You can specify full state backup only during installation. Full state backup is a binary file that includes a snapshot of the entire system. You can use the file generated from this backup to restore the system during disaster recovery. You cannot use this file for an import.



Note You can only use a full state backup file to restore a system that is running the same version as the system from which the backup file was exported.

- **Config-all**— All configuration back up is an XML file that includes all system and logical configuration settings. You cannot use this file for a system restore during installation.
- **Config-logical**— Logical configuration back up is an XML file that includes all logical configuration settings. These include service profiles, VLANs, VSANs, pools, policies, users, locales, LDAP, NTP, DNS authentication and administration settings. You can use the file generated from this backup to import these configuration settings. You cannot use this file for a full state system restore during installation.

- **Config-system**— System configuration back up is an XML file that includes statistics configuration and scheduler information. You can use the file generated from this backup to import these configuration settings. You cannot use this file for a full state system restore during installation.

Enabling Backup in Cisco UCS Central

By default the backup operation is disabled. You must enable the backup policy for Cisco UCS Central to automatically backup the database or system configuration.

Procedure

	Command or Action	Purpose
Step 1	UCSC # connect policy-mgr	Connects to operation manager mode.
Step 2	UCSC(policy-mgr) # scope org	Enters into the organization.
Step 3	UCSC(policy-mgr) /org # scope device-profile	Enters device profile mode.
Step 4	UCSC(policy-mgr) /org/device-profile # scope backup-policy {cfg full-state} hostname	Enters system backup mode for the specified hostname.
Step 5	UCSC(policy-mgr) /org/device-profile/cfg # set adminstate {enable disable}	Enables the backup operation. Note For backup operations using FTP, SCP, SFTP, you are prompted for the password. Enter the password before committing the transaction.
Step 6	UCSC(policy-mgr) /org/device-profile/cfg # commit-buffer	Commits the transaction.

The following example shows how to enable backup for Cisco UCS Central:

```
UCSC# connect policy-mgr
UCSC(policy-mgr) # scope org
UCSC(policy-mgr) /org #scope device-profile
UCSC(policy-mgr) /org/device-profile # scope backup-policy cfg default
UCSC(policy-mgr) /org/device-profile/cfg # set adminstate enable
UCSC(policy-mgr) /org/device-profile/cfg* # commit-buffer
UCSC(policy-mgr) /org/device-profile/cfg #
```

Creating an On Demand Backup for Cisco UCS Central

Before You Begin

Obtain the backup server IPv4 or IPv6 address and authentication credentials.

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect operation-mgr	Enters operations manager mode.
Step 2	UCSC(ops-mgr)# scope system	Enters the system mode.
Step 3	UCSC(ops-mgr) /system # create backup URL <i>backup-type</i> { disabled enabled }	<p>Creates a backup operation. Specify the <i>URL</i> for the backup file using one of the following syntax:</p> <ul style="list-style-type: none"> • ftp:// username@hostname / path • scp:// username@hostname / path • sftp:// username@hostname / path • tftp:// hostname : port-num / path <p>Note Full-state backup files cannot be imported using an import operation. They are used only to restore the configuration for a fabric interconnect.</p> <p>You can save multiple backup operations, but only one operation for each hostname is saved.</p> <p>If you use the enable keyword, the backup operation automatically runs as soon as you enter the commit-buffer command. If you use the disable keyword, the backup operation does not run until it is enabled. When enabling a backup operation, you must specify the hostname you used when creating the backup operation.</p>
Step 4	UCSC(ops-mgr) /system # commit-buffer	Commits the transaction.

The following example shows how to create a full-state backup operation for hostname host35 and commit the transaction:

```
UCSC# connect operation-mgr
UCSC(ops-mgr)# scope system
UCSC(ops-mgr) /system* # create backup scp://user@host35/backups/fullstate.tgz disabled
Password:
UCSC(ops-mgr) /system* # commit-buffer
UCSC(ops-mgr) /system # show fsm status
```

Creating a Config-All Export Policy for Cisco UCS Central

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect policy-mgr	Enters policy manager mode.
Step 2	UCSC(policy-mgr) # scope org	Enters org mode.
Step 3	UCSC(policy-mgr)/prg # scope device-profile	Enters device profile mode.
Step 4	UCSC(policy-mgr) /org/device-profile # create backup-policy cfg default	Enters device profile configuration mode.
Step 5	UCSC(policy-mgr) /org/device-profile/cfg* # set adminstate {disable enable}	(Optional) If you use the enable keyword, the backup operation automatically runs as soon as you enter the commit-buffer command. If you use the disable keyword, the backup operation will not run until it is enabled. When enabling a backup operation, you must specify the hostname you used when creating the backup operation.
Step 6	UCSC(policy-mgr) /org/device-profile/cfg* # set descr description	(Optional) Provides a description for the backup policy. Note If your description includes spaces, special characters, or punctuation, you must begin and end your description with quotation marks. The quotation marks will not appear in the description field of any show command output.
Step 7	UCSC(policy-mgr) /org/device-profile/cfg* # set remote-file	(Optional) Selects the backup location.
Step 8	UCSC(policy-mgr) /org/device-profile/cfg* # set protocol ftpsftp scp tftp	(Optional) Specifies the protocol.
Step 9	UCSC(policy-mgr) /org/device-profile/cfg* # set max-copies	(Optional) Specifies the maximum number of backups (1 to 30 copies)
Step 10	UCSC(policy-mgr) /org/device-profile/cfg* # set schedule {bi-weekly daily weekly}	(Optional) Specifies the schedule for the backup.
Step 11	UCSC(policy-mgr) /org/device-profile/cfg* # commit-buffer	Commits the transaction.

The following example shows how to create a disabled all-configuration backup operation and commit the transaction. The backup schedule is bi-weekly and 25 copies are saved:

```
UCSC# connect policy-mgr
UCSC(policy-mgr) # scope org
UCSC(policy-mgr) /org* # create backup-policy cfg default
UCSC(policy-mgr) /org/device-profile/cfg*# set adminstate disabled
UCSC(policy-mgr) /org/device-profile/cfg*# set remote-filenfs-copy
UCSC(policy-mgr) /org/device-profile/cfg*#set protocolftpsftpscptftp
UCSC(policy-mgr) /org/device-profile/cfg*# set max-copies 25
UCSC(policy-mgr) /org/device-profile/cfg*#set schedule bi-weekly
UCSC(policy-mgr) /org/device-profile/cfg*#commit-buffer
UCSC(policy-mgr) /org/device-profile/cfg*#
```

Backing up and Restoring Cisco UCS Domains

You can create global backup policies for registered UCS domains in Cisco UCS Central at the domain group root or at the domain group levels.

When you create a global backup policy, Cisco UCS domains that are part of the domain group inherit the policy creating, update and deletion events. Deleting these policies remotely resets the admin state to disabled in Cisco UCS Manager since these are global policies that cannot be completely deleted. You can schedule a backup and restore operation or you can perform an immediate backup and restore operation.



Important

Backing up UCS domains to a remote locations is supported only from Cisco UCS Manager, release 2.2(2x) and above. Trying to backup a UCS domain that is running on any earlier Cisco UCS Manager release versions will not work.

Recommendations

- Make sure to set **Backup & Export Polices to Global** in Cisco UCS Manager.
- You must register a Cisco UCS Domain under a domain group to enable the global backup policy.
- When you have multiple Cisco UCS Manager release versions in your setup, make sure to same release versions of UCS Manager are registered under one domain group.
- You cannot specify multiple backup policies under different domain groups. All of the backup policies must be named default.

Creating a Scheduled Database Backup Policy for Cisco UCS Domains

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect policy-mgr	Enters policy manager mode.
Step 2	UCSC(policy-mgr) # scope domain-group	Enters domain group mode.

	Command or Action	Purpose
Step 3	UCSC(policy-mgr) /domain-group # create backup-policy full-state default	Enters domain group configuration mode.
Step 4	UCSC(policy-mgr) /domain-group/full-state * # set adminstate {disabled enabled}	(Optional) If you use the enable keyword, the backup operation automatically runs as soon as you enter the commit-buffer command. If you use the disable keyword, the backup operation will not run until it is enabled. When enabling a backup operation, you must specify the hostname you used when creating the backup operation.
Step 5	UCSC(policy-mgr) /domain-group/full-state * # set descr description	(Optional) Provides a description for the backup policy. Note If your description includes spaces, special characters, or punctuation, you must begin and end your description with quotation marks. The quotation marks will not appear in the description field of any show command output.
Step 6	UCSC(policy-mgr) /domain-group/full-state * # set max-copies number	(Optional) Specifies the maximum number of backups (1 to 30 copies)
Step 7	UCSC(policy-mgr) /domain-group/full-state * # set schedule {bi-weekly daily weekly}	(Optional) Specifies the schedule for the backup.
Step 8	UCSC(policy-mgr) /domain-group/full-state * # commit-buffer	Commits the transaction.

The following example shows how to create a disabled full-state backup operation and commit the transaction. The backup schedule is daily and 5 copies are saved:

```
UCSC# connect policy-mgr
UCSC(policy-mgr) # scope domain-group
UCSC(policy-mgr) /domain-group* # create backup-policy full-state default
UCSC(policy-mgr) /domain-group/full-state * # set adminstate disabled
UCSC(policy-mgr) /domain-group/full-state * # set max-copies 5
UCSC(policy-mgr) /domain-group/full-state * # set schedule daily
UCSC(policy-mgr) /domain-group/full-state * # commit-buffer
UCSC(policy-mgr) /domain-group/full-state #
```

Modifying a Scheduled All-Configuration Backup Policy

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect policy-mgr	Enters policy manager mode.
Step 2	UCSC(policy-mgr) # scope domain-group	Enters domain group mode.
Step 3	UCSC(policy-mgr) /domain-group # scope backup-policy cfg default	Enters backup policy configuration mode.
Step 4	UCSC(policy-mgr) /domain-group/cfg* # set adminstate {disabled enabled}	(Optional) If you use the enable keyword, the backup operation automatically runs as soon as you enter the commit-buffer command. If you use the disable keyword, the backup operation will not run until it is enabled. When enabling a backup operation, you must specify the hostname you used when creating the backup operation.
Step 5	UCSC(policy-mgr) /domain-group/cfg* # set descr description	(Optional) Provides a description for the backup policy. Note If your description includes spaces, special characters, or punctuation, you must begin and end your description with quotation marks. The quotation marks will not appear in the description field of any show command output.
Step 6	UCSC(policy-mgr) /domain-group/cfg* # set max-copies number	(Optional) Specifies the maximum number of backups (1 to 30 copies)
Step 7	UCSC(policy-mgr) /domain-group/cfg* # set schedule {bi-weekly daily weekly}	(Optional) Specifies the schedule for the backup.
Step 8	UCSC(policy-mgr) /domain-group/cfg* # commit-buffer	Commits the transaction.

The following example shows how to modify an all-configuration backup operation. The backup schedule is set to daily and 10 copies are saved:

```
UCSC# connect policy-mgr
UCSC(policy-mgr) # scope domain-group
UCSC(policy-mgr) /domain-group* # scope backup-policy cfg default
UCSC(policy-mgr) /domain-group/cfg* # set adminstate enabled
UCSC(policy-mgr) /domain-group/cfg* # set max-copies 10
UCSC(policy-mgr) /domain-group/cfg* # set schedule daily
UCSC(policy-mgr) /domain-group/cfg* # commit-buffer
UCSC(policy-mgr) /domain-group/cfg #
```

Modifying a Scheduled Database Backup Policy

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect policy-mgr	Enters policy manager mode.
Step 2	UCSC(policy-mgr) # scope domain-group	Enters domain group mode.
Step 3	UCSC(policy-mgr) /domain-group # scope backup-policy full-state default	Enters domain group configuration mode.
Step 4	UCSC(policy-mgr) /domain-group/full-state* # set adminstate {disabled enabled}	(Optional) If you use the enable keyword, the backup operation automatically runs as soon as you enter the commit-buffer command. If you use the disable keyword, the backup operation will not run until it is enabled. When enabling a backup operation, you must specify the hostname you used when creating the backup operation.
Step 5	UCSC(policy-mgr) /domain-group/full-state* # set descr description	(Optional) Provides a description for the backup policy. Note If your description includes spaces, special characters, or punctuation, you must begin and end your description with quotation marks. The quotation marks will not appear in the description field of any show command output.
Step 6	UCSC(policy-mgr) /domain-group/full-state* # set max-copies number	(Optional) Specifies the maximum number of backups (1 to 30 copies)
Step 7	UCSC(policy-mgr) /domain-group/full-state* # set schedule {bi-weekly daily weekly}	(Optional) Specifies the schedule for the backup.
Step 8	UCSC(policy-mgr) /domain-group/full-state* # commit-buffer	Commits the transaction.

The following example shows how to modify a disabled full-state backup operation. The backup schedule is daily and 5 copies are saved:

```
UCSC# connect policy-mgr
UCSC(policy-mgr) # scope domain-group
UCSC(policy-mgr) /domain-group* # scope backup-policy full-state default
UCSC(policy-mgr) /domain-group/full-state* # set adminstate enabled
UCSC(policy-mgr) /domain-group/full-state* # set max-copies 5
UCSC(policy-mgr) /domain-group/full-state* # set schedule daily
```

```
UCSC(policy-mgr) /domain-group/full-state* # commit-buffer
UCSC(policy-mgr) /domain-group/full-state #
```

Deleting a Scheduled All-Configuration and Full-State Backup Policy

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect policy-mgr	Enters policy manager mode.
Step 2	UCSC(policy-mgr) # scope domain-group	Enters domain group mode.
Step 3	UCSC(policy-mgr) /domain-group # delete backup-policy cfg name	Deletes the all-configuration backup policy.
Step 4	UCSC(policy-mgr) /domain-group* # delete backup-policy full-state name	Deletes the all-configuration backup policy.
Step 5	UCSC(policy-mgr) /domain-group* # commit-buffer	Commits the transaction.

The following example shows how to delete the all-configuration and the full-state backup operations and commit the transaction:

```
UCSC# connect policy-mgr
UCSC(policy-mgr) # scope domain-group
UCSC(policy-mgr) /domain-group* # delete backup-policy cfg default
UCSC(policy-mgr) /domain-group* # delete backup-policy full-state default
UCSC(policy-mgr) /domain-group* # commit-buffer
UCSC(policy-mgr) /domain-group #
```

Creating a Backup Operation

Before You Begin

Obtain the backup server IPv4 or IPv6 address and authentication credentials.

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect operation-mgr	Enters operations manager mode.
Step 2	UCSC(ops-mgr)# scope system	Enters the system mode.
Step 3	UCSC(ops-mgr) /system # create backup URL {disabled enabled}	Creates a backup operation. Specify the <i>URL</i> for the backup file using one of the following syntax: <ul style="list-style-type: none"> • ftp:// username@hostname / path • scp:// username@hostname / path

	Command or Action	Purpose
		<ul style="list-style-type: none"> • <code>sftp://username@hostname / path</code> • <code>tftp://hostname : port-num / path</code> <p>You can save multiple backup operations, but only one operation for each hostname is saved.</p> <p>If you use the enable keyword, the backup operation automatically runs as soon as you enter the commit-buffer command. If you use the disable keyword, the backup operation will not run until it is enabled. When enabling a backup operation, you must specify the hostname you used when creating the backup operation.</p>
Step 4	UCSC(ops-mgr) /system/backup # commit-buffer	Commits the transaction.

The following example shows how to create a disabled backup operation for host35:

```
UCSC# connect operation-mgr
UCSC(ops-mgr) # scope system
UCSC(ops-mgr) /system* # create backup scp://user@10.0.0.1/backups disabled
Password:
UCSC(ops-mgr) /system* # commit-buffer
UCSC(ops-mgr) /system #
```

Modifying a Backup Operation

You can modify a backup operation to save a file of another backup type to that location or to change the filename and avoid overwriting previous backup files.

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect operation-mgr	Enters operations manager mode.
Step 2	UCSC(ops-mgr)# scope system	Enters the system mode.
Step 3	UCSC(ops-mgr) /system # scope backup hostname	Enters system backup mode for the specified hostname.
Step 4	UCSC(ops-mgr) /system/backup-mgmt # disable	(Optional) Disables an enabled backup operation so that it does not automatically run when the transaction is committed.
Step 5	UCSC(ops-mgr) /system/backup-mgmt # enable	(Optional) Automatically runs the backup operation as soon as you commit the transaction.

	Command or Action	Purpose
Step 6	UCSC(ops-mgr) /system/backup-mgmt # set descr <i>description</i>	(Optional) Provides a description for the backup operation. Note If your description includes spaces, special characters, or punctuation, you must begin and end your description with quotation marks. The quotation marks will not appear in the description field of any show command output.
Step 7	UCSC(ops-mgr) /system/backup-mgmt # set protocol {ftp scp sftp tftp}	(Optional) Specifies the protocol to use when communicating with the remote server.
Step 8	UCSC(ops-mgr) /system/backup-mgmt # set remote-file <i>filename</i>	(Optional) Specifies the name of the configuration file that is being backed up.
Step 9	UCSC(ops-mgr) /system/backup-mgmt # set user <i>username</i>	(Optional) Specifies the username the system should use to log in to the remote server. This step does not apply if the TFTP protocol is used.
Step 10	UCSC(ops-mgr) /system/backup-mgmt # set password	(Optional) After you press Enter, you are prompted to enter the password. Specifies the password for the remote server username. This step does not apply if the TFTP protocol is used.
Step 11	UCSC(ops-mgr) /system/backup-mgmt # commit-buffer	Commits the transaction.

The following example shows how to:

- Add a description
- Change the protocol
- Change the username
- Change the password

```
UCSC# connect operation-mgr
UCSC(ops-mgr) # scope system
UCSC(ops-mgr) /system # scope backup host35
UCSC(ops-mgr) /system/backup-mgmt # set descr "This is a backup operation for host35."
UCSC(ops-mgr) /system/backup-mgmt* # set protocol sftp
UCSC(ops-mgr) /system/backup-mgmt* # set user UserName32
UCSC(ops-mgr) /system/backup-mgmt* # set password
Password:
UCSC(ops-mgr) /system/backup-mgmt* # commit-buffer
UCSC(ops-mgr) /system #
```

Deleting a Backup Operation

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect operation-mgr	Connects to operation manager mode.
Step 2	UCSC(ops-mgr)# scope system	Enters system mode.
Step 3	UCSC(ops-mgr) /system # delete backup <i>hostname</i>	Deletes the backup operation for the specified hostname.
Step 4	UCSC(ops-mgr) /system # commit-buffer	Commits the transaction.

The following example shows how to delete a backup operation for the host35 hostname and commit the transaction:

```
UCSC# connect operation-mgr
UCSC(ops-mgr) # scope system
UCSC(ops-mgr) /system # delete backup host35
UCSC(ops-mgr) /system* # commit-buffer
UCSC(ops-mgr) /system #
```

Modifying a Full-State Backup

Use this task to change or restart the backup operation.



Note

After modifying the backup operation, enter **enable** inside this scope to restart the operation.

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect operation-mgr	Enters operations manager mode.
Step 2	UCSC(ops-mgr)# scope system	Enters the system mode.
Step 3	UCSC(ops-mgr) /system # scope backup <i>URL</i>	Enters system backup mode for the specified hostname.

	Command or Action	Purpose
Step 4	UCSC(ops-mgr) /system/backup # set descr <i>description</i>	(Optional) Provides a description for the backup operation. Note If your description includes spaces, special characters, or punctuation, you must begin and end your description with quotation marks. The quotation marks will not appear in the description field of any show command output.
Step 5	UCSC(ops-mgr) /system/backup # set password	(Optional) After you press Enter, you are prompted to enter the password. Specifies the password for the remote server username. This step does not apply if the TFTP protocol is used.
Step 6	UCSC(ops-mgr) /system/backup # set protocol {ftp sep sftp tftp}	(Optional) Specifies the protocol to use when communicating with the remote server.
Step 7	UCSC(ops-mgr) /system/backup # set remote-file <i>filename</i>	(Optional) Specifies the name of the configuration file that is being backed up.
Step 8	UCSC(ops-mgr) /system/backup # set user <i>username</i>	(Optional) Specifies the username the system should use to log in to the remote server. This step does not apply if the TFTP protocol is used.
Step 9	UCSC(ops-mgr) /system/backup # disable	(Optional) Disables an enabled backup operation so that it does not automatically run when the transaction is committed.
Step 10	UCSC(ops-mgr) /system/backup # enable	(Optional) Automatically runs the backup operation as soon as you commit the transaction.
Step 11	UCSC(ops-mgr) /system/backup # commit-buffer	Commits the transaction.

The following example shows how to add a description and change the protocol, username, and password for the host35 backup operation and commit the transaction:

```
UCSC# connect operation-mgr
UCSC(ops-mgr) # scope system
UCSC(ops-mgr) /system # scope backup host35
UCSC(ops-mgr) /system/backup # set descr "This is an backup operation for host35."
UCSC(ops-mgr) /system/backup* # set protocol sftp
UCSC(ops-mgr) /system/backup* # set user UserName32
UCSC(ops-mgr) /system/backup* # set password
Password:
UCSC(ops-mgr) /system/backup* # commit-buffer
UCSC(ops-mgr) /system # show detail
```

Deleting an Unused Backup File

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect operation-mgr	Connects to operation manager mode.
Step 2	UCSC(ops-mgr)# scope backup-mgmt	Enters backup management mode.
Step 3	UCSC(ops-mgr) /backup-mgmt # delete-backup consumer-catalogue <i>name</i> backup type {config-all full-state} backup-date <i>data/time</i>	Enters consumer-catalog mode for the specified catalogue.

The following example shows how to delete an unused backup file :

```
UCSC(ops-mgr) /backup-mgmt # delete-backup catalogue 192.168.10.22
backup type config-all backup-date 2012-11-11T07:31:39.00
```

Deleting an Unused Catalogue

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect operation-mgr	Connects to operation manager mode.
Step 2	UCSC(ops-mgr)# scope backup-mgmt	Enters backup management mode.
Step 3	UCSC(ops-mgr) /backup-mgmt # delete consumer-catalogue <i>hostname</i>	Specifies the consumer-catalog.
Step 4	UCSC(ops-mgr) /backup-mgmt* # commit-buffer	Commits the transaction.

The following example deletes the consumer-catalog host35 :

```
UCSC# connect operation-mgr
UCSC(ops-mgr) # scope backup-mgmt
UCSC(ops-mgr) /backup-mgmt # delete consumer-catalogue host35
UCSC(ops-mgr) /backup-mgmt* # commit-buffer
```

Viewing a List of Backups Under a Specific Catalogue

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect operation-mgr	Connects to operation manager mode.
Step 2	UCSC(ops-mgr)# scope backup-mgmt	Enters backup management mode.
Step 3	UCSC(ops-mgr) /backup-mgmt # scope consumer-catalogue hostname	Enters consumer-catalog mode for the specified catalogue.
Step 4	UCSC(ops-mgr) /backup-mgmt/consumer-catalogue # show backup	Lists the backup operations in a specified catalogue.

The following example shows how to list the backup operations for consumer-catalog host35 :

```
UCSC# connect operation-mgr
UCSC(ops-mgr) # scope backup-mgmt
UCSC(ops-mgr) /backup-mgmt # scope consumer-catalogue host35
UCSC(ops-mgr) /backup-mgmt/consumer-catalogue # show backup
Config Backup:
  Type          Gen Number Time
  -----
Config All          1    2012-11-11T07:31:39.000
```

Viewing Internal Backup Archive Operations

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect operation-mgr	Connects to operation manager mode.
Step 2	UCSC(ops-mgr)# scope backup-mgmt	Enters backup management mode.
Step 3	UCSC(ops-mgr) /backup-mgmt # show {consumer-catalogue [detail expand fsm internal name] event detail fsm FSM task}	Specifies one of the following to display: <ul style="list-style-type: none"> • consumer-catalogue —The consumer-catalogue including the name, internal name, and owner. • event —The event management. • fsm —The finite state machine (FSM).

The following example shows how to list the consumer-catalog :

```
UCSC# connect operation-mgr
UCSC(ops-mgr)# scope backup-mgmt
UCSC(ops-mgr) /backup-mgmt # show consumer-catalogue
Consumer Catalogue:
  Name                Internal Name        Owner
  -----
  192.168.10.10        192.168.10.10
  192.168.10.20        192.168.10.20
  192.168.10.25        192.168.10.25
  192.168.10.35        192.168.10.35
  192.168.10.40        192.168.10.40
  ucs-central          ucs-central
```

Import Configuration

You can import any configuration file that was exported from Cisco UCS Central. The file does not need to have been exported from the same Cisco UCS Central.



Note

You cannot import a configuration from a higher release to a lower release.

The import function is available for all configuration, system configuration, and logical configuration files. You can perform an import while the system is up and running. An import operation modifies information on the management plane only. Some modifications caused by an import operation, such as a change to a vNIC assigned to a server, can cause a server reboot or other operations that disrupt traffic.

You cannot schedule an import operation. You can, however, create an import operation in advance and leave the admin state disabled until you are ready to run the import. Cisco UCS Central will not run the import operation on the configuration file until you set the admin state to enabled.

You can maintain only one import operation for each location where you saved a configuration backup file.

Import Methods

You can use one of the following methods to import and update a system configuration through Cisco UCS:

- **Merge**—The information in the imported configuration file is compared with the existing configuration information. If there are conflicts, the import operation overwrites the information on the Cisco UCS domain with the information in the import configuration file.
- **Replace**—The current configuration information is replaced with the information in the imported configuration file one object at a time.

Creating an Import Operation for Cisco UCS Central

You cannot import a Full State backup file. You can import any of the following configuration files:

- All configuration
- System configuration
- Logical configuration

Before You Begin

Collect the following information to import a configuration file:

- Backup server IP address and authentication credentials
- Fully-qualified name of a backup file

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect operation-mgr	Enters operations manager mode.
Step 2	UCSC(ops-mgr)# scope system	Enters the system mode.
Step 3	UCSC(ops-mgr) /system # create import URL {merge replace} {disabled enabled}	<p>Creates an import operation for Cisco UCS Central. Specify the URL for the file being imported using one of the following syntax:</p> <ul style="list-style-type: none"> • ftp:// username@hostname / path • scp:// username@hostname / path • sftp:// username@hostname / path • tftp:// hostname : port-num / path <p>You can save multiple import operations, but only one operation for each hostname is saved.</p> <p>If you use the merge keyword, the configuration information is merged with the existing information. If there are conflicts, the system replaces the information on the current system with the information in the import configuration file. If you use the replace keyword, the system takes each object in the import configuration file and overwrites the corresponding object in the current configuration.</p> <p>If you use the enable keyword, the import operation automatically runs as soon as you enter the commit-buffer command. If you use the disable keyword, the import operation will not run until it is enabled. When enabling an import operation, you must specify the hostname you used when creating the import operation.</p>
Step 4	UCSC(ops-mgr) /system/import* # commit-buffer	Commits the transaction.

The following example shows how to create a disabled import operation that replaces the existing configuration:

```
UCSC# connect operation-mgr
UCSC(ops-mgr) # scope system
UCSC(ops-mgr) /system* # create import scp://user@10.0.0.1/backups/all-config9.bak disabled
replace
Password:
```

```
UCSC (ops-mgr) /system/import* # commit-buffer
UCSC (ops-mgr) /system/import #
```

Creating an Import Operation to a Cisco UCS Domain

Before You Begin

Collect the following information to import a configuration file:

- Backup server IP address and authentication credentials
- Fully-qualified name of a backup file

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect operation-mgr	Enters operations manager mode.
Step 2	UCSC(ops-mgr)# scope backup-mgmt	Enters backup management mode.
Step 3	UCSC(ops-mgr) /backup-mgmt# create-importer to managed-system name from consumer-catalogue name backup-date date/time import-action { merge replace } import-action	Creates an import operation to a Cisco UCS domain.
Step 4	UCSC(ops-mgr) /backup-mgmt *# commit-buffer	Commits the transaction.

The following example shows how to create an import operation to a Cisco UCS domain:

```
UCSC# connect operation-mgr
UCSC (ops-mgr) # scope backup-mgmt
UCSC (ops-mgr) /backup-mgmt # create-importer to managed-system 10.105.214.103
from consumer-catalogue 10.105.214.103 backup-ate 2012-11-16T16:01:39.000 import-action
merge
UCSC (ops-mgr) /backup-mgmt* # commit-buffer
```

Enabling an Import Operation to Run

If you set your import operation to disabled when you created it, you must enable it so it can run.

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect operation-mgr	Connects to operation manager mode.
Step 2	UCSC# scope system	Enters system mode.
Step 3	UCSC /system # scope import {hostname host IP address}	Enters system backup mode for the specified hostname.

	Command or Action	Purpose
Step 4	UCSC /system/import # enable	Enables the import operation.
Step 5	UCSC /system/import # commit-buffer	Commits the transaction.

The following example shows how to enable an import operation:

```
UCSC# scope system
UCSC /system # scope import 10.0.0.1
UCSC /system/import # enable
UCSC /system/import*# commit-buffer
UCSC /system/import #
```

Modifying an Import Operation for Cisco UCS Central

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect operation-mgr	Connects to operation manager mode.
Step 2	UCSC(ops-mgr)# scope system	Enters system mode.
Step 3	UCSC(ops-mgr) /system # scope import hostname	Enters system import configuration mode for the specified hostname.
Step 4	UCSC(ops-mgr) /system/import # disable	(Optional) Disables an enabled import operation so that it does not automatically run when the transaction is committed.
Step 5	UCSC(ops-mgr) /system/import # enable	(Optional) Automatically runs the import operation as soon as you commit the transaction.
Step 6	UCSC(ops-mgr) /system/import # set action {merge replace}	(Optional) Specifies one of the following action types to use for the import operation: <ul style="list-style-type: none"> • Merge —The configuration information is merged with the existing information. If there are conflicts, the system replaces the information on the current system with the information in the import configuration file. • Replace —The system takes each object in the import configuration file and overwrites the corresponding object in the current configuration.

	Command or Action	Purpose
Step 7	UCSC(ops-mgr) /system/import # set descr <i>description</i>	(Optional) Provides a description for the import operation. Note If your description includes spaces, special characters, or punctuation, you must begin and end your description with quotation marks. The quotation marks will not appear in the description field of any show command output.
Step 8	UCSC(ops-mgr) /system/import # set password	(Optional) After you press Enter, you are prompted to enter the password. Specifies the password for the remote server username. This step does not apply if the TFTP protocol is used. Note Cisco UCS Central does not store this password. Therefore, you do not need to enter this password unless you intend to enable and run the import operation immediately.
Step 9	UCSC(ops-mgr) /system/import # set protocol {ftp scp sftp tftp}	(Optional) Specifies the protocol to use when communicating with the remote server.
Step 10	UCSC(ops-mgr) /system/import # set remote-file-prefix <i>filename</i>	(Optional) Specifies the name and full path of the configuration file that is being imported.
Step 11	UCSC(ops-mgr) /system/import # set user <i>username</i>	(Optional) Specifies the username the system should use to log in to the remote server. This step does not apply if the TFTP protocol is used.
Step 12	UCSC(ops-mgr) /system/import # commit-buffer	Commits the transaction.

The following example shows how to modify an import operation for Cisco UCS Central to change the description, protocol, and username for the import operation:

```
UCSC# connect operation-mgr
UCSC(ops-mgr) # scope system
UCSC(ops-mgr) /system # scope import host35
UCSC(ops-mgr) /system/import # set descr "This is an import operation for UCS Central."
UCSC(ops-mgr) /system/import* # set password
Password:
UCSC(ops-mgr) /system/import* # set protocol ftp
UCSC(ops-mgr) /system/import* # set user admin5
UCSC(ops-mgr) /system/import* # commit-buffer
UCSC(ops-mgr) /system/import #
```

Deleting a Backup, Export, or Import Operation

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect operation-mgr	Connects to operation manager mode.
Step 2	UCSC(ops-mgr)# scope system	Enters system mode.
Step 3	UCSC(ops-mgr) /system # delete {backup export import} hostname	Deletes the backup, management data export, or management data import operation for the specified hostname.
Step 4	UCSC(ops-mgr) /system # commit-buffer	Commits the transaction.

The following example shows how to delete the import operation:

```
UCSC# connect operation-mgr
UCSC(ops-mgr) # scope system
UCSC(ops-mgr) /system # delete import 10.0.0.1
UCSC(ops-mgr) /system* # commit-buffer
UCSC(ops-mgr) /system #
```

Deleting a Cisco UCS Domain Import Operation

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect operation-mgr	Connects to operation manager mode.
Step 2	UCSC(ops-mgr)# scope ucs-domain	Enters Cisco UCS domain mode.
Step 3	UCSC(ops-mgr) /ucs-domain # scope managed-system	Enters managed system mode.
Step 4	UCSC(ops-mgr) /ucs-domain/managed-system* # delete importer {hostname host IP address}	Specifies the host to delete.
Step 5	UCSC(ops-mgr) /ucs-domain/managed-system* # commit-buffer	Commits the transaction.

The following example shows how to delete a domain import operation:

```
UCSC# connect operation-mgr
UCSC(ops-mgr) # scope ucs-domain
UCSC(ops-mgr) /ucs-domain # scope managed-system
UCSC(ops-mgr) /ucs-domain/managed-system # delete importer 10.105.214.100
UCSC(ops-mgr) /ucs-domain/managed-system* # commit-buffer
```

Viewing the Status of an Import Operation to a Cisco UCS Domain

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect operation-mgr	Connects to operation manager mode.
Step 2	UCSC(ops-mgr)# scope ucs-domain	Enters Cisco UCS domain mode.
Step 3	UCSC(ops-mgr) /ucs-domain # show managed-system	Enters managed system mode.
Step 4	UCSC(ops-mgr) /ucs-domain/managed-system # show importer {detail expand fsm hostname}	Displays the status of the import operation to a Cisco UCS domain.

The following example shows how to display the managed system 1006 import detail:

```
UCSC# connect operation-mgr
UCSC(ops-mgr)# scope ucs-domain
UCSC(ops-mgr) /ucs-domain # show managed-system
Managed System:
  ID          Name          Ip Address      Admin State      Oper State
  -----
  1006 bgl-samc01 192.168.10.25  Managed         Ok
UCSC(ops-mgr) /ucs-domain # scope managed-system 1006
UCSC(ops-mgr) /ucs-domain/managed-system # show importer detail
Importer:
  Hostname: 192.168.10.20
  Remote File: /192.168.10.25/cfg-backups/all-cfg
  Admin State: Disabled
  Action: Merge
  Op Status: All Success
  Status Report:
  Current Task:
```

Creating an Export Operation

Before You Begin

Obtain the backup server IPv4 or IPv6 address and authentication credentials.

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect operation-mgr	Enters operations manager mode.
Step 2	UCSC(ops-mgr)# scope system	Enters the system mode.

	Command or Action	Purpose
Step 3	UCSC(ops-mgr) /system # create export <i>URL</i> <i>backup-type</i> { disabled enabled }	<p>Creates a backup operation. Specify the <i>URL</i> for the backup file using one of the following syntax:</p> <ul style="list-style-type: none"> • ftp:// <i>username@hostname</i> / <i>path</i> • scp:// <i>username@hostname</i> / <i>path</i> • sftp:// <i>username@hostname</i> / <i>path</i> • tftp:// <i>hostname</i> : <i>port-num</i> / <i>path</i> <ul style="list-style-type: none"> • config-all —Backs up the server-, fabric-, and system-related configuration • config-logical —Backs up the fabric- and service profile-related configuration • config-system —Backs up the system-related configuration <p>You can save multiple backup operations, but only one operation for each hostname is saved.</p> <p>If you use the enable keyword, the backup operation automatically runs as soon as you enter the commit-buffer command. If you use the disable keyword, the backup operation will not run until it is enabled. When enabling a backup operation, you must specify the hostname you used when creating the backup operation.</p>
Step 4	UCSC(ops-mgr) /system/export* # commit-buffer	Commits the transaction.

The following example shows how to create a disabled config-all export operation for hostname host35 and commit the transaction:

```
UCSC# connect operation-mgr
UCSC(ops-mgr) # scope system
UCSC(ops-mgr) /system* # create export scp://user@host35/backups/all-config9.bak config-all
disabled
Password:
UCSC(ops-mgr) /system/export* # commit-buffer
UCSC(ops-mgr) /system/export # show fsm status
```

Modifying and Restarting an Export Operation

Use this task to change or restart the export operation.



Note

After modifying the export operation, enter **enable** inside this scope to restart the operation.

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect operation-mgr	Enters operations manager mode.
Step 2	UCSC(ops-mgr)# scope system	Enters the system mode.
Step 3	UCSC(ops-mgr) /system # scope export hostname	Enters system export mode for the specified hostname.
Step 4	UCSC(ops-mgr) /system/export # disable	(Optional) Disables an enabled export operation so that it does not automatically run when the transaction is committed.
Step 5	UCSC(ops-mgr) /system/export # enable	(Optional) Automatically runs the export operation as soon as you commit the transaction.
Step 6	UCSC(ops-mgr) /system/export # set descr description	(Optional) Provides a description for the export operation. Note If your description includes spaces, special characters, or punctuation, you must begin and end your description with quotation marks. The quotation marks will not appear in the description field of any show command output.
Step 7	UCSC(ops-mgr) /system/export # set password	(Optional) After you press Enter, you are prompted to enter the password. Specifies the password for the remote server username. This step does not apply if the TFTP protocol is used.
Step 8	UCSC(ops-mgr) /system/export # set protocol {ftp scp sftp tftp}	(Optional) Specifies the protocol to use when communicating with the remote server.
Step 9	UCSC(ops-mgr) /system/export # set remote-file-prefix filename	(Optional) Specifies the name of the configuration file that is being backed up.
Step 10	UCSC(ops-mgr) /system/export # set type export-type	(Optional) Specifies the type of export file to be made. The <i>export-type</i> argument can be one of the following values: <ul style="list-style-type: none"> • config-all —Exports the server-, fabric-, and system-related configuration • config-logical —Exports the fabric- and service profile-related configuration • config-system —Exports the system-related configuration

	Command or Action	Purpose
		<ul style="list-style-type: none"> • full-state —Exports the full-state file for disaster recovery <p>Note Full-state export files cannot be imported using an import operation. They are used only to restore the configuration for a fabric interconnect.</p>
Step 11	UCSC(ops-mgr) /system/export # set user <i>username</i>	(Optional) Specifies the username the system should use to log in to the remote server. This step does not apply if the TFTP protocol is used.
Step 12	UCSC(ops-mgr) /system/export # commit-buffer	Commits the transaction.

The following example shows how to add a description and change the protocol, username, and password:

```
UCSC# connect operation-mgr
UCSC(ops-mgr) # scope system
UCSC(ops-mgr) /system # scope export 10.0.0.1
UCSC(ops-mgr) /system/export # set descr "This is an export operation for 10.0.0.1"
UCSC(ops-mgr) /system/export* # set protocol sftp
UCSC(ops-mgr) /system/export* # set user UserName32
UCSC(ops-mgr) /system/export* # set password
Password:
UCSC(ops-mgr) /system/export* # set preserve-pooled-values no
UCSC(ops-mgr) /system/export* # commit-buffer
UCSC(ops-mgr) /system #
```

System Restore

You can use the restore function for disaster recovery.

You can restore a system configuration from any full-state backup file that was exported from Cisco UCS. The file does not need to have been exported from Cisco UCS on the system that you are restoring. When restoring using a backup file, that was exported from a different system, we recommend that you use a system with the same or similar system configuration and hardware, including fabric interconnects, servers, adapters, and I/O module or FEX connectivity. Mismatched hardware and system configuration can lead to the restored system not fully functioning. If there is a mismatch between the I/O module links or servers on the two systems, acknowledge the chassis and servers after the restore operation.

The restore function is only available for a full-state backup file. You cannot import a full-state backup file. You perform a restore through the initial system setup. For more information, see the appropriate *Cisco UCS Central Installation and Upgrade Guide*.



Note

You can only use a full state backup file to restore a system that is running the same version as the system from which the backup file was exported.

Restoring the Configuration for a Fabric Interconnect

Before You Begin

Collect the following information to restore the system configuration:

- Fabric interconnect management port IPv4 address and subnet mask, or IPv6 address and prefix
- Default gateway IPv4 or IPv6 address
- Backup server IPv4 or IPv6 address and authentication credentials
- Fully-qualified name of a Full State backup file



Note You must have access to a Full State configuration file to perform a system restore. You cannot perform a system restore with any other type of configuration or backup file.

Procedure

	Command or Action	Purpose
Step 1	Connect to the console port.	
Step 2	If the fabric interconnect is off, power on the fabric interconnect.	You will see the power on self-test message as the fabric interconnect boots.
Step 3	At the installation method prompt, enter console .	
Step 4	Enter restore to restore the configuration from a full-state backup.	
Step 5	Enter y to confirm that you want to restore from a full-state backup.	
Step 6	Enter the IP address for the management port on the fabric interconnect.	
Step 7	Enter the subnet mask for the management port on the fabric interconnect.	
Step 8	Enter the IP address for the default gateway.	
Step 9	Enter one of the following protocols to use when retrieving the backup configuration file:	<ul style="list-style-type: none"> • scp • ftp • tftp • sftp
Step 10	Enter the IP address of the backup server.	
Step 11	Enter the full path and filename of the Full State backup file.	

	Command or Action	Purpose
Step 12	Enter the username and password to access the backup server.	The fabric interconnect logs in to the backup server, retrieves a copy of the specified full-state backup file, and restores the system configuration. For a cluster configuration, you do not need to restore the secondary fabric interconnect. As soon as the secondary fabric interconnect reboots, Cisco UCS synchronizes the configuration with the primary fabric interconnect.

The following example restores a system configuration from the Backup.bak file, which was retrieved from the 20.10.20.10 backup server using FTP:

```
Enter the configuration method. (console/gui) ? console
Enter the setup mode; setup newly or restore from backup. (setup/restore) ? restore
```

NOTE:

To configure Fabric interconnect using a backup file on a remote server, you will need to setup management interface. The management interface will be re-configured (if necessary), based on information stored in the backup file.

```
Continue to restore this Fabric interconnect from a backup file (yes/no) ? yes
```

```
Physical Switch Mgmt0 IPv4 address : 192.168.10.10
```

```
Physical Switch Mgmt0 IPv4 netmask : 255.255.255.0
```

```
IPv4 address of the default gateway : 192.168.10.1
```

```
Enter the protocol to get backup file (scp/ftp/tftp/sftp) ? scp
```

```
Enter the IP address of backup server: 20.10.20.10
```

```
Enter fully qualified backup file name: Backup.bak
```

```
Enter user ID: user
```

```
Enter password:
```

```
Retrieved backup configuration file.
```

```
Configuration file - Ok
```

```
Cisco UCS 6100 Series Fabric Interconnect
```

```
UCSC login:
```

