Troubleshooting the Configuration

The following procedures may be used to troubleshoot the configuration:

Updating the Configuration Using the Wizard

You can troubleshoot the Cisco APIC-EM deployment by running the configuration wizard a second time and updating any earlier configuration entries. The configuration wizard saves and displays your previous configuration settings, so you do not have to reenter them.

Note When performing this procedure, controller downtime occurs. For this reason, we recommend that you perform this procedure during a maintenance time period. For information about changing settings for a multi-host configuration, see Changing the Settings in a Multi-Host Cluster.

Before You Begin

You have deployed Cisco APIC-EM following the procedure described in the Cisco APIC-EM deployment guide.

Step 1 Using a Secure Shell (SSH) client, log into the host (physical or virtual) with the IP address that you specified using the configuration wizard.

Note The IP address to enter for the SSH client is the IP address that you configured for the network adapter. This IP address connects the host to the external network.

Step 2 When prompted, enter your Linux username ('grapevine') and password for SSH access.

Step 3 Restart the configuration wizard using the following command.

```
$ config_wizard
```

Note The **config_wizard** command is in the PATH of the 'grapevine' user, and not the "root" user. Either run the command as the "grapevine" user, or fully qualify the command as the "root" user. For example: **/home/grapevine/bin/config_wizard**

Step 4 Review the current configuration values in the configuration wizard and click **next>>**, until you access the specific step where you wish to update your previous configuration entry.
For example, if you need to enter a new NTP server IP address, click **next >>** until you get to the **NTP SERVER SETTINGS** screen.

Step 5 Update the value that was previously entered in the configuration wizard and is currently displayed.
For example, you can update the NTP server settings by entering a new IP address.

Step 6 Click **next>>** until the last step of the configuration wizard process.

Step 7 Click **proceed>>** to have the configuration wizard save and apply your configuration changes to your Cisco APIC-EM deployment.

Resetting the Cisco APIC-EM

You can troubleshoot a Cisco APIC-EM deployment by resetting the controller back to configuration values that were originally set using the configuration wizard the first time. A reset of the controller is helpful, when the controller has gotten itself into an unstable state and other troubleshooting activities have not resolved the situation.

Note In a multi-host environment, you need to perform this procedure on only a single host. After performing this procedure on a single host, the other two hosts will be automatically reset.

Before You Begin

You have deployed the Cisco APIC-EM following the procedure described in the Cisco APIC-EM deployment guide.

Step 1 Using a Secure Shell (SSH) client, log into the host (physical or virtual) with the IP address that you specified using the configuration wizard.
Note The IP address to enter for the SSH client is the IP address that you configured for the network adapter. This IP address connects the host to the external network.

Step 2   When prompted, enter your Linux username ('grapevine') and password for SSH access.

Step 3   Navigate to the `bin` directory on the Grapevine root. The `bin` directory contains the grapevine scripts.

Step 4   Enter the **reset_grapevine** command at the prompt to run the reset grapevine script.

```
$ reset_grapevine
```

The **reset_grapevine** command returns the configuration settings back to values that you configured when running the configuration wizard for the first time. The configuration settings are saved to a .JSON file. This .JSON file is located at: `/etc/grapevine/controller-config.json`.

The **reset_grapevine** command uses the data in the `controller-config.json` file to return to the earlier configuration settings, so do not delete this file. If you delete this file, you must run the configuration wizard again and reenter your configuration data.

You are then prompted to reenter your Grapevine password.

Step 5   Enter your Grapevine password a second time.

```
[sudo] password for grapevine:********
```

You are then prompted to delete all virtual disks The virtual disks are where the Cisco APIC-EM database resides. For example, data about devices that the controller discovered are saved on these virtual disks. If you enter yes (**y**), all of this data is deleted. If you enter no (**n**), then the new cluster will come up populated with your existing data once the reset procedure completes.

Step 6   Enter **n** to prevent the deletion all of the virtual disks.

```
THIS IS A DESTRUCTIVE OPERATION
Do you want to delete all VIRTUAL DISKS in your APIC-EM cluster? (y/n):n
```

You are then prompted to delete all Cisco APIC-EM authentication timeout policies, user password policies, and user accounts other than the primary administrator account.

Step 7   Enter **n** to prevent the deletion of all authentication timeout policies, user password policies, and user accounts other than the primary administrator account.

```
THIS IS A DESTRUCTIVE OPERATION
Do you want to delete authentication timeout policies, user password policies,
and Cisco APIC-EM user accounts other than the primary administrator account? (y/n): n
```

You are then prompted to delete any imported certificates.

Step 8   Enter **n** to prevent the deletion of any imported certificates.

```
THIS IS A DESTRUCTIVE OPERATION
Do you want to delete the imported certificates? (y/n): n
```

You are then prompted to delete any backups.

Step 9 Enter **n** to prevent the deletion of any backups.

```
THIS IS A DESTRUCTIVE OPERATION
Do you want to delete the backups? (y/n): n
```

The controller then resets itself with the configuration values that were originally set using the configuration wizard the first time. When the controller is finished resetting, you are presented with a command prompt from the controller.

Step 10 Using the Secure Shell (SSH) client, log out of the host.

Restoring the Controller to the Factory Default

In certain situations, you may want to restore the Cisco APIC-EM to its original factory default settings. For example, if your controller appliance is being replaced or simply has an undesirable configuration that needs to be completely removed. Under these circumstances, you can restore the controller to its factory defaults and then proceed to reconfigure it as a new controller.

This procedure describes how to a restore the factory defaults to the controller.

⚠️

Caution This procedure shuts down both the Cisco APIC-EM and the host (physical or virtual) on which it resides. At the end of this procedure, you will need to access the host and restart it.

Before You Begin

You have already deployed the Cisco APIC-EM following the procedure described in the Cisco APIC-EM deployment guide.

You have access to the Cisco APIC-EM using either a physical console or a Telnet connection.

Step 1 Using a Secure Shell (SSH) client, log into the host (physical or virtual) with the IP address that you specified using the configuration wizard.

Note The IP address to enter for the SSH client is the IP address that you configured for the network adapter. This IP address connects the host to the external network.

Step 2 When prompted, enter your Linux username ('grapevine') and password for SSH access.

Step 3 Enter the **reset_grapevine factory** command at the prompt.

```
$ reset_grapevine factory
```

Step 4 Enter your Linux grapevine password a second time to start the reset process.

```
$ sudo password for grapevine *********
```

After entering this command a warning appears that the **reset_grapevine factory** command will shut down the controller.

You are then prompted to confirm your desire to run the **reset_grapevine factory** command.

Step 5 Enter **Yes** to confirm that you want to run the **reset_grapevine factory** command.
The controller then performs the following tasks:

- Stops all running clients and services

- Deletes all cluster data

- Deletes all user data

- Deletes the configuration files including secrets and private keys

- Shuts down the controller

- Shuts down the host (physical or virtual)

What to Do Next

Perform the following tasks:

- Start up the host (physical or virtual).

- After start up, the configuration wizard appears and prompts you to re-deploy the Cisco APIC-EM.

- Proceed to re-deploy the Cisco APIC-EM using the configuration wizard.

Creating a Support File for the Cisco APIC-EM

You can troubleshoot the Cisco APIC-EM deployment by creating a support file. This support file consists of logs, configuration files, and command output. After you create this support file, you can then email it to Cisco support for assistance.

Before You Begin

You have deployed the Cisco APIC-EM following the procedure described in the Cisco APIC-EM deployment guide.

Step 1 Using a Secure Shell (SSH) client, log into the host (physical or virtual) with the IP address that you specified using the configuration wizard.
Note The IP address to enter for the SSH client is the IP address that you configured for the network adapter. This IP address connects the host to the external network.

Step 2 When prompted, enter your Linux username ('grapevine') and password for SSH access.

Step 3 Navigate to the `bin` directory on the host. The `bin` directory contains the grapevine scripts.

Step 4 To create the support file, enter the **rca** command in this directory.

```
$ rca
mkdir: created directory '/tmp grapevine-rca-2014-05-27_04-22-20-PM_PDT-0700'

----------------------------------------------------------------------
RCA package created On Tues May 27 16:22:20 PDT 2014
```

```
----------------------------------------------------------------------

[INFO] Generating log for 'vmstat 1 10'
[sudo] password for grapevine:
```

The **rca** command runs a root cause analysis script that creates a `tar` file that contains log files, configuration files, and the command output.

What to Do Next

Send the `tar` file created by this procedure to Cisco support for assistance in resolving your issue.