Z

zone access

To configure the accessibility of your local zone, use the **zone access** command in gatekeeper configuration mode. To remove any accessibility configurations, use the **no** form of this command.

zone access *local-zone-name* {**default** | **remote-zone** *remote-zone-name*} {**direct** | **proxied**}
no zone access *local-zone-name* **remote-zone** *remote-zone-name*

Syntax Description

local -zone-name	Name of local zone (synonymous with local gatekeeper).
default	Use with the **direct** or **proxied** keyword to define the mode of behavior for all remote zones that have not been specially named using the **remote-zone** *remote-zone-name* keyword and argument combination.
remote -zone *remote-zone-name*	Name of remote zone (synonymous with remote gatekeeper) for which a special mode of behavior is defined.
direct	Configures direct calls (without use of proxies) between endpoints. The local zone (or gatekeeper) offers the local endpoint IP address instead of the IP address of a local proxy.
proxied	Configures calls using proxies between endpoints. The local zone (or gatekeeper) offers the IP address of a local proxy instead of the local endpoint address.

Command Default

The local zone allows proxied access for all remote zones.

Command Modes

Gatekeeper configuration (config-gk)

Command History

Release	Modification
11.3(2)NA	This command was introduced on the Cisco 2500 series and Cisco 3600 series.

Usage Guidelines

By default, a gatekeeper offers a local proxy IP address when queried by a remote gatekeeper about a target local endpoint. This is considered proxied access. By using the **zone access** command, you can configure the local gatekeeper to offer the local endpoint address instead of the local proxy address. This is considered direct access.

Note The **zone access** command, configured on your local gatekeeper, affects only the use of proxies for incoming calls (that is, it does not affect the use of local proxies for outbound calls). When originating a call, a gatekeeper uses a proxy only if the remote gatekeeper offers a proxy at the remote end. A call between two endpoints in the same zone is always a direct (nonproxied) call.

You can define the accessibility behavior of a local zone relative to certain remote zones using the **remote-zone** *remote-zone-name* keyword and argument combination with the **direct** or **proxied** keyword. You can define the default behavior of a local zone relative to all other remote zones using the **default** keyword with the

direct or **proxied** keywords. To remove an explicitly named remote zone so that it is governed by the default-behavior rule, use the **no zone access** command.

Examples

The following example allows direct access to the local zone eng.xyz.com from remote zones within xyz corporation. All other remote locations will have proxied access to eng.xzy.com.

```
zone local eng.xyz.com xyz.com
zone access eng.xyz.com remote-zone mfg.xyz.com direct
zone access eng.xyz.com remote-zone mktg.xyz.com direct
zone access eng.xyz.com remote-zone sales.xyz.com direct
zone access eng.xyz.com default proxied
```

The following example supposes that only local gatekeepers within xyz.com have direct access to each other because your corporation has firewalls or you do not advertise your gatekeepers externally. You have excellent Quality of Service (QoS) within your corporate network, except for a couple of foreign offices. In this case, use proxies with the foreign offices (in Milan and Tokyo) and nowhere else.

```
zone local sanjose.xyz.com xyz.com
zone access sanjose.xyz.com default direct
zone access sanjose.xyz.com remote-zone milan.xyz.com proxied
zone access sanjose.xyz.com remote-zone tokyo.xyz.com proxied
```

Related Commands

Command	Description
show proxy h323 calls	Displays a list of each active call on the proxy.
zone local	Specifies a zone controlled by a gatekeeper.

zone bw

To set the maximum bandwidth allowed in a gatekeeper zone at any one time, use the **zone bw** command in gatekeeper configuration mode. To remove the maximum bandwidth setting and make the bandwidth unlimited, use the **no** form of this command.

zone bw *gatekeeper-name max-bandwidth*
no zone bw *gatekeeper-name max-bandwidth*

Syntax Description

gatekeeper -name	Name of the gatekeeper that controls the zone.
max -bandwidth	Maximum bidirectional bandwidth, in kbps, allowed in the zone at any one time.

Command Default

Bandwidth is unlimited.

Command Modes

Gatekeeper configuration (config-gk)

Command History

Release	Modification
11.3(2)NA	This command was introduced on Cisco 2500 series and Cisco 3600 series.

Examples

The following example sets the maximum bandwidth to 1000 kbps for zone gk1:

```
zone bw gk1
1000
```

Related Commands

Command	Description
show proxy h323 calls	Displays a list of each active call on the proxy.

zone circuit-id

To associate a remote zone with a circuit, use the **zone circuit-id** command in gatekeeper configuration mode. To delete the circuit ID for a zone, use the **no** form of this command.

zone circuit-id *remote-zone-name circuit-id* [**override-source-circuitid**]
no zone circuit-id *remote-zone-name circuit-id*

Syntax Description

remote -zone-name	Name of the remote zone.
circuit -id	ID of the circuit to be associated with the remote zone.
override-source-circuitid	(Optional) Specifies whether the source circuit ID of the incoming location request (LRQ) message needs to be overridden with this keyword.

Command Default

The override flag is disabled and the incoming source circuit ID is used if present.

Command Modes

Gatekeeper configuration (config-gk)

Command History

Release	Modification
12.2(11)T	This command was introduced.
12.3(14)T	The **override-source-circuitid**keyword was added.

Usage Guidelines

VoIP calls with an LRQ message that come to a gatekeeper from a non-cisco gatekeeper in a remote zone (for example, from an Internet telephony service provider [ITSP]), the LRQ message does not include a source circuit identifier. This command allows the gatekeeper to assign a circuit identifier to the zone and an IP address of the call origination. If the source circuit ID is already present then the configured value will not be used. To enforce the usage of configured source circuit ID, even if the incoming LRQ has a value, configure the **override-source-circuitid** keyword. The Gatekeeper Transaction Message Protocol (GKTMP) server application uses this data to determine a route for the call.

Examples

The following example configures the remote zone GKout1 with a circuit ID CarrierA:

```
Router(config)# gatekeeper
Router(config-gk)# zone circuit-id GKout1 CarrierA
```

The following example configures the remote zone GKout2 with a circuit ID CarrierB and overrides the incoming LRQ source circuit-id value:

```
Router(config)# gatekeeper
Router(config-gk)# zone circuit-id GKout2 CarrierB override-source-circuitid
```

Related Commands

Command	Description
endpoint circuit-id h323id	Assigns a circuit to a non-Cisco endpoint.

Command	Description
show gatekeeper circuits	Displays circuit information on the gatekeeper.
show gatekeeper endpoint circuits	Displays information for all registered endpoints and carriers for the gatekeeper.

zone cluster local

To define a local grouping of gatekeepers, including the gatekeeper that you are configuring, use the **zone cluster local**command in gatekeeper configuration mode. To disable the local grouping of gatekeepers, use the **no** form of this command.

zone cluster local *cluster-name local-zone-name*
no zone cluster local

Syntax Description

cluster -name	Cluster name.
local -zone-name	Local zone name.

Command Default

No default behavior or values

Command Modes

Gatekeeper configuration (config-gk)

Command History

Release	Modification
12.1(5)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 Cisco AS5850.

Usage Guidelines

Use this command to define a local cluster of gatekeepers that are alternates of each other. Each of these gatekeepers must be configured in a compatible manner for the cluster to work effectively.

Examples

The following example defines a local grouping of gatekeepers named EuropeCluster in the ParisGK time zone:

```
zone cluster local EuropeCluster ParisGK
```

Related Commands

Command	Description
element	Defines component elements of local or remote clusters.
zone cluster remote	Defines a remote grouping of gatekeepers, including the gatekeeper that you are configuring.

zone cluster remote

To define a remote grouping of gatekeepers, including the gatekeeper that you are configuring, use the **zone cluster remote command in**gatekeeper configuration mode. To disable the remote grouping of gatekeepers, use the **no** form of this command.

{**zone cluster remote** *cluster name* [**cost** *cost-value* [**priority** *priority-value*]] [**foreign-domain**] [**invia** *inbound gatekeeper*] | [**outvia** *outbound gatekeeper*]}
no zone cluster remote

Syntax Description

cluster name	Cluster name.
cost	(Optional) Cost.
cost -value	(Optional) Cost value. Range is from 1 to 100. The default is L50.
priority	(Optional) Priority.
priority -value	(Optional) Priority value. Range is from 1 to 100. The default is 50.
foreign -domain	(Optional) Cluster is in a different administrative domain.
invia	Specifies gatekeeper for calls entering this zone.
inbound gatekeeper	Name of gatekeeper.
outvia	Specifies gatekeeper for calls leaving this zone.
outbound gatekeeper	Name of gatekeeper.

Command Default

No default behavior or values

Command Modes

Gatekeeper configuration (config-gk)

Command History

Release	Modification
12.1(5)XM	This command was introduced.
12.2(2)T	This command was integrated into Cisco IOS Release 12.2(2)T.
12.2(2)XA	The **foreign-domain** keyword was added.
12.2(4)T	This command was integrated into Cisco IOS Release 12.2(4)T. Support for the Cisco AS5300, Cisco AS5350, and Cisco AS5400 is not included in this release.
12.2(2)XB1	This command was implemented on Cisco AS5850.
12.2(13)T3	The **invia** and **outvia** keywords were added.

Usage Guidelines

Use this command to define a set of remote gatekeepers that act as alternates to each other and that form a local cluster. This command causes the gatekeeper to optimize these remote gatekeepers by round-robin sending of Location Request (LRQ) messages.

Examples

The following example shows how to define a remote grouping of gatekeepers:

```
zone cluster remote AsiaCluster cost 70 priority 10
```

Related Commands

Command	Description
element	Defines component elements of local or remote clusters.
zone cluster local	Defines a local grouping of gatekeepers, including the gatekeeper that you are configuring.
zone local	Specifies a zone controlled by a gatekeeper.

zone qos

To configure the Differentiated Services Code Point (DSCP) value for a specific zone or a common DSCP value for all zones in Quality of Service (QoS) configurations on a Cisco router, use the **zone qos**command in gatekeeper configuration mode. To remove the DSCP configuration, use the **no** form of this command.

zone qos {*gatekeeper-name* | **global**} **dscp** *dscp-value*
no zone qos {*gatekeeper-name* | **global**} **dscp dscp-value**

Syntax Description

gatekeeper-name	The gatekeeper name to be configured.
global	Configures the DSCP value globally.
dscp	Specifies the DSCP to be configured.
dscp-value	The predefined DSCP keyword or its equivalent numeric value. Refer to the table below for more details.

Command Default

This command is disabled by default.

Command Modes

Gatekeeper configuration (conf-gk)

Command History

Release	Modification
15.0(1)M	This command was introduced.

Usage Guidelines

To configure a common DSCP value for all local and remote zones, use the **global** keyword and then specify the **dscp** keyword and its value. To change a globally configured DSCP value for a zone-specific DSCP value, the globally configured value should be removed first using the **no** form of the command. If not, a warning message will be displayed. Use the gatekeeper name and the **dscp** keyword with the specific value to configure a zone-based DSCP value.

DSCP can be configured using the predefined DSCP keywords or its equivalent numeric value. For example, to configure the DSCP value of a zone, the **cs1** keyword can be replaced with the numeric value 8. However, the **show gatekeeper zone status** output displays the configured DSCP as cs1. The table below provides the predefined DSCP keywords and their equivalent numeric values. The hexadecimal value is the number that is displayed in the QOS field of the IP header.

Table 1: Predefined DSCP Keywords and Numeric Values

Keyword	Numeric Value	Hexadecimal Value
default	0	0x00
cs1	8	0x20
af11	10	0x28
af12	12	0X30

Keyword	Numeric Value	Hexadecimal Value
af13	14	0x38
cs2	16	0x40
af21	18	0x48
af22	20	0x50
af23	22	0x58
cs3	24	0x60
af31	26	0x68
af32	28	0x70
af33	30	0x78
cs4	32	0x80
af41	34	0x88
af42	36	0x90
af43	38	0x98
cs5	40	0xA0
ef	46	0xB8
cs6	48	0xC0
cs7	56	0xE0

Examples

The following example shows how to configure the DSCP value for a specific zone using the **zone qos** *gatekeeper-name* **dscp** *dscp-value*command:

```
Router(config)# gatekeeper
Router(conf-gk)# zone qos GK-08 dscp cs3
```

The following example shows how to configure the global DSCP value using the **zone qos global dscp** *dscp-value*command:

```
Router(config)# gatekeeper
Router(conf-gk)# zone qos global dscp af11
```

Related Commands

Command	Description
show gatekeeper zone status	Displays the status of the zones related to the gatekeeper.

zone local

To specify a zone controlled by a gatekeeper, use the **zone local** command in gatekeeper configuration mode. To remove a zone controlled by a gatekeeper, use the **no** form of this command.

zone local *gatekeeper-name domain-name* [*ras-IP-address*] [**invia** *inbound gatekeeper* | **outvia** *outbound gatekeeper* [**enable-intrazone**]]
no zone local *gatekeeper-name domain-name* [**invia** *inbound gatekeeper* | **outvia** *outbound gatekeeper* [**enable-intrazone**]]

Syntax Description

gatekeeper-name	Gatekeeper name or zone name. This is usually the fully domain-qualified host name of the gatekeeper. For example, if the *domain-name* is cisco.com, the *gatekeeper-name* might be gk1.cisco.com. However, if the gatekeeper is controlling multiple zones, the *gatekeeper-name* for each zone should be some unique mnemonic string.
domain-name	The domain name served by this gatekeeper.
ras-IP-address	(Optional) IP address of one of the interfaces on the gatekeeper. When the gatekeeper responds to gatekeeper discovery messages, it signals the endpoint or gateway to use this address in future communications. **Note** Setting this address for one local zone makes it the address used for all local zones.
invia	Specifies gatekeeper for calls entering this zone.
inbound gatekeeper	Name of gatekeeper.
outvia	Specifies gatekeeper for calls leaving this zone.
outbound gatekeeper	Name of gatekeeper.
enable-intrazone	Forces all intrazone calls to use the via gatekeeper.

Command Default

No local zone is defined.

Note The gatekeeper cannot operate without at least one local zone definition. Without local zones, the gatekeeper goes to an inactive state when the **no shutdown** command is issued.

Command Modes

Gatekeeper configuration (config-gk)

Command History

Release	Modification
11.3(2)NA	This command was introduced on Cisco 2500 and Cisco 3600 series routers.
12.2(11)T	This command was implemented on the Cisco MC3810 and Cisco 7200 series.

Release	Modification
12.3(4)T	The **invia**, **outvia**, and **enable-intrazone** keywords were added.

Usage Guidelines

Multiple local zones can be defined. The gatekeeper manages all configured local zones. Intrazone and interzone behavior remains the same (zones are controlled by the same or different gatekeepers).

Only one *ras-IP-address* argument can be defined for all local zones. You cannot configure each zone to use a different RAS IP address. If you define this in the first zone definition, you can omit it for all subsequent zones, which automatically pick up this address. If you set it in a subsequent **zone local** command, it changes the RAS address of all previously configured local zones as well. Once defined, you can change it by reissuing any **zone local** command with a different *ras-IP-address* argument.

If the *ras-IP-address* argument is a Hot Standby Router Protocol (HSRP) virtual address, it automatically puts the gatekeeper into HSRP mode. In this mode, the gatekeeper assumes STANDBY or ACTIVE status according to whether the HSRP interface is on STANDBY or ACTIVE status.

You cannot remove a local zone if there are endpoints or gateways registered in it. To remove the local zone, shut down the gatekeeper first, which forces unregistration.

Multiple zones are controlled by multiple logical gatekeepers on the same Cisco IOS platform.

The maximum number of local zones defined in a gatekeeper should not exceed 100.

This command can also be used to change the IP address used by the gatekeeper.

Examples

The following example creates a zone controlled by a gatekeeper in the domain called "cisco.com":

```
Router(config)# gatekeeper
Router(config-gk)# zone local easterngk.cisco.com cisco.com
```

Related Commands

Command	Description
show proxy h323 calls	Displays a list of each active call on the proxy.
zone subnet	Specifies a zone controlled by a gatekeeper.

zone prefix

To add a prefix to the gatekeeper zone list, use the **zone prefix** command in gatekeeper configuration mode. To remove knowledge of a zone prefix, use the **no** form of this command with the gatekeeper name and prefix. To remove the priority assignment for a specific gateway, use the **no** form of this command with the **gw-priority** option.

zone prefix*gatekeeper-name e164 prefix*[**blast** | **sequence**] {**gw-priority***priority-gw-alias*[*gw-alias..*]}
zone prefix*gatekeeper-name e164 prefix*[**blast** | **sequence**] {**gw-priority***priority-gw-alias*[*gw-alias..*]}

Syntax Description

gatekeeper -name	Name of a local or remote gatekeeper, which must have been defined by using the **zone local** or **zone remote** command.
e164 -prefix	E.164 prefix in standard form followed by dots (.). Each dot represents a number in the E.164 address. For example, 212..... is matched by 212 and any seven numbers. **Note** Although a dot representing each digit in an E.164 address is the preferred configuration method, you can also enter an asterisk (*) to match any number of digits.
blast	(Optional) If you list multiple hopoffs, this indicates that the LRQs should be sent simultaneously to the gatekeepers based on the order in which they were listed. The default is **seq**.
seq	(Optional) If you list multiple hopoffs, this indicates that the LRQs should be sent sequentially to the gatekeepers based on the order in which they were listed. The default is **seq**.
gw -priority *pri-0-to-10 gw-alias*	(Optional) Defines how the gatekeeper selects gateways in its local zone for calls to numbers beginning with prefix *e164-prefix*. Do not use this option to set priority levels for a prefix assigned to a remote gatekeeper. Range is from 0 to 10, where 0 prevents the gatekeeper from using the gateway *gw-alias* for that prefix and 10 places the highest priority on gateway *gw-alias*. The default is 5. To assign the same priority value for one prefix to multiple gateways, list all the gateway names after the *pri-0-to-10*value. *gw-alias* name is the H.323 ID of a gateway that is registered or will register with the gatekeeper. This name is set on the gateway with the **h323-gateway voip h.323-id** command.

Command Default

No knowledge of the gatekeeper zone prefix or the prefix of any other zone is defined. Gateway priority is 5.

Command Modes

Gatekeeper configuration (config-gk)

Command History

Release	Modification
11.3(6)Q	This command was introduced.

Release	Modification
11.3(7)NA	This command was modified for H.323 Version 1.
12.0(5)T	The display format was modified for H.323 Version 2.
12.1(5)XM	The command was implemented on Cisco AS5350 and Cisco AS5400.
12.2(4)T	This command was integrated into Cisco IOS Release 12.2(4)T. Support for the Cisco AS5300, Cisco AS5350, and Cisco AS5400 is not included in this release.
12.2(2)XB1	This command was implemented on the Cisco AS5850.
12.2(8)T	Support for the Cisco AS5300, Cisco AS5350, Cisco AS5400, and Cisco AS5850 is not included in this release.
12.2(11)T	This command was integrated into Cisco IOS Release 12.2(11)T and was implemented on the following platforms: Cisco 2600 series, Cisco 3600 series, Cisco 3700 series, Cisco 7200 series, and Cisco MC3810. This command is supported on the Cisco AS5300, Cisco AS5350, Cisco AS5400, and Cisco AS5850 in this release.

Usage Guidelines

A gatekeeper can handle more than one zone prefix, but a zone prefix cannot be shared by more than one gatekeeper. If you have defined a zone prefix as being handled by a gatekeeper and now define it as being handled by a second gatekeeper, the second assignment cancels the first.

If you need a gatekeeper to handle more than one prefix, but for cost reasons you want to be able to group its gateways by prefix usage, there are two ways to do it.

The first method is simpler, has less overhead, and is recommended if your gateways can be divided into distinct groups, in which each group is to be used for a different set of prefixes. For instance, if a group of gateways is used for calling area codes 408 and 650, and another group is used for calling area code 415, you can use this method. In this case, you define a local zone for each set of prefixes and have the group of gateways to be used for that set of prefixes register with that specific local zone. Do not define any gateway priorities. All gateways in each local zone are treated equally in the selection process.

However, if your gateways cannot be cleanly divided into nonintersecting groups (for instance, if one gateway is used for calls to 408 and 415 and another gateway is used for calls to 415 and 650), you can put all these gateways in the same local zone and use the **gw-priority** option to define which gateways will be used for which prefixes.

When choosing a gateway, the gatekeeper first looks for the longest zone prefix match; then it uses the priority and the gateway status to select from the gateways.

If all gateways are available, the gatekeeper chooses the highest-priority gateway. If all the highest-priority gateways are busy (see the gateway **resource threshold** command), a lower-priority gateway is selected.

Note The **zone prefix** command matches a prefix to a gateway. It does not register the gateway. The gateway must register with the gatekeeper before calls can be completed through that gateway.

Examples

The following example shows how you can define multiple local zones for separating your gateways:

```
Router(config-gk)# zone local gk408or650 xyz.com
Router(config-gk)# zone local gk415 xyz.com
Router(config-gk)# zone prefix gk408or650 408.......Router(config-gk)# zone prefix
gk408or650 650.......Router(config-gk)# zone prefix gk415 415.......
```

Now you need to configure all the gateways to be used for area codes 408 or 650 to register with gk408or650 and all gateways to be used for area code 415 to register with gk415. On Cisco voice gateways, you configure the gateways to register with the appropriate gatekeepers by using the **h323 voip id** command.

The following example shows how you can put all your gateways in the same zone but use the **gw-priority** keyword to determine which gateways are used for calling different area codes:

```
Router(config-gk)# zone local localgk xyz.com
Router(config-gk)# zone prefix localgk 408.......
Router(config-gk)# zone prefix localgk 415....... gw-priority 10 gw1 gw2
Router(config-gk)# zone prefix localgk 650....... gw-priority 0 gw1
```

The commands shown accomplish the following tasks:

- Domain xyz.com is assigned to gatekeeper localgk.
- Prefix 408..... is assigned to gatekeeper localgk, and no gateway priorities are defined for it; therefore, all gateways registering to localgk can be used equally for calls to the 408 area code. No special gateway lists are built for the 408..... prefix; selection is made from the primary list for the zone.
- Prefix 415..... is added to gatekeeper localgk, and priority 10 is assigned to gateways gw1 and gw2.
- Prefix 650..... is added to gatekeeper localgk, and priority 0 is assigned to gateway gw1.

A priority 0 is assigned to gateway gw1 to exclude it from the gateway pool for prefix 650. When gateway gw2 registers with gatekeeper localgk, it is added to the gateway pool for each prefix as follows:

- For gateway pool for 415, gateway gw2 is set to priority 10.
- For gateway pool for 650, gateway gw2 is set to priority 5.

The following example changes gateway gw2 from priority 10 for zone 415..... to the default priority 5:

```
Router(config)# gatekeeper
Router(config-gk)# no zone prefix localgk 415....... gw-priority 10 gw2
```

The following example changes both gateways gw1 and gw2 from priority 10 for zone 415..... to the default priority 5:

```
Router(config)# gatekeeper
Router(config-gk)# no zone prefix localgk 415....... gw-priority 10 gw1 gw2
```

In this example, the prefix 415..... remains assigned to gatekeeper localgk. All gateways that do not specify a priority level for this prefix are assigned a default priority of 5. The following example removes the prefix and all associated gateways and priorities from this gatekeeper:

```
Router(config)# gatekeeper
Router(config-gk)# no zone prefix localgk 415.......
```

Related Commands

Command	Description
register	Configures a gateway to register or deregister a fully qualified dial-peer E.164 address with a gatekeeper.
resource threshold	Configures a gateway to report H.323 resource availability to the gatekeeper of the gateway.
show call resource voice threshold	Displays the threshold configuration settings and status for an H.323 gateway.
show gateway	Displays the current gateway status.
zone local	Specifies a zone controlled by a gatekeeper.
zone remote	Statically specifies a remote zone if DNS is unavailable or undesirable.

zone remote

To statically specify a remote zone if domain name service (DNS) is unavailable or undesirable, use the **zone remote**command in gatekeeper configuration mode. To remove the remote zone, use the **no** form of this command.

{**zone remote** *other-gatekeeper-name other-domain-name other-gatekeeper-ip-address* [*port-number*] [**cost** *cost-value* [**priority** *priority-value*]] [**foreign-domain**] [**invia** *inbound gatekeeper*] | [**outvia** *outbound gatekeeper*]}
{**no zone remote** *other-gatekeeper-name other-domain-name other-gatekeeper-ip-address* [*port-number*] [**cost** *cost-value* [**priority** *priority-value*]] [**foreign-domain**] [**invia** *inbound gatekeeper*] | [**outvia** *outbound gatekeeper*]}

Syntax Description

other -gatekeeper-name	Name of the remote gatekeeper.
other -domain-name	Domain name of the remote gatekeeper.
other -gatekeeper-ip-address	IP address of the remote gatekeeper.
port-number	(Optional) RAS signaling port number for the remote zone. Range is from 1 to 65535. If the value is not set, the default is the well-known RAS port number 1719.
cost *cost -value*	(Optional) Cost of the zone. Range is from 1 to 100. The default is 50.
priority *priority-value*	(Optional) Priority of the zone. Range is from 1 to 100. The default is 50.
foreign -domain	(Optional) Cluster is in a different administrative domain.
invia	Specifies gatekeeper for calls entering this zone.
inbound gatekeeper	Name of gatekeeper.
outvia	Specifies gatekeeper for calls leaving this zone.
outbound gatekeeper	Name of gatekeeper.

Command Default

No remote zone is defined. DNS will locate the remote zone. Default RAS port is 1719. Cost value is 50. Priority value is 50.

Command Modes

Gatekeeper configuration (config-gk)

Command History

Release	Modification
11.3(2)NA	This command was introduced on Cisco 2500 and Cisco 3600 series routers.
12.0(3)T	This command was integrated into Cisco IOS Release 12.0(3)T.
12.1(5)XM	The **cost** and **priority** keywords were added.

Release	Modification
12.2(2)T	This command was integrated into Cisco IOS Release 12.2(2)T.
12.2(2)XA	The **foreign-domain** keyword was added.
12.2(4)T	The command was integrated into Cisco IOS Release 12.2(4)T. Support for the Cisco AS5300, Cisco AS5350, and Cisco AS5400 is not included in this release.
12.2(2)XB1	This command was implemented on Cisco AS5850 universal gateways.
12.2(8)T	Support for the Cisco AS5300, Cisco AS5350, Cisco AS5400, and Cisco AS5850 is not included in this release.
12.2(11)T	This command was integrated into Cisco IOS Release 12.2(11)T and was implemented on the Cisco 7200 series. This command is supported on the Cisco AS5300, Cisco AS5350, Cisco AS5400, and Cisco AS5850 in this release.
12.2(13)T3	The **invia** and **outvia** keywords were added.

Usage Guidelines

Not all gatekeepers have to be in the DNS. For those that are not, use the **zone remote** command so that the local gatekeeper knows how to access them. In addition, you may wish to improve call response time slightly for frequently accessed zones. If the **zone remote** command is configured for a particular zone, you do not need to make a DNS lookup transaction.

The maximum number of zones defined on a gatekeeper varies depending on the mode or the call model or both. For example, a directory gatekeeper may be in the mode of being responsible for forwarding Location Request (LRQ) messages and not handling any local registrations and calls; the call model might be E.164 addressed calls instead of H.323-ID addressed calls.

For a directory gatekeeper that does not handle local registrations and calls, the maximum remote zones defined should not exceed 10,000; an additional 4 MB of memory is required to store this maximum number of remote zones.

For a gatekeeper that handles local registrations and only E.164 addressed calls, the number of remote zones defined should not exceed 2000.

For a gatekeeper that handles H.323-ID calls, the number of remote zones defined should not exceed 200.

When there are several remote zones configured, they can be ranked by cost and priority value. A zone with a lower cost value and a higher priority value is given preference over others.

Examples

The following example configures the local gatekeeper to reach targets of the form *xxx*.cisco.com by sending queries to the gatekeeper named "sj3.cisco.com" at IP address 10.1.1.12.

```
Router(config)# gatekeeper
Router(config-gk)# zone remote sj3.cisco.com cisco.com 10.1.1.12
```

The following example shows how to configure the cost and priority for the gatekeeper "GK10" that serves zone 1.

```
Router(config)# gatekeeper
Router(config-gk)#  zone remote GK10 Zone1 209.165.200.224 cost 20 priority 5
```

Related Commands

Command	Description
show proxy h323 calls	Lists each active call on the proxy.
zone local	Specifies a zone controlled by a gatekeeper.

zone subnet

To configure a gatekeeper to accept discovery and registration messages sent by endpoints in designated subnets, use the **zone subnet**command in gatekeeper configuration mode. To disable the gatekeeper from acknowledging discovery and registration messages from subnets or to remove subnets entirely, use the **no** form of this command.

zone subnet *local-gatekeeper-name* {**default** | *subnet-address* {*/bits-in-maskmask-address*}} **enable**
no zone subnet *local-gatekeeper-name* {**default** | *subnet-address* {*/bits-in-maskmask-address*}} **enable**

Syntax Description

local -gatekeeper-name	Name of the local gatekeeper.
default	Applies to all other subnets that are not specifically defined by the **zone subnet** command.
subnet -address	Address of the subnet being defined.
/ *bits -in-mask*	Number of bits of the mask to be applied to the subnet address.
mask -address	Mask (in dotted string format) to be applied to the subnet address.
enable	Gatekeeper accepts discovery and registration from the specified subnets.

Command Default

The local gatekeeper accepts discovery and registration requests from all subnets. If the request specifies a gatekeeper name, it must match the local gatekeeper name or the request is not accepted.

Command Modes

Gatekeeper configuration (config-gk)

Command History

Release	Modification
11.3(2)NA	This command was introduced on 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

You can use the **zone subnet** command more than once to create a list of subnets controlled by a gatekeeper. The subnet masks do not have to match actual subnets in use at your site. For example, to specify a particular endpoint, you can supply its address with a 32-bit netmask.

Examples

The following example starts by disabling the gatekeeper, gk1.cisco.com, from accepting discovery and registration messages from all subnets. Next, gk1.cisco.com is configured to accept discovery and registration messages from all H.323 nodes on the subnet 172.21.127.0.

In addition, gk1.cisco.com is configured to accept discovery and registration messages from a particular endpoint with the IP address 172.21.128.56.

```
no zone subnet gk1.cisco.com default enable
zone subnet gk1.cisco.com 172.21.127.0/24 enable
zone subnet gk1.cisco.com 172.21.128.56/32 enable
```

Related Commands

Command	Description
show gatekeeper zone status	Displays the status of zones related to a gatekeeper.
zone local	Specifies a zone controlled by a gatekeeper.