



Using CiscoWorks2000 Voice Manager 2.0 to Manage Devices

This chapter describes how to manage devices with CiscoWorks2000 Voice Manager (CVM) 2.0. It assumes that you have read the concepts in Chapter 3, “Getting Started with CiscoWorks2000 Voice Manager 2.0.”

This chapter contains information on the following topics:

- Groups
- Gatekeepers
- Routers
- Synchronize Devices
- Scheduling Tasks

Groups

A group is a logical partition of non-gatekeeper managed routers that normally interact with each other in a network. You create groups in CVM to manage routers that are not managed by a gatekeeper and interact with each other in your network. Groups must be created to manage routers in VoFR/VoATM networks because these networks do not use gatekeepers. Groups must be created in VoIP networks that contain routers that are not managed by a gatekeeper. When you add a router to a group, and make changes to the phone number on a voice port of the router, CVM automatically propagates dial-plan information among all routers in the group.

This section contains the following:

- Creating a Group
- Modifying a Group
- Deleting a Group

Creating a Group

To create a group:

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- Step 1** Select the **Device Tree Hierarchy**.
 - Step 2** Select **Add Group** from the Device menu. The Add Group dialog box appears.
 - Step 3** Enter a group name in the Group Name field.
 - Step 4** Enter a group description in the Group Description field.



Note Optional fields in CVM are indicated by an asterisk beside the field name in a dialog box. You only enter information in an optional field if the value exists in the Cisco IOS software running on the device.

- Step 5** Click **Finish**. The group appears as a node in the Device Tree Hierarchy.
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Modifying a Group

You can modify the name and description of an existing group:

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- Step 1** Select the **Group** that you want to modify.
 - Step 2** Select **Modify Group** from the Device menu. The Modify Group dialog box appears.

- Step 3** Modify the group.
- Step 4** Click **Finish**. The group is modified.
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Deleting a Group

If a group no longer contains any routers, you might want to delete it from CVM. You can only delete groups that contain no routers. To delete a group:

- Step 1** Select the group you want to delete.
- Step 2** Select **Delete Group** from the Device menu.
- Step 3** Click **Yes** to confirm the deletion of the group. The group is deleted from the Device Tree Hierarchy.
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Gatekeepers

Gatekeepers are used only in VoIP networks and, when added to CVM, they appear only in VoIP view. When adding a gatekeeper to CVM, you must know the IP address and any passwords the gatekeeper has. CVM searches the gatekeeper for its name and zone information. CVM automatically propagates the local and remote zone information to routers controlled by a gatekeeper and to other gatekeepers in your network.

**Note**

Gatekeepers added to CVM must be running Cisco IOS software.

**Note**

Because CVM supports a wide variety of Cisco routers, only basic information about gatekeepers is provided in this document. For detailed information about gatekeepers, refer to the documentation provided with your Cisco router.

Adding a Gatekeeper

When adding a gatekeeper to CVM, you must know the IP address and any passwords the gatekeeper has. CVM searches the gatekeeper for its name and zone information. CVM automatically propagates the local and remote zone information to routers controlled by a gatekeeper and to other gatekeepers in your network.

To add a gatekeeper:

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- Step 1** Select **VoIP** view.
 - Step 2** Select the **Device Tree Hierarchy**.
 - Step 3** Select **Add Gatekeeper** from the Device menu.
 - Step 4** Enter the following values for the gatekeeper:
 - IP address
 - Community string read
 - Community string write
 - Step 5** Enter the following values for the terminal server:
 - IP address
 - Port
 - Login username
 - Step 6** Enter the following passwords for the gatekeeper:
 - Login
 - Enable
 - Secret
 - Step 7** Click **CVM to Poll** to have CVM poll the router.
 - Step 8** Click **Forward Traps** to have CVM monitor traps on the gatekeeper.



Note Optional fields in CVM are indicated by an asterisk beside the field name in a dialog box. You only enter information in an optional field if the value exists in the Cisco IOS software running on the device.

Step 9 Click **Finish**. The gatekeeper is added to the Device Tree Hierarchy.

Modifying a Gatekeeper

You can modify a gatekeeper in CVM to make changes to its configuration. For example, you can use CVM to modify the password in the Cisco IOS software of a gatekeeper in your network.



Note Because CVM supports a wide variety of Cisco routers, only basic information about gatekeepers is provided in this document. For detailed information about gatekeepers, refer to the documentation provided with your Cisco router.

To modify a gatekeeper:

- Step 1** Select **VoIP** view.
- Step 2** Select the gatekeeper that you want to modify.
- Step 3** Select **Modify Gatekeeper** from the Device menu.
- Step 4** Modify any of the following for the terminal server:
- IP address
 - Port
 - Login username

- Step 5** Click the **Password** button to change the following on the gatekeeper:
- Login
 - Enable
 - Secret
- Step 6** Click **CVM to Poll** to have CVM poll the gatekeeper.
- Step 7** Click **Forward Traps** to have CVM monitor traps on the gatekeeper.



Note Optional fields in CVM are indicated by an asterisk beside the field name in a dialog box. You only enter information in an optional field if the value exists in the Cisco IOS software running on the device.

- Step 8** Click **OK**.
- Step 9** Click **Finish**. The gatekeeper is modified.
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Deleting a Gatekeeper

When you are no longer using a gatekeeper in your network, you might want to delete it from CVM. Before deleting a gatekeeper, make sure it no longer controls any routers.

To delete a gatekeeper:

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- Step 1** Select the gatekeeper that you want to delete.
- Step 2** Select **Delete Gatekeeper** from the Device menu.
- Step 3** Click **OK** to confirm the deletion of the gatekeeper. The gatekeeper is deleted from the Device Tree Hierarchy.
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Local Zones

You can create a new local zone on a gatekeeper after you have added it to CVM. CVM automatically propagates the local zone information of the gatekeeper to routers controlled by the gatekeeper.

Creating a Local Zone

When you create a local zone on a gatekeeper, CVM automatically propagates the local zone information to routers controlled by the gatekeeper.

To create a local zone:

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- Step 1** Select a gatekeeper from the Device Tree Hierarchy.
 - Step 2** Select **Local Zone** from the Device menu. The Local Zone dialog box appears.
 - Step 3** Click **Add**.
 - Step 4** Enter a name in the Zone field.
 - Step 5** Enter a domain in the Domain field.
 - Step 6** Enter the RASIP in the RASIP field. If no RASIP is entered, CVM will detect the existing RASIP.
 - Step 7** Enter the maximum bandwidth in the Max Bandwidth field.
 - Step 8** Enter a zone prefix in the Zone Prefix field. You can enter more than one zone prefix by separating the zone prefixes with commas.
 - Step 9** Click **Next**. The Schedule Operation dialog box appears.
 - a.** Click **Do Now** to immediately create the local zone and propagate the information.
 - b.** Click **Schedule** to schedule the operation to execute at a later time. (See the “Scheduling Tasks” section on page 4-19 for more information.)
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The local zone is created.

Modifying a Local Zone

You can modify the name, domain, maximum bandwidth, and zone prefix for a local zone on a gatekeeper. CVM automatically propagates the local zone information to routers controlled by the gatekeeper.

To modify a local zone:

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- Step 1** Select a gatekeeper from the Device Tree Hierarchy.
- Step 2** Select **Local Zone** from the Device menu. The Local Zone dialog box appears.
- Step 3** Modify any of the following for the local zone:
- Name
 - Domain
 - Max Bandwidth
 - Zone Prefix



Note All optional fields in CVM are indicated by an asterisk beside the field name in a dialog box. You only enter information in an optional field if the value exists in the Cisco IOS software running on the device.

- Step 4** Click **Next**. The Schedule Operation dialog box appears.
- a. Click **Do Now** to immediately create the local zone and propagate the information.
 - b. Click **Schedule** to schedule the operation to execute at a later time. (See the “Scheduling Tasks” section on page 4-19 for more information.)
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The local zone is modified.

Deleting a Local Zone

If you are no longer using a local zone, you might want to delete it from a gatekeeper. CVM automatically propagates the deletion of a local zone to routers controlled by the gatekeeper.

To delete a local zone:

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- Step 1** Select a gatekeeper from the Device Tree Hierarchy.
 - Step 2** Select **Local Zone** from the Device menu. The Local Zone dialog box appears.
 - Step 3** Select the local zone you want to delete.
 - Step 4** Click **Delete**. The local zone is deleted.
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Remote Zones

When you add a gatekeeper to CVM, it searches the gatekeeper for its name and zone information. CVM automatically propagates the remote zone information to other gatekeepers in your network.

Creating a Remote Zone

CVM automatically propagates the remote zone information of a gatekeeper to other gatekeepers in your network.

To create a remote zone:

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- Step 1** Select a gatekeeper from the Device Tree Hierarchy.
 - Step 2** Select **Remote Zone** from the Device menu. The Remote Zone dialog box appears.
 - Step 3** Click **Add**.
 - Step 4** Enter a name in the Zone field.
 - Step 5** Enter a domain in the Domain field.

- Step 6** Enter the following for the gatekeeper:
- RASIP in the RASIP field.
 - RAS port in the RAS Port field.
 - Zone prefix in the Zone Prefix field. You can enter more than one zone prefix by separating the zone prefixes with commas.
- Step 7** Click **Next**. The Schedule Operation dialog box appears.
- a. Click **Do Now** to immediately create the remote zone and propagate the information.
 - b. Click **Schedule** to schedule the operation to execute at a later time. (See the “Scheduling Tasks” section on page 4-19 for more information.)
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The remote zone is created.

Modifying a Remote Zone

You can modify the name, domain, RAS port, and zone prefix for a remote zone on a gatekeeper in CVM. CVM automatically propagates changes to remote zone information of a gatekeeper to other gatekeepers in your network.

To modify a remote zone:

- Step 1** Select a gatekeeper from the Device Tree Hierarchy.
- Step 2** Select **Remote Zone** from the Device menu. The Remote Zone dialog box appears.
- Step 3** Modify any of the following for the remote zone:
- Name
 - Domain
 - RAS Port
 - Zone Prefix



Note All optional fields in CVM are indicated by an asterisk beside the field name in a dialog box. You only enter information in an optional field if the value exists in the Cisco IOS software running on the device.

- Step 4** Click **Next**. The Schedule Operation dialog box appears.
- a. Click **Do Now** to immediately modify the remote zone and propagate the information.
 - b. Click **Schedule** to schedule the operation to execute at a later time. (See the “Scheduling Tasks” section on page 4-19 for more information.)
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The remote zone is modified.

Deleting a Remote Zone

If a remote zone is no longer in use, you might want to delete it from CVM. CVM automatically propagates the deletion of a remote zone on a gatekeeper to other gatekeepers in your network.

To delete a remote zone:

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- Step 1** Select a gatekeeper from the Device Tree Hierarchy.
- Select **Remote Zone** from the Device menu. The Remote Zone dialog box appears.
- Step 2** Select the remote zone you want to delete.
- Step 3** Click **Delete**. The remote zone is deleted.
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Routers

CVM manages routers enabled for combinations of VoIP and VoFR/VoATM networks. Groups must always be created to manage routers in VoFR/VoATM networks because these networks do not use gatekeepers. Groups must be created in VoIP networks that contain routers that are not managed by a gatekeeper.

Before you can add a router to CVM, Telnet and SNMP must be enabled on the router. Because Telnet is used to communicate with the router, Session Timeout must be configured to a non-zero value for all vty lines.

To enable SNMP:

```
Router(config)# snmp-server community public RW
```

To configure Enable or Secret Password:

```
Router(config)# enable password lab
```

Line password in the line configuration set to enable Telnet:

```
Router(config)# line vty 0 4  
Router(config)# password lab
```

To configure Session Timeout for all vty lines:

```
Router# config term  
Router(config)# line vty 0 4  
Router(config-line)# session-timeout 10
```

When adding a router to CVM, you must know the IP address and any passwords the router has. CVM searches the router and automatically detects the type of voice interfaces enabled on the router and places the router in the appropriate view(s) and in the All Router view.


**Note**

Because CVM supports a wide variety of Cisco routers, only basic information about routers is provided in this document. For detailed information about routers, refer to the documentation provided with your Cisco router.

Adding a Router

You can add a router to a group or gatekeeper in CVM. In VoFR/VoATM networks routers can only be added to groups. In VoIP networks, routers are added to groups or gatekeepers depending on the configuration of the network.

To add a router:

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- Step 1** Select the **Group** or **Gatekeeper** to which you want to add the router.
- Step 2** Select **Add Router** from the Device menu. The Add Router dialog box appears.
- Step 3** Enter the following values for the router:
- IP address
 - Community string read
 - Community string write
- Step 4** Enter the following values for the terminal server:
- IP address
 - Port
 - Login username
- Step 5** Enter the following passwords for the router:
- Login
 - Enable
 - Secret
-  **Note** All optional fields in CVM are indicated by an asterisk beside the field name in a dialog box. You only enter information in an optional field if the value exists in the Cisco IOS software running on the device.
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- Step 6** Click **Next**. The Network Interfaces screen appears indicating the type(s) of network interface found on the router.
- Step 7** Select the **Network Interfaces** on the router.



Note If you are adding a router in VoFR/VoATM view and the router is also enabled for VoIP, an option appears allowing you to add the router to the appropriate group or gatekeeper in the VoIP view.

- Step 8** Select **CVM to Poll** to have CVM poll the router.
- Step 9** Click **Forward Traps** to have CVM monitor traps on the router.
- Step 10** Click **Finish**. The router is added to the Device Tree Hierarchy.
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Modifying a Router

CVM gives you the ability to change specific parameters on a router that you've added to CVM.



Note Because CVM supports a wide variety of Cisco routers, only basic information about routers is provided in this document. For detailed information about routers, refer to the documentation provided with your Cisco router.

To modify a router:

- Step 1** Select the router that you want to modify.
- Step 2** Select **Modify Router** from the Device menu.
- Step 3** Modify any of the following for the router:
- Router name
 - Traps enabled
 - Polling interval

- Step 4** Modify any of the following for the terminal server:
- IP address
 - Port
 - Login username
- Step 5** Click **Change Password** to change the following:
- Login
 - Enable
 - Secret
- Step 6** Click **CVM to Poll** to have CVM poll the router.
- Step 7** Click **Forward Traps** to have CVM monitor traps on the router.
- Step 8** Click **Change Network** to modify the types of network interfaces found on the router.
- Step 9** Click **Finish**. The router is modified.
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Locating a Router

Use the **Search Router** command to locate a router in the Device Tree Hierarchy. This is useful when you need to locate a specific router and you have many routers in the Device Tree Hierarchy.

To locate a router:

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- Step 1** Select **Search Router** from the phone menu. The Search Router window appears.
- Step 2** Enter the IP address of the router you need to locate:
- a. Click **Current View** to search your current view. The router is highlighted in the Device tree.
 - b. Click **All Router View** to search the All Router view. The router is highlighted in the Device tree.
- Step 3** Click **Finish**. The Search Router window closes.
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Deleting a Router

You can delete a router from CVM or from a specific view.

To delete a router from CVM:

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- Step 1** Select the **All Router** view.
 - Step 2** Select the router that you want to delete.
 - Step 3** Select **Delete Router** from the Device menu.
 - Step 4** Click **OK** to confirm the deletion of the router. The router is deleted from CVM.
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To delete a router from a specific view:

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- Step 1** Select **VoIP** or **VoFR/VoATM** view.
 - Step 2** Select the router that you want to delete.
 - Step 3** Select **Delete Router** from the Device menu. A popup window appears with two options:
 - a.** Select **Delete from System** to delete the router from CVM. The router is deleted from CVM.
 - b.** Select **Delete from View** to delete the router from only the selected view. The router is deleted from the view.
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Saving a Running Configuration

You can use CVM to save the running configuration of a device to its NVRAM.

**Note**

For detailed information about configuring routers, refer to the documentation provided with your Cisco router.

To save the running configuration of a device to its NVRAM:

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- Step 1** Select a device in the Device Tree Hierarchy.
- Step 2** Select **Save NVRAM** from the Device menu.
- Step 3** Click **Yes** to confirm. The running configuration of the device is saved to NVRAM.
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Moving Routers

With CVM, you can use drag-and-drop to move a router:

- **Between Groups**—Dial-peer information from the router you are moving is not automatically propagated to the other routers in the new group. Also, dial-peer information for routers in the old group is not deleted from the router.
- **From a Group to a Gatekeeper**—The zone on the router being moved must be valid for the new gatekeeper. If the zone is not valid, you must create the zone on the new gatekeeper before moving the router. Also, if the telephone numbers on a router are not within the prefix range for the zone, then the router cannot register those phone numbers with the router, and the phone numbers can only be accessed by explicit dial peers on other routers.
- **From one Gatekeeper to another Gatekeeper**—The zone on the router being moved must be valid for the new gatekeeper. If the zone is not valid, you must create the zone on the new gatekeeper before moving the router. Also, if the telephone numbers on a router are not within the prefix range for the zone, then the router cannot register those phone numbers with the router and the phone numbers can only be accessed by explicit dial peers on other routers.
- **From a Gatekeeper to a Group**—Dial-peer information on the router is not automatically propagated to the other routers in the group.

Synchronize Devices

The **sync device** command updates device information in CVM to reflect changes you make to the voice port or dial plan on a device through the CLI. You can synchronize a router, a gatekeeper, and all gatekeepers.

Synchronize a Router

When you make a change to a voice port or dial plan on a router through the CLI, you need to synchronize the router to update CVM.

To synchronize a router:

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- Step 1** Select the router in the Device Tree Hierarchy.
 - Step 2** Select **Sync Router** from the Device menu.
 - Step 3** Click **Yes**. The router is updated in CVM.
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Synchronize a Gatekeeper

When you make a change to a local or remote zone on a gatekeeper through the CLI, you need to synchronize the gatekeeper to update the CVM.

To synchronize a gatekeeper:

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- Step 1** Select the gatekeeper in the Device Tree Hierarchy.
 - Step 2** Select **Sync Gatekeeper** from the Device menu.
 - Step 3** Click **Yes**. The gatekeeper is updated in CVM.
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Synchronize all Gatekeepers

When you make changes to local or remote zones on more than one gatekeeper through CLI commands, you need to synchronize all the gatekeepers to update CVM.

To synchronize all gatekeepers:

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- Step 1** Select the gatekeeper in the Device Tree Hierarchy.
 - Step 2** Select **Sync All Gatekeepers** from the Device menu.
 - Step 3** Click **Yes**. All gatekeepers are updated in CVM.
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Scheduling Tasks

With CVM, you can schedule certain tasks to execute at a time and date that you specify. CVM will warn you of tasks that might take a long time to finish. Task scheduling is a method to execute network intensive tasks at off-peak hours. If the task you are about to perform can be scheduled, the option to schedule the task is presented as the final step in the Operation menu.

Scheduling a Task

Task scheduling is used to execute network-intensive tasks at off-peak hours for a network. To schedule a task:

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- Step 1** Select **Schedule** from the Operation menu. The Schedule Time and Date dialog box appears.
 - Step 2** Specify a date
 - Step 3** Specify a time.
 - Step 4** Click **Finish**. The task will execute on the date and time specified.
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Rescheduling Tasks

To reschedule a previously scheduled task:

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- Step 1** Select **Task Management** from the Options menu. The Task Management dialog box appears.
 - Step 2** Select the task you want to reschedule. The task is highlighted in the Task Management window.
 - Step 3** Click **Reschedule**.
 - Step 4** Specify a date.
 - Step 5** Specify a time.
 - Step 6** Click **Finish**. The task will execute on the date and time specified.
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Deleting a Scheduled Task

To delete a previously scheduled task:

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- Step 1** Select **Task Management** from the Options menu. The Task Management dialog box appears.
 - Step 2** Select the task you want to delete. The task is highlighted in the Task Management window.
 - Step 3** Click **Delete**.
 - Step 4** Click **OK** to confirm the operation. The task is removed from the Task Management window.
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