advertise (virtual server submode)

To allow the CSM to advertise the IP address of the virtual server as the host route, use the **advertise** command in the SLB virtual server configuration mode. To stop advertising the host route for this virtual server, use the **no** form of this command.

advertise [**active**]

no advertise

Syntax Description

active	(Optional) Allows the CSM to advertise the IP address of the virtual server as host route.

Defaults

The default for network mask is 255.255.255.255 if the network mask is not specified.

Command Modes

SLB virtual server configuration submode

Command History

Release	Modification
CSM release 1.1(1)	This command was introduced.
CSM-S release 1.1(1)	This command was introduced.

Usage Guidelines

Without the active option, the CSM always advertises the virtual server IP address whether or not there is any active real server attached to this virtual server.

Examples

This example shows how to restrict a client from using the virtual server:

```
Cat6k-2(config-slb-redirect-vs)# advertise 10.5.2.1 exclude
```

Related Commands

redirect-vserver
show module csm vserver redirect

client (virtual server submode)

To restrict which clients are allowed to use the virtual server, use the **client** command in the SLB virtual server configuration mode. To remove the client definition from the configuration, use the **no** form of this command.

client *ip-address* [*network-mask*] [**exclude**]

no client *ip-address* [*network-mask*]

Syntax Description

ip-address	Client's IP address.
network-mask	(Optional) Client's IP mask.
exclude	(Optional) Specifies that the IP address is disallowed.

Defaults

The default for network mask is 255.255.255.255 if the network mask is not specified.

Command Modes

SLB virtual server configuration submode

Command History

Release	Modification
CSM release 1.1(1)	This command was introduced.
CSM-S release 1.1(1)	This command was introduced.

Usage Guidelines

The network mask is applied to the source IP address of incoming connections and the result must match the IP address before the client is allowed to use the virtual server. If exclude is not specified, the IP address and network mask combination is allowed.

Examples

This example shows how to restrict a client from using the virtual server:

```
Cat6k-2(config-slb-vserver)# client 10.5.2.1 exclude
```

Related Commands

advertise (virtual server submode)
client-group (policy submode)
ip access-list standard
show module csm vserver redirect

(virtual server submode)idle (virtual server submode)

To control the amount of time the CSM maintains connection information in the absence of packet activity, use the **idle** command in the SLB virtual server configuration submode. To change the idle timer to its default value, use the **no** form of this command.

idle *duration*

no idle

Syntax Description

duration	Idle connection timer duration in seconds; the range is from 4 to 65535.

Defaults

The default is 3600.

Command Modes

SLB virtual server configuration submode

Command History

Release	Modification
CSM release 1.1(1)	This command was introduced.
CSM-S release 1.1(1)	This command was introduced.

Usage Guidelines

If you do not specify a duration value, the default value is applied.

Examples

This example shows how to specify an idle timer duration of 4000:

```
Cat6k-2(config-slb-vserver)# idle 4000
```

Related Commands

advertise (virtual server submode)
show module csm vserver redirect

inservice (virtual server submode)

To enable the virtual server for load balancing, use the **inservice** command in the SLB virtual server configuration submode. To remove the virtual server from service, use the **no** form of this command.

inservice

no inservice

Syntax Description

This command has no keywords or arguments.

Defaults

The default is the virtual server is not in service.

Command Modes

SLB virtual server configuration submode

Command History

Release	Modification
CSM release 1.1(1)	This command was introduced.
CSM-S release 1.1(1)	This command was introduced.

Examples

This example shows how to enable a virtual server for load balancing:

```
Cat6k-2(config-slb-vserver)# inservice
```

Related Commands

advertise (virtual server submode)
show module csm vserver redirect

owner (virtual server submode)

To define an owner that may access the virtual server, use the **owner** command in the SLB virtual server submode. To remove the owner, use the **no** form of this command.

owner *owner-name* **maxconns** *number*

no owner maxconns

Syntax Description

owner-name	Name of the owner object.
maxconns	Sets the maximum number of connections for this owner.
number	Maximum number of connections.

Defaults

This command has no default settings.

Command Modes

SLB virtual server configuration submode

Command History

Release	Modification
CSM release 3.1(1)	This command was introduced.
CSM-S release 1.1(1)	This command was introduced.

Examples

This example shows how to specify an owner for virtual server access:

```
Cat6k-2(config-slb-vserver)# owner madrigal maxconns 1000
```

Related Commands

advertise (virtual server submode)

parse-length (virtual server submode)

To set the maximum number of bytes to parse for URLs and cookies, use the **parse-length** command in the SLB virtual server configuration submode. To restore the default, use the **no** form of this command.

parse-length *bytes*

no parse-length

Syntax Description

bytes	Number of bytes; the range is from 1 to 4000.

Defaults

The default is 600.

Command Modes

SLB virtual server configuration submode

Command History

Release	Modification
CSM release 1.1(1)	This command was introduced.
CSM-S release 1.1(1)	This command was introduced.

Examples

This example shows how to set the number of bytes to parse for URLs and cookies:

```
Cat6k-2(config-slb-vserver)# parse-length 1000
```

Related Commands

advertise (virtual server submode)
show module csm vserver redirect

pending (virtual server submode)

To set the pending connection timeout, use the **pending** command in the SLB virtual server configuration submode. To restore the default, use the **no** form of this command.

pending *timeout*

no pending

Syntax Description

timeout	Seconds to wait before a connection is considered unreachable. Range is from 1 to 65535.

Defaults

The default pending timeout is 30 seconds.

Command Modes

SLB virtual server configuration submode

Command History

Release	Modification
CSM release 2.2(1)	This command was introduced.
CSM-S release 1.1(1)	This command was introduced.

Usage Guidelines

This command is used to prevent denial-of-service (DOS) attacks. The pending connection timeout sets the response time for terminating connections if a switch becomes flooded with traffic. The pending connections are configurable on a per-virtual-server basis.

Examples

This example shows how to set the number to wait for a connection to be made to the server:

```
Cat6k-2(config-slb-vserver)# pending 300
```

Related Commands

advertise (virtual server submode)
show module csm vserver redirect

persistent rebalance (virtual server submode)

To enable or disable HTTP 1.1 persistence for connections in the virtual server, use the **persistent rebalance** command in the SLB virtual server configuration submode. To disable persistence, use the **no** form of this command.

persistent rebalance

no persistent rebalance

Syntax Description

This command has no keywords or arguments.

Defaults

Persistence is disabled.

Command Modes

SLB virtual server configuration submode

Command History

Release	Modification
CSM release 2.1(1)	This command was introduced.
CSM-S release 1.1(1)	This command was introduced.

Examples

This example shows how to enable the HTTP 1.1 persistence:

```
Cat6k-2(config-slb-vserver)# persistent rebalance
```

Related Commands

advertise (virtual server submode)
show module csm vserver redirect

replicate csrp (virtual server submode)

To enable connection redundancy, use the **replicate csrp** command in the SLB virtual server configuration submode. To disable connection redundancy, use the **no** form of this command.

replicate csrp {**sticky** | **connection**}

no replicate csrp {**sticky** | **connection**}

Syntax Description

sticky	Replicates the sticky database to the backup CSM.
connection	Replicates connections to the backup CSM.

Defaults

Connection redundancy is disabled.

Command Modes

SLB virtual server configuration submode

Command History

Release	Modification
CSM release 2.1(1)	This command was introduced.
CSM-S release 1.1(1)	This command was introduced.

Usage Guidelines

Sticky and connection replication can be enabled or disabled separately. For replication to occur, you must enable SLB fault tolerance with the **ft group** command.

Examples

This example shows how to enable connection redundancy:

```
Cat6k-2(config-slb-vserver)# replicate csrp connection
```

Related Commands

advertise (virtual server submode)
ft group
show module csm vserver redirect

reverse-sticky (virtual server submode)

To ensure that the CSM switches connections in the opposite direction back to the original source, use the **reverse-sticky** command in the virtual server submode. To remove the reverse-sticky option from the policy or the default policy of a virtual server, use the **no** form of this command.

reverse-sticky *group-id*

no reverse-sticky

Syntax Description

group-id	Number identifying the sticky group to which the virtual server belongs; the range is from 0 to 255.

Defaults

Reverse sticky is not enabled.

Command Modes

SLB virtual server configuration submode

Command History

Release	Modification
CSM release 1.1(1)	This command was introduced.
CSM release 3.1(1)	The **IP reverse-sticky** command is introduced.
CSM-S release 1.1(1)	This command was introduced.

Usage Guidelines

Sticky connections are not tracked. The group ID default is 0. The sticky feature is not used for other virtual servers. The network default is 255.255.255.255.

Examples

This example shows how to set the IP reverse-sticky feature:

```
Cat6k-2(config-module-csm)# vserver PUBLIC_HTTP
Cat6k-2(config-slb-vserver)# reverse-sticky 60
```

Related Commands

show module csm sticky
show module csm vserver redirect
sticky
sticky-group (policy submode)

serverfarm (virtual server submode)

To associate a server farm with a virtual server, use the **serverfarm** command in SLB virtual server configuration submode. To remove a server farm association from the virtual server, use the **no** form of this command.

serverfarm *primary-serverfarm* [**backup** *sorry-serverfarm* [**sticky**]]

no serverfarm

Syntax Description

primary-serverfarm	Character string used to identify the server farm.
backup	(Optional) Sets the name of a backup server farm.
sorry-serverfarm	(Optional) Backup server farm name.
sticky	(Optional) Associates the backup server farm with a virtual server.

Defaults

This command has no default settings.

Command Modes

SLB virtual server configuration submode

Command History

Release	Modification
CSM release 1.1(1)	This command was introduced.
CSM release 3.1(1)	The sorry server (backup server) option was added to this command.
CSM-S release 1.1(1)	This command was introduced.

Usage Guidelines

The server farm name must match the server farm name specified in a previous module CSM submode **serverfarm** command.

The backup server farm can be associated with a policy. A primary server farm must be associated with that policy to allow the backup server farm to function properly. The backup server farm can have a different predictor option than the primary server. When the sticky option is used for a policy, then stickiness can apply to real servers in the backup server farm. Once a connection has been balanced to a server in the backup server farm, subsequent connections from the same client can be stuck to the same server even when the real servers in the primary server farm come back to the operational state. You may allow the sticky attribute when applying the backup server farm to a policy.

By default, the sticky option does not apply to the backup server farm. To remove the backup server farm, you can either use the **serverfarm** command without the backup option or use the **no serverfarm** command.

Examples

This example shows how to associate a server farm with a virtual server named PUBLIC_HTTP:

```
Cat6k-2(config-slb-vserver)# serverfarm PUBLIC_HTTP back-up seveneleven sticky
```

Related Commands

advertise (virtual server submode)
serverfarm (policy submode)
serverfarm (virtual server submode)
show module csm vserver redirect

slb-policy (virtual server submode)

To associate a load-balancing policy with a virtual server, use the **slb-policy** command in the SLB virtual server configuration submode. To remove a policy from a virtual server, use the **no** form of this command.

slb-policy *policy-name*

no slb-policy *policy-name*

Syntax Description

policy-name	Policy associated with a virtual server.

Defaults

This command has no default settings.

Command Modes

SLB virtual server configuration submode

Command History

Release	Modification
CSM release 1.1(1)	This command was introduced.
CSM-S release 1.1(1)	This command was introduced.

Usage Guidelines

Multiple load-balancing policies can be associated with a virtual server. URLs in incoming requests are parsed and matched against policies defined in the same order in which they are defined with this command. The policy name must match the name specified in a previous **policy** command.

Note The order of the policy association is important; you should enter the highest priority policy first.

Examples

This example shows how to associate a policy with a virtual server.:

```
Cat6k-2(config-slb-vserver)# slb-policy COOKIE-POLICY1
```

Related Commands

advertise (virtual server submode)
policy
show module csm owner
show module csm vserver redirect

ssl-sticky (virtual server submode)

To allow SSL sticky operation, use the **ssl-sticky** command in the SLB virtual server configuration submode. To remove the SSL sticky feature, use the **no** form of this command.

ssl-sticky offset *X* **length** *Y*

no ssl-sticky

Syntax Description

offset	Specifies the SSL ID offset.
X	Sets the offset value.
length	Specifies the SSL ID length.
Y	Sets the length.

Defaults

Offset is 0 and length is 32.

Command Modes

SLB virtual server configuration submode

Command History

Release	Modification
CSM release 3.1(1)	This command was introduced.
CSM-S release 1.1(1)	This command was introduced.

Usage Guidelines

This feature allows you to stick an incoming SSL connection based only on this special section of the SSL ID specified by the offset and length values. The **ssl-sticky** command was added to ensure that the CSM always load balances an incoming SSL connection to the SSL termination engine that generated that SSL ID.

Examples

This example shows how to associate a policy with a virtual server:

```
Cat6k-2(config-slb-vserver)# ssl-sticky offset 0 length 32
```

Related Commands

advertise (virtual server submode)
policy
show module csm owner
show module csm vserver redirect

sticky (virtual server submode)

To ensure that connections from the client use the same real server, use the **sticky** command in the virtual server submode. To change the sticky timer to its default value and remove the sticky option from the virtual server, use the **no** form of this command.

sticky *duration* [***group*** *group-id*] [**netmask** *ip-netmask*] [**source** | **destination** | **both**]

no sticky

Syntax Description

duration	Sticky timer duration in minutes; the range is from 1 to 65535.
group	(Optional) Places the virtual server in a sticky group for connection coupling.
group-id	(Optional) Number identifying the sticky group to which the virtual server belongs; the range is from 0 to 255.
netmask	(Optional) Specifies which part of the address should be used for stickiness.
ip-netmask	(Optional) Network that allows clients to be stuck to the same server.
source	(Optional) Specifies the source portion of the IP address.
destination	(Optional) Destination portion of the IP address.
both	(Optional) Specifies that both the source and destination portions of the IP address are used.

Defaults

The sticky option is not in the server.

Command Modes

SLB virtual server configuration submode

Command History

Release	Modification
CSM release 1.1(1)	This command was introduced.
CSM release 3.1(1)	The IP reverse-sticky optional parameters are introduced.
CSM-S release 1.1(1)	This command was introduced.

Usage Guidelines

Sticky connections are not tracked. The group ID default is 0. The sticky feature is not used for other virtual servers. The network default is 255.255.255.255.

The last real server that was used for a connection from a client is stored for the *duration* value after the end of the client's latest connection. If a new connection from the client to the virtual server is initiated during that time, the same real server that was used for the previous connection is chosen for the new connection.

A nonzero sticky group ID must correspond to a sticky group previously created using the **sticky** command. Virtual servers in the same sticky group share sticky state information.

Examples

This example shows how to set the sticky timer duration and places the virtual server in a sticky group for connection coupling:

```
Cat6k-2(config-module-csm)# vserver PUBLIC_HTTP
Cat6k-2(config-slb-vserver)# sticky 60 group 3
```

Related Commands

advertise (virtual server submode)
reverse-sticky (virtual server submode)
show module csm sticky
show module csm vserver redirect
sticky
sticky-group (policy submode)

unidirectional (virtual server submode)

To select the traffic type and appropriate timeout value, use the **unidirectional** command in the SLB virtual server submode.

[**no** | **default**] **unidirectional**

Syntax Description

no	(Optional) Removes the traffic type and timeout values from the configuration.
default	(Optional) Specifies that the CSM selects the appropriate behavior (unidirectional or bidirectional) based on the protocol.

Defaults

The default is **default**.

Command Modes

SLB virtual server configuration submode

Command History

Release	Modification
CSM release 2.1(1)	This command was introduced.
CSM-S release 1.1(1)	This command was introduced.

Usage Guidelines

The CSM selects the traffic type and the correct timeout behavior for that traffic. The current timeout value can be displayed using the **show module csm vserver detail** commands.

Examples

This example shows how to select the traffic type and the timeout behavior:

```
Cat6k-2(config-slb-vserver)# default unidirectional
```

Related Commands

show module csm vserver redirect

url-hash (virtual server submode)

To set the beginning and ending pattern of a URL to parse URLs for the URL hash load-balancing algorithm, use the **url-hash** command in the SLB virtual server configuration submode. To remove the hashing from service, use the **no** form of this command.

url-hash {**begin-pattern** | **end-pattern**} *pattern*

no url-hash

Syntax Description

begin-pattern	Specifies the beginning of the URL to parse.
end-pattern	Specifies the ending of the URL to parse.
pattern	Pattern string to parse.

Defaults

URL hasing is off.

Command Modes

SLB virtual server configuration submode

Command History

Release	Modification
CSM release 2.1(1)	This command was introduced.
CSM-S release 1.1(1)	This command was introduced.

Usage Guidelines

The beginning and ending patterns apply to the URL hashing algorithm that is set using the **predictor** command in the SLB server farm submode.

Examples

This example shows how to specify a URL pattern to parse:

```
Cat6k-2(config-slb-vserver)# url hash begin pattern lslkjfsj
```

Related Commands

predictor (serverfarm submode)
show module csm vserver redirect

virtual (virtual server submode)

To configure virtual server attributes, use the **virtual** command in the SLB virtual server configuration submode. To set the virtual server's IP address to 0.0.0.0 and its port number to zero, use the **no** form of this command.

virtual *ip-address* [*ip-mask*] **tcp** *port* [**service** {**ftp** | **rtsp** | **termination**}]

virtual *ip-address* [*ip-mask*] **udp** *port* [**service** {**rtsp** | **per packet**}]

virtual *ip-address* [*ip-mask*] {**any** | *protocol-number*} [**service per-packet**]

no virtual *ip-address*

Syntax Description

ip-address	IP address for the virtual server.
ip-mask	(Optional) Mask for the IP address to allow connections to an entire network.
tcp *port*	Specifies the TCP port.
service ftp	(Optional) Combines connections associated with the same service so that all related connections from the same client use the same real server. FTP data connections are combined with the control session that created them. If you want to configure FTP services, these keywords are required.
service rtsp	(Optional) Combines connections to the Real Time Streaming Protocol (RTSP) TCP port 554.
service termination	(Optional) Enables TCP termination for DoS attack protection.
udp *port*	Specifies the UDP port.
any | *protocol-number*	Load-balancing protocol, either TCP, UDP, any, or a number from 0 to 255.
service per-packet	(Optional) Enables load balancing for each packet independently. This option is for non-TCP only.

Defaults

The default IP mask is 255.255.255.255.

Command Modes

SLB virtual server configuration submode

Command History

Release	Modification
CSM release 1.1(1)	This command was introduced.
CSM release 2.1(1)	*ip-netmask*, UDP/arbitrary protocol introduced.
CSM release 2.2.1	RTSP support introduced.
CSM release 3.2(1)	Added TCP termination for DoS attack prevention and per packet load balancing.
CSM-S release 1.1(1)	This command was introduced.

Usage Guidelines

Clients connecting to the virtual server use this address to access the server farm. A port of 0 (or **any**) means that this virtual server handles all ports not specified for handling by another virtual server with the same IP address. The port is used only for TCP or UDP load balancing. No virtual servers can be configured with the same virtual settings and VLAN.

The following TCP port names can be used in place of a number:

XOT—X25 over TCP (1998)

dns—Domain Name Service (53)

ftp—File Transfer Protocol (21)

https—HTTP over Secure Sockets Layer (443)

matip-a—Mapping of Airline Traffic over IP, Type A (350)

nntp—Network News Transport Protocol (119)

pop2—Post Office Protocol v2 (109)

pop3—Post Office Protocol v3 (110)

smtp—Simple Mail Transport Protocol (25)

telnet—Telnet (23)

www—World Wide Web—Hypertext Transfer Protocol (80)

any—Traffic for any port (the same as specifying a 0).

The Cisco Content Switching Module allows virtual server configuration with the service RTSP service. The implementation supports 4 ports from streams data traffic, and the number of media streams in one RTSP presentation is limited to 2. It is possible to handle the TCP and UDP traffic separately, and link them using sticky. This example (replace IP-x with valid IP address) shows how to separate TCP and UDP traffic:

```
Cat6k-2(config-module-csm)# serverfarm TEST
Cat6k-2(config-slb-sfarm)# nat server
Cat6k-2(config-slb-sfarm)# no nat client
Cat6k-2(config-module-csm)# real IP-1
Cat6k-2(config-slb-real)# inservice
Cat6k-2(config-module-csm)# real IP-2
Cat6k-2(config-slb-real)# inservice
Cat6k-2(config-module-csm)# real IP-3
Cat6k-2(config-slb-real)# inservice
!
Cat6k-2(config-module-csm)# sticky 7 netmask 255.255.255.255 address source timeout 5
!
Cat6k-2(config-module-csm)# vserver RTSP
Cat6k-2(config-slb-vserver)# virtual IP-4 tcp any
Cat6k-2(config-slb-vserver)# serverfarm TEST
Cat6k-2(config-slb-vserver)# sticky 5 group 7
Cat6k-2(config-slb-vserver)# persistent rebalance
Cat6k-2(config-slb-vserver)# inservice
!
Cat6k-2(config-module-csm)# vserver RTSP2
Cat6k-2(config-slb-vserver)# virtual IP-4 udp any
Cat6k-2(config-slb-vserver)# serverfarm TEST
Cat6k-2(config-slb-vserver)# sticky 5 group 7
Cat6k-2(config-slb-vserver)# persistent rebalance
Cat6k-2(config-slb-vserver)# inservice
```

Examples

This example shows how to create a virtual server and assign it an IP address, protocol, and port:

```
Cat6k-2(config-slb-vserver)# virtual 102.35.44.79 tcp 1
```

Related Commands

advertise (virtual server submode)
show module csm vserver

vlan (virtual server submode)

To define which source VLANs may access the virtual server, use the **vlan** command in the SLB virtual server submode. To remove the VLAN, use the **no** form of this command.

vlan *vlan-number* **local**

no vlan

Syntax Description

vlan-number	VLAN that the virtual server may access.
local	Allows the virtual server to accept connections from the SSL daughter card.

Defaults

The default is all VLANs.

Command Modes

SLB virtual server configuration submode

Command History

Release	Modification
CSM release 2.1(1)	This command was introduced.
CSM-S release 1.1(1)	This command was introduced.

Usage Guidelines

The VLAN must correspond to an SLB VLAN previously created with the **vlan** command.

Examples

This example shows how to specify a VLAN for virtual server access:

```
Cat6k-2(config-slb-vserver)# vlan 5
```

Related Commands

show module csm vserver redirect
show module csm vlan
vlan (virtual server submode)

vlan

To define which source VLANs may access the virtual server, and then enter the VLAN submode, use the **vlan** command in the CSM submode. To remove the VLAN, use the **no** form of this command.

vlan *vlan-number*

no vlan

Syntax Description

vlan-number	VLAN that the virtual server may access.

Defaults

The default is all VLANs.

Command Modes

SLB configuration submode

Command History

Release	Modification
CSM release 2.1(1)	This command was introduced.
CSM-S release 1.1(1)	This command was introduced.

Usage Guidelines

The VLAN must correspond to an SLB VLAN previously created with the **vlan** command.

Examples

This example shows how to specify a VLAN for virtual server access:

```
Cat6k-2(config-slb-csm)# vlan 5
```

Related Commands

alias (VLAN submode)
gateway (VLAN submode)
ip address (VLAN submode)
route (VLAN submode)
show module csm vlan

alias (VLAN submode)

To assign multiple IP addresses to the CSM, use the **alias** command in the SLB VLAN configuration submode. To remove an alias IP addresses from the configuration, use the **no** form of this command.

alias *ip-address netmask*

no alias *ip-address netmask*

Syntax Description

ip-address	Alias IP address; a maximum of 255 addresses are allowed per VLAN.
netmask	Network mask.

Defaults

This command has no default settings.

Command Modes

SLB VLAN configuration submode

Command History

Release	Modification
CSM release 1.1(1)	This command was introduced for server VLANs.
CSM release 2.1(1)	This command is now available for both client and server VLANs.
CSM-S release 1.1(1)	This command was introduced.

Usage Guidelines

This command allows you to place the CSM on a different IP network than real servers without using a router.

If the ICMP protocol does not terminate, you may need to set the idle timeout of these connections. The alias IP address in the CSM serves three purposes:

- It is a shared next hop (gateway) for two CSMs in the redundant configuration. The servers should point to the alias as the default gateway. The Route Health Injection (RHI) service would be using the alias IP address as the next hop when inserting a route.
- If ping is destined to the alias IP address, the CSM sends the reply back to the source MAC. This reply is useful when performing an ICMP probe from one CSM, across a firewall farm, to the other CSM alias address.
- In the Global Server Load Balancing (GSLB) configuration, the alias IP address is the destination VIP for the DNS request.

Examples

This example shows how to assign multiple IP addresses to the CSM:

```
Cat6k-2(config-slb-vlan-server)# alias 130.21.34.56 255.255.255.0
Cat6k-2(config-slb-vlan-server)# alias 130.22.35.57 255.255.255.0
Cat6k-2(config-slb-vlan-server)# alias 130.23.36.58 255.255.255.0
Cat6k-2(config-slb-vlan-server)# alias 130.24.37.59 255.255.255.0
Cat6k-2(config-slb-vlan-server)# alias 130.25.38.60 255.255.255.0
```

Related Commands show module csm vlan
vlan (XML submode)

gateway (VLAN submode)

To configure a gateway IP address, use the **gateway** command in the SLB VLAN configuration submode. To remove the gateway from the configuration, use the **no** form of this command.

gateway *ip-address*

no gateway *ip-address*

Syntax Description

ip-address	IP address of the client-side gateway.

Defaults

This command has no default settings.

Command Modes

SLB VLAN configuration submode

Command History

Release	Modification
CSM release 1.1(1)	This command was introduced for client VLANs.
CSM release 2.1(1)	This command is now available for both client and server VLANs.
CSM-S release 1.1(1)	This command was introduced.

Usage Guidelines

You can configure up to 7 gateways per VLAN with a total of up to 255 gateways for the entire system. A gateway must be in the same network as specified in the **ip address** SLB VLAN command.

Examples

This example shows how to configure a client-side gateway IP address:

```
Cat6k-2(config-slb-vlan-client)# gateway 130.21.34.56
```

Related Commands

ip address (VLAN submode) (SLB VLAN configuration submode)
show module csm vlan
vlan (virtual server submode)

ip address (VLAN submode)

To assign an IP address to the CSM that is used for probes and ARP requests on a VLAN, use the **ip address** command in the SLB VLAN configuration submode. To remove the CSM IP address and disable probes and ARP requests from the configuration, use the **no** form of this command.

ip address *ip-address netmask*

no ip address

Syntax Description

ip-address	IP address for the CSM; only one management IP address is allowed per VLAN.
netmask	Network mask.

Defaults

This command has no default settings.

Command Modes

SLB VLAN configuration submode

Command History

Release	Modification
CSM release 1.1(1)	This command was introduced.
CSM release 2.2.1	Increases maximum number of unique VLAN IP addresses per system form 32 to 255.
CSM-S release 1.1(1)	This command was introduced.

Usage Guidelines

This command is applicable for both server and client VLANs. Up to 255 unique VLAN IP addresses are allowed per module.

Examples

This example shows how to assign an IP address to the CSM:

```
Cat6k-2(config-slb-vlan-client)# ip address 130.21.34.56 255.255.255.0
```

Related Commands

show module csm vlan
vlan (virtual server submode)

route (VLAN submode)

To configure networks that are one Layer 3 hop away from the CSM, use the **route** command in the SLB VLAN configuration submode. To remove the subnet or gateway IP address from the configuration, use the **no** form of this command.

route *ip-address netmask* **gateway** *gw-ip-address*

no route *ip-address netmask* **gateway** *gw-ip-address*

Syntax Description

ip-address	Subnet IP address.
netmask	Network mask.
gateway	Specifies that the gateway is configured.
gw-ip-address	Gateway IP address.

Defaults

This command has no default settings.

Command Modes

SLB VLAN configuration submode

Command History

Release	Modification
CSM release 1.1(1)	This command was introduced for server VLANs.
CSM release 2.1(1)	This command is now available for both client and server VLANs.
CSM-S release 1.1(1)	This command was introduced.

Usage Guidelines

You specify the Layer 3 networks subnet address and the gateway IP address to reach the next-hop router. The gateway address must be in the same network as specified in the **ip address** SLB VLAN command.

Examples

This example shows how to configure a network to the CSM:

```
Cat6k-2(config-slb-vlan-server)# route 130.21.34.56 255.255.255.0 gateway 120.22.36.40
```

Related Commands

ip address (VLAN submode)
show module csm vlan
vlan (virtual server submode)

xml-config

To enable XML for a CSM module, and then enter the XML configuration submode, use the **xml-config** command. To remove the XML configuration, use the **no** form of this command.

xml-config

no xml-config

Defaults

This command has no default settings.

Command Modes

Module CSM configuration submode

Command History

Release	Modification
CSM release 3.1(1)	This command was introduced.
CSM-S release 1.1(1)	This command was introduced.

Examples

This example shows how to display the XML configuration:

```
Cat6k-2(config-module-csm)# xml-config
Cat6k-2(config-slb-xml)#
```

Related Commands

client-group (XML submode)
credentials (XML submode)
vlan (XML submode)

client-group (XML submode)

To allow only connections sourced from an IP address matching the client group, use the **client-group** command in the SLB XML configuration submode. To remove the client group connections, use the **no** form of this command.

client-group [*1–99* | *name*]

no client-group

Syntax Description

1–99	(Optional) Client group number.
name	(Optional) Name of the client group.

Defaults

Client group connections are removed.

Command Modes

SLB XML configuration submode

Command History

Release	Modification
CSM release 3.1(1)	This command was introduced.
CSM-S release 1.1(1)	This command was introduced.

Usage Guidelines

When a client group is specified, only connections sourced from an IP address matching that client group are accepted by the CSM XML configuration interface. If no client group is specified, then no source IP address check is performed. Only one client group may be specified.

Examples

This example shows how to specify a client group:

```
Cat6k-2(config-slb-xml)# client-group domino
```

Related Commands

xml-config

credentials (XML submode)

To define one or more username and password combinations, use the **credentials** command in the SLB XML configuration submode. To remove the credentials, use the **no** form of this command.

credentials *user-name password*

no credentials *user-name*

Syntax Description

user-name	Name of the credentials user.
password	Password for the credentials user.

Defaults

This command has no default settings.

Command Modes

SLB XML configuration submode

Command History

Release	Modification
CSM release 3.1(1)	This command was introduced.
CSM-S release 1.1(1)	This command was introduced.

Usage Guidelines

When one or more credentials commands are specified, the CSM HTTP server authenticates user access.

Examples

This example shows how to specify the user and password credentials for access:

```
Cat6k-2(config-slb-xml)# credentials savis XXXXX
```

Related Commands

client-group (XML submode)
xml-config

inservice (XML submode)

To enable XML for use by the CSM, use the **inservice** command in the SLB XML configuration submode. If this command is not specified, XML is not used. To disable XML, use the **no** form of this command.

inservice

no inservice

Defaults

This command has no default settings.

Command Modes

SLB XML configuration submode

Command History

Release	Modification
CSM release 3.1(1)	This command was introduced.
CSM-S release 1.1(1)	This command was introduced.

Examples

This example shows how to enable XML:

```
Cat6k-2(config-slb-xml)# inservice
```

Related Commands

xml-config

port (XML submode)

To specify the TCP port on which the CSM HTTP server listens, use the **port** command in the SLB XML configuration submode. To remove the port, use the **no** form of this command.

port *port-number*

no port

Syntax Description

port-number	Sets the CSM port.

Defaults

The default is port 80.

Command Modes

SLB XML configuration submode

Command History

Release	Modification
CSM release 3.1(1)	This command was introduced.
CSM-S release 1.1(1)	This command was introduced.

Examples

This example shows how to specify the TCP port for the server:

```
Cat6k-2(config-slb-xml)# port 80
```

Related Commands

client-group (XML submode)

vlan (XML submode)

To restrict the CSM HTTP server to accept connections only from the specified VLAN, use the **vlan** command in the SLB XML configuration submode. To specify that all VLANs are accepted, use the **no** form of this command.

vlan *id*

no vlan

Syntax Description

id	VLAN name.

Defaults

All VLANs are accepted.

Command Modes

SLB XML configuration submode

Command History

Release	Modification
CSM release 3.1(1)	This command was introduced.
CSM-S release 1.1(1)	This command was introduced.

Examples

This example shows how to specify an owner for virtual server access:

```
Cat6k-2(config-slb-xml)# vlan 9
```

Related Commands

client-group (XML submode)