



Serviceability Tools

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Access Control Center — Network Services Menu

Control Center in Cisco VVB Serviceability lets you do the following tasks:

- Start, stop, and restart Cisco VVB services
- View the status the status of Cisco VVB services
- Refresh the status of Cisco VVB services

Cisco VVB Serviceability provides Control Center - Network Services menu option, which is essential for your system to function.

Procedure

Choose **Tools > Control Center - Network Services** from the Cisco VVB Serviceability menu bar to perform the above-mentioned actions.

Tip You may need to manage services in both Cisco VVB Serviceability and Cisco Unified Serviceability to troubleshoot a problem. For information on Unified Serviceability services, see the *Cisco Unified Contact Center Express Serviceability Administration Guide* available at: <https://www.cisco.com/c/en/us/support/unified-communications/unified-communications-manager-callmanager/tsd-products-support-series-home.html>.

Network Services

Installed automatically, network services include services that the system requires to function; for example, database and system services. Because these services are required for basic functionality, you cannot activate them in the Service Activation window.

After the installation of your application, network services start automatically. The list of services displayed in the Control Center—Network Services web page depends on the license package of your Cisco VVB. The Serviceability categorizes the network services into the following categories, which are explained in the subsequent sections:

- [System Services, on page 2](#)
- [Admin Services, on page 2](#)
- [DB Services, on page 3](#)

The Control Center—Network Services web page displays the following information for the network services:

- Name of the network services, their dependant subsystems, managers, or components
- Status of the service (IN SERVICE, PARTIAL SERVICE, or SHUT DOWN; for individual subsystems, the status could be OUT OF SERVICE or NOT CONFIGURED).
- Start Time of the service
- Up Time of the service



Note

- Only System and Admin Services Information will be visible in Cisco VVB Node Services Information.
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System Services

The Cisco VVB Serviceability service supports starting and stopping of the following System Services:

- Perfmon Counter Service
- Cluster View Daemon—List of Managers
- Engine—List of Subsystems and Managers
- Voice Subagent
- SNMP Java Adapter
- Speech Server

Admin Services

The Cisco VVB Serviceability service supports starting and stopping of the following Admin Services:

- Cisco VVB Configuration API

- Cisco VVB Administration
- Cisco VVB Serviceability - List of Managers



Note You can start or stop this service only by using CLI. Cisco VVB Serviceability web interface does not provide the functionality to start or stop this service.

DB Services

You can start and stop Cisco VVB Database service.

Manage Network Services

Control Center in Cisco VVB Serviceability allows you to view status, refresh the status, and to start, stop, and restart network services.

Perform the following procedure to start, stop, restart, or view the status of services for a server. You can start, stop, or refresh only one service at a time. Be aware that when a service is stopping, you cannot start it until the service is stopped. Likewise, when a service is starting, you cannot stop it until the service starts.

Procedure

- Step 1** Choose **Tools > Control Center—Network Services** from the Cisco VVB Serviceability menu bar.
- Step 2** From the **Server** drop-down list box, choose the sever and then click **Go**.
- The window displays the following items:
- The service names for the server that you chose.
 - The service status; for example, In Service, Shutdown, Partial Service and so on. (Status column)
 - The exact time that the service started running. (Start Time column)
 - The amount of time that the service has been running. (Up Time column)
- Step 3** Perform one of the following tasks:
- Click the radio button before the service that you want to start and click the **Start** button.
The Status changes to reflect the updated status.
 - Click the radio button before the service that you want to stop and click the **Stop** button.
The Status changes to reflect the updated status.
 - Click the radio button before the service that you want to restart and click the **Restart** button.
A message indicates that restarting may take a while. Click **OK**.
 - To get the latest status of the services, click the **Refresh** button. The status information is updated to reflect the current status.
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Simple Network Management Protocol

Simple Network Management Protocol (SNMP) is an industry-standard interface for exchanging management information between network devices. SNMP enables you to monitor and manage the Cisco VVB system. You also can set up SNMP traps to automatically notify any high-severity messages and errors that are generated by the Cisco VVB system.

You can configure the SNMP settings using the **Cisco Unified Serviceability** web interface.

SNMP Management Information Base (MIB)

A Management Information Base (MIB) designates a collection of information that is organized hierarchically. MIBs are made up of managed objects, which are referenced by object identifiers. Managed objects are made up of one or more object instances, which are essentially variables. MIBs provide status monitoring, provisioning, and notification.

Table 1: SNMP MIBs

MIB	Agent Service
CISCO-VOICE-APPS-MIB	Cisco VVB Voice Subagent
CISCO-CDP-MIB	Cisco CDP Agent
CISCO-SYSLOG-MIB	Cisco Syslog Agent
SYSAPPL-MIB	System Application Agent
MIB-II	MIB2 Agent
HOST-RESOURCES-MIB	Host Resources Agent



Note

- In Cisco VVB, the SysAppl MIB will not provide the Cisco VVB subsystem information and their status information. You can view the subsystem and their status information through Cisco VVB Serviceability web interface.
- Syslog messages can also be sent as SNMP traps using the CISCO-SYSLOG-MIB. Refer to the section on CISCO-SYSLOG-MIB for details. They can be correlated to the failure of important features of Cisco VVB.

The following section describes CISCO-VOICE-APPS-MIB. For more information about other Cisco VVB supported MIBs, see **Cisco Unified CM SNMP** chapter in the *Cisco Unified Serviceability Administration Guide* available at https://www.cisco.com/en/US/partner/products/sw/voicesw/ps556/prod_maintenance_guides_list.html

CISCO-VOICE-APPS-MIB

The CISCO-VOICE-APPS-MIB provides information associated with the installed workflow applications provisioned on the Cisco VVB Server. It also provides information on the supported SNMP Traps on Cisco VVB. You can manage CISCO-VOICE-APPS-MIB through **Cisco VVB Serviceability** web interface.

Cisco VVB Voice Subagent

Cisco VVB Voice Subagent service implements the CISCO-VOICE-APPS-MIB. Cisco VVB Voice Subagent Service communicates with the SNMP Master Agent through Cisco VVB SNMP Java Adaptor. The Cisco VVB SNMP Java Adaptor service should be up and running for the Cisco VVB Voice Subagent to work properly.

For more information about the CISCO-VOICE-APPS-MIB, see this URL:
<ftp://ftp.cisco.com/pub/mibs/v2/CISCO-VOICE-APPS-MIB.my>.



Note

- In Cisco VVB, while exposing the Cisco VVB workflow information through CISCO-VOICE-APPS-MIB, only one trigger per application row will be returned when doing a walk on the workflow table (cvaWorkflowInstallTable object). If there are multiple triggers associated with a Workflow application, these are shown as separate entries (rows).

SNMP Traps

Subsystems, which are the functional blocks of Cisco VVB, sends out alarms that are routed to the Syslog or as SNMP Traps. SNMP Traps are generated when any Cisco VVB Subsystem or module or processes start or stop or runtime failure occurs for a module. These failures can be tracked for each major component to track the health of the Cisco VVB system.

The following Traps are supported as part of the CISCO-VOICE-APPS-MIB:

Trap Name	Description
cvaModuleStart	A cvaModuleStart notification signifies that an application module or subsystem has successfully started and transitioned into in-service state.
cvaModuleStop	A cvaModuleStop notification signifies that an application module or subsystem has stopped. If cause of the failure is known then, it will be specified as part of the Trap message.
cvaModuleRunTimeFailure	cvaModuleRunTimeFailure notification signifies that a run time failure has occurred. If cause of the failure is known then it will be specified as part of the Trap message.
cvaProcessStart	A cvaProcessStart notification signifies that a process has just started.
cvaProcessStop	A cvaProcessStop notification signifies that a process has just stopped.

The ModuleStart and ModuleStop traps are generated when the key Cisco VVB services including Cisco VVB Engine and Cisco VVB Administration and their modules/subsystems are started and stopped respectively.

The ProcessStart and ProcessStop traps are generated when the key Cisco VVB services including Cisco VVB Engine, and Cisco VVB Administration are started and stopped.

You can configure the notification destinations by using the **SNMP Notification Destination Configuration** page in Cisco Unified Serviceability.



Note SNMP Traps are not generated for events when the Cisco VVB services and/or their subsystems go Out of Service or are In Service. These events are sent as Remote Syslog messages and can be viewed through any third-party Syslog Viewers. You can refer to the list of Cisco VVB services and their subsystems/modules from the Cisco VVB Serviceability under **Tools > Control Center - Network Services**.



Note

- Cisco VVB does not support SNMP trap V3 notifications.
- CISCO-VOICE-APPS-MIB does not support INFORM notifications.

For all notifications, the system sends traps immediately if the corresponding trap flags are enabled. Before you configure notification destination, verify that the required SNMP services are activated and running. Also, make sure that you configured the privileges for the community string or user correctly.

More Info on SNMP

For more information related to SNMP such as SNMP Version 1, Version 2C, Version 3, SNMP system group configuration, SNMP informs and SNMP trap parameters, see *Cisco Unified Serviceability Administration Guide* available at https://www.cisco.com/en/US/partner/products/sw/voicesw/ps556/prod_maintenance_guides_list.html

Configure Performance Monitoring of Cisco VVB Servers

Use the Performance Configuration and Logging page to configure JVM parameters and dump Thread and Memory traces for performance monitoring of VVB servers. You can configure settings only for the following services of VVB:

- Cluster View Daemon
- Engine
- Serviceability

Use the following procedure to configure JVM parameters for a particular service on a particular server.

Procedure

- Step 1** From the Cisco VVB Serviceability menu bar, choose **Tools > Performance Configuration and Logging**.
- Step 2** Choose a server from the Server drop-down list box and click **Go**.
- The first node is selected by default and JVM options for the VVB Engine service in the first node is displayed.
- Step 3** Choose a service for which you want to see the JVM options from the Service drop-down list box. You should be able to select any one of the following services from this list box:

- Cluster View Daemon
- Engine
- Serviceability

The following JVM options are displayed for each service:

- PrintClassHistogram
- PrintGCDetails
- PrintGC
- PrintGCTimeStamps

Step 4 Click the **Dump Thread Trace** icon or button to dump the thread traces for the selected service in the selected server. You can collect the corresponding jvm.log from the log folder for that facility using Real-Time Monitoring Tool (RTMT).

Step 5 Click the **Dump Memory Trace** icon or button to dump the memory traces. This creates the following two logs in the log folder for that facility.

- a) Memory-<facility name>-<time stamp>.hprof (for heap dump)
- b) histo-<facility name> <time stamp>.log (for histogram)

Step 6 You can change the JVM options by clicking **Enable** or **Disable** radio buttons in this page.

Click the **Update JVM Options** icon or button to update the new settings for selected service on selected node.
