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Using CiscoWorks2000 Voice Manager 2.0 to Manage Dial Plans

This chapter describes how to manage dial plans with CiscoWorks2000 Voice Manager (CVM) 2.0. This chapter is based on the assumption that you understand the concepts presented in Chapter 3, "Getting Started with CiscoWorks2000 Voice Manager 2.0." This chapter contains information on the following topics:

- Local Dial Plans
- Network Dial Plans
- Voice Ports

Local Dial Plans

You can create and modify local dial plans (also called POTS dial plans) with CVM. A local dial plan is created when you assign a telephone number to a voice port on a router. CVM can automatically propagate the dial-plan information to all other routers in the group to which the router belongs. If a gatekeeper is used, CVM can automatically propagate the dial-plan information to the gatekeeper of the router.

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

This section describes the following:

- Creating a Local Dial Plan
- Modifying a Local Dial Plan
- Deleting a Local Dial Plan

Creating a Local Dial Plan

You create a local dial plan when you assign a telephone number to a voice port on a voice-enabled router. CVM can automatically propagate the dial-plan information to all other routers in the group to which the router belongs or if a gatekeeper is used, CVM can automatically propagate the local dial plan information to the gatekeeper of the router.

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

To create a local dial plan:

Step 1 In the Device Tree Hierarchy, select the group or gatekeeper to which the router belongs.

Step 2 Select a router.

Step 3 Select **Dial Plan:Phone Number Assignment** from the Device menu. The Phone Number window appears.

Step 4 Select the voice port to which you want to add a telephone number.

Step 5 Enter a phone number in the Phone Number field.

Step 6 Click **Next.** The Schedule Operation dialog box appears:

    a. Click **Do Now** to immediately assign the telephone number.

    b. Click **Schedule** to schedule the operation to execute at a later time. (See the "Scheduling a Task" section on page 4-19 for more information.)

Step 7 Click **Finish**. The Propagate Phone popup window appears.

    a. Click **Yes** to have CVM automatically propagate the dial-plan information to the other routers in the group or to the gatekeeper of the router.

    b. Click **No** to stop the dial-plan information from being propagated to other routers in the group.

Step 8 Click **Finish**. The local dial plan is created.

Modifying a Local Dial Plan

To make changes to the default configuration of the dial plan, modify a local dial plan:

Step 1 Select the view to which the dial plan corresponds.

Step 2 In the DeviceTree Hierarchy, select the group or gatekeeper to which the router belongs.

Step 3 Select the router that contains the dial plan to be modified.

Step 4 Select **Dial Plan:POTS Dial Plans** from the Device menu. The Administer POTS Dial Plans window appears.

Step 5 Select the dial plan you want to modify.

Step 6 Click **Modify**. The Modify POTS Dial Plan window appears with the Main Settings tab active.

Step 7 Enter a new destination pattern in the Destination Pattern field.

Step 8 Modify any of the following optional fields:

- Huntstop—If the dial peer selected is a match to an incoming number and the associated device is not reachable, do not continue further matches. The default is No.

- Maximum Connections—Maximum allowed connections to the dial plan. A value of -1 represents no limits.

- Application—Application that handles the incoming call after the dial plan is selected. If no application name is specified, the default session application handles the incoming call.

- Incoming—Call pattern for incoming calls. This address can be used to identify the peer. If this address is either unknown or identical to the address of the Outgoing Call Pattern, the value of this parameter is zero.

- Preference—Peer selection order when multiple peers match the selection criteria. A value of 0 gives the highest priority for peer selection. A value of -1 disables the parameter.

Step 9   Click the **POTS** tab. The POTS (local dial plan) options appear.

Step 10   Modify any of the following optional fields:

- Prefix—Prefix of the target number the dial plan is dialing. This number is usually an area code or an extension.

- Forward Digits—Number of dialed digits that will be forwarded as part of the call setup message.

- Register E.164—Telephone number assigned to this port that is registered with the router's associated gatekeeper.

- Direct Inward Dial—Assigned telephone number used as the final destination number.

Step 11   Click **Finish**. The local dial plan is modified.

Deleting a Local Dial Plan

Deleting a local dial plan removes the telephone number assigned to a voice port on a router. To delete a local dial plan:

Step 1   Select the **View** where the dial plan exists.

Step 2   In the DeviceTree Hierarchy, select the group or gatekeeper to which the router belongs.

Step 3   Select the router that contains the dial plan you want to delete.

Step 4   Select **Dial Plan:Phone Number Assignment** from the Device menu. The Phone Number window appears.

Step 5   Select the voice port from which you want to delete the telephone number.

Step 6   Delete the phone number in the Phone Number field.

Step 7   Click **Next.** The Schedule Operation dialog box appears:

    a.   Click **Do Now** to immediately assign the telephone number.

    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.)

Step 8   Click **Finish**. The Propagate Phone popup window appears:

    a.   Click **Yes** to have CVM automatically propagate the dial-plan information to the other routers in the group.

    b.   Click **No** to stop the dial-plan information from being propagated to other routers in the group.

Step 9   Click **Finish**. The local dial plan is deleted.

Network Dial Plans

CVM gives you the ability to create and manage VoIP, VoFR, and VoATM network dial plans. A VoIP network dial plan is created when you assign a telephone number to an IP address. A VoFR and VoATM network dial plan is created when you assign a telephone number to a Frame Relay or ATM circuit. CVM propagates all network dial-plan information automatically.

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

This section describes the following:

- Creating a VoIP Network Dial Plan
- Creating a VoATM Network Dial Plan
- Creating a VoFR Network Dial Plan
- Modifying a Network Dial Plan
- Deleting a Network Dial Plan

Creating a VoIP Network Dial Plan

You create a VoIP network dial plan when you assign a telephone number to an IP address. CVM propagates the network dial-plan information automatically.

To create a VoIP network dial plan:

Step 1   Select a router in the Device Tree Hierarchy.

Step 2   Select **Dial Plan:Network Dial Plan** from the Device menu. The Administer Network Dial Plan window appears.

Step 3   Click **New Dial Plan**. The Create Network Dial Plan window appears.

Step 4   Select **VoIP Dial Plan** from the Dial Plan Type drop-down list. The VoIP tab on the Create Network Dial Plan window is now active.

Step 5   Enter a dial-plan tag in the Dial-Plan Tag field.

Step 6   Enter a destination pattern in the Destination Pattern field.

Step 7   Modify the following optional fields to reflect the design of your dial plan:

- Huntstop—If the dial peer selected is a match to an incoming number and the associated device is not reachable, do not continue further matches. The default is No.

- Maximum Connections—Maximum allowed connections to the dial plan. A value of -1 represents no limits.

- Application—Application that handles the incoming call after the dial plan is selected. If no application name is specified, the default session application handles the incoming call.

- Incoming—Call pattern for incoming calls. This address can be used to identify the peer. If this address is either unknown or identical to the address of the Outgoing Call Pattern, the value of this parameter is zero.

- Preference—Peer selection order when multiple peers match the selection criteria. A value of 0 gives the highest priority for peer selection. A value of -1 disables the parameter.

Step 8   Click the **VoIP** tab on the Create Network Dial Plan window. The VoIP options appear.

Step 9   Modify the following optional fields to reflect the design of your dial plan:

- Session Protocol—Session protocol to be used between the local and remote router
- Session Target—Session target used for the call
- Codec—Voice coder rate of speech
- Codec Bytes—Number of voice data bytes per frame
- Fax Rate—Rate at which faxes are received
- Fax Rate Bytes—Number of fax data bytes per frame
- Signal Type—Specifies the signal type
- DTMF Relay—Whether DTMF relay is used to improve the end-to-end transport of DTMF tones
- IP Precedence—Datagram precedence of a voice packet
- CPIF—This parameter specifies the Calculated Planning Impairment Factor of the call
- Acc QOS—Acceptable quality of service for the call
- Req QOS—Required quality of service for the call
- Expect Factor—User-requested Expectation Factor of voice quality for the call
- Tech Prefix—Technology prefix of the peer passed in the Admission Request (ARQ) along with the called party address to the gatekeeper for called party address resolution during call setup
- VAD—Voice activity detection is enabled for the call
- Poor QOV Trap—Whether the poor quality of voice trap is enabled
- IP UDP Checksum—Whether the outgoing voice-related UDP packet includes the checksum information

Step 10   Click **Finish.** The VoIP network dial plan is created.

Creating a VoATM Network Dial Plan

A VoATM network dial plan is created when you assign a telephone number to an ATM circuit. CVM propagates network dial-plan information automatically.

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

To create a VoATM network dial plan:

Step 1   Select a router in the Device Tree.

Step 2   Select **Dial Plan:Network Dial Plan** from the Device menu. The Administer Network Dial Plan window appears.

Step 3   Click **New Dial Plan**. The Create Network Dial Plan window appears.

Step 4   Select **VoATM Dial Plan** from the Dial Plan Type drop-down list. The VoIP tab on the Create Network Dial Plan window is now active.

Step 5   Enter a dial plan tag in the Dial Plan Tag field.

Step 6   Enter a destination pattern in the Destination Pattern field. The destination pattern is the telephone number of the voice device attached to the voice port.

Step 7   Modify the following optional fields to reflect the design of your dial plan:

- Huntstop—If the dialpeer selected is a match to an incoming number and the associated device is not reachable, do not continue further matches. The default is No.

- Maximum Connections—Maximum allowed connections to the dial plan. A value of -1 represents no limits.

- Application—Application that handles the incoming call after the dial plan is selected. If no application name is specified, the default session application handles the incoming call.

- Incoming—Call pattern for incoming calls. This address can be used to identify the peer. If this address is either unknown or identical to the address of the Outgoing Call Pattern, the value of this parameter is zero.

- Preference—Peer selection order when multiple peers match the selection criteria. A value of 0 gives the highest priority for peer selection. A value of -1 disables the parameter.

Step 8   Click the **VoATM** tab on the Create Network Dial Plan window. The VoATM options appear.

Step 9   Modify any the following optional fields to reflect the design of your dial plan:

- Session Protocol—Session protocol to be used between the local and remote router

- Session Target—Session target used for the call

- Codec—Voice coder rate of speech

- Codec Bytes—Number of voice data bytes per frame

- Fax Rate—Rate at which faxes are received

- Fax Rate Bytes—Number of fax data bytes per frame

- Signal Type—Specifies the signal type

- DTMF Relay—Whether DTMF relay is used to improve the end-to-end transport of DTMF tones

- VAD—Voice activity detection is enabled for the call

Step 10   Click **Finish.** The VoATM network dial plan is created.

Creating a VoFR Network Dial Plan

A VoFR network dial plan is created when you assign a telephone number to a Frame Relay circuit. CVM propagates the network dial plan information automatically.

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

To create a VoFR network dial plan:

Step 1   Select a router in the Device Tree Hierarchy.

Step 2   Select **Dial Plan:Network Dial Plan** from the Device menu. The Administer Network Dial Plan window appears.

Step 3   Click **New Dial Plan**. The Create Network Dial Plan window appears.

Step 4   Select **VoFR Dial Plan** from the Dial Plan Type drop-down list. The VoIP tab on the Create Network Dial Plan window is now active.

Step 5   Enter a dial plan tag in the Dial Plan Tag field.

Step 6   Enter a destination pattern in the Destination Pattern field.

Step 7   Enter values in the optional fields to reflect the design of your dial plan:

- Huntstop—If the dial peer selected is a match to an incoming number and the associated device is not reachable, do not continue further matches. The default is No.

- Maximum Connections—Maximum allowed connections to the dial plan. A value of -1 represents no limits.

- Application—Application that handles the incoming call after the dial plan is selected. If no application name is specified, the default session application handles the incoming call.

- Incoming—Call pattern for incoming calls. This address can be used to identify the peer. If this address is either unknown or identical to the address of the Outgoing Call Pattern, the value of this parameter is zero.

- Preference—Peer selection order when multiple peers match the selection criteria. A value of 0 gives the highest priority for peer selection. A value of -1 disables the parameter.

Step 8   Click the **VoFR** tab on the Create Network Dial Plan window. The VoFR options appear.

Step 9   Enter values in the optional fields to reflect the design of your dial plan:

- Session Protocol—Session protocol to be used between the local and remote route

- Session Target—Session target used for the call

- Codec—Voice coder rate of speech

- Codec Bytes—Number of voice data bytes per frame

- Fax Rate—Rate at which faxes are received

- Fax Rate Bytes—Number of fax data bytes per frame

- Signal Type—Specifies the signal type

- DTMF Relay—Whether DTMF relay is used to improve the end-to-end transport of DTMF tones

- VAD—Voice activity detection is enabled for the call

Step 10   Click **Finish**. The VoFR network dial plan is created.

Modifying a Network Dial Plan

You can modify a network dial plan to make changes to the existing configuration of the dial plan. For example, you might modify a VoIP dial plan to change the signal type.

Note   All network dial plans are modified using the same procedure.

To modify a network dial plan:

Step 1   Select the router where the network dial plan exists.

Step 2   Select **Dial Plan:Network Dial Plan** from the Device menu. The Administer Network Dial Plan window appears.

Step 3   Select the dial plan you want to modify.

Step 4   Click **Modify**. The Main Settings tab and the corresponding Network Dial Plan Type tab are active.

Step 5   You can modify any of the following parameters on the Main Settings tab:

- Huntstop—If the dial peer selected is a match to an incoming number and the associated device is not reachable, do not continue further matches. The default is No.

- Maximum Connections—Maximum allowed connections to the dial plan. A value of -1 represents no limits.

- Application—Application that handles the incoming call after the dial plan is selected. If no application name is specified, the default session application handles the incoming call.

- Incoming—Call pattern for incoming calls. This address can be used to identify the peer. If this address is either unknown or identical to the address of the Outgoing Call Pattern, the value of this parameter is zero.

- Preference—Peer selection order when multiple peers match the selection criteria. A value of 0 gives the highest priority for peer selection. A value of -1 disables the parameter.

Step 6   Click the **VoIP**, **VoATM**, or **VoFR** tab on the Create Network Dial Plan window. The options corresponding to the selection you've made appear. You can modify any of the optional fields to reflect the design of your specific dial plan.

Step 7   Click **Finish**. The network dial plan is modified.

Deleting a Network Dial Plan

Deleting a local dial plan removes the telephone number that is assigned to the IP address (VoIP) or the circuit (VoFR or VoATM).

To delete a network dial plan:

Step 1   Select the router with the network dial plan you want to delete.

Step 2   Select **Dial Plan:Network Dial Plan** from the Device menu. The Administer Network Dial Plan window appears.

Step 3   Select the dial plan you want to delete.

Step 4   Click **Delete**. The network dial plan is deleted.

Dial Plan Verification

Dial plan verification confirms that a dial plan exists between two telephone numbers.

To verify a dial plan:

Step 1   Select **Verify Dial Plan** from the Phone menu. The Verify Dial Plan window appears.

Step 2   Enter the source phone number in the Source Phone Number field.

Step 3   Enter the destination phone number in the Destination Number field.

Step 4   Click **Verify.** The dial-plan information for the two numbers appears in the text window.

Step 5   Click **Finish**. The Verify Dial Plan window closes.

Voice Ports

You can use CVM to modify the configuration of voice ports that have been initially configured through the CLI on a router. For example, you can use CVM to modify the configuration of an FXO voice port on a voice-enabled Cisco 3600 series router. However, the initial configuration of the FXO voice port must be done through the CLI.

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

This section describes the following:

- Modifying an FXO Voice Port
- Modifying an FXS Voice Port
- Modifying an E&M Voice Port
- Modifying an ISDN Voice Port

Modifying an FXO Voice Port

CVM automatically detects the type and configurations of voice ports enabled on a router when you add the router to CVM. You can use CVM to modify the configuration of a voice port.

To modify the configuration of one or all FXO voice ports on a router:

Step 1 Select the router in the Device Tree Hierarchy.

Step 2 Select **Dial Plan:Configure Voice Ports** from the Device menu. The Configure Voice Ports—Step One window appears.

Step 3 Select the FXO voice port you want to configure:

   a. To configure only the FXO voice port you've selected, click **Configure Port**. The Configure Voice Ports—Step Two window appears.

   b. To configure all FXO voice ports on the router, click **Batch Configure**. The Configure Voice Ports—Step Two window appears.

Step 4 You can modify any of these parameters on the Main tab of the Configure Voice Ports—Step 2 window:

   • Background Noise Enabled—Whether or not the background noise should be played to fill silence gaps if VAD is activated. The default value is enabled.

   • Echo-Cancel Enable—Whether Echo Cancellation is enabled for the interface. The default value is enabled.

   • Nonlinear Processing Enable—Whether the NonLinear Processing is enabled for the interface. The default value is enabled. Enabling this parameter usually improves performance, although some users might perceive truncation of consonants when you enable this parameter.

   • Music On Hold Threshold—Music on Hold threshold for the interface in decibels. The values range from -70 to -30 dBm and the default value is -38 dBm.

   • Input Gain—Level of input gain in decibels that is inserted at the receiver side of the interface. The values range from -6 to 14 dB and the default is 0 dB.

   • Output Attenuation—Output attenuation in dB inserted at the transmit side of the interface.

   • Echo Cancel Coverage—Whether Echo Cancellation is enabled for the interface. The default is enabled.

- Connection Mode—This parameter specifies the connection mode of the interface. The values are normal, trunking, and PLAR (the default).

- Connection Number—Full E.164 telephone number (maximum of 32 characters) that is used to establish connection with trunking or PLAR modes. If Connection Mode is set to normal, this parameter does not apply and defaults to null.

- Initial Digit Timeout—Specifies the amount of time the managed system waits for an initial input digit from the caller. The values range from 0 to 120 seconds, and the default is 10 seconds.

- Inter-Digit Timeout—Specifies the number of seconds the managed system waits for a subsequent input digit from the caller. The values range from 0 to 120 seconds, and the default is 10 seconds.

- Region Tone—Specifies the region-specific standards for default tone, ring, and cadence settings.

Step 5 Click the **FXO** tab. The FXO options appear.

Step 6 You can modify any of these parameters on the FXO tab of the Configure Voice Ports—Step 2 window:

- Signal Type—Specifies signal types you can assign to the FXO interface. Valid values are LoopStart (the default) or GroundStart.

- Number of Rings—Specifies the Number of Rings detected before closing the loop. The values range from 1 to 10 rings and the default is 1 ring.

Step 7 Click **Finish.** The FXO voice port has been modified according to the changes you've made and the Configure Voice Ports window closes. If you selected **Batch Configure** in Step 3, all of the FXO voice ports on the selected router have been modified.

Modifying an FXS Voice Port

CVM automatically detects the type and configurations of voice ports enabled on a router when you add the router to CVM. You can use CVM to modify the configuration of a voice port.

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

To modify the configuration of one or all FXS voice ports on a router:

Step 1   Select the router in the Device Tree Hierarchy.

Step 2   Select **Dial Plan:Configure Voice Ports** from the Device menu. The Configure Voice Ports—Step One window appears.

Step 3   Select the FXS voice port you want to configure.

   a.   To configure only the FXS voice port you've selected, click **Configure Port**. The Configure Voice Ports—Step Two window appears.

   b.   To configure all FXS voice ports on the router, click **Batch Configure**. The Configure Voice Ports—Step Two window appears.

Step 4   You can modify any of these parameters on the Main tab of the Configure Voice Ports—Step 2 window:

   • Background Noise Enabled—Whether or not the background noise should be played to fill silence gaps if VAD is activated. The default value is enabled.

   • Echo-Cancel Enable—Whether Echo Cancellation is enabled for the interface. The default value is enabled.

   • Nonlinear Processing Enable—Whether the NonLinear Processing is enabled for the interface. The default value is enabled. Enabling this parameter usually improves performance, although some users might perceive truncation of consonants when you enable this parameter.

   • Music On Hold Threshold—Music on Hold threshold for the interface in decibels. The values range from -70 to -30 dBm and the default value is -38 dBm.

   • Input Gain—Level of input gain in decibels that is inserted at the receiver side of the interface. The values range from -6 to 14 dB and the default is 0 dB.

   • Output Attenuation—Output attenuation in dB inserted at the transmit side of the interface.

- Echo Cancel Coverage—Whether Echo Cancellation is enabled for the interface. The default is enabled.

- Connection Mode—This parameter specifies the connection mode of the interface. The values are normal, trunking, and PLAR (the default).

- Connection Number—Full E.164 telephone number (max of 32 characters) that is used to establish connection with trunking or PLAR modes. If Connection Mode is set to normal, this parameter does not apply and defaults to null.

- Initial Digit Timeout—Specifies the amount of time the managed system waits for an initial input digit from the caller. The values range from 0 to 120 seconds, and the default is 10 seconds.

- Inter-Digit Timeout—Specifies the number of seconds the managed system waits for a subsequent input digit from the caller. The values range from 0 to 120 seconds, and the default is 10 seconds.

- Region Tone—Specifies the region-specific standards for default tone, ring, and cadence settings.

Step 5   Click the **FXS** tab. The FXS options appear.

Step 6   You can modify any of these parameters on the Main tab of the Configure Voice Ports—Step 2 window:

- Signal Type—Signal type assigned to the interface. Valid values are LoopStart (the default) or GroundStart.

- Ring Frequency—Ring frequency (in Hertz) to be used. Valid values are 25 Hz or 50 Hz. The default value is 25 Hz.

Step 7   Click **Finish.** The FXS voice port has been modified according to the changes you've made and the Configure Voice Ports window closes. If you selected **Batch Configure** in Step 3, all of the FXS voice ports on the selected router have been modified.

Modifying an E&M Voice Port

CVM automatically detects the type and configurations of voice ports enabled on a router when you add the router to CVM. You can use CVM to modify the configuration of a voice port.

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

To modify the configuration of one or all E&M voice ports on a router:

Step 1 Select the router in the Device tree.

Step 2 Select **Dial Plan:Configure Voice Ports** from the Device menu. The Configure Voice Ports—Step One window appears.

Step 3 Select the **E&M Voice Port** you want to configure:

   a. To configure only the **E&M** voice port you've selected, click **Configure Port**. The Configure Voice Ports—Step Two window appears.

   b. To configure all **E&M** voice ports on the router, click **Batch Configure**. The Configure Voice Ports—Step Two window appears.

Step 4 You can modify any of these parameters on the Main tab of the Configure Voice Ports—Step 2 window:

   • Background Noise Enabled—Whether or not the background noise should be played to fill silence gaps if VAD is activated. The default value is enabled.

   • Echo-Cancel Enable—Whether Echo Cancellation is enabled for the interface. The default value is enabled.

   • Nonlinear Processing Enable—Whether the NonLinear Processing is enabled for interface. The default value is enabled. Enabling this parameter usually improves performance, although some users might perceive truncation of consonants when you enable this parameter.

   • Music On Hold Threshold—Music on Hold threshold for the interface in decibels. The values range from -70 to -30 dBm and the default value is -38 dBm.

   • Input Gain—Level of input gain in decibels that is inserted at the receiver side of the interface. The values range from -6 to 14 dB and the default is 0 dB.

   • Output Attenuation—Output attenuation in dB inserted at the transmit side of the interface.

- Echo Cancel Coverage—Whether Echo Cancellation is enabled for the interface. The default is enabled.

- Connection Mode—This parameter specifies the connection mode of the interface. The values are normal, trunking, and PLAR (the default).

- Connection Number—Full E.164 telephone number (maximum of 32 characters) that is used to establish connection with trunking or PLAR modes. If Connection Mode is set to normal, this parameter does not apply and defaults to null.

- Initial Digit Timeout—Specifies the amount of time the managed system waits for an initial input digit from the caller. The values range from 0 to 120 seconds, and the default is 10 seconds.

- Inter-Digit Timeout—Specifies the number of seconds the managed system waits for a subsequent input digit from the caller. The values range from 0 to 120 seconds, and the default is 10 seconds.

- Region Tone—Specifies the region-specific standards for default tone, ring, and cadence settings.

Step 5   Click the **E&M** tab. The E&M options appear.

Step 6   You can modify any of these parameters on the E&M tab of the Configure Voice Ports—Step 2 window:

- Signal Type—Signal type assigned to the interface. Valid values are wink start, immediate dial, and delay dial. The default is winkstart.

- Operation—Whether the operation of the interface is 2-wire operation or 4-wire. The default value is 2-wire.

- Interface Type—Valid values are: Type I, Type II, Type III, Type IV, or Type V.

- Dial Type—Outgoing dial type for the interface. Values can either be DTMF (specifying a touch-tone dialer) or Pulse (specifying a pulse dialer). The default is DTMF.

Step 7   Click **Finish**. The E&M voice port has been modified according to the changes you've made and the Configure Voice Ports window closes. If you selected **Batch Configure** in Step 3, all of the E&M voice ports on the selected router have been modified.

Modifying an ISDN Voice Port

CVM automatically detects the type and configurations of voice ports enabled on a router when you add the router to CVM. You can use CVM to modify the configuration of a voice port.

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

To modify the configuration of one or all ISDN voice ports on a router:

Step 1   Select the router in the Device tree.

Step 2   Select **Dial Plan:Configure Voice Ports** from the Device menu. The Configure Voice Ports—Step One window appears.

Step 3   Select the ISDN voice port you want to configure:

a.   To configure only the ISDN voice port you've selected, click **Configure Port**. The Configure Voice Ports—Step Two window appears.

b.   To configure all ISDN voice ports on the router, click **Batch Configure**. The Configure Voice Ports—Step Two window appears.

Step 4   You can modify any of these parameters on the Main tab of the Configure Voice Ports—Step 2 window:

- Background Noise Enabled—Whether or not the background noise should be played to fill silence gaps if VAD is activated. The default value is enabled.

- Echo-Cancel Enable—Whether Echo Cancellation is enabled for the interface. The default value is enabled.

- Nonlinear Processing Enable—Whether the NonLinear Processing is enabled for the interface. The default value is enabled. Enabling this parameter usually improves performance, although some users might perceive truncation of consonants when you enable this parameter.

- Music On Hold Threshold—Music on Hold threshold for the interface in decibels. The values range from -70 to -30 dBm and the default value is -38 dBm.

- Input Gain—Level of input gain in decibels that is inserted at the receiver side of the interface. The values range from -6 to 14 dB and the default is 0 dB.

- Output Attenuation—Output attenuation in dB inserted at the transmit side of the interface.

- Echo Cancel Coverage—Whether Echo Cancellation is enabled for the interface. The default is enabled.

- Connection Mode—This parameter specifies the connection mode of the interface. The values are normal, trunking, and PLAR (the default).

- Connection Number—Full E.164 telephone number (maximum of 32 characters) that is used to establish connection with trunking or PLAR modes. If Connection Mode is set to normal, this parameter does not apply and defaults to null.

- Initial Digit Timeout—Specifies the amount of time the managed system waits for an initial input digit from the caller. The values range from 0 to 120 seconds, and the default is 10 seconds.

- Inter-Digit Timeout—Specifies the number of seconds the managed system waits for a subsequent input digit from the caller. The values range from 0 to 120 seconds, and the default is 10 seconds.

- Region Tone—Specifies the region-specific standards for default tone, ring, and cadence settings.

Step 5   Click the **BRI** tab. The BRI (Basic Rate Interface) options appear.

Step 6   You can modify any of these parameters on the BRI tab of the Configure Voice Ports—Step 2 window:

- Signal Type—Specifies signal types you can assign to the FXO interface. Valid values are LoopStart (the default) or GroundStart.

- Number of Rings—Specifies the Number of Rings detected before closing the loop. The values range from 1 to 10 rings and the default is 1 ring.

Step 7   Click **Finish**. The ISDN voice port has been modified according to the changes you've made and the Configure Voice Ports window closes. If you selected **Batch Configur**e in Step 3, all of the ISDN voice ports on the selected router have been modified.

Voice Ports