Enable Cisco APIC-EM to Troubleshoot Conference

This section explains the following:

Enable Cisco APIC-EM to Troubleshoot Conference

This chapter provides information about enabling Cisco APIC-EM to troubleshoot conference.

Overview of Cisco APIC-EM

For Cisco Prime Collaboration Release 11.6 and later

Cisco Application Policy Infrastructure Controller Enterprise Module (APIC-EM) provides centralized automation of policy-based application profiles. Cisco APIC-EM works with existing network infrastructure and automates the deployment and compliance checking of network policies across the entire network. For more information, see Cisco Application Policy Infrastructure Controller Enterprise Module. For information on deployment of Cisco APIC-EM in your network, see Cisco Application Policy Infrastructure Controller Enterprise Module Deployment Guide.

Cisco Prime Collaboration Assurance integrates with Cisco APIC-EM to trace and monitor any in-progress voice or video conference media path, and automatically troubleshoots the network elements that cause quality degradation in a media path.

The following are the key features of Cisco APIC-EM:

- Monitors midpoints or enterprise network devices (routers, switches, and hosts) for media path troubleshooting.
- Relies upon 5-tuple (Source IP Address, Destination Address, Source Port, Destination Port, and Protocol) that are received from Cisco Prime Collaboration Assurance to perform Path Trace.

Note For more information on Path Trace and its limitations, see the *Performing Path Traces* section in the Cisco Application Policy Infrastructure Controller Enterprise Module Configuration Guide.

- Requires both SNMP and CLI credentials to manage the devices.
- Provides media path and path statistics information (device statistics, interface statistics, and PerfMon statistics) for a given flow directly to Cisco Prime Collaboration Assurance.
- Performs on-demand PerfMon configuration on midpoints for a given flow to fetch media flow statistics. The PerfMon configuration is removed when the troubleshooting conference ends.

Note For more information on the platform on which the PerfMon data can be collected, see the http://apic-em/wiki/Category:Testing/Platform_Support#APIC-EM_PLATFORM_SUPPORT wiki page.

- Enables path troubleshooting for destination endpoint that is in unknown state.

Note
- You can upgrade to Cisco Prime Collaboration Assurance 11.5 Service Pack 1 from 11.5 release only.

Cisco APIC-EM Controller Integration Settings

Cisco Prime Collaboration Assurance allows you to troubleshoot the quality issues of media conference using Cisco APIC-EM Controller Integration Settings under **Alarm & Report Administration** > **APIC-EM & Prime Integration**.

Before you begin

Ensure that the user is assigned with the role ROLE_POLICY_ADMIN in Cisco APIC-EM.

Step 1 Choose **Alarm & Report Administration** > **APIC-EM & Prime Integration**.

Step 2 Enter the valid Cisco APIC-EM credentials in **APIC-EM Controller Integration Settings** pane and click **Save**.

a) If Cisco APIC-EM APIs are accessible with the credentials entered, Cisco Prime Collaboration Assurance saves the configuration details in the database and displays the popup message.

```
APIC-EM credentials are saved successfully.
```

b) If Cisco APIC-EM APIs are not accessible with the credentials entered, Cisco Prime Collaboration Assurance displays a warning message.

```
APIC-EM is not accessible with the credentials provided. Please verify the
credentials and try again.
```

Step 3 Click **Reset** to clear the Cisco APIC-EM configurations details in **APIC-EM Controller Integration Settings** pane.

Note Cisco APIC-EM version 1.2.x has been validated with Cisco Prime Collaboration Assurance Release 11.5 Service Pack 1.

Cisco APIC-EM Controller Integration Settings Pane - Field Descriptions

Table 1: Field Descriptions for Cisco APIC-EM Controller Integration Settings Pane

Field	Description
IP Address	Cisco APIC-EM Controller Management IP Address of the cluster. Enter reachable host IP address or virtual IP address address of APIC-EM cluster.
HTTP Username and Password	Login credentials of Cisco APIC-EM Server.

Troubleshooting

Issue: Test connectivity fails.

Recommendations:

- Ensure that Cisco APIC-EM APIs are accessible with the credentials provided in field of **APIC-EM Controller Integration Settings Pane**.
- Ensure that you are assigned with the role ROLE_POLICY_ADMIN.

Conference Troubleshooting with Cisco APIC-EM

The following procedure contains the high-level steps to troubleshoot a conference.

Before you begin

Ensure that Cisco Prime Collaboration Assurance is integrated with Cisco APIC-EM. For more information, see Cisco APIC-EM Controller Integration Settings, on page 2.

Step 1 Cisco Prime Collaboration Assurance initiates SDN Path Trace by providing 5-tuple information received from endpoint for the given call leg.

Cisco APIC-EM creates a flow to keep track of the request.

Step 2 Cisco Prime Collaboration Assurance uses the flow to collect the media path and path statistics information.

Cisco APIC-EM enables performance monitoring configuration on the devices (ingress or egress interface) involved in the path for a given flow. The PerfMon configuration is removed when troubleshooting ends.

Step 3 Cisco Prime Collaboration Assurance collects the media flow statistics (for example, Packet Loss, Jitter, and CPU utilization) for each node from the Cisco APIC-EM Controller periodically.

Step 4 Cisco Prime Collaboration Assurance continues to poll the endpoints to collect the media statistics from the endpoints.

Example

The following image shows the interaction between Cisco Prime Collaboration Assurance and Cisco APIC-EM to troubleshoot a conference.

Figure 1: Interaction between Cisco Prime Collaboration Assurance and Cisco APIC-EM