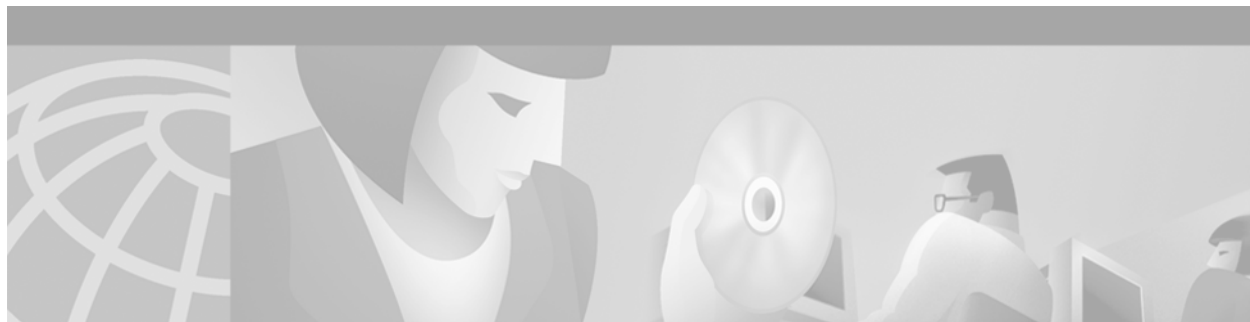




Enhanced Voice Services for Japan for Cisco 800 Series Routers

This appendix describes the Enhanced Voice Services for Japan Cisco IOS features, including INS-NET-64 voice features.

This appendix includes the following sections:

- [Enhanced Voice Services Overview, page 857](#)
- [Enhanced Voice Services Prerequisite Tasks, page 861](#)
- [Enhanced Voice Services Configuration Task List, page 862](#)
- [Enhanced Voice Services Configuration Examples, page 864](#)

For a complete description of the commands used in this appendix, refer to the *Cisco IOS Voice, Video, and Fax Command Reference*. To locate documentation of other commands that appear in this appendix, use the command reference master index or search online.

To identify the hardware platform or software image information associated with a feature in this appendix, use the [Feature Navigator](#) on Cisco.com to search for information about the feature or refer to the software release notes for a specific release. For more information, see the “Identifying Supported Platforms” section in the “Using Cisco IOS Software” chapter.

Enhanced Voice Services Overview

The Enhanced Voice Services for Japan Cisco IOS features consist of the following voice capabilities for the Cisco 800 series routers:

- **Caller ID**—Provides analog caller ID support for Japanese-language display, Caller ID- equipped, analog telephones. The Cisco 800 series router receives the caller ID information from the INS-NET-64 switch. The router software prepares the caller ID with a tone, transmits the caller ID to plain old telephone service (POTS) port 1 or 2 on the router, and displays the caller ID on the telephone.
- **Call Blocking on Caller ID**—Allows Cisco 800 series routers to reject an incoming voice call, based on local directory number (LDN) caller IDs. Using the command-line interface (CLI), you can configure blocking for up to ten caller ID numbers for each LDN.

- **Local Call Waiting**—Notifies you with a call-waiting tone of an incoming call while you are already connected to a telephone call. You can place the first call on hold by pressing the on-and-off-hook button (flash), connect to the second call, and then return to the first call after finishing with the second.

The feature uses both B channels of the ISDN line, enabling local call-waiting support on the router. Unlike standard ISDN call waiting, local call waiting does not require a subscription to call waiting from a service provider.

- **E Ya Yo**—Conceals the caller ID of the outgoing call from the receiving device. To activate the feature, dial 184 before dialing the number of the receiving device, as specified in the Nippon Telegraph and Telephone (NTT) Communications Corporation user manual. This feature is specific to NTT Communications Corporation switches and is offered free of charge. The router handles this feature as a regular outgoing call and requires no special operation.
- **Voice Warp**—On the INS-NET-64 switch, forwards all incoming calls for a terminal device to another device. Voice-warp registration, activation, and deactivation requests are sent to the switch for each LDN. The routers support the registration, activation, and deactivation requests for devices attached to the PHONE 1 or 2 port. The forwarding function itself is performed by the INS-NET-64 switch. This feature can be deactivated after its registration and activation phases.

During the registration phase of the device, you can:

- Create a list of forwarding destination numbers and select one as the active destination.
- Specify whether an announcement is made to the caller, to the forwarding device, or both, when the call is forwarded.
- Set the no-answer timer parameter from 5 to 60 seconds at 5-second intervals. This setting affects the redirection of calls when the voice-warp feature is activated.

During the activation phase, you determine whether calls are redirected all the time or only if the receiving device is busy or does not answer within the specified no-answer time period. You can use the telephone keypad dialing sequence as specified in the NTT user manual for any of the operations described above and to hear the Voice Warp registration details for a local device.

- **Voice Select Warp**—An enhanced version of the Voice Warp feature. You can create a list of incoming caller IDs that is used in call redirection, either by redirecting incoming calls only from matching caller IDs, or by redirecting all calls except those from matching caller IDs. You can use the telephone keypad dialing sequence as specified in the NTT user manual for any of the Voice Select Warp feature operations and to hear the Voice Warp registration details for a local device.
- **Nariwake**—Checks for caller IDs that you register (using the telephone keypad for each LDN) and presents a distinctive ring to the telephone port receiving the incoming call if a match is detected. The routers provide three different ring cadences that you can set for calls from both registered and unregistered callers.

The default ring cadence setting is ring 1 for registered callers and ring 0 for unregistered callers. The on-and-off period for normal ringing signals (ring 0) and ringing signals for Nariwake service (ring 1) are defined in the NTT user manual.

The number of caller IDs you can register for each LDN at one time is defined by the INS-NET-64 switch, not by the router. You can register this feature with the list of caller IDs for each LDN, cancel the registration for the LDN, or get registration information from the INS-NET-64 switch. You can use the telephone keypad dialing sequence as specified in the NTT Communications Corporation user manual for any of the Nariwake feature operations and to hear the Nariwake registration details for a local device.

- **Trouble Call Blocking**—Also described as *nuisance telephone call refusal service* by INS Net. The network rejects all incoming calls to a particular telephone number from a troublesome caller. You do not have to specify the actual telephone number of the caller.

When activated, the caller hears a standard telephone announcement and a disconnect message. For information about the announcement or message, see the NTT user manual.

You are not automatically notified of incoming call attempts. However, to confirm call blocking results, you can listen to an announcement listing the number of incoming calls from blocked telephone numbers during the previous two months.

The number of callers that you can block is defined by the service provider at the time the service is activated. If you request an additional telephone number to block beyond the defined limit, the oldest number is discarded (unblocked) before the new number is registered.

To add a new number, you must hang up the telephone, go off-the-hook, and dial the call-blocking telephone keypad sequence within 60 seconds. When the feature is activated, you receive a recorded announcement indicating whether or not the activation is successful.

The feature can be turned off for either the last added (blocked) number or for all call-blocked numbers. A recorded announcement indicates the changes after they are made.

- **I Number**—Supports the use of multiple terminal devices with one subscriber line. The telephone numbers of the subscriber line and router ports are assigned by the service provider. Calls coming into any of the assigned numbers are routed through the same subscriber line to the terminal device attached to the target port.
- **POTS Dial**—Supports the POTS dial feature for Japanese telephones. Using a dial application on your workstation, you can dial a telephone number for the POTS port on the router.

If the telephone is on the hook when you issue the dial command, the router rings the telephone, waits until the telephone is taken off the hook, and then dials the requested number. If the telephone is off the hook when you issue the command, the router dials the requested number.
- **POTS Disconnect**—Disconnects a telephone number from the POTS port on the router.

The Enhanced Voice Services for Japan Cisco IOS features provide the following benefits:

- **Caller ID**—Provide analog caller ID support for Japanese caller ID-equipped telephones.
- **Call Blocking on Caller ID**—Reject incoming voice calls based on LDN caller IDs.
- **Local Call Waiting**—Provide call waiting on a local basis for Cisco 800 series routers.
- **E Ya Yo**—Prevent the caller ID of an outgoing call from being visible to a receiving device.
- **Voice Warp**—On a switch, forward registered incoming calls for a terminal device to another terminal device. List more than one forwarding destination number in the switch register and then select one to be the active number. Specify an announcement to be heard on the caller side, the forwarding side, or both when a call is forwarded.
- **Voice Select Warp**—Create a registration list of caller IDs, and use it to redirect incoming calls. Choose to ignore the registration list, which causes functionality to be the same as Voice Warp.
- **Nariwake**—Provide distinctive ring cadences for registered caller IDs to telephone ports receiving incoming calls.
- **Trouble Call Blocking**—Refuse nuisance telephone calls.
- **I Number**—Use one subscriber line for multiple terminal devices.
- **POTS Dial**—Dial a telephone number on a Cisco 800 series router POTS port by using a dial application on your workstation.
- **POTS Disconnect**—Disconnect a telephone number from a Cisco 800 series router POTS port.

Enhanced Voice Services Limitations

The Enhanced Voice Services for Japan Cisco IOS features have the following restrictions:

- You must subscribe to the NTT services to use the Enhanced Voice Services for Japan Cisco IOS features. Therefore, except for the Call Blocking on Caller ID feature and Local Call Waiting, support is limited to telephone service inside Japan.
- Caller ID
 - You must subscribe to caller ID service before using this feature.
 - In Japan, the analog caller ID feature supports only Japanese caller ID telephones.
- Call Blocking on Caller ID
 - You must subscribe to caller ID service before using this feature.
 - This function is not enabled during setup; it is only enabled if you enter caller ID numbers for blocking through the CLI.
 - The routers store a maximum of ten caller ID telephone numbers to block. Cisco 800 series routers do not accept additional caller ID numbers if ten numbers already exist. In this case, you must remove a number before adding another caller ID number for blocking.
- Local Call Waiting
 - This feature is not supported if any of the interactive voice response (IVR) features (such as voice warp, voice select warp, and Nariwake) are in use.
 - The call waiting feature is provided locally; therefore each call must have its own separate B channel. Local Call Waiting is not available if data traffic is already on-going or if both B channels are in use, for example, if POTS 1 and POTS 2 are already connected.
 - If an ISDN line already supports Call Waiting before Local Call Waiting is configured on a Cisco 811 or 813 router, the router activates ISDN Call Waiting instead of Local Call Waiting.
- Voice Warp
 - You must subscribe to the Voice Warp service before using this feature.
 - Activating the Voice Warp feature disables support for the Call Waiting feature for both local and network calls.
 - Status information for this feature is delivered over voice only.
 - The routers support this feature for one only LDN. If more than one LDN is configured, only the primary LDN can be used with this feature.
- Voice Select Warp—All Voice Warp limitations apply to the Voice Select Warp feature.
- Nariwake
 - You must subscribe to Nariwake service before using this feature.
 - Activating the Nariwake feature disables support for the Call Waiting feature for both local and network calls.
 - The Cisco 800 series routers support this feature for one LDN only. If more than one LDN is configured, only the primary LDN can be used with this feature.

- Trouble Call Blocking
 - The maximum number of troublesome callers you can block is defined when the service is activated. If you request to block more than the maximum number, the oldest blocked number must be unblocked before the new telephone number can be registered.
 - When multiple NTT services are provided with the troublesome call refusing feature, the features could possibly limit or interact with each other.
 - The Cisco 800 series routers support this feature for one LDN only. If more than one LDN is configured, only the primary LDN can be used with this feature.
- I Number—You must subscribe to the I Number service before using this feature.

Related Documents for Enhanced Voice Services

The following documents provide additional platform-specific information:

- Cisco 800 Series Routers
 - *Cisco 800 Series Router Quick Start Guide*
 - *Cisco 800 Series Routers Hardware Installation Guide*
 - *Cisco 800 Series Routers Software Configuration Guide*
- Cisco 805 Routers
 - *Cisco 805 Router Hardware Installation Guide*
 - *Quick Start Guide – Setting Up the Cisco 805 Router*
 - *Cisco 805 Router Software Configuration Guide*
- Cisco 811 and 813 Routers
 - *Cisco 811 and Cisco 813 Routers Hardware Installation Guide*
 - *Quick Start Guide: Setting Up Cisco 811 and Cisco 813 Routers*

Enhanced Voice Services Prerequisite Tasks

Before using the Enhanced Voice Services for Japan Cisco IOS features, use the Cisco IOS command **pots country *jp*** to configure the router telephone ports to Japanese standards. The following requirements must also be met:

- E Ya Yo—You must subscribe to the NTT Communications Corporation E Ya Yo service and connect the router to a Japanese INS-NET-64 switch.
- Voice Warp—You must subscribe to the NTT Communications Corporation Voice Warp and Caller ID services and connect the router to a Japanese INS-NET-64 switch.
- Voice Select Warp—You must subscribe to the NTT Communications Corporation Voice Select Warp service and connect the router to a Japanese INS-NET-64 switch.
- Nariwake—You must subscribe to the NTT Communications Corporation service for distinctive incoming calls (distinctive ringing).
- Trouble Call Blocking—You must subscribe to the NTT Communications Corporation service for refusing troublesome calls.

Enhanced Voice Services Configuration Task List

Many of the Enhanced Voice Services for Japan Cisco IOS features were developed for other Cisco routers before they were ported to Cisco 800 series routers. In some cases, CLI commands were created or modified to allow the features to run on Cisco 800 series routers. The following sections provide step-by-step instructions for configuring only those features that require new or changed Cisco IOS commands specifically created or modified to run on Cisco 800 series routers.

The Local Call Waiting feature is enabled by a single command in global configuration mode; for command syntax and examples, see the **pots call-waiting** command in the *Cisco IOS Voice, Video, and Fax Command Reference*. The features POTS Dial and POTS Disconnect are also single commands in EXEC mode; for command syntax and examples, see the **test pots dial** and **test pots disconnect** commands in the *Cisco IOS Voice, Video, and Fax Command Reference*.

See the following sections for configuration tasks for Enhanced Voice Services for Japan:

- [Configuring Caller ID, page 862](#) (optional)
- [Configuring Call Blocking on Caller ID, page 862](#) (optional)
- [Configuring Nariwake, page 863](#) (optional)
- [Configuring I Number, page 863](#) (optional)
- [Monitoring and Maintaining Enhanced Voice Services, page 864](#) (optional)

Configuring Caller ID

To configure Caller ID, use the following commands beginning in global configuration mode:

	Command	Purpose
Step 1	Router(config)# pots country jp	Configures the router telephone ports to Japanese standards.
Step 2	Router(config)# dial-peer voice <i>number</i> pots	Enters dial-peer configuration mode, and selects the POTS port.
Step 3	Router(config-dial-peer)# caller-id	Enables the Caller ID feature.

Configuring Call Blocking on Caller ID

To configure Call Blocking on Caller ID, use the following commands beginning in global configuration mode:

	Command	Purpose
Step 1	Router(config)# dial-peer voice <i>number</i> pots	Enters dial-peer configuration mode, and selects the POTS port.
Step 2	Router(config-dial-peer)# block-caller <i>number</i>	Blocks the caller ID: <i>number</i> . For example, blocks incoming calls from the telephone number 408-555-1234.

Configuring Nariwake

To configure Nariwake, use the following commands beginning in global configuration mode:

	Command	Purpose
Step 1	Router(config)# pots country jp	Configures the router telephone ports to Japanese standards.
Step 2	Router(config)# dial-peer voice <i>number</i> pots	Enters dial-peer configuration mode, and selects the POTS port.
Step 3	Router(config-dial-peer)# registered-caller ring cadence	Configures the Nariwake service registered caller ring cadence. For example, you could set the ring cadence for registered callers to 2.
Step 4	Router(config-dial-peer)# destination-pattern not-provided	(Optional) If you also subscribe to I Number and Dial-In services, configures a dial peer.

Configuring I Number

To configure I Number, use the following commands beginning in global configuration mode:

	Command	Purpose
Step 1	Router(config)# interface bri <i>number</i>	Enters interface configuration mode and specifies the basic rate interface number, such as bri0 .
Step 2	Router(config-if)# isdn i-number <i>n1 ld1</i>	Configures the first router POTS port to use a single subscriber line, such as 5551234.
Step 3	Router(config-if)# isdn i-number <i>n2 ld2</i>	Configures the second router POTS port to use a single subscriber line, such as 5556789.
Step 4	Router(config-if)# exit	Exits interface configuration mode for the basic rate interface configuration.
Step 5	Router(config)# dial-peer voice <i>number</i> pots	Enters dial-peer configuration mode, and selects the POTS port.
Step 6	Router(config-dial-peer)# destination-pattern 5551234	Sets the first dial-peer destination pattern to the corresponding LDN, such as 5551234.
Step 7	Router(config-dial-peer)# exit	Exits dial-peer configuration mode for the first destination-pattern configuration.
Step 8	Router(config)# dial-peer voice <i>number</i> pots	Enters dial-peer configuration mode, and selects the POTS port.
Step 9	Router(config-dial-peer)# destination-pattern <i>number</i>	Sets the second dial-peer destination pattern to the corresponding LDN.
Step 10	Router(config-dial-peer)# exit	Exits dial-peer configuration mode for the second destination-pattern configuration.

Monitoring and Maintaining Enhanced Voice Services

To monitor your enhanced voice services configuration, use the following command:

Command	Purpose
<code>router# show pots csm port</code>	Displays information about the current state of calls and the most recent event received by the call switching module (CSM) in the router.

Enhanced Voice Services Configuration Examples

This section contains the following examples:

- [Caller ID Example, page 864](#)
- [Call Blocking on Caller ID Example, page 864](#)
- [Local Call Waiting Example, page 864](#)
- [Nariwake Example, page 865](#)
- [I Number Example, page 865](#)
- [POTS Dial Example, page 865](#)
- [POTS Disconnect Example, page 865](#)

Caller ID Example

The following example shows how to configure a router to use the Caller ID feature.

```
dial-peer voice 1 pots
 caller-id
```

Call Blocking on Caller ID Example

The following example shows how to configure a router to use the Call Blocking on Caller ID feature. This example configures a router to block calls from a caller whose Caller ID number is 408-555-1234.

```
dial-peer voice 1 pots
 block-caller 4085551234
```

Local Call Waiting Example

The following example shows how to enable the Local Call Waiting feature on a router.

```
pots call-waiting local
```


Nariwake Example

The following two examples show how to configure a router to use the Nariwake feature.

The first example sets the ring cadence for registered callers to 2:

```
pots country jp
dial-peer voice 1 pots
  registered-caller ring 2
```

The second example adds the **destination-pattern not-provided** command, which is needed if you also subscribe to the I Number and dial-in services:

```
pots country jp
dial-peer voice 1 pots
  registered-caller ring 2
  destination-pattern not-provided
```

I Number Example

The following example shows how to configure a router to use the ISDN I Number feature so that several terminal devices can share one subscriber line. This example shows the configuration commands for two LDNs configured under interface BRI0:

```
interface bri0
  isdn i-number 1 5551234
  isdn i-number 2 5556789
  exit
dial-peer voice 1 pots
  destination-pattern 5551234
  exit
dial-peer voice 2 pots
  destination-pattern 5556789
  exit
```

POTS Dial Example

The following example shows how to use the POTS Dial feature.

The POTS dial command shown below dials the telephone number 408-555-1234:

```
test pots 1 dial 4085551234#
```

POTS Disconnect Example

The following example shows how to use the POTS Disconnect feature.

The POTS disconnect command shown below disconnects a telephone call from POTS port 1:

```
test pots 1 disconnect
```

