



CHAPTER 3

Resource Manager: Network Management

This section is intended for Organization Administrators. Topics in this section include:

- [Overview of Network Management, page 3-1](#)
- [Using the IP Topology Tab, page 3-2](#)
- [Configuring a Device Island, page 3-2](#)
- [Using the ISDN Topology Tab, page 3-3](#)

Overview of Network Management

The **Network Management** section enables you to map topology for IP and ISDN network topology according to the actual deployment environment.



Note

The Network Management section is hidden by default. It can be activated via **Configuration Tool > System Configuration > UI Settings > IP Topology or Configuration Tool > System Configuration > UI Settings > ISDN Topology**.

Understanding IP Network Topology

IP network topology is the foundation of intelligent resource allocation. It allows Resource Manager to model the video network by recording distance and bandwidth between device islands (IP locations where central and essential devices such as gatekeepers, MCUs, and gateways are placed) and to perform least-cost or best-performance routing over the IP network. An IP endpoint is also associated with its nearest device island when the endpoint is configured. This information is used by Resource Manager to determine the best gatekeeper, MCU, and gateway resources to reserve and schedule for any call.

In a large distributed deployment, a device island should be created for each location containing network devices, such as MCUs, gateways, and endpoints. The Resource Manager monitors the bandwidth limitations and distance between each of the device islands.



Note

IP Network Topology is an advanced feature that is hidden by default. It is enabled in the Resource Manager Configuration Tool.

Understanding ISDN Network Topology

ISDN network topology intelligently manages ISDN/PSTN network connectivity and cost, gateway numbers, and PSTN/ISDN endpoint numbers that are assigned to ISDN device islands (similar to IP Network Topology). This allows Resource Manager to perform least-cost routing over the ISDN network according to the topology configuration.

Within the same ISDN device island, PSTN/ISDN least-cost routing is also performed based on country codes, area codes of gateway numbers, and PSTN/ISDN endpoint numbers. Costly telephone or PSTN/ISDN line-usage is reduced by selecting the least costly gateway resources via telephone number.

**Note**

ISDN Network Topology is an advanced feature that is hidden by default. It is enabled in the Resource Manager Configuration Tool.

Accessing Network Management

To access the Network Management of the Resource Manager section, in the Admin sidebar menu, click **Network Management** button. The Network Management section contains the following tabs:

- IP Topology
- ISDN Topology

Using the IP Topology Tab

The IP Topology tab displays distance and bandwidth information for all device islands within your video meeting network. The following parameters are included in the IP Topology table

- **Distance**—Distance between the specified device islands relative to all other configured islands on the organization LAN. This setting is used to find and allocate the best available resources. The Distance value is a weight factor that describes relative network delay between two device islands. The larger the distance, the larger the round trip delay caused by the network between two device islands. The distance should be an attribute proportional to the network delay. One logical way to model delay is to “ping” the connection between the two LANs and use the average delay results.
- **Bandwidth**—Bandwidth connection (in Kbps) between specified device islands. This setting is used in bandwidth control during resource allocation. The Bandwidth field represents the connection bandwidth (in Kbps) between any two device islands that can be used for video meetings. This is defined by the narrowest section of bandwidth, usually one of the outgoing connections from the LAN.

Configuring a Device Island

Use the following workflow to configure a device island:

Procedure

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- Step 1** View the topology.
- To display a different subset of defined device islands, click **Display Location**.

In the window that opens, select the IP locations you want to be included in the grid display on the IP Topology tab. A maximum of eight locations can be selected.

- Click **Search**.

The selected device islands appear in the grid display.



Note For each listed device island in the window, its relationship with other device islands is displayed in a single row.

Step 2 Modify the topology.

- To configure the relationship between two device islands, in the cell between the two devices change the values in the **Distance** and **Bandwidth** fields.
- To remove connectivity between two device islands, delete the Distance and Bandwidth values.



Note There may be two cells that display the same connectivity setting between two device islands. If you modify the values in one of the cells, the same modified values appear in the other cell.

Step 3 Add topology.

- Click **Add** to add a new device island.

An empty row appears that includes all of the existing device islands displayed in columns. Configure the **Distance** and **Bandwidth** fields in each column and then click **OK** to add a new device island or click **Cancel** to abort adding a new device island.

Step 4 Delete topology.

- Click the **X** above the device island that you want to delete. If any devices are currently assigned to the device island that you want to delete, in the Reassign Device Island window that appears, select the device island you want to reassign the devices to, and then click Reassign.



Note The device island cannot be deleted.

Using the ISDN Topology Tab

The ISDN Topology tab displays connectivity and distance information for all device islands within your PSTN/ISDN network. The following parameter is included in the **ISDN Topology** table:

- **Cost**—Cost of a PSTN/ ISDN call between the specified device islands relative to all other configured islands on the organization PSTN/ISDN network. This setting is used to find and allocate best available resources.

Configuring Device Islands

Configure ISDN Topology in the same way as IP Topology is configured. The exception is that the relationship between two ISDN device islands is represented by Cost, while the relationship between two IP device islands is represented by Distance and Bandwidth. For a configuration workflow, see [“Configuring a Device Island” section on page 3-2](#).

