



## Cisco IOS Voice Commands: L

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This chapter contains commands to configure and maintain Cisco IOS voice applications. The commands are presented in alphabetical order. Some commands required for configuring voice may be found in other Cisco IOS command references. Use the command reference master index or search online to find these commands.

For detailed information on how to configure these applications and features, refer to the *Cisco IOS Voice Configuration Guide*.

## link (RLM)

To enable a Redundant Link Manager (RLM) link, use the **link** command in RLM configuration mode. To disable this function, use the **no link** form of this command.

**link** {hostname *name* | address *ip-address*} source *loopback-source* weight *factor*

**no link** {hostname *name* | address *ip-address*} source *loopback-source* weight *factor*

### Syntax Description

<b>hostname</b> <i>name</i>	RLM host name. If host name is used, RLM looks up the DNS server periodically for the host name configured until lookup is successful or the configuration is removed.
<b>address</b> <i>ip-address</i>	IP address of the link.
<b>source</b> <i>loopback-source</i>	Loopback interface source. We recommend that you use the loopback interface as the source, so that it is independent of the hardware condition. Also, the source interface should be different in every link to avoid falling back to the same routing path. If you intend to use the same routing path for the failover, a single link is sufficient to implement it.
<b>weight</b> <i>factor</i>	An arbitrary number that sets link preference. The higher the weighting factor number assigned, the higher priority it gets to become the active link. If all entries have the same weighting factor assigned, all links are treated equally. There is no preference among servers according to the assumption that only one server accepts the connection requests at any given time. Otherwise, preferences are extended across all servers.

### Command Default

Disabled

### Command Modes

RLM configuration

### Command History

Release	Modification
11.3(7)	This command was introduced.

### Usage Guidelines

This command is a preference-weighted multiple entries command. Within the same server, the link preference is specified in weighting.

### Examples

The following example specifies the RLM group (network access server), device name, and link addresses and their weighting preferences:

```
rlm group 1
server rl-server
link address 10.1.4.1 source Loopback1 weight 4
link address 10.1.4.2 source Loopback2 weight 3
```

# lmr duplex half

To have the voice path for a voice port operate in half duplex mode, use the **lmr duplex half** command in voice-port configuration mode. To return to the default, use the **no** form of this command.

**lmr duplex half**

**no lmr duplex half**

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**Syntax Description** This command has no arguments or keywords.

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**Command Default** Full duplex mode

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**Command Modes** Voice-port configuration

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<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	12.3(4)XD	This command was introduced.
	12.3(7)T	This command was integrated into Cisco IOS Release 12.3(7)T.

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**Usage Guidelines** When a radio system is receiving voice traffic from the radio, operating the voice path in half duplex mode prevents the speaker from being interrupted and prevents the voice stream from being fed back to itself.

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**Examples** In the following example, the voice path for voice port 1/0/0 on a Cisco 3700 series router is set to operate in half duplex mode:

```
voice-port 1/0/0
 lmr duplex half
```

# lmr e-lead

To define the use of the E-lead in signaling between the ear and mouth (E&M) voice port on the router and the attached Land Mobile Radio (LMR) device, use the **lmr e-lead** command in voice-port configuration mode. To return to the default use of the E-lead, use the **no** form of this command.

```
lmr e-lead {inactive | seize | voice}
```

```
no lmr e-lead {inactive | seize | voice}
```

Syntax Description		
	<b>inactive</b>	Specifies that the router never sends a seize signal on the E-lead to the LMR device. The router sends voice packets to LMR devices.
	<b>seize</b>	Specifies that for PLAR and multicast connections, the router sends a seize signal on the E-lead when the LMR port is connected and removes the seize signal from the E-lead when the LMR port is not involved in a VoIP connection. This is the default.  Specifies that for connection trunk connections, the router does not send a seize signal when the LMR port is connected. Instead, if the trunk connection is up, the M-lead signal from the far-end router is passed through as the E-lead on the near-end router. When the M-lead is dropped on the far-end router and the trunk connection is still up, the E-lead is dropped on the near-end router.
	<b>voice</b>	Specifies that the router sends a seize signal on the E-lead only when it receives voice packets from the network. When no packets are detected on the network, the seize signal is removed from the E-lead.

Command Default	
	seize

Command Modes	
	Voice-port configuration

Command History	Release	Modification
	12.3(4)XD	This command was introduced.
	12.3(7)T	This command was integrated into Cisco IOS Release 12.3(7)T.

**Usage Guidelines**

The **lmr e-lead** command has an effect on an ear and mouth (E&M) voice port only if the signal type for that port is LMR. The **lmr e-lead** command is effective only if the attached LMR device operates under E-lead control. Use the **lmr e-lead** command to configure the voice port when using private line, automatic ringdown (PLAR) connections. The E-lead connects to the Push To Talk (PTT) of the LMR system.

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**Examples**

In the following example, packet transmission from the E&M voice port on a Cisco 3745 to an attached LMR radio system is disabled:

```
lmr e-lead inactive
```

---

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>lmr m-lead</b>	Defines the use of the M-lead in signaling between the E&M voice port on the router and the attached LMR device.

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# lmr ip-vad

To configure the Land Mobile Radio (LMR) digital signal processor (DSP) on a Cisco 2800 series integrated services router to report a voice packet arrival event only if the packet contains voice energy, use the **lmr ip-vad** command in voice-port configuration mode. To disable this feature, use the **no** form of this command.

**lmr ip-vad**

**no lmr ip-vad**

**Syntax Description** This command has no arguments or keywords.

**Command Default** Any voice packet received from the IP network side triggers the DSP to report a voice packet arrival event to the Cisco IOS software.

**Command Modes** Voice-port configuration

Command History	Release	Modification
	12.4(6)T	This command was introduced.

**Usage Guidelines** The **lmr ip-vad** command applies to a voice interface card (VIC) in a Cisco 2800 series integrated services router if the VIC is one of the following types of ear and mouth (E&M) interfaces:

- VIC2-2E/M with signal type LMR
- ds0-group created with signal type e&m-lmr under an E1 or T1 controller

The **lmr ip-vad** command configures the LMR DSP to report voice activity detection (VAD) status change events (rather than voice packet arrival events) for a supported voice interface in a Cisco 2800 series integrated services router.

**Examples** The following example shows a sequence of commands that can be used to configure a voice port so that a voice packet arrival event is reported to the Cisco IOS software on the router only if the packet contains voice energy.

```
Router(config)# voice-port 1/1/0
Router(config-voiceport)# signal lmr
Router(config-voiceport)# lmr ip-vad
```

Related Commands	Command	Description
	<b>signal</b>	Configures the type of signaling to be used for a voice port.
	<b>voice-port</b>	Enters voice-port configuration mode.

# lmr led-on

To use the ear and mouth (E&M) LED to indicate the E-lead and M-lead status, use the **lmr led-on** command in voice-port configuration mode. To return to the default use of the E&M LED, use the **no** form of this command.

**lmr led-on**

**no lmr led-on**

## Syntax Description

This command has no arguments or keywords.

## Command Default

The E&M LED indicates voice port activity only.

## Command Modes

Voice-port configuration

## Command History

Release	Modification
12.3(4)XD	This command was introduced.
12.3(7)T	This command was integrated into Cisco IOS Release 12.3(7)T.

## Usage Guidelines

The **lmr e-lead** command is available on an E&M voice port only if the signal type for that port is Land Mobile Radio (LMR). This command enables the use of the E&M LED to indicate the E-lead and M-lead status as follows:

- Red—E-lead active
- Green—M-lead active
- Yellow—Both E-lead and M-lead active

The default behavior of the E&M LED is to light up when there is activity on the voice port and to turn off when there is no activity.

## Examples

The following example specifies that the E&M LED is used to indicate the E-lead and M-lead status:

```
voice-port 1/0/0
 lmr led-on
```

# lmr m-lead

To define the use of the M-lead in signaling between the ear and mouth (E&M) voice port on the router and the attached Land Mobile Radio (LMR) device, use the **lmr m-lead** command in voice-port configuration mode. To return to the default use of the M-lead, use the **no** form of this command.

```
lmr m-lead {inactive | audio-gate-in | dialin}
```

```
no lmr m-lead {inactive | audio-gate-in | dialin}
```

## Syntax Description

<b>inactive</b>	The router ignores signals sent by voice on the M-lead. The flow of voice packets is determined by voice activity detection (VAD). The router sends voice received from the LMR device. This is the default.
<b>audio-gate-in</b>	The router generates VoIP packets when a seize signal is detected on the M-lead. The router stops generating VoIP packets when the seize signal is removed from the M-lead.
<b>dialin</b>	When the LMR device is not involved in a VoIP connection, the first seize signal detected on the M-lead triggers the router to set up a VoIP connection. Once the connection is made, the router behaves as in the <b>audio-gate-in</b> option.

## Command Default

inactive

## Command Modes

Voice-port configuration

## Command History

Release	Modification
12.3(4)XD	This command was introduced.
12.3(7)T	This command was integrated into Cisco IOS Release 12.3(7)T.

## Usage Guidelines

The **lmr m-lead** command has an effect on an ear and mouth (E&M) voice port only if the signal type for that port is LMR. The **lmr e-lead** command is effective only if the attached LMR device operates under M-lead control. The M-lead corresponds to the Carrier Operated Relay (COR) of the LMR system, which indicates receive activity on the LMR system.

## Examples

In the following example, an LMR radio system attached to the E&M voice port on a Cisco 3745 is allowed to transmit audio by first raising the E-lead, then transmitting:

```
lmr m-lead dialin
```

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>lmr e-lead</b>	Defines the use of the E-lead in signaling between the E&M voice port on the router and the attached LMR device.

# load-balance

To configure load balancing, use the **load-balance** command in gatekeeper configuration mode. To disable load balancing, use the **no** form of this command.

**load-balance** [**endpoints** *max-endpoints*] [**calls** *max-calls*] [**cpu** *max-%cpu*]  
 [**memory** *max-%mem-used*]

**no load-balance** [**endpoints** *max-endpoints*] [**calls** *max-calls*] [**cpu** *max-%cpu*]  
 [**memory** *max-%mem-used*]

## Syntax Description

<b>endpoints</b> <i>max-endpoints</i>	(Optional) Maximum number of endpoints.
<b>calls</b> <i>max-calls</i>	(Optional) Maximum number of calls.
<b>cpu</b> <i>max-%cpu</i>	(Optional) Maximum percentage of CPU utilization.
<b>memory</b> <i>max-%mem-used</i>	(Optional) Maximum percentage of memory used.

## Command Default

Load balancing is performed by the gatekeeper.

## Command Modes

Gatekeeper configuration

## Command History

Release	Modification
12.1(2)XM	This command was introduced.
12.2(2)T	This command was integrated into Cisco IOS Release 12.2(2)T.
12.2(2)XB1	This command was implemented on the Cisco AS5850.

## Usage Guidelines

Load balancing occurs when one gatekeeper reaches the default or the configured load level. Upon reaching the load-level threshold, the gatekeeper begins sending alternate gatekeeper information in Registration, Admission, and Status (RAS) messages, and the gateways then attempt to migrate from the loaded gatekeeper to its least busy alternate. The move is permanent; endpoints are not actively moved back to the original gatekeeper if it stabilizes. However, they may return to that gatekeeper if the new gatekeeper reaches a load threshold and transfers them again. The gatekeepers share the load, but they may not have equal shares. The process of load balancing allows for more effective zone management.

## Examples

The following example configures load balancing:

```
load-balance endpoints 200 calls 100 cpu 75 memory 80
```

## Related Commands

Command	Description
<b>zone cluster local</b>	Configures alternate gatekeepers for each zone.

# local

To define the local domain, including the IP address and port that the border element (BE) should use for interacting with remote BEs, use the **local** command in Annex G configuration mode. To reset to the default, use the **no** form of this command.

**local ip** *ip-address* [**port** *local-port*]

**no local ip**

## Syntax Description

<b>ip</b> <i>ip-address</i>	IP address of the local border element.
<b>port</b> <i>local-port</i>	(Optional) Port number of the local border element, which is used for exchanging Annex G messages. Default is 2099.

## Command Default

Port number: 2099

## Command Modes

Annex G configuration

## Command History

Release	Modification
12.2(2)XA	This command was introduced.
12.2(4)T	This command was integrated into Cisco IOS Release 12.2(4)T. This command does not support the Cisco AS5300, Cisco AS5350, and Cisco AS5400 in this release.
12.2(2)XB1	This command was implemented on the Cisco AS5850.
12.2(11)T	This command was integrated into Cisco IOS Release 12.2(11)T.

## Usage Guidelines

The local IP address can be a virtual Hot Standby Routing Protocol (HSRP) address for high reliability and availability. You can configure multiple gatekeepers and BEs identically and use HSRP to designate a primary BE and other standby BEs. If the primary BE is down, a standby BE operates in its place.

## Examples

The following example sets the IP address and port that the BE should use. (Note that this example uses a nonstandard port number. If you do not want to use a nonstandard port number, use the default value of 2099.)

```
Router(config)# call-router h323-annexg be20
Router(config-annexg)# local ip 121.90.10.80 port 2010
```

## Related Commands

Command	Description
<b>call-router</b>	Enables the Annex G border element configuration commands.
<b>show call-router status</b>	Displays the Annex G BE status.

# localhost dns (global)

To define a local hostname used for locally generated gateway URLs, use the **localhost dns** command in global configuration mode. To disable the local hostname, use the **no** form of this command.

**localhost dns:***host-name-string*

**no localhost dns:***host-name-string*

## Syntax Description

:	Command delimiter.
<i>host-name-string</i>	Locally generated gateway URL.

## Command Default

No local hostnames used for locally generated gateway URLs are sent.

## Command Modes

Global configuration

## Command History

Release	Modification
12.4(2)T	This command was introduced.

## Usage Guidelines

Configuring the **localhost dns** command under the VoIP dial peer overrides the global **voice-class sip localhost** command.

## Examples

The following example defines a local hostname used for a locally generated gateway URL:

```
Router(config)# localhost dns:customer1.com
```

## Related Commands

Command	Description
<b>sip</b>	Enters SIP configuration mode.
<b>voice-class sip localhost</b>	Enters global configuration mode and specifies a local hostname.
<b>voice service voip</b>	Enters voice-service configuration mode and specifies a voice-encapsulation type.

# loopback (controller)

To set the loopback method for testing a T1 or E1 interface, use the **loopback** command in controller configuration mode. To reset to the default, use the **no** form of this command.

```
loopback { diagnostic | local { payload | line } | remote { v54 channel-group channel-number | iboc
| esf { payload | line } }
```

```
no loopback
```

## Syntax Description

<b>diagnostic</b>	Loops the outgoing transmit signal back to the receive signal.
<b>local</b>	Places the interface into local loopback mode.
<b>payload</b>	Places the interface into external loopback mode at the payload level.
<b>line</b>	Places the interface into external loopback mode at the line level.
<b>remote</b>	Keeps the local end of the connection in remote loopback mode.
<b>v54 channel-group</b>	Activates a V.54 channel-group loopback at the remote end. Available for both T1 and E1 facilities.
<i>channel-number</i>	Channel number for the V.54 channel-group loopback. Range is from 0 to 1.
<b>iboc</b>	Sends an inband bit-oriented code to the far end to cause it to go into line loopback.
<b>esf</b>	T1 or E1 frame type of Extended Super Frame (ESF). Only available under T1 or E1 controllers when ESF is configured on the controller. The following are keywords: <ul style="list-style-type: none"> <li><b>payload</b>—Activates remote payload loopback by sending Facility Data Link (FDL) code. FDL is a 4-kbps out-of-band signaling channel in ESF.</li> <li><b>line</b>—Activates remote line loopback by sending FDL code.</li> </ul>

## Command Default

No loopback is configured.

## Command Modes

Controller configuration

## Command History

Release	Modification
11.3(1)MA	This command was introduced as a controller configuration command for the Cisco MC3810.
12.0(5)T and 12.0(5)XK	The command was introduced as an ATM interface configuration command for the Cisco 2600 series and Cisco 3600 series.
12.0(5)XE	The command was introduced as an ATM interface configuration command for the Cisco 7200 series and Cisco 7500 series.
12.0(5)XK and 12.0(7)T	The command was introduced as a controller configuration command for the Cisco 2600 series and Cisco 3600 series.
12.1(1)T	The command was modified as a controller configuration command for the Cisco 2600 series.

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**Usage Guidelines**

You can use a loopback test on lines to detect and distinguish equipment malfunctions caused either by the line and channel service unit/digital service unit (CSU/DSU) or by the interface. If correct data transmission is not possible when an interface is in loopback mode, the interface is the source of the problem.

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**Examples**

The following example sets the diagnostic loopback method on controller T1 0/0:

```
controller t1 0/0
  loopback diagnostic
```

The following example sets the payload loopback method on controller E1 0/0:

```
controller e1 0/0
  loopback local payload
```

# loop-detect

To enable loop detection for T1, use the **loop-detect** command in controller configuration mode. To cancel loop detection, use the **no** form of this command.

**loop-detect**

**no loop-detect**

**Syntax Description** This command has no arguments or keywords.

**Command Default** Loop detection is disabled.

**Command Modes** Controller configuration

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	11.3(1)MA	This command was introduced on the Cisco MC3810.

**Usage Guidelines** This command applies to Voice over Frame Relay and Voice over ATM.

**Examples** The following example configures loop detection for controller T1 0:

```
controller t1 0
 loop-detect
```

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>loopback (interface)</b>	Diagnoses equipment malfunctions between an interface and a device.

# loss-plan

To specify the analog-to-digital gain offset for an analog Foreign Exchange Office (FXO) or Foreign Exchange Station (FXS) voice port, use the **loss-plan** command in voice-port configuration mode. To reset to the default, use the **no** form of this command.

**loss-plan** { **plan1** | **plan2** | **plan3** | **plan4** | **plan5** | **plan6** | **plan7** | **plan8** | **plan9** }

**no loss-plan**

## Syntax Description

<b>plan1</b>	FXO: A-D gain = 0 dB, D-A gain = 0 dB. FXS: A-D gain = -3 dB, D-A gain = -3 dB.
<b>plan2</b>	FXO: A-D gain = 3 dB, D-A gain = 0 dB. FXS: A-D gain = 0 dB, D-A gain = -3 dB.
<b>plan3</b>	FXO: A-D gain = -3 dB, D-A gain = 0 dB. FXS: Not applicable.
<b>plan4</b>	FXO: A-D gain = -3 dB, D-A gain = -3 dB. FXS: Not applicable.
<b>plan5</b>	FXO: Not applicable. FXS: A-D gain = -3 dB, D-A gain = -10 dB.
<b>plan6</b>	FXO: Not applicable. FXS: A-D gain = 0 dB, D-A gain = -7 dB.
<b>plan7</b>	FXO: A-D gain = 7 dB, D-A gain = 0 dB. FXS: A-D gain = 0 dB, D-A gain = -6 dB.
<b>plan8</b>	FXO: A-D gain = 5 dB, D-A gain = -2 dB. FXS: Not applicable.
<b>plan9</b>	FXO: A-D gain = 6 dB, D-A gain = 0 dB. FXS: Not applicable.

## Command Default

FXO: A-D gain = 0 dB, D-A gain = 0 dB (loss plan 1)  
FXS: A-D gain = -3 dB, D-A gain = -3 dB (loss plan 1)

## Command Modes

Voice-port configuration

## Command History

Release	Modification
11.3(1)MA	This command was introduced on the Cisco MC3810.
12.0(7)XK	The following additional signal level choices were added: plan 3, plan 4, plan 8, and plan 9.
12.1(2)T	This command was integrated into Cisco IOS Release 12.1(2)T.

**Usage Guidelines**

This command sets the analog signal level difference (offset) between the analog voice port and the digital signal processor (DSP). Each loss plan specifies a level offset in both directions—from the analog voice port to the DSP (A-D) and from the DSP to the analog voice port (D-A).

Use this command to obtain the required levels of analog voice signals to and from the DSP.

**Examples**

The following example configures FXO voice port 1/6 for a -3 dB offset from the voice port to the DSP and for a 0 dB offset from the DSP to the voice port:

```
voice-port 1/6
  loss-plan plan3
```

The following example configures FXS voice port 1/1 for a 0 dB offset from the voice port to the DSP and for a -7 dB offset from the DSP to the voice port:

```
voice-port 1/1
  loss-plan plan6
```

**Related Commands**

Command	Description
<b>impedance</b>	Specifies the terminating impedance of a voice port interface.
<b>input gain</b>	Specifies the gain applied by a voice port to the input signal from the PBX or other customer premises equipment.
<b>output attenuation</b>	Specifies the attenuation applied by a voice port to the output signal toward the PBX or other customer premises equipment.

# lrq forward-queries

To enable a gatekeeper to forward location request (LRQ) messages that contain E.164 addresses that match zone prefixes controlled by remote gatekeepers, use the **lrq forward-queries** command in gatekeeper configuration mode. To disable this function, use the **no** form of this command.

**lrq forward-queries**

**no lrq forward-queries**

**Syntax Description** This command has no arguments or keywords.

**Command Default** Disabled

**Command Modes** Gatekeeper configuration

## Command History

Release	Modification
12.0(3)T	This command was introduced on the following platforms: Cisco 2500 series, Cisco 3600 series, and Cisco MC3810.

## Usage Guidelines

LRQ forwarding is dependent on a Cisco nonstandard field that first appeared in Cisco IOS Release 12.0(3)T. This means that any LRQ message received from a non-Cisco gatekeeper or any gatekeeper running a Cisco IOS software image prior to Cisco IOS Release 12.0(3)T is not forwarded.

The routing of E.164-addressed calls is dependent on the configuration of zone prefix tables (for example, area code definitions) on each gatekeeper. Each gatekeeper is configured with a list of prefixes controlled by itself and by other remote gatekeepers. Calls are routed to the zone that manages the matching prefix. Thus, in the absence of a directory service for such prefix tables, you, the network administrator, may have to define extensive lists of prefixes on all the gatekeepers in your administrative domain.

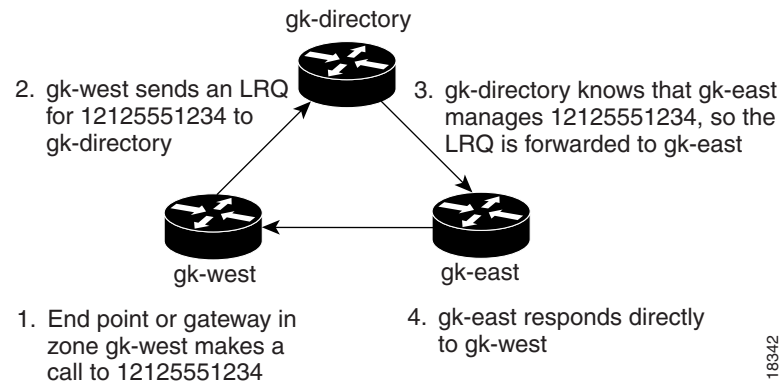
To simplify this task, you can select one of your gatekeepers as the “directory” gatekeeper and configure that gatekeeper with the complete list of prefixes and the **lrq forward-queries** command. You can then simply configure all the other gatekeepers with their own prefixes and the wildcard prefix “\*” for your directory gatekeeper.

This command affects only the forwarding of LRQ messages for E.164 addresses. LRQ messages for H.323-ID addresses are never forwarded.

**Examples**

The following example selects one gatekeeper as the directory gatekeeper. See [Figure 4](#).

**Figure 4 Example Scenario with Directory Gatekeeper and Two Remote Gatekeepers**

**Configuration on gk-directory**

On the directory gatekeeper called gk-directory, identify all the prefixes for all the gatekeepers in your administrative domain:

```
zone local gk-directory cisco.com
zone remote gk-west cisco.com 172.16.1.1
zone remote gk-east cisco.com 172.16.2.1

zone prefix gk-west 1408.....
zone prefix gk-west 1415.....
zone prefix gk-west 1213.....
zone prefix gk-west 1650.....

zone prefix gk-east 1212.....
zone prefix gk-east 1617.....

lrq forward-queries
```

**Configuration on gk-west**

On the gatekeeper called gk-west, configure all the locally managed prefixes for that gatekeeper:

```
zone local gk-west cisco.com
zone remote gk-directory cisco.com 172.16.2.3

zone prefix gk-west 1408.....
zone prefix gk-west 1415.....
zone prefix gk-west 1213.....
zone prefix gk-west 1650.....
zone prefix gk-directory *
```

**Configuration on gk-east**

On the gatekeeper called gk-east, configure all the locally managed prefixes for that gatekeeper:

```
zone local gk-east cisco.com
zone remote gk-directory cisco.com 172.16.2.3

zone prefix gk-east 1212.....
zone prefix gk-east 1617.....
zone prefix gk-directory *
```

When an endpoint or gateway in zone gk-west makes a call to 12125551234, gk-west sends an LRQ message for that E.164 address to gk-directory, which forwards the message to gk-east. Gatekeeper gk-east responds directly to gk-west.

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>lrq reject-unknown-prefix</b>	Enables the gatekeeper to reject all LRQ messages for zone prefixes that are not configured.

# lrq lrj immediate-advance

To enable the Cisco IOS gatekeeper to immediately send a sequential location request (LRQ) message to the next zone after it receives a location reject (LRJ) message from a gatekeeper in the current zone, use the **lrq lrj immediate-advance** command in gatekeeper configuration mode. To disable this function, use the **no** form of this command.

**lrq lrj immediate-advance**

**no lrq lrj immediate-advance**

**Syntax Description** This command has no arguments or keywords.

**Command Default** Disabled

**Command Modes** Gatekeeper configuration

Command History	Release	Modification
	12.2(4)T	This command was introduced. This command does not support the Cisco AS5300, Cisco AS5350, and Cisco AS5400 series in this release.

**Usage Guidelines** In a network in which LRQ messages are forwarded through multiple gatekeepers along a single path, a single LRQ message sent from a gatekeeper could solicit multiple LRJ and location confirmation (LCF) responses. If an LRJ response is received first, a potentially unnecessary LRQ message could be sent to the next zone, increasing traffic.

To avoid this problem, perform the following:

- Configure the zone prefix to send sequential LRQ messages rather than to use the **blast** option, using the **zone prefix** command.
- Configure the sequential timer on each gatekeeper along the path, using the **timer lrq seq delay** command.

**Examples** The following example enables the gatekeeper to immediately send a sequential LRQ message to the next zone after it receives an LRJ message from a gatekeeper in the current zone.

```
lrq lrj immediate-advance
```

Related Commands	Command	Description
	<b>timer lrq seq delay</b>	Defines the time interval between successive sequential LRQ messages.
	<b>timer lrq window</b>	Defines the time window during which the gatekeeper collects responses to one or more outstanding LRQ messages.
	<b>zone prefix</b>	Adds a prefix to the gatekeeper zone list.

# lrq reject-resource-low

To configure a gatekeeper to notify a sending gatekeeper on receipt of a location request (LRQ) message that no terminating endpoints are available, use the **lrq reject-resource-low** command in gatekeeper configuration mode. To disable this function, use the **no** form of this command.

**lrq reject-resource-low**

**no lrq reject-resource-low**

---

**Syntax Description** This command has no arguments or keywords.

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**Command Default** Disabled

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**Command Modes** Gatekeeper configuration

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<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	12.2(11)T	This command was introduced on the following platforms: Cisco 2500 series, Cisco 2600 series, Cisco 3600 series, Cisco 3700 series, Cisco 7200 series, and Cisco 7400 series.

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**Examples** The following example causes the gatekeeper to notify the sending gatekeeper on receipt of an LRQ message that no terminating endpoints are available:

```
Router(config)# gatekeeper
Router(config-gk)# lrq reject-resource-low
```

# lrq reject-unknown-circuit

To enable the gatekeeper to reject a location request (LRQ) message that contains an unknown destination circuit, use the **lrq reject-unknown-circuit** command in gatekeeper configuration mode. To disable the rejection, use the **no** form of this command.

**lrq reject-unknown-circuit**

**no lrq reject-unknown-circuit**

**Syntax Description** This command has no keywords or arguments.

**Command Default** Disabled

**Command Modes** Gatekeeper configuration

Command History	Release	Modification
	12.2(11)T	This command was introduced.

**Usage Guidelines** The gatekeeper checks the destination circuit field in each LRQ message. If the field contains a circuit unknown to the gatekeeper and this command is entered, the gatekeeper rejects the LRQ request. If this command is disabled, the gatekeeper tries to resolve the alias without considering the circuit.

**Examples** The following example causes the gatekeeper to reject unknown carriers in an LRQ request:

```
Router(config)# gatekeeper
Router(config-gk)# lrq reject-unknown-circuit
```

Related Commands	Command	Description
	<b>endpoint circuit-id h323id</b>	Assigns a circuit to a non-Cisco endpoint.
	<b>show gatekeeper endpoint circuits</b>	Displays the information of all registered endpoints for a gatekeeper.

# lrq reject-unknown-prefix

To enable the gatekeeper to reject all location request (LRQ) messages for zone prefixes that are not configured, use the **lrq reject-unknown-prefix** command in gatekeeper configuration mode. To reenble the gatekeeper to accept and process all incoming LRQ messages, use the **no** form of this command.

**lrq reject-unknown-prefix**

**no lrq reject-unknown-prefix**

**Syntax Description** This command has no arguments or keywords.

**Command Default** The gatekeeper accepts and processes all incoming LRQ messages.

**Command Modes** Gatekeeper configuration

Command History	Release	Modification
	11.3(6)NA2	This command was introduced on the Cisco 2500 series and Cisco 3600 series.
	12.0(3)T	This command was integrated into Cisco IOS Release 12.0(3)T.

**Usage Guidelines** Use this command to configure the gatekeeper to reject any incoming LRQ messages for a destination E.164 address that does not match any of the configured zone prefixes.

Whether or not you use this command, the following is true when the E.164 address matches a zone prefix:

- If the matching zone prefix is local (that is, controlled by this gatekeeper), the LRQ message is serviced.
- If the matching zone prefix is remote (that is, controlled by some other gatekeeper), the LRQ message is rejected.

If you do not use this command and the target address does not match any known local or remote prefix, the default behavior is to attempt to service the call using one of the local zones. If this default behavior is not suitable for your site, use this command on your router to force the gatekeeper to reject such requests.

**Examples** Consider the following gatekeeper configuration:

```
zone local gk408 cisco.com
zone local gk415 cisco.com
zone prefix gk408 1408.....
zone prefix gk415 1415.....
lrq reject-unknown-prefix
```

In this sample configuration, the gatekeeper is configured to manage two zones. One zone contains gateways with interfaces in the 408 area code, and the second zone contains gateways in the 415 area code. Then using the **zone prefix** command, the gatekeeper is configured with the appropriate prefixes so that calls to those area codes hop off in the optimal zone.

Now say some other zone has been erroneously configured to route calls to the 212 area code to this gatekeeper. When the LRQ message for a number in the 212 area code arrives at this gatekeeper, the gatekeeper fails to match the area code, and the message is rejected.

If this was your only site that had any gateways in it and you wanted your other sites to route all calls that require gateways to this gatekeeper, you can undo the **lrq reject-unknown-prefix command** by simply using the **no lrq reject-unknown-prefix command**. Now when the gatekeeper receives an LRQ message for the address 12125551234, it attempts to find an appropriate gateway in either one of the zones gk408 or gk415 to service the call.

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>lrq forward-queries</b>	Enables a gatekeeper to forward LRQ messages that contain E.164 addresses that match zone prefixes controlled by remote gatekeepers.

# lrq timeout blast window

To configure the timeout window for use when sending multiple location request (LRQ) messages (either sequentially or simultaneously), use the **lrq timeout blast window** command in gatekeeper configuration mode. To reset to the default, use the **no** form of this command.

**lrq timeout blast window** *seconds*

**no lrq timeout blast window**

<b>Syntax Description</b>	<i>seconds</i>	Duration of the window, in seconds. Range is from 1 to 10. Default is 6.
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<b>Command Default</b>	6 seconds
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<b>Command Modes</b>	Gatekeeper configuration
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<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	12.1(2)T	This command was introduced on the following platforms: Cisco 2500 series, Cisco 2600 series, Cisco 3600 series, Cisco 7200 series, and Cisco MC3810.

<b>Examples</b>	The following example sets the window to 3 seconds:  lrq timeout blast window 3
-----------------	---

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>gatekeeper gw-type-prefix</b>	Sets the gatekeepers responsible for each technology prefix.
	<b>zone prefix</b>	Adds a prefix to a gatekeeper's zone list.

# Irq timeout seq delay

To configure the delay for use when sending location request (LRQ) messages sequentially, use the **irq timeout seq delay** command in gatekeeper configuration mode. To reset to the default, use the **no** form of this command.

**irq timeout seq delay** *value*

**no irq timeout seq delay**

<b>Syntax Description</b>	<i>value</i>	Duration of the delay, in 100-millisecond units. Range is from 1 to 10. The default is 5 (500 ms or 0.5 seconds).
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<b>Command Default</b>	Five 100-millisecond units (500 ms or 0.5 seconds)
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<b>Command Modes</b>	Gatekeeper configuration
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<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	12.1(2)T	This command was introduced on the following platforms: Cisco 2500 series, Cisco 2600 series, Cisco 3600 series, Cisco 7200 series, and Cisco MC3810.

**Examples** The following example sets the window to 300 milliseconds:

```
irq timeout seq delay 3
```

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>gatekeeper gw-type-prefix</b>	Sets the gatekeepers responsible for each technology prefix.
	<b>zone prefix</b>	Adds a prefix to a gatekeeper's zone list.