Unicast Routing Show Commands

This chapter describes the Cisco NX-OS unicast routing **show** commands available on Cisco Nexus 5000 Series switches.

show bgp

To display Border Gateway Protocol (BGP) routes, use the **show bgp** command.

show bgp {**all** | **ipv4** {**unicast** | **multicast**} [*addr* | *prefix* [**longer-prefixes**]] [**vrf** *vrf-name* | **all**]}

Syntax Description

all	Displays BGP information for all address families.
ipv4	Displays BGP information for the IPv4 address family.
unicast	Displays BGP information for the unicast address family.
multicast	Displays BGP information for the multicast address family.
addr	(Optional) Network from the selected address family. The format is A.B.C.D for IPv4.
prefix	(Optional) Prefix from the selected address family. The format is A.B.C.D/length for IPv4.
longer-prefixes	(Optional) Displays the prefix and any more specific routes.
vrf *vrf-name*	(Optional) Specifies the virtual router context (VRF) name. The name can be any case-sensitive, alphanumeric string up to 32 characters.
all	(Optional) Specifies all VRF.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines   Use the **show bgp** command to display information about BGP.

This command requires the LAN Enterprise Services license.

Examples   This example shows how to display an entry in the BGP table:

```
switch# show bgp ipv4 multicast
BGP routing table information for VRF default, address family IPv4 Multicast
BGP table version is 5, local router ID is 2.2.2.3
Status: s-suppressed, x-deleted, S-stale, d-dampened, h-history, *-valid, >-best
Path type: i-internal, e-external, c-confed, l-local, a-aggregate, r-redist
Origin codes: i - IGP, e - EGP, ? - incomplete, | - multipath

   Network          Next Hop          Metric     LocPrf     Weight Path
   192.168.1.3      0.0.0.0                       100        32768 i
switch#
```

Related Commands	Command	Description
	clear bgp	Clears entries in the BGP table.

show bgp community

To display Border Gateway Protocol (BGP) routes that match a community, use the **show bgp community** command.

show bgp {{**ip** | **ipv4**} {**unicast** | **multicast**}} **community** [*as-number*]**no-advertise**] [**no-export**] [**no-export-subconfed**] [**exact-match**]} [**vrf** *vrf-name*]

Syntax Description

ip	Displays BGP information for the IPv4 address family.
ipv4	Displays BGP information for the IPv4 address family.
unicast	Displays BGP information for the unicast address family.
multicast	Displays BGP information for the multicast address family.
as-number	(Optional) AS number. The AS number can be a 16-bit integer or a 32-bit integer in the form of <higher 16-bit decimal number>.<lower 16-bit decimal number>.
no-advertise	(Optional) Displays the no-advertise community.
no-export	(Optional) Displays the no-export community.
no-export-subconfed	(Optional) Displays the no-export-subconfed community.
exact-match	(Optional) Displays an exact match of the community.
vrf *vrf-name*	(Optional) Specifies the virtual routing and forwarding (VRF) instance. The name can be any case-sensitive, alphanumeric string up to 32 characters.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines

This command requires the LAN Enterprise Services license.

Examples

This example shows how to display the routes that match a community:

```
switch# show bgp ip multicast community no-advertise
```

Related Commands

Command	Description
ip community-list	Creates a community list.

show bgp community-list

To display Border Gateway Protocol (BGP) routes that match a community list, use the **show bgp community-list** command.

> **show bgp** {{**ip** | **ipv4**} {**unicast** | **multicast**}} **community-list** *commlist-name* [**exact-match**] [**vrf** *vrf-name*]

Syntax Description

ip	Displays BGP information for the IPv4 address family.
ipv4	Displays BGP information for the IPv4 address family.
unicast	Displays BGP information for the unicast address family.
multicast	Displays BGP information for the multicast address family.
commlist-name	Name of a community-list. The commlist-name can be any case-sensitive, alphanumeric string up to 63 characters.
exact-match	(Optional) Displays an exact match of the communities.
vrf *vrf-name*	(Optional) Specifies the virtual router context (VRF) name. The name can be any case-sensitive, alphanumeric string up to 32 characters.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines   This command requires the LAN Enterprise Services license.

Examples   This example shows how to display the routes that match a community list:

```
switch(config)# show bgp ip unicast community-list test1
```

Related Commands

Command	Description
ip community-list	Creates a community list.

show bgp extcommunity

To display Border Gateway Protocol (BGP) routes that match an extended community, use the **show bgp extcommunity** command.

show bgp {{**ip** | **ipv4**} {**unicast** | **multicast**}} **extcommunity 4byteas-generic** {**non-transitive** | **transitive**} [*as4-number*] [**exact-match**] [**vrf** *vrf-name*]

Syntax Description

ip	Displays BGP information for the IPv4 address family.
ipv4	Displays BGP information for the IPv4 address family.
unicast	Displays BGP information for the unicast address family.
multicast	Displays BGP information for the multicast address family.
4byteas-generic	Displays the routes that match the generic specifice extended communities.
non-transitive	Displays the routes that match the nontransitive extended communities.
transitive	Displays the routes that match the transitive extended communities.
as4-number	AS number. The *as4-number* is a 32-bit integer in the form of a plaintext integer or <higher 16-bit decimal number>.<lower 16-bit decimal number> .
exact-match	(Optional) Displays an exact match of the extended community.
vrf *vrf-name*	(Optional) Specifies the virtual routing and forwarding (VRF) context name. The name can be any case-sensitive, alphanumeric string up to 32 characters.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines   This command requires the LAN Enterprise Services license.

Examples   This example shows how to display the routes that match an extended community:

```
switch(config)# show bgp ip unicast extcommunity 4byteas-generic transitive 1.3:30
```

Related Commands

Command	Description
ip extcommunity-list	Creates an extended community list.

show bgp extcommunity-list

To display Border Gateway Protocol (BGP) routes that match an extended community list, use the **show bgp extcommunity-list** command.

> show bgp {{**ip** | **ipv4**} {**unicast** | **multicast**}} **extcommunity-list** *commlist-name* [**exact-match**] [**vrf** *vrf-name*]

Syntax Description		
	ip	Displays BGP information for the IPv4 address family.
	ipv4	Displays BGP information for the IPv4 address family.
	unicast	Displays BGP information for the unicast address family.
	multicast	Displays BGP information for the multicast address family.
	commlist-name	Name of an extended community-list. The *commlist-name* can be any case-sensitive, alphanumeric string up to 63 characters.
	exact-match	(Optional) Displays an exact match of the extended communities.
	vrf *vrf-name*	(Optional) Specifies the virtual router context (VRF) name. The name can be any case-sensitive, alphanumeric string up to 32 characters.

Command Default   None

Command Modes   Any command mode

Command History	Release	Modification
	5.0(3)N1(1)	This command was introduced.

Usage Guidelines   This command requires the LAN Enterprise Services license.

Examples   This example shows how to display the routes that match a community list:

```
switch(config)# show bgp ipv4 unicast extcommunity-list test1
```

Related Commands	Command	Description
	ip extcommunity-list	Creates an extended community list.

show bgp neighbors

To display Border Gateway Protocol (BGP) neighbors, use the **show bgp neighbors** command.

show bgp {**ip** | **ipv4**} {**unicast** | **multicast**} **neighbors** [*addr* [**advertised-routes** | **flap-statistics** | **paths** | **received-routes** | **routes** [**advertised** | **dampened** | **received**]]] [**vrf** {**all** | *vrf-name*}]

Syntax Description

ip	Displays the IPv4 neighbor information.
ipv4	Displays the IPv4 neighbor information.
unicast	Displays the unicast neighbor information.
multicast	Displays the multicast neighbor information.
addr	IPv4 address. The format is x.x.x.x
advertised-routes	(Optional) Displays all the routes advertised to this neighbor.
flap-statistics	(Optional) Displays flap statistics for the routes received from this neighbor.
paths	(Optional) Displays AS paths learned from this neighbor.
received-routes	(Optional) Displays all the routes received from this neighbor.
routes	(Optional) Displays the routes received or advertised to or from this neighbor.
advertised	(Optional) Displays all the routes advertised for this neighbor.
dampened	(Optional) Displays all dampened routes received from this neighbor.
received	(Optional) Displays all the routes received from this neighbor.
vrf *vrf-name*	(Optional) Specifies the virtual router context (VRF) name. The name can be any case-sensitive, alphanumeric string up to 32 characters.
all	Specifies all VRF.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines   This command requires the LAN Enterprise Services license.

Examples   This example shows how to display the BGP neighbors:

```
switch(config)# show bgp ip unicast neighbors
```

Related Commands	Command	Description
	show ip bgp neighbors	Displays the IPv4 BGP information.

show bgp sessions

To display Border Gateway Protocol (BGP) sessions, use the **show bgp sessions** command.

show bgp sessions [**vrf** *vrf-name*]

Syntax Description

vrf *vrf-name*	(Optional) Specifies the virtual router context (VRF) name. The name can be any case-sensitive, alphanumeric string up to 32 characters.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines   This command requires the LAN Enterprise Services license.

Examples   This example shows how to display the BGP sessions:

```
switch# show bgp sessions
Total peers 2, established peers 0
ASN 102
VRF default, local ASN 102
peers 2, established peers 0, local router-id 2.2.2.3
State: I-Idle, A-Active, O-Open, E-Established, C-Closing, S-Shutdown

Neighbor        ASN    Flaps LastUpDn|LastRead|LastWrit St Port(L/R)  Notif(S/R)
10.0.0.100      64497 0     01:31:58|never  |never   I  0/0         0/0
192.168.1.3        0 0     00:03:25|never  |never   I  0/0         0/0
switch#
```

Related Commands

Command	Description
clear bgp	Clears BGP sessions.

show bgp statistics

To display Border Gateway Protocol (BGP) traffic statistics, use the **show bgp statistics** command.

show bgp statistics

Syntax Description   This command has no argument or keywords.

Command Default   None

Command Modes   EXEC mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines   This command requires the LAN Enterprise Services license.

Examples   This example shows how to display the BGP traffic statistics:

```
switch# show bgp statistics

Neighbor aggregated statistics (sent/received)
 Msgs                Bytes               Opens               Updates

 0/0                 0/0                 0/0                 0/0


 Keepalives          Notifications       Route-refresh       Capabilities

 0/0                 0/0                 0/0                 0/0


BGP I/O Information
Active Open attempts            : 0
Passive Open attempts           : 0
BGP I/O Open loops              : 117
BGP I/O Open calls              : 0
BGP I/O Open recv calls         : 0
BGP I/O Send calls              : 0
BGP I/O Recv calls              : 0
BGP I/O Write calls             : 0
BGP I/O Write loops             : 1
BGP I/O Write loop yields       : 0
BGP I/O Read calls              : 0
BGP I/O Read loops              : 117
BGP I/O Read loop yields        : 0
BGP I/O process nlri yields     : 0
BGP I/O process withdraw yields : 0
BGP Read time exceeded          : 0
```

```
BGP Update send pending        : 0
BGP Update buffer not available : 0
BGP Update walk suspended      : 0
BGP Yielded in updates         : 0
BGP Yielded in packing         : 0
BGP No sendbuf for peer        : 0
BGP No withdraw buf for peer   : 0
BGP Yields in update peer loop : 0
No updates pending or no buffers : 1
No data to write               : 1
Msg queue recv errors          : 0
Sockets create/accept/close    : 2/0/0
Sockets create retries/failures : 0/0
switch#
```

Related Commands	Command	Description
	clear bgp	Clears BGP sessions.

show forwarding

To display forwarding information, use the **show forwarding** command.

show forwarding [**ip** | **ipv4**] {**adjacency** | **interfaces** | **route** | **trace** [**clear**] | **table** *id* | **pss** | **route**} [**module** *slot*] [**vrf** *vrf-name*]

Syntax Description

ip	(Optional) Displays the IPv4 forwarding information.
ipv4	(Optional) Displays the IPv4 forwarding information.
adjacency	Displays the adjacency information.
interfaces	Displays the forwarding information for interfaces on a module.
route	Displays the forwarding information for routes on a module.
trace	Displays the forwarding trace buffer on a module.
clear	(Optional) Clears the forwarding trace buffer on a module.
table *id*	Displays the forwarding information for a route table. The *id* range is from 0 to 2147483647.
pss	Displays route information from persistent storage.
route	Displays route information from the IP routing table.
module *slot*	(Optional) Displays information for the module. The slot range depends on the hardware platform.
vrf *vrf-name*	(Optional) Specifies the name of the virtual routing and forwarding (VRF) instance. The *vrf-name* argument can be specified as any case-sensitive, alphanumeric string up to 32 characters. The strings "default" and "all" are reserved VRF names.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines   Use the **show forwarding** command on the supervisor to view forwarding information on a module. Optionally, you can use the **attach module** command to attach to a module and use the **show forwarding** command on the module.

Examples   This example shows how to display forwarding information for module 2:

```
switch# show forwarding route module 2
```

Related Commands	Command	Description
	show ip fib	Displays information about the FIB.

show forwarding distribution

To display forwarding distribution information, use the **show forwarding distribution** command.

show forwarding distribution [**clients** | **fib-state**]

Syntax Description

clients	(Optional) Displays the forwarding distribution information for unicast clients.
fib-state	(Optional) Displays the forwarding distribution state for unicast Forwarding Information Base (FIB).

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Examples   This example shows how to display the forwarding information for unicast clients:

```
switch# show forwarding distribution clients
```

Related Commands

Command	Description
show ip fib distribution	Displays distribution information about the FIB.

show forwarding inconsistency

To display the results of the forwarding inconsistency checker, use the **show forwarding inconsistency** command.

show forwarding inconsistency [**ip** | **ipv4**] [**unicast**] **module** *slot* [**vrf** *vrf-name*]

Syntax Description

ip	(Optional) Displays the IPv4 forwarding inconsistency information.
ipv4	(Optional) Displays the IPv4 forwarding inconsistency information.
unicast	(Optional) Displays the forwarding inconsistency information for unicast routes
module *slot*	Displays inconsistency information for the module. The slot range depends on the hardware platform.
vrf *vrf-name*	(Optional) Displays inconsistency information for the virtual routing and forwarding (VRF) instance. The *vrf-name* argument can be specified as any case-sensitive, alphanumeric string up to 32 characters. The strings "default" and "all" are reserved VRF names.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines   Use the **show forwarding inconsistency** command to display the results of the **test forwarding inconsistency** command.

Examples   This example shows how to display the forwarding inconsistency information for module 2:

```
switch# show forwarding inconsistency module 2
```

Related Commands

Command	Description
clear forwarding inconsistency	Clears the forwarding inconsistency checker.
test forwarding inconsistency	Triggers the forwarding inconsistency checker.

show hsrp

To display Hot Standby Router Protocol (HSRP) information for each HSRP group, use the **show hsrp** command.

show hsrp [**interface** {**ethernet** *slot*/*port* | **port-channel** *number* | **vlan** *vlan-id*}] [**group** *group-number*] [**active** | **init** | **listen** | **standby**] [**all**] [**brief**] [**detail**] [**ipv4**]

Syntax Description

interface	(Optional) Specifies the interface for which to display HSRP information.
ethernet *slot*/*port*	Specifies the Ethernet interface and the slot number and port number. The slot number is from 1 to 255, and the port number is from 1 to 128.
port-channel *number*	Specifies the EtherChannel interface and EtherChannel number. The range is from 1 to 4096.
vlan *vlan-id*	Specifies the VLAN interface. The range is from 1 to 4094.
group *group-number*	(Optional) Specifies the HSRP group number of the interface to display information about. The range is from 0 to 4095.
active	(Optional) Displays HSRP groups that are in an active state.
init	(Optional) Displays HSRP groups that are in an initialization state.
listen	(Optional) Displays HSRP groups that are in an listen state.
standby	(Optional) Displays HSRP groups that are in an standby state.
all	(Optional) Displays all HSRP groups.
brief	(Optional) Summarizes each virtual gateway or virtual forwarder with a single line of output.
detail	(Optional) Displays detailed information about HSRP groups.
ipv4	(Optional) Displays HSRP IPv4 groups.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines   Use the **show hsrp** command to display information about HSRP groups. The **brief** keyword displays a single line of information about each virtual gateway or virtual forwarder.

If you have not configured authentication, the **show hsrp** command will display the following string:

```
Authentication text "cisco"
```

This is the default behavior of HSRP as defined in RFC 2281:

```
If no authentication data is configured, the RECOMMENDED default
value is 0x63 0x69 0x73 0x63 0x6F 0x00 0x00 0x00.
```

This command does not require a license.

✎
Note Make sure the LAN Base Services license is installed on the switch to enable Layer 3 interfaces.

Examples This example shows how to display the default information about HSRP:

```
switch# show hsrp
Vlan1 - Group 1 (HSRP-V1) (IPv4)
  Local state is Active, priority 150 (Cfged 150), may preempt
    Forwarding threshold(for vPC), lower: 1 upper: 150
  Preemption Delay (Seconds) Reload:300
  Hellotime 3 sec, holdtime 10 sec
  Next hello sent in 0.793000 sec(s)
  Virtual IP address is 10.1.1.3 (Cfged)
  Active router is local
  Standby router is unknown
  Authentication text "cisco"
  Virtual mac address is 0000.0c07.ac01 (Default MAC)
  17 state changes, last state change 1w0d
  IP redundancy name is hsrp-Vlan1-1 (default)
...
```

✎
Note The authentication text string in the preceding example indicates that authentication has not been configured on the interface.

This example shows how to display a brief summary of HSRP information:

```
switch# show hsrp brief
                   P indicates configured to preempt.
                   |
Interface   Grp Prio P State    Active addr     Standby addr    Group addr
Vlan1       1   150  P Active   local           unknown         10.1.1.3        (conf)
Vlan2       2   150  P Active   local           unknown         10.1.2.3        (conf)
...
```

Related Commands

Command	Description
feature hsrp	Enables the HSRP feature.

show hsrp delay

To display the Hot Standby Router Protocol (HSRP) group delay information, use the **show hsrp delay** command.

> **show hsrp delay** [**interface** {**ethernet** *slot*/*port* | **port-channel** *number*[**.***sub_if_number*] | **vlan** *vlan_id*}] [**group** *group-number*] [**all**] [**brief**]

Syntax Description

interface	(Optional) Specifies the interface type and number for which to display HSRP information.
ethernet *slot*/*port*	(Optional) Specifies the Ethernet interface. The slot number is from 1 to 255, and the port number is from 1 to 128.
port-channel *number*	(Optional) Specifies the EtherChannel interface. The EtherChannel number is from 1 to 4096.
sub_if-number	(Optional) Subinterface number. The range is from 1 to 4093.
vlan *vlan-id*	(Optional) Specifies the VLAN interface. The range is from 1 to 4094.
group *group-number*	(Optional) Specifies the HSRP group number of the interface to display information about. The range is from 0 to 4095.
all	(Optional) Specifies all HSRP information.
brief	(Optional) Specifies brief HSRP information.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

✎
Note Make sure the LAN Base Services license is installed on the switch to enable Layer 3 interfaces.

Examples

This example shows how to display HSRP delay information:

```
switch# show hsrp delay
-------------------------------
Interface     Minimum   Reload
-------------------------------
Eth1/5        30        0
switch#
```

Related Commands	Command	Description
	delay minimum	Configures the delay infromation for HSRP groups.
	feature hsrp	Enables the HSRP feature.
	hsrp delay	Configures the delay infromation for HSRP groups.

show hsrp summary

To display Hot Standby Router Protocol (HSRP) summary information for each HSRP group, use the **show hsrp summary** command.

show hsrp summary

Syntax Description   This command has no arguments or keywords.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines   This command does not require a license.

Note   Make sure the LAN Base Services license is installed on the switch to enable Layer 3 interfaces.

Examples   This example shows how to display a summary of HSRP information:

```
switch# show hsrp summary

HSRP Summary:

Extended-hold (NSF) disabled
Global HSRP-BFD disabled

Total Groups: 1
    Version::    V1-IPV4: 1       V2-IPV4: 0       V2-IPV6: 0
     State::      Active: 0       Standby: 0        Listen: 0
     State::   V6-Active: 0    V6-Standby: 0     V6-Listen: 0

Total HSRP Enabled interfaces: 1

Total Packets:
           Tx - Pass: 0       Fail: 0
           Rx - Good: 0

Packet for unknown groups: 0

Total MTS: Rx: 25

switch#
```

Related Commands	Command	Description
	feature hsrp	Enables the HSRP feature.
	hsrp	Configures HSRP groups.

show ip adjacency

To display adjacency information, use the **show ip adjacency** command.

show ip adjacency [*ip-addr* | *interface*] [**detail**] [**non-best**] [**statistics**] [**summary**]
[**vrf** *vrf-name* | **all** | **default** | **management**]

Syntax Description

ip-addr	(Optional) IPv4 source address. The format is x.x.x.x.
interface	(Optional) Interface. Use *?* to determine the supported interface types.
detail	(Optional) Displays detailed adjacency information.
non-best	(Optional) Displays both the best and nonbest adjacency information.
statistics	(Optional) Displays adjacency statistics.
summary	(Optional) Displays a summary of the adjacency information.
vrf *vrf-name*	(Optional) Specifies the virtual router context (VRF) name. The name can be any case-sensitive, alphanumeric string up to 32 characters.
all	(Optional) Displays adjacency statistics for all VRF entries.
default	(Optional) Displays adjacency statistics for the default VRF.
management	(Optional) Displays adjacency statistics for the management VRF.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines

The counter values in the output of **show ip adjacency** {**statistics** | **detail**} command are cleared after a supervisor module switchover.

Examples

This example shows how to display a summary of the adjacency information:

```
switch# show ip adjacency summary

IP Adjacency Table for VRF default
Total number of entries: 1
Address         MAC Address    Pref Source     Interface
2.2.2.100       000a.000a.000a 1    Static      Ethernet1/2
switch#
```

show ip adjacency

Related Commands	Command	Description
	show forwarding adjacency	Displays forwarding adjacency information.

show ip adjacency summary

To display the IP adjacency summary, use the **show ip adjacency summary** command.

show ip adjacency summary

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

EXEC mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to display the IP adjacency summary:

```
switch# show ip adjacency summary
I
IP AM Table - Adjacency Summary

  Static  : 1
  Dynamic : 0
  Others  : 0
  Total   : 1

switch#
```

Related Commands

Command	Description
ip arp timeout	Configures ARP.

show ip arp

To display the Address Resolution Protocol (ARP) information, use the **show ip arp** command.

show ip arp [*ip-addr* | {**ethernet** *slot/port* | **loopback** *if_number* | **mgmt** *mif_number* | **port-channel** *number*}] [**client**] [**static**] [**statistics**] [**vrf** *vrf-name*]

Syntax Description

ip-addr	(Optional) IPv4 source address. The format is x.x.x.x.
ethernet *slot/port*	(Optional) Specifies the Ethernet interface. The slot number is from 1 to 255, and the port number is from 1 to 128.
loopback *if_number*	(Optional) Specifies the loopback interface. The loopback interface number is from 0 to 1023.
mgmt *mif_number*	(Optional) Specifies the management interface. The management interface number is from 0 to 1023.
port-channel *number*	(Optional) Specifies the EtherChannel interface and EtherChannel number. The range is from 1 to 4096.
client	(Optional) Displays the ARP client table
static	(Optional) Displays static ARP entries.
statistics	(Optional) Displays ARP statistics.
vrf *vrf-name*	(Optional) Specifies the virtual router context (VRF) name. The name can be any case-sensitive, alphanumeric string up to 32 characters.

Command Default None

Command Modes Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Examples This example shows how to display the ARP information:

```
switch# show ip arp

Flags: D - Static Adjacencies attached to down interface

IP ARP Table for context default
Total number of entries: 1
Address         Age      MAC Address     Interface
2.2.2.100        -       000a.000a.000a  Ethernet1/2
switch#
```

Related Commands	Command	Description
	ip arp	Configures a static ARP entry.

show ip arp summary

To display ARP adjacency summary, use the **show ip arp summary** command.

show ip arp summary

Syntax Description   This command has no arguments or keywords.

Command Default   None

Command Modes   Global configuration mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Examples   This example shows how to display ARP adjacency summary:

```
switch# show ip arp summary

IP ARP Table - Adjacency Summary

 Resolved   : 0
 Incomplete : 0
 Unknown    : 0
 Total      : 0

switch#
```

Related Commands

Command	Description
ip arp timeout	Configures ARP.

show ip bgp

To display entries in the Border Gateway Protocol (BGP) table, use the **show ip bgp** command.

show ip bgp [*ip-addr* | *ip-prefix* [**longer-prefixes**]] [**received-paths**] [**regexp** *expression*] [**route-map** *map-name*] [**summary**] [**vrf** *vrf-name*]

Syntax Description

ip-addr	(Optional) Network from the BGP route table. The format is x.x.x.x.
ip-prefix	(Optional) Prefix from the BGP route table. The format is x.x.x.x/length.
longer-prefixes	(Optional) Displays the prefix and any more specific routes.
received-paths	(Optional) Displays paths stored for soft reconfiguration.
regexp *expression*	(Optional) Displays information that matches the regular expression.
route-map *map-name*	(Optional) Displays routes that match the route map. The map name can be any case-sensitive, alphanumeric string up to 63 characters.
summary	(Optional) Displays the summary of the routes.
vrf *vrf-name*	(Optional) Specifies the virtual routing and forwarding (VRF) instance. The name can be any case-sensitive, alphanumeric string up to 32 characters.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines   This command requires the LAN Enterprise Services license.

Examples   This example shows how to display the BGP route table:

```
switch(config-router)# show ip bgp
```

Related Commands

Command	Description
clear ip bgp	Clears entries in the BGP route table.

show ip bgp all

To display the Border Gateway Protocol (BGP) entries for all address families, use the **show ip bgp all** command.

> **show ip bgp all** [*ip-addr* | *ip-prefix* [**longer-prefixes**]] [**filter-list** *list-name*] [**community-list** *commlist-name* [**exact-match**]] [**flap-statistics**] [**nexthop-database**] [**received-paths**] [**regexp** *expression*][**route-map** *map-name*] [**summary**] [**vrf** {*vrf-name* | **all**}]

> **show ip bgp all community** [*comm-name*] [{{**internet** | **no-advertise** | **no-export** | **no-export-subconfed**} | **exact-match**}] [**vrf** {*vrf-name* | **all**}]

> **show ip bgp all extcommunity 4byteas-generic** {**non-transitive** | **transitive**} [*as4-number*] [**exact-match**] [**vrf** {*vrf-name* | **all**}]

> **show ip bgp all dampening** {**dampened-paths** [**regexp** *expression*] | **flap-statistics** | **history-paths** [**regexp** *expression*] | **parameters**} [**vrf** {*vrf-name* | **all**}]

> **show ip bgp all neighbors** [*ip-addr* [**advertised-routes** | **flap-statistics** | **paths** | **received-routes** | **routes** [**advertised** | **dampened** | **received**]]] [**vrf** {*vrf-name* | **all**}]

Syntax Description

ip-addr	(Optional) Network from the BGP route table. The format is x.x.x.x.
ip-prefix	(Optional) Prefix from the BGP route table. The format is x.x.x.x/length.
longer-prefixes	(Optional) Displays the prefix and any more specific routes.
filter-list	(Optional) Displays BGP routes that match a filter list.
list-name	Name of a filter list. The name can be any case-sensitive, alphanumeric string up to 63 characters.
community-list *commlist-name*	(Optional) Display routes matching the community-list. The *commlist-name* can be any case-sensitive, alphanumeric string up to 63 characters.
exact-match	(Optional) Displays an exact match of the communities.
flap-statistics	Displays flap statistics for routes.
nexthop-database	(Optional) Displays the BGP next-hop database.
received-paths	(Optional) Displays paths stored for soft reconfiguration.
regexp *expression*	(Optional) Displays information that matches the regular expression.
route-map *map-name*	(Optional) Displays routes that match the route map. The map name can be any case-sensitive, alphanumeric string up to 63 characters.
summary	(Optional) Displays the summary of the routes.
community	Displays BGP routes that match a community list.
community-number	(Optional) Community number. Valid value is a community number in the range from 1 to 4294967200, or **AA**:**NN** (autonomous system-community number/2-byte number).
no-export	(Optional) Displays routes with this community that are advertised to only peers in the same autonomous system or to only other subautonomous systems within a confederation.
no-advertise	(Optional) Displays routes that are not advertise to any peer (internal or external).

no-export-subconfed	(Optional) Displays routes that are part of the well-known community no-export-subconfed.
internet	(Optional) Displays routes that are part of the well-known community internet community.
extcommunity	Displays routes that match an extended community.
4byteas-generic	(Optional) Displays the routes that match the generic specifice extended communities.
non-transitive	(Optional) Displays the routes that match the non-transitive extended communities.
transitive	(Optional) Displays the routes that match the transitive extended communities.
as4-number	(Optional) AS number. The *as4-number* is a 32-bit integer in the form of a plaintext integer or <higher 16-bit decimal number>.<lower 16-bit decimal number> .
exact-match	(Optional) Displays an exact match of the extended community.
dampening	Displays all dampening information.
dampened-paths	(Optional) Displays all dampened paths.
regexp *expression*	(Optional) Display information that matches the regular expression.
history-paths	(Optional) Displays all history paths.
parameters	(Optional) Displays all dampening parameters.
neighbors	Displays all BGP neigbors.
advertised-routes	(Optional) Displays all the routes advertised to this neighbor.
flap-statistics	(Optional) Displays flap statistics for the routes received from this neighbor.
paths	(Optional) Displays AS paths learned from this neighbor.
received-routes	(Optional) Displays all the routes received from this neighbor.
routes	(Optional) Displays the routes received or advertised to or from this neighbor.
advertised	(Optional) Displays all the routes advertised for this neighbor.
dampened	(Optional) Displays all dampened routes received from this neighbor.
received	(Optional) Displays all the routes received from this neighbor.
vrf *vrf-name*	(Optional) Specifies the virtual routing and forwarding (VRF) instance. The name can be any case-sensitive, alphanumeric string up to 32 characters.
all	(Optional) Specifies the VFR reserved all name.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Cisco Nexus 5000 Series NX-OS Unicast Routing Command Reference

Usage Guidelines   This command requires the LAN Enterprise Services license.

Examples   This example shows how to display the BGP entries for all address families:

```
switch# show ip bgp all
BGP routing table information for VRF default, address family IPv4 Multicast
BGP table version is 5, local router ID is 2.2.2.3
Status: s-suppressed, x-deleted, S-stale, d-dampened, h-history, *-valid, >-best
Path type: i-internal, e-external, c-confed, l-local, a-aggregate, r-redist
Origin codes: i - IGP, e - EGP, ? - incomplete, | - multipath

   Network          Next Hop          Metric    LocPrf    Weight Path
   192.168.1.3/2       0.0.0.0                     100      32768 i
switch#
```

This example shows how to display a summary of the state of the BGP route table:

```
switch# show ip bgp all summary
BGP summary information for VRF default, address family IPv4 Multicast
BGP router identifier 2.2.2.3, local AS number 102
BGP table version is 5, IPv4 Multicast config peers 2, capable peers 0
1 network entries and 1 paths using 104 bytes of memory
BGP attribute entries [1/124], BGP AS path entries [0/0]
BGP community entries [0/0], BGP clusterlist entries [0/0]

Neighbor        V    AS MsgRcvd MsgSent   TblVer  InQ OutQ Up/Down  State/PfxRcd
10.0.0.100      4 64497       0       0        0    0    0 03:20:10 Idle
192.168.1.3     4     0       0       0        0    0    0 01:51:38 Idle
switch#
```

Related Commands

Command	Description
clear ip bgp	Clears entries in the BGP route table.

show ip bgp community

To display Border Gateway Protocol (BGP) routes that match a community list, use the **show ip bgp community** command.

show ip bgp community {*community-number*] [{**internet** | **no-advertise** | **no-export** | **no-export-subconfed**}} [**vrf** {*vrf-name* | **all**}]

Syntax Description		
	community-number	Community number. Valid value is a community number in the range from 1 to 4294967200, or **AA**:**NN** (autonomous system-community number/2-byte number).
	internet	Displays routes that are part of the well-known community internet community.
	no-advertise	Displays routes that are not advertise to any peer (internal or external).
	no-export	Displays routes with this community that are advertised to only peers in the same autonomous system or to only other subautonomous systems within a confederation.
	no-export-subconfed	Displays routes that are part of the well-known community no-export-subconfed.
	vrf *vrf-name*	(Optional) Specifies the virtual routing and forwarding (VRF) instance. The name can be any case-sensitive, alphanumeric string up to 32 characters.
	all	(Optional) Specifies the reserved all VRF.

Command Default   None

Command Modes   Any command mode

Command History	Release	Modification
	5.0(3)N1(1)	This command was introduced.

Usage Guidelines   This command requires the LAN Enterprise Services license.

Examples   This example shows how to display the routes that are part of the 201 BGP community:

```
switch# show ip bgp community 201
```

This example shows how to display the routes that are part of the no-advertise BGP community and all VRF:

```
switch# show ip bgp community no-advertise
```

Cisco Nexus 5000 Series NX-OS Unicast Routing Command Reference ■

Related Commands	Command	Description
	set community	Sets the attributes for BGP communities.
	show ip bgp community-list	Displays BGP routes that are permitted by the BGP community list.
	show ip bgp community exact-match	Displays the routes that have exactly the same specified BGP communities.

show ip bgp community exact-match

To display routes that matches a specific Border Gateway Protocol (BGP) community, use the **show ip bgp community exact-match** command.

show ip bgp community *community-number* **exact-match** [**vrf** {**all** | *vrf-name*}]

Syntax Description

community-number	Community number. Valid value is a community number in the range from 1 to 4294967200, or **AA**:**NN** (autonomous system-community number/2-byte number).
exact-match	Displays only routes that have exactly the same specified communities.
all	(Optional) Specifies the reserved all VRF.
vrf *vrf-name*	(Optional) Specifies the virtual routing and forwarding (VRF) instance. The name can be any case-sensitive, alphanumeric string up to 32 characters.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines

This command requires the LAN Enterprise Services license.

Examples

This example shows how to display the routes that have exactly the same specified BGP communities:

```
switch# show ip bgp community 201 exact-match
```

Related Commands

Command	Description
set community	Sets the attributes for BGP communities.
show ip bgp community	Displays the BGP routes that match a community list.
show ip bgp community-list	Displays BGP routes that are permitted by the BGP community list.

show ip bgp community-list

To display Border Gateway Protocol (BGP) routes that are permitted by the BGP community list, use the **show ip bgp community-list** command.

show ip bgp [**ipv4** {**unicast** | **multicast**} | **all**] **community-list** *commlist-name* [**exact-match**]} [**vrf** *vrf-name*]

Syntax Description

ipv4	(Optional) Displays BGP information for the IPv4 address family.
unicast	Displays BGP information for the unicast address family.
multicast	Displays BGP information for the multicast address family.
all	Displays BGP information for all address families.
community-list *commlist-name*	Display routes matching the community-list. The *commlist-name* can be any case-sensitive, alphanumeric string up to 63 characters.
exact-match	(Optional) Displays an exact match of the communities.
vrf *vrf-name*	(Optional) Specifies the virtual router context (VRF) name. The name can be any case-sensitive, alphanumeric string up to 32 characters.

Command Default None

Command Modes Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines This command requires the LAN Enterprise Services license.

Examples This example shows how to display routes that match a community list:

```
switch(config)# show ip bgp community-list test1
```

Related Commands

Command	Description
ip community-list	Creates a community list.

show ip bgp dampening

To display Border Gateway Protocol (BGP) dampening information, use the **show ip bgp dampening** command.

show ip bgp [**ipv4** {**unicast** | **multicast**} | **all**] **dampening** {**dampened-paths** [**regexp** *expression*] | **flap-statistics** | **history-paths** [**regexp** *expression*] | **parameters**} [**vrf** *vrf-name*]

Syntax Description

ipv4	(Optional) Display BGP information for the IPv4 address family.
unicast	Displays BGP information for the unicast address family.
multicast	Displays BGP information for the multicast address family.
all	Displays BGP information for all address families.
dampened-paths	Displays all dampened paths.
regexp *expression*	(Optional) Display information that matches the regular expression.
flap-statistics	Displays flap statistics for routes.
history-paths	Displays all history paths.
parameters	Displays all dampening parameters.
vrf *vrf-name*	(Optional) Specifies the virtual router context (VRF) name. The name can be any case-sensitive, alphanumeric string up to 32 characters.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines   This command requires the LAN Enterprise Services license.

Examples   This example shows how to display the dampening information:

```
switch(config)# show ip bgp dampening dampened-paths
```

Related Commands

Command	Description
address-family (BGP router)	Configures BGP parameters.
dampening (BGP)	Configures the route flap dampening.

show ip bgp extcommunity

To display Border Gateway Protocol (BGP) routes that match an extended community, use the **show ip bgp extcommunity** command.

show ip bgp extcommunity generic {**non-transitive** | **transitive**} [*as4-number*] [**exact-match**] [**vrf** *vrf-name*]

Syntax Description		
	generic	Displays the routes that match the generic specifice extended communities.
	non-transitive	Displays the routes that match the non-transitive extended communities.
	transitive	Displays the routes that match the transitive extended communities.
	as4-number	(Optional) AS number. The *as4-number* is a 32-bit integer in the form of a plaintext integer or <higher 16-bit decimal number>.<lower 16-bit decimal number> .
	exact-match	(Optional) Displays an exact match of the extended community.
	vrf *vrf-name*	(Optional) Specifies the virtual router context (VRF) name. The name can be any case-sensitive, alphanumeric string up to 32 characters.

Command Default None

Command Modes Any command mode

Command History	Release	Modification
	5.0(3)N1(1)	This command was introduced.

Usage Guidelines This command requires the LAN Enterprise Services license.

Examples This example shows how to display routes that match an extended community:

```
switch(config)# show ip bgp extcommunity generic transitive 1.3:30
```

Related Commands	Command	Description
	ip extcommunity-list	Creates an extended community list.

show ip bgp extcommunity-list

To display Border Gateway Protocol (BGP) routes that match an extended community list, use the **show ip bgp extcommunity-list** command.

show ip bgp extcommunity-list *commlist-name* [**exact-match**] [**vrf** *vrf-name*]

Syntax Description		
	commlist-name	Name of an extended community-list. The *commlist-name* can be any case-sensitive, alphanumeric string up to 63 characters.
	exact-match	(Optional) Displays an exact match of the extended communities.
	vrf *vrf-name*	(Optional) Specifies the virtual router context (VRF) name. The name can be any case-sensitive, alphanumeric string up to 32 characters.

Command Default None

Command Modes Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines This command requires the LAN Enterprise Services license.

Examples This example shows how to display routes that match a community list:

```
switch(config)# show ip bgp extcommunity-list test1
```

Related Commands

Command	Description
ip extcommunity-list	Creates an extended community list.

show ip bgp filter-list

To display Border Gateway Protocol (BGP) routes that match a filter list, use the **show ip bgp filter-list** command.

show ip bgp filter-list *list-name* [**exact-match**] [**vrf** *vrf-name*]

Syntax Description

list-name	Name of a filterlist. The name can be any case-sensitive, alphanumeric string up to 63 characters.
exact-match	(Optional) Displays an exact match of the filter.
vrf *vrf-name*	(Optional) Specifies the virtual router context (VRF) name. The name can be any case-sensitive, alphanumeric string up to 32 characters.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines   This command requires the LAN Enterprise Services license.

Examples   This example shows how to display routes that match a filter list:

```
switch(config)# show ip bgp filter-list test1
```

Related Commands

Command	Description
filter-list	Assigns an autonomous system (AS) path filter to a BGP peer.
show ip bgp all	Displays the BGP entries for all address families.

show ip bgp flap-statistics

To display Border Gateway Protocol (BGP) flap statistics, use the **show ip bgp flap-statistics** command.

show ip bgp flap-statistics [**vrf** *vrf-name*]

Syntax Description

vrf *vrf-name*	(Optional) Specifies the virtual router context (VRF) name. The name can be any case-sensitive, alphanumeric string up to 32 characters.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines   This command requires the LAN Enterprise Services license.

Examples   This example shows how to display the flap statistics:

```
switch(config)# show ip bgp flap-statistics
```

Related Commands

Command	Description
clear bgp flap-statistics	Clears BGP route flap statistics.

show ip bgp neighbors

To display Border Gateway Protocol (BGP) neighbors, use the **show ip bgp neighbors** command.

show ip bgp neighbors [*addr* [**advertised-routes** | **flap-statistics** | **paths** | **received-routes** | **routes** [**advertised** | **dampened** | **received**]]] [**vrf** {**all** | *vrf-name*}]

Syntax Description

addr	IPv4 address. The format is x.x.x.x
advertised-routes	(Optional) Displays all the routes advertised to this neighbor.
flap-statistics	(Optional) Displays flap statistics for the routes received from this neighbor.
paths	(Optional) Displays AS paths learned from this neighbor.
received-routes	(Optional) Displays all the routes received from this neighbor.
routes	(Optional) Displays the routes received or advertised to or from this neighbor.
advertised	(Optional) Displays all the routes advertised for this neighbor.
dampened	(Optional) Displays all dampened routes received from this neighbor.
received	(Optional) Displays all the routes received from this neighbor.
vrf *vrf-name*	(Optional) Specifies the virtual router context (VRF) name. The name can be any case-sensitive, alphanumeric string up to 32 characters.
all	(Optional) Specifies all VRF.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines

This command requires the LAN Enterprise Services license.

Examples

This example shows how to display the BGP neighbors:

```
switch(config)# show ip bgp neighbors
```

Related Commands

Command	Description
neighbor	Configures BGP neighbors.

show ip bgp nexthop

To display Border Gateway Protocol (BGP) next-hop information, use the **show ip bgp nexthop** command.

> **show ip bgp nexthop** *addr* [**vrf** *vrf-name*]

Syntax Description

addr	IPv4 address. The format is x.x.x.x
vrf *vrf-name*	(Optional) Specifies the virtual router context (VRF) name. The name can be any case-sensitive, alphanumeric string up to 32 characters.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines   This command requires the LAN Enterprise Services license.

Examples   This example shows how to display the BGP next-hop information:

```
switch(config)# show ip bgp nexthop 192.0.2.1
```

Related Commands

Command	Description
show ip bgp neighbors	Displays BGP neighbor information.

show ip bgp nexthop-database

To display Border Gateway Protocol (BGP) next-hop database, use the **show ip bgp nexthop-database** command.

show ip bgp nexthop-database [**vrf** *vrf-name*]

Syntax Description	**vrf** *vrf-name*	(Optional) Specifies the virtual router context (VRF) name. The name can be any case-sensitive, alphanumeric string up to 32 characters.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines   This command requires the LAN Enterprise Services license.

Examples   This example shows how to display the BGP next-hop database:

```
switch(config)# show ip bgp nexthop-database
```

Related Commands

Command	Description
show ip bgp neighbors	Displays BGP neighbor information.

show ip bgp paths

To display all the Border Gateway Protocol (BGP) paths in the database, use the **show ip bgp paths** command.

show ip bgp paths

Syntax Description   This command has no arguments or keywords.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines   This command requires the LAN Enterprise Services license.

Examples   This example shows how to display the BGP paths in the database:

```
switch(config)# show ip bgp paths
Address    Hash Refcount     Metric Path
0x5a5e46bc 2001        1          0 i
switch#
```

Related Commands

Command	Description
maximum-paths	Controls the maximum number of parallel routes that the Border Gateway Protocol (BGP) can support.
show ip bgp	Displays the BGP table information.
show ip bgp neighbors	Displays BGP neighbor information.

show ip bgp peer-policy

To display Border Gateway Protocol (BGP) peer policy template information, use the **show ip bgp peer-policy** command.

show ip bgp peer-policy *name*

Syntax Description

name	Name of a BGP template. The name can be any case-sensitive, alphanumeric string up to 63 characters.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines   This command requires the LAN Enterprise Services license.

Examples   This example shows how to display the BGP peer policy:

```
switch(config)# show ip bgp peer-policy test1
```

Related Commands

Command	Description
inherit peer-policy	Inherits a peer policy template for a neighbor.
template peer-policy	Configures a peer policy template.

show ip bgp peer-session

To display Border Gateway Protocol (BGP) peer session template information, use the **show ip bgp peer-session** command.

show ip bgp peer-session *name*

Syntax Description		
	name	Name of a BGP template. The name can be any case-sensitive, alphanumeric string up to 63 characters.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines   This command requires the LAN Enterprise Services license.

Examples   This example shows how to display the BGP peer session:

```
switch(config)# show ip bgp peer-session test1
```

Related Commands

Command	Description
inherit peer-session	Inherits a peer session template for a neighbor.
template peer-session	Configures a peer session template.

show ip bgp peer-template

To display Border Gateway Protocol (BGP) peer template information, use the **show ip bgp peer-template** command.

show ip bgp peer-template *name*

Syntax Description	*name*	Name of a BGP template. The name can be any case-sensitive, alphanumeric string up to 63 characters.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines   This command requires the LAN Enterprise Services license.

Examples   This example shows how to display the BGP peer template:

```
switch(config)# show ip bgp peer-template peer1
```

Related Commands

Command	Description
inherit peer-template	Inherits a peer template for a neighbor.
template peer	Configures a peer template.

show ip bgp prefix-list

To display Border Gateway Protocol (BGP) routes that match a prefix list, use the **show ip bgp prefix-list** command.

show ip bgp prefix-list *list-name* [**exact-match**] [**vrf** *vrf-name*]

Syntax Description

list-name	Name of a prefix list. The commlist-name can be any case-sensitive, alphanumeric string up to 63 characters.
exact-match	(Optional) Displays an exact match of the filter.
vrf *vrf-name*	(Optional) Specifies the virtual router context (VRF) name. The name can be any case-sensitive, alphanumeric string up to 32 characters.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines   This command requires the LAN Enterprise Services license.

Examples   This example shows how to display routes that match a prefix list:

```
switch(config)# show ip bgp prefix-list test1
```

Related Commands

Command	Description
maximum-prefix	Controls the number of prefixes that can be received from a BGP neighbor.

show ip bgp received-paths

To display the routes received from a Border Gateway Protocol (BGP) peer, use the **show ip bgp received-paths** command.

show ip bgp received-paths [**vrf** *vrf-name* | **all**]

Syntax Description

vrf *vrf-name*	(Optional) Specifies the virtual router context (VRF) name. The name can be any case-sensitive, alphanumeric string up to 32 characters.
all	(Optional) Specifies all VRF.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines   This command requires the LAN Enterprise Services license.

Examples   This example shows how to display the received routes from a BGP peer:

```
switch(config)# show ip bgp received-paths
```

Related Commands

Command	Description
show ip bgp neighbors	Displays BGP neighbor information.

show ip bgp route-map

To display the Border Gateway Protocol (BGP) route maps from the BGP table, use the **show ip bgp route-map** command.

show ip bgp route-map *route-map-name* [**vrf** *vrf-name* | **all**]

Syntax Description

route-map-name	Route map name.
vrf *vrf-name*	(Optional) Specifies the virtual router context (VRF) name. The name can be any case-sensitive, alphanumeric string up to 32 characters.
all	(Optional) Specifies all VRF.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines   This command requires the LAN Enterprise Services license.

Examples   This example shows how to display the BGP route maps from the BGP table:

```
switch(config)# show ip bgp route-map
```

Related Commands

Command	Description
route-map	Creates route maps.
clear ip bgp	Clear BGP routes from the BGP table.

show ip bgp summary

To display the status of all Border Gateway Protocol (BGP) connections, use the **show ip bgp summary** command.

show ip bgp summary [**vrf** *vrf-name* | **all**]

Syntax Description

vrf *vrf-name*	(Optional) Specifies the virtual router context (VRF) name. The name can be any case-sensitive, alphanumeric string up to 32 characters.
all	(Optional) Specifies all VRF.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines   This command requires the LAN Enterprise Services license.

Examples   This example shows how to display the status of BGP connections:

```
switch(config)# show ip bgp summary
```

Related Commands

Command	Description
maximum-prefix	Controls the number of prefixes that can be received from a BGP neighbor.
router bgp	Assigns an autonomous system (AS) number to a router.

show ip client

To display information about the internal IP clients, use the **show ip client** command.

show ip client [*name*]

Syntax Description	*name*	(Optional) Name of the client.

Command Default None

Command Modes Any command mode

Command History	Release	Modification
	5.0(3)N1(1)	This command was introduced.

Examples This example shows how to display the IP client information for the Address Resolution Protocol (ARP):

```
switch(config)# show ip client arp
```

Related Commands	Command	Description
	show ip process	Displays information about the IP process.

show ip community-list

To display community lists for the Border Gateway Protocol (BGP), use the **show ip community-list** command.

show ip community-list [*name*]

Syntax Description	*name*	(Optional) Name of the community list. The name can be any case-sensitive, alphanumeric string up to 63 characters.

Command Default None

Command Modes Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Examples This example shows how to display the community lists:

```
switch(config)# show ip community-list
```

Related Commands

Command	Description
ip community-list	Configures a BGP community list.

show ip eigrp

To display a summary of the Enhanced Interior Gateway Routing Protocol (EIGRP) processes, use the **show ip eigrp** command.

show ip eigrp [*instance-tag*]

Syntax Description

instance-tag	(Optional) Name of the EIGRP instance. The *instance-tag* can be any case-sensitive, alphanumeric string up to 20 characters.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines   This command requires the LAN Base Services license.

Examples   This example shows how to display all the EIGRP instances:

```
switch# show ip eigrp
IP-EIGRP AS 65535 ID 3.1.1.1 VRF default
  Process-tag: Test1
  Status: running
  Authentication mode: none
  Authentication key-chain: none
  Metric weights: K1=1 K2=0 K3=1 K4=0 K5=0
  IP proto: 88 Multicast group: 224.0.0.10
  Int distance: 90 Ext distance: 170
  Max paths: 8
  Number of EIGRP interfaces: 8 (0 loopbacks)
  Number of EIGRP passive interfaces: 0
  Number of EIGRP peers: 8
  Redistributing:
    direct route-map SVI-EIGRP
  Graceful-Restart: Enabled
  Stub-Routing: Disabled
  NSF converge time limit/expiries: 120/0
  NSF route-hold time limit/expiries: 240/0
  NSF signal time limit/expiries: 20/0
  Redistributed max-prefix: Disabled
switch#
```

Related Commands	Command	Description
	show running-config eigrp	Displays EIGRP running configuration information.
	router eigrp	Configures an EIGRP instance.

show ip eigrp accounting

To display prefix accounting information for the Enhanced Interior Gateway Routing Protocol (EIGRP) processes, use the **show ip eigrp accounting** command.

show ip eigrp [*instance-tag*] **accounting** [**vrf** {*vrf-name* | **all** | **default** | **management**}]

Syntax Description

instance-tag	(Optional) Name of the EIGRP instance. This option is available when a virtual routing and forwarding (VRF) instance is not specified. The instance tag can be any case-sensitive, alphanumeric string up to 20 characters.
vrf *vrf-name*	(Optional) Specifies the name of the virtual routing and forwarding (VRF) instance. The *vrf-name* argument can be specified as any case-sensitive, alphanumeric string up to 32 characters.
all	(Optional) Specifies all VRF instances.
default	(Optional) Specifies the default VRF.
management	(Optional) Specifies the management VRF.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines   This command requires the LAN Base Services license.

Examples   This example shows how to display the EIGRP accounting information:

```
switch# show ip eigrp accounting
IP-EIGRP Accounting Statistics for AS 65535 VRF default
Total Prefix Count: 3536

States: A-Adjacency, P-Pending, D-Down

State Address/Source    Interface       Prefix    Restart   Restart/
                                        Count     Count     Reset(s)
A     Redistributed     ----            118       0         0
A     10.20.150.2       Po2001          3413      0         0
A     10.20.200.2       Po2000          3418      0         0
A     10.0.1.1          Eth1/26         3419      0         0
A     10.50.2.1         Eth2/5          3419      0         0
A     10.50.1.1         Eth2/6          3419      0         0
A     10.50.3.1         Eth2/7          3419      0         0
A     10.20.5.2         Eth3/11         3419      0         0
```

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```
    A   10.20.6.2      Eth3/12         3419      0         0
switch#
```

	Command	Description
Related Commands	**show running-config eigrp**	Displays EIGRP running configuration information.
	router eigrp	Configures an EIGRP instance.

show ip eigrp interfaces

To display information about interfaces configured for the Enhanced Interior Gateway Routing Protocol (EIGRP), use the **show ip eigrp interfaces** command.

show ip eigrp [*instance-tag*] **interfaces** [{**ethernet** *slot*/*port* | **loopback** *if_number* | **port-channel** *number* | **vlan** *vlan-id*}] [**brief**] [**vrf** {*vrf-name* | **all** | **default** | **management**}]

Syntax Description		
	instance-tag	EIGRP Instance. The instance tag can be any case-sensitive, alphanumeric string up to 20 characters.
	ethernet *slot*/*port*	Specifies the Ethernet interface and the slot number and port number. The slot number is from 1 to 255, and the port number is from 1 to 128.
	loopback *if_number*	Specifies the loopback interface. The loopback interface number is from 0 to 1023.
	port-channel *number*	Specifies the EtherChannel interface and EtherChannel number. The range is from 1 to 4096.
	vlan *vlan-id*	Specifies the VLAN interface. The range is from 1 to 4094.
	brief	(Optional) Displays a brief summary of EIGRP interface information.
	vrf *vrf-name*	(Optional) Specifies the name of the virtual routing and forwarding (VRF) instance. The *vrf-name* argument can be specified as any case-sensitive, alphanumeric string up to 32 characters.
	all	(Optional) Specifies all VRF instances.
	default	(Optional) Specifies the default VRF.
	management	(Optional) Specifies the management VRF.

Command Default   This command shows all interfaces for the default VRF if no VRF or no interface is specified.

Command Modes   Any command mode

Command History	Release	Modification
	5.0(3)N1(1)	This command was introduced.

Usage Guidelines   Use the **show ip eigrp interfaces** command to determine on which interfaces EIGRP is active and learn information about EIGRP related to those interfaces.

If you specify an interface, only that interface is displayed. Otherwise, all interfaces on which EIGRP is running are displayed.

If you specify an autonomous system, only the routing process for the specified autonomous system is displayed. Otherwise, all EIGRP processes are displayed.

This command requires the LAN Base Services license.

Examples   This example shows how to display information about EIGRP interfaces:

```
switch# show ip eigrp interfaces brief
IP-EIGRP interfaces for process 65535 VRF default

                         Xmit Queue   Mean   Pacing Time   Multicast    Pending
Interface      Peers   Un/Reliable   SRTT   Un/Reliable   Flow Timer   Routes
Eth1/26          1        0/0         16        0/1           64           0
Eth2/5           1        0/0         16        0/1           64           0
Eth2/6           1        0/0         16        0/1           64           0
Eth2/7           1        0/0         13        0/1           50           0
Eth3/11          1        0/0         18        0/1           80           0
Eth3/12          1        0/0         14        0/1           64           0
Po2000           1        0/0         13        0/1           72           0
Po2001           1        0/0         20        0/1          128           0
switch#
```

This example shows how to display information about a particular EIGRP interface:

```
switch# show ip eigrp interfaces ethernet 2/5
IP-EIGRP interfaces for process 65535 VRF default

                         Xmit Queue   Mean   Pacing Time   Multicast    Pending
Interface      Peers   Un/Reliable   SRTT   Un/Reliable   Flow Timer   Routes
Eth2/5           1        0/0         16        0/1           64           0
  Hello interval is 5 sec
  Holdtime interval is 15 sec
  Next xmit serial <none>
  Un/reliable mcasts: 0/178  Un/reliable ucasts: 292/17
  Mcast exceptions: 4  CR packets: 4  ACKs suppressed: 8
  Retransmissions sent: 8  Out-of-sequence rcvd: 146
  Authentication mode is not set
switch#
```

Related Commands

Command	Description
show ip eigrp neighbors	Displays the neighbors discovered by EIGRP.
show running-config eigrp	Displays EIGRP running configuration information.

show ip eigrp neighbors

To display information about neighbors discovered by the Enhanced Interior Gateway Routing Protocol (EIGRP), use the **show ip eigrp neighbors** command.

show ip eigrp [*instance-tag*] **neighbors** [**detail**] [{**ethernet** *slot/port* | **loopback** *if_number* | **port-channel** *number* | **vlan** *vlan-id*}] [**vrf** {*vrf-name* | **all** | **default** | **management**}]

Syntax Description		
instance-tag	(Optional) Name of the EIGRP instance. The instance tag can be any case-sensitive, alphanumeric string up to 20 characters.	
detail	(Optional) Displays detailed EIGRP neighbor information.	
ethernet *slot/port*	(Optional) Specifies the Ethernet interface and the slot number and port number. The slot number is from 1 to 255, and the port number is from 1 to 128.	
loopback *if_number*	(Optional) Specifies the loopback interface. The loopback interface number is from 0 to 1023.	
port-channel *number*	(Optional) Specifies the EtherChannel interface and EtherChannel number. The range is from 1 to 4096.	
vlan *vlan-id*	(Optional) Specifies the VLAN interface. The range is from 1 to 4094.	
vrf *vrf-name*	(Optional) Specifies the name of the virtual routing and forwarding (VRF) instance. The *vrf-name* argument can be specified as any case-sensitive, alphanumeric string up to 32 characters.	
all	(Optional) Specifies all VRF instances.	
default	(Optional) Specifies the default VRF.	
management	(Optional) Specifies the management VRF.	

Command Default   This command displays all neighbors for the default VRF on all interfaces if no VRF or interface is specified.

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines   Use the **show ip eigrp neighbors** command to determine when neighbors become active and inactive. This command is also useful for debugging certain types of transport problems.

This command requires the LAN Base Services license.

Examples   This example shows how to display information about EIGRP neighbors:

```
switch# show ip eigrp neighbors
IP-EIGRP neighbors for process 65535 VRF default
H   Address                Interface       Hold  Uptime    SRTT  RTO  Q   Seq
                                           (sec)           (ms)       Cnt Num
7   10.20.150.2            Po2001          12    03:44:02  20    200  0   10331
6   10.20.200.2            Po2000          14    03:44:02  13    200  0   158157
5   10.40.1.1              Eth1/26         13    03:44:14  16    200  0   158164
4   10.50.2.1              Eth2/5          12    03:44:14  16    200  0   158166
3   10.50.1.1              Eth2/6          13    03:44:15  16    200  0   158165
2   10.50.3.1              Eth2/7          11    03:44:15  13    200  0   158167
1   10.20.5.2              Eth3/11         14    03:44:16  18    200  0   158158
0   10.20.6.2              Eth3/12         11    03:44:17  14    200  0   158163
switch#
```

This example shows how to display detailed information about EIGRP neighbors:

```
switch# show ip eigrp neighbors detail
IP-EIGRP neighbors for process 65535 VRF default
H   Address                Interface       Hold  Uptime    SRTT  RTO  Q   Seq
                                           (sec)           (ms)       Cnt Num
7   10.20.150.2            Po2001          10    03:45:21  20    200  0   10331
    Version 12.4/1.2, Retrans: 4, Retries: 0, Prefixes: 3413
6   10.20.200.2            Po2000          12    03:45:22  13    200  0   158157
    Version 12.4/1.2, Retrans: 2, Retries: 0, Prefixes: 3418
5   10.40.1.1              Eth1/26         11    03:45:34  16    200  0   158164
    Version 12.4/1.2, Retrans: 5, Retries: 0, Prefixes: 3419
4   10.50.2.1              Eth2/5          12    03:45:34  16    200  0   158166
    Version 12.4/1.2, Retrans: 8, Retries: 0, Prefixes: 3419
3   10.50.1.1              Eth2/6          12    03:45:35  16    200  0   158165
    Version 12.4/1.2, Retrans: 4, Retries: 0, Prefixes: 3419
2   10.50.3.1              Eth2/7          13    03:45:35  13    200  0   158167
    Version 12.4/1.2, Retrans: 3, Retries: 0, Prefixes: 3419
1   10.20.5.2              Eth3/11         12    03:45:36  18    200  0   158158
    Version 12.4/1.2, Retrans: 7, Retries: 0, Prefixes: 3419
0   10.20.6.2              Eth3/12         10    03:45:36  14    200  0   158163
    Version 12.4/1.2, Retrans: 5, Retries: 0, Prefixes: 3419
switch#
```

Related Commands

Command	Description
clear ip eigrp neighbors	Clears neighbors for EIGRP.
show running-config eigrp	Displays EIGRP running configuration information.

show ip eigrp route

To display the Enhanced Interior Gateway Routing Protocol (EIGRP) routes, use the **show ip eigrp route-map statistics** command in any mode.

show ip eigrp [*instance-tag*] **route** [*ip-prefix/length*] [**active**] [**all-links**] [**detail-links**] [**pending**] [**summary**] [**zero-successors**] [**vrf** {*vrf-name* | **all** | **default** | **management**}]

Syntax Description

instance-tag	(Optional) Name of the EIGRP instance. The instance tag can be any case-sensitive, alphanumeric string up to 20 characters.
ip-prefix/length	(Optional) IP address in four-part, dotted-decimal notation with a network mask indicated as a slash (/) and number. For example, /8 indicates that the first 8 bits of the mask are 1s, and the corresponding bits of the address are the network address.
active	(Optional) Displays only active entries in the EIGRP topology table.
all-links	(Optional) Displays all entries in the EIGRP topology table.
detail-links	(Optional) Displays detailed information for all entries in the EIGRP topology table.
pending	(Optional) Displays all entries in the EIGRP topology table that are waiting for an update from a neighbor or are waiting to reply to a neighbor.
summary	(Optional) Displays a summary of theEIGRP topology table.
zero-successors	(Optional) Displays available routes in the EIGRP topology table.
vrf *vrf-name*	(Optional) Specifies the name of the virtual routing and forwarding (VRF) instance. The *vrf-name* argument can be specified as any case-sensitive, alphanumeric string up to 32 characters.
all	(Optional) Specifies all VRF instances.
default	(Optional) Specifies the default VRF.
management	(Optional) Specifies the management VRF.

Command Default None

Command Modes Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines This command requires a LAN Base Services license.

Examples This example shows how to display the EIGRP routes:

```
switch# show ip eigrp route
```

```
        IP-EIGRP Topology Table for AS(65535)/ID(3.1.1.1) VRF default

        Codes: P - Passive, A - Active, U - Update, Q - Query, R - Reply,
               r - reply Status, s - sia Status

        P 192.0.2.0/24, 7 successors, FD is 13056
                via 192.0.2.1 (13056/12800), Ethernet2/7
                via 192.0.2.5 (13056/12800), Ethernet1/26
                via 192.0.2.3 (13056/12800), Ethernet3/12
                via 192.0.2.6 (13056/12800), Ethernet3/11
                via 192.0.2.4 (13056/12800), port-channel2000
                via 192.0.2.2 (13056/12800), Ethernet2/6
                via 192.0.2.7 (13056/12800), Ethernet2/5
        P 192.0.2.1/24, 7 successors, FD is 13056
                via 192.0.2.1 (13056/12800), Ethernet2/7
                via 192.0.2.2 (13056/12800), Ethernet2/6
                via 192.0.2.3 (13056/12800), Ethernet3/12
                via 192.0.2.4 (13056/12800), port-channel2000
                via 192.0.2.6 (13056/12800), Ethernet3/11
                via 192.0.2.5 (13056/12800), Ethernet1/26
                via 192.0.2.7 (13056/12800), Ethernet2/5
        P 192.0.2.5/24, 7 successors, FD is 13056
                via 192.0.2.1 (13056/12800), Ethernet2/7
        <--Output truncated-->
        switch#
```

Related Commands	Command	Description
	clear ip eigrp route-map statistics	Clears route-map statistics for EIGRP.
	show ip eigrp traffic	Displays EIGRP traffic statistics.
	show running-config eigrp	Displays EIGRP running configuration information.

show ip eigrp route-map statistics

To display the route redistribution statistics for the Enhanced Interior Gateway Routing Protocol (EIGRP), use the **show ip eigrp route-map statistics** command in any mode.

show ip eigrp [*instance-tag*] **route-map statistics redistribute** {**bgp** *id* | **direct** | **eigrp** *id* | **ospf** *id* | **rip** *id* | **static**} [**vrf** {*vrf-name* | **all** | **default** | **management**}]

Syntax Description		
	instance-tag	(Optional) Name of the EIGRP instance. The instance tag can be any case-sensitive, alphanumeric string up to 20 characters.
	bgp	Displays policy statistics for the Border Gateway Protocol (BGP).
	direct	Displays policy statistics for directly connected routes only.
	eigrp	Displays policy statistics for EIGRP.
	ospf	Displays policy statistics for the Open Shortest Path First (OSPF) protocol.
	rip	Displays policy statistics for the Routing Information Protocol (RIP).
	static	Displays policy statistics for IP static routes.
	id	For the **bgp** keyword, an autonomous system number. The range for 2-byte numbers is from 1 to 65535. The range for 4-byte numbers is from 1.0 to 65535.65535.
		For the **eigrp** keyword, an EIGRP instance name from which routes are to be redistributed. The value takes the form of a string. You can enter a decimal number, but Cisco NX-OS stores it internally as a string.
		For the **ospf** keyword, an OSPF instance name from which routes are to be redistributed. The value takes the form of a string. You can enter a decimal number, but Cisco NX-OS stores it internally as a string.
	vrf *vrf-name*	(Optional) Specifies the name of the virtual routing and forwarding (VRF) instance. The *vrf-name* argument can be specified as any case-sensitive, alphanumeric string up to 32 characters.
	all	(Optional) Specifies all VRF instances.
	default	(Optional) Specifies the default VRF.
	management	(Optional) Specifies the management VRF.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines   This command requires a LAN Base Services license.

Examples

This example shows how to display route-map statistics for EIGRP:

```
switch# show ip eigrp route-map statistics redistribute direct
C: No. of comparisions, M: No. of matches

route-map SVI-EIGRP permit 10
  match source-protocol direct                              C: 129    M: 0
Total accept count for policy: 129
Total reject count for policy: 0
switch#
```

Related Commands

Command	Description
clear ip eigrp route-map statistics	Clears route-map statistics for EIGRP.
show ip eigrp traffic	Displays EIGRP traffic statistics.
show running-config eigrp	Displays EIGRP running configuration information.

show ip eigrp topology

To display the Enhanced Interior Gateway Routing Protocol (EIGRP) topology table, use the **show ip eigrp topology** command.

show ip eigrp [*instance-tag*] **topology** [*ip-address/length*] [**active** | **all-links** | **detail-links** | **pending** | **summary** | **zero-successors**] [**vrf** {*vrf-name* | **all** | **default** | **management**}]

Syntax Description

instance-tag	(Optional) Name of the EIGRP instance. The instance tag can be any case-sensitive, alphanumeric string up to 20 characters.
ip-address/length	(Optional) IP address in four-part, dotted-decimal notation with a network mask indicated as a slash (/) and number. For example, /8 indicates that the first 8 bits of the mask are 1s, and the corresponding bits of the address are the network address.
active	(Optional) Displays only active entries in the EIGRP topology table.
all-links	(Optional) Displays all entries in the EIGRP topology table.
detail-links	(Optional) Displays detailed information for all entries in the EIGRP topology table.
pending	(Optional) Displays all entries in the EIGRP topology table that are waiting for an update from a neighbor or are waiting to reply to a neighbor.
summary	(Optional) Displays a summary of the EIGRP topology table.
zero-successors	(Optional) Displays available routes in the EIGRP topology table.
vrf *vrf-name*	(Optional) Specifies the name of the virtual routing and forwarding (VRF) instance. The *vrf-name* argument can be specified as any case-sensitive, alphanumeric string up to 32 characters.
all	(Optional) Specifies all VRF instances.
default	(Optional) Specifies the default VRF.
management	(Optional) Specifies the management VRF.

Command Default

This command displays information for the default VRF if no VRF is specified.

Command Modes

Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines

Use the **show ip eigrp topology** command to determine Diffusing Update Algorithm (DUAL) states and to debug possible DUAL problems.

When you use the **show ip eigrp topology** command without any keywords or arguments, Cisco NX-OS displays only routes that are feasible successors.

This command requires the LAN Base Services license.

Examples

This example shows how to display the EIGRP topology table. The EIGRP metrics for specified internal routes and external routes are displayed.

```
switch# show ip eigrp topology 192.0.2.0/24
IP-EIGRP (AS 65535): Topology entry for 192.0.2.0/24
  State is Passive, Query origin flag is 1, 7 Successor(s), FD is 13056
  Routing Descriptor Blocks:
  192.0.2.1 (Ethernet2/7), from 192.0.2.1, Send flag is 0x0
      Composite metric is (13056/12800), Route is External
      Vector metric:
        Minimum bandwidth is 500000 Kbit
        Total delay is 310 microseconds
        Reliability is 200/255
        Load is 1/255
        Minimum MTU is 1500
        Hop count is 1
      External data:
        Originating router is 1.1.1.1
        AS number of route is 0
        External protocol is OSPF, external metric is 0
        Administrator tag is 0 (0x00000000)
  192.0.2.2 (Ethernet2/6), from 192.0.2.2, Send flag is 0x0
      Composite metric is (13056/12800), Route is External
      Vector metric:
        Minimum bandwidth is 500000 Kbit
        Total delay is 310 microseconds
        Reliability is 200/255
        Load is 1/255
        Minimum MTU is 1500
        Hop count is 1
      External data:
        Originating router is 1.1.1.1
        AS number of route is 0
        External protocol is OSPF, external metric is 40
        Administrator tag is 0 (0x00000000)
  192.0.2.3 (Ethernet3/12), from 192.0.2.3, Send flag is 0x0
      Composite metric is (13056/12800), Route is External
      Vector metric:
        Minimum bandwidth is 500000 Kbit
        Total delay is 310 microseconds
        Reliability is 200/255
        Load is 1/255
        Minimum MTU is 1500
        Hop count is 1
      External data:
        Originating router is 1.1.1.1
        AS number of route is 0
        External protocol is OSPF, external metric is 40
        Administrator tag is 0 (0x00000000)
  192.0.2.6 (Ethernet3/11), from 192.0.2.6, Send flag is 0x0
      Composite metric is (13056/12800), Route is External
      Vector metric:
        Minimum bandwidth is 500000 Kbit
        Total delay is 310 microseconds
        Reliability is 200/255
        Load is 1/255
        Minimum MTU is 1500
        Hop count is 1
      External data:
        Originating router is 1.1.1.1
```

```
                AS number of route is 0
                External protocol is OSPF, external metric is 40
                Administrator tag is 0 (0x00000000)
        192.0.2.4 (port-channel2000), from 192.0.2.4, Send flag is 0x0
            Composite metric is (13056/12800), Route is External
            Vector metric:
                Minimum bandwidth is 500000 Kbit
                Total delay is 310 microseconds
                Reliability is 200/255
                Load is 1/255
                Minimum MTU is 1500
                Hop count is 1
            External data:
                Originating router is 1.1.1.1
                AS number of route is 0
                External protocol is OSPF, external metric is 40
                Administrator tag is 0 (0x00000000)
        192.0.2.2 (Ethernet2/6), from 192.0.2.2, Send flag is 0x0
            Composite metric is (13056/12800), Route is External
            Vector metric:
                Minimum bandwidth is 500000 Kbit
                Total delay is 310 microseconds
                Reliability is 200/255
                Load is 1/255
                Minimum MTU is 1500
                Hop count is 1
            External data:
                Originating router is 1.1.1.1
                AS number of route is 0
                External protocol is OSPF, external metric is 40
                Administrator tag is 0 (0x00000000)
        192.0.2.7 (Ethernet2/5), from 192.0.2.7, Send flag is 0x0
            Composite metric is (13056/12800), Route is External
            Vector metric:
                Minimum bandwidth is 500000 Kbit
                Total delay is 310 microseconds
                Reliability is 200/255
                Load is 1/255
                Minimum MTU is 1500
                Hop count is 1
            External data:
                Originating router is 1.1.1.1
                AS number of route is 0
                External protocol is OSPF, external metric is 40
                Administrator tag is 0 (0x00000000)
        192.0.2.200 (port-channel2001), from 192.0.2.200, Send flag is 0x0
            Composite metric is (13312/13056), Route is External
            Vector metric:
                Minimum bandwidth is 500000 Kbit
                Total delay is 320 microseconds
                Reliability is 200/255
                Load is 1/255
                Minimum MTU is 1500
                Hop count is 2
            External data:
                Originating router is 1.1.1.1
                AS number of route is 0
                External protocol is OSPF, external metric is 40
                Administrator tag is 0 (0x00000000)
    switch#
```

This example show how to display all the entries in the EIGRP topology table:

```
switch(config)# show ip eigrp topology all-links
```

This example shows how to display the detailed information for all entries in the EIGRP topology table:

```
switch(config)# show ip eigrp topology detail-links
```

This example shows how to display a summary of the topology table:

```
switch(config)# show ip eigrp topology summary
IP-EIGRP Topology Table for AS(65535)/ID(3.1.1.1) VRF default

Head serial 3, next serial 15631
3536 routes, 0 pending replies, 0 dummies
IP-EIGRP(0) enabled on 8 interfaces, 8 neighbors present on 8 interfaces
Quiescent interfaces:  Eth3/11 Po2000 Po2001 Eth2/7 Eth2/5 Eth2/6 Eth1/26 Eth3/12
switch#
```

This example shows how to display the active entries in the topology table:

```
switch(config-if)# show ip eigrp topology active
```

This example shows how to display zero-successors in the topology table:

```
switch(config-router)# show ip eigrp topology zero-successors
```

This example shows how to display pending entries:

```
switch(config)# show ip eigrp topology pending
```

Related Commands	Command	Description
	show running-config eigrp	Displays EIGRP running configuration information.

show ip eigrp traffic

To display the number of Enhanced Interior Gateway Routing Protocol (EIGRP) packets sent and received, use the **show ip eigrp traffic** command.

show ip eigrp [*instance-tag*] **traffic** [**vrf** {*vrf-name* | **all** | **default** | **management**}]

Syntax Description	*instance-tag*	(Optional) Name of the EIGRP instance. The instance tag can be any case-sensitive, alphanumeric string up to 20 characters.
	vrf *vrf-name*	(Optional) Specifies the name of the virtual routing and forwarding (VRF) instance. The *vrf-name* argument can be specified as any case-sensitive, alphanumeric string up to 32 characters.
	all	(Optional) Specifies all VRF instances.
	default	(Optional) Specifies the default VRF.
	management	(Optional) Specifies the management VRF.

Command Default

This command displays information for the default VRF if no VRF is specified.

Command Modes

Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines

Use the **show ip eigrp traffic** command to find the number of packets sent and received by this EIGRP instance.

In addition, this command is useful in determining whether packets from one node are not reaching the neighboring node due to connectivity or configuration problems.

This command requires the LAN Base Services license.

Examples

This example shows how to display the EIGRP traffic statistics:

```
switch# show ip eigrp traffic
IP-EIGRP Traffic Statistics for AS 65535 VRF default
  Hellos sent/received: 29838/44756
  Updates sent/received: 1448/1775
  Queries sent/received: 33/47
  Replies sent/received: 31/31
  Acks sent/received: 1759/2061
  Input queue high water mark 33, 0 drops
  SIA-Queries sent/received: 0/0
  SIA-Replies sent/received: 0/0
  Hello Process ID: (no process)
  PDM Process ID: (no process)
switch#
```

Related Commands	Command	Description
	show running-config eigrp	Displays EIGRP running configuration information.

show ip fib

To display forwarding information, use the **show ip fib** command.

show ip fib {**adjacency** | **interfaces** | **route**} **module** *slot*

Syntax Description

adjacency	Displays the adjacency information.
interfaces	Displays the forwarding information for interfaces on a module.
route	Displays the forwarding information for routes on a module.
module *slot*	Displays information for the module. The slot range depends on the hardware platform.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines

Use the **show ip fib** command on the supervisor to view forwarding information on a module. Optionally, you can use the **attach module** command to attach to a module and use the **show ip fib** command on the module.

Examples

This example shows how to display the forwarding information for module 1:

```
switch# show ip fib route module 1

IPv4 routes for table default/base

-----------------+-----------------+--------------------
Prefix           | Next-hop        | Interface
-----------------+-----------------+--------------------
0.0.0.0/32         Drop              Null0
255.255.255.255/32 Receive           sup-eth1
switch#
```

Related Commands

Command	Description
show forwarding	Displays information about the FIB.

show ip fib distribution

To display forwarding distribution information, use the **show ip fib distribution** command.

show ip fib distribution [**clients** | **state**]

Syntax Description

clients	(Optional) Displays the forwarding distribution information for unicast clients.
state	(Optional) Displays the forwarding distribution state for unicast FIB.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Examples   This example shows how to display the forwarding information for unicast clients:

```
switch# show ip fib distribution clients
```

Related Commands

Command	Description
show forwarding distribution	Displays distribution information about the FIB.

show ip interface

To display IP information for an interface, use the **show ip interface** command.

show ip interface [*type number*] [**brief**] [**vrf** *vrf-name*]

Syntax Description

type	(Optional) Interface type. Use **?** to see the options.
number	(Optional) Interface number. Use **?** to see the range.
brief	(Optional) Displays a summary of IP information.
vrf *vrf-name*	(Optional) Specifies the name of the virtual routing and forwarding (VRF) instance. The *vrf-name* argument can be specified as any case-sensitive, alphanumeric string up to 32 characters. The strings "default" and "all" are reserved VRF names.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Examples

This example shows how to display the IP information for Ethernet 1/5:

```
switch# show ip interface ethernet 1/5
IP Interface Status for VRF "default"(1)
Ethernet1/5, Interface status: protocol-down/link-down/admin-up, iod: 11,
  IP address: 192.0.0.1, IP subnet: 192.0.0.0/24
  IP broadcast address: 255.255.255.255
  IP multicast groups locally joined: none
  IP MTU: 1500 bytes (using link MTU)
  IP primary address route-preference: 0, tag: 0
  IP proxy ARP : disabled
  IP Local Proxy ARP : disabled
  IP multicast routing: disabled
  IP icmp redirects: enabled
  IP directed-broadcast: disabled
  IP icmp unreachables (except port): disabled
  IP icmp port-unreachable: enabled
  IP unicast reverse path forwarding: none
  IP load sharing: none
  IP interface statistics last reset: never
  IP interface software stats: (sent/received/forwarded/originated/consumed)
    Unicast packets    : 0/0/0/0/0
    Unicast bytes      : 0/0/0/0/0
    Multicast packets  : 0/0/0/0/0
    Multicast bytes    : 0/0/0/0/0
    Broadcast packets  : 0/0/0/0/0
    Broadcast bytes    : 0/0/0/0/0
```

```
        Labeled packets   : 0/0/0/0/0
        Labeled bytes     : 0/0/0/0/0
switch#
```

Related Commands	Command	Description
	ip address	Assigns a primary IP address for a network interface.

show ip load-sharing

To display IP load sharing information, use the **show ip load-sharing** command.

show ip load-sharing

Syntax Description   This command has no arguments or keywords.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Examples   This example shows how to display the IP load sharing information:

```
switch# show ip load-sharing
```

Related Commands

Command	Description
show ip load-sharing	Displays IP load sharing.

show ip ospf

To display general information about Open Shortest Path First (OSPF) routing instances, use the **show ip ospf** command.

show ip ospf [*instance-tag*] [**vrf** *vrf-name*]

Syntax Description

instance-tag	(Optional) Name of the OSPF instance. Use this tag to display OSPF information about a specific OSPF instance. The *instance-tag* argument can be any alphanumeric string of 20 characters.
vrf *vrf-name*	(Optional) Specifies the name of the virtual routing and forwarding (VRF) instance. The *vrf-name* argument can be specified as any case-sensitive, alphanumeric string up to 32 characters. The strings "default" and "all" are reserved VRF names.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines   Use the **show ip ospf** command to display information about one or more OSPF instances.

This command requires the LAN Base Services license.

Examples   This example shows how to display information all about OSPF instances:

```
switch# show ip ospf
Routing Process 201 with ID 192.0.2.1 VRF default
 Stateful High Availability enabled
 Graceful-restart is configured
   Grace period: 60 state: Inactive
   Last graceful restart exit status: None
 Supports only single TOS(TOS0) routes
 Supports opaque LSA
 This router is an autonomous system boundary
 Redistributing External Routes from
   bgp-1
   Maximum limit: 1000 (warning-only)
   Threshold: message 750
   Current count: 0
 Administrative distance 110
 Reference Bandwidth is 40000 Mbps
 Initial SPF schedule delay 3000.000 msecs,
   minimum inter SPF delay of 2000.000 msecs,
   maximum inter SPF delay of 4000.000 msecs
```

```
                Initial LSA generation delay 3000.000 msecs,
                  minimum inter LSA delay of 6000.000 msecs,
                  maximum inter LSA delay of 6000.000 msecs
                Minimum LSA arrival 2000.000 msec
                Maximum paths to destination 3
                Originating router LSA with maximum metric
                  Condition: Always
                Number of external LSAs 0, checksum sum 0
                Number of opaque AS LSAs 0, checksum sum 0
                Number of areas is 3, 3 normal, 0 stub, 0 nssa
                Number of active areas is 0, 0 normal, 0 stub, 0 nssa
                  Area BACKBONE(0.0.0.0) (Inactive)
                        Area has existed for 00:22:49
                        Interfaces in this area: 1 Active interfaces: 0
                        Passive interfaces: 0  Loopback interfaces: 0
                        No authentication available
                        SPF calculation has run 3 times
                         Last SPF ran for 0.000036s
                        Area ranges are
                        Number of LSAs: 0, checksum sum 0
                  Area (0.0.0.10) (Inactive)
                        Area has existed for 00:41:30
                        Interfaces in this area: 0 Active interfaces: 0
                        Passive interfaces: 0  Loopback interfaces: 0
                        Summarization is disabled
                        Simple password authentication
                        SPF calculation has run 8 times
                         Last SPF ran for 0.000150s
                        Area ranges are
                          10.3.0.0/16 Passive (Num nets: 0) Advertise
                        Area-filter in 'FilterLSAs'
                        Number of LSAs: 0, checksum sum 0
                  Area (0.0.0.15) (Inactive)
                        Area has existed for 00:49:30
                        Interfaces in this area: 1 Active interfaces: 0
                        Passive interfaces: 1  Loopback interfaces: 0
                        No authentication available
                        SPF calculation has run 8 times
                         Last SPF ran for 0.000021s
                        Area ranges are
                        Number of LSAs: 0, checksum sum 0
        switch#
```

This example shows how to display information about one specific OSPF instance:

```
switch# show ip ospf 201
Routing Process 201 with ID 192.0.2.1 VRF default
 Stateful High Availability enabled
 Graceful-restart is configured
   Grace period: 60 state: Inactive
   Last graceful restart exit status: None
 Supports only single TOS(TOS0) routes
 Supports opaque LSA
 Administrative distance 110
 Reference Bandwidth is 40000 Mbps
 Initial SPF schedule delay 200.000 msecs,
   minimum inter SPF delay of 1000.000 msecs,
   maximum inter SPF delay of 5000.000 msecs
 Initial LSA generation delay 0.000 msecs,
   minimum inter LSA delay of 5000.000 msecs,
   maximum inter LSA delay of 5000.000 msecs
 Minimum LSA arrival 1000.000 msec
 Maximum paths to destination 3
 Number of external LSAs 0, checksum sum 0
```

```
        Number of opaque AS LSAs 0, checksum sum 0
        Number of areas is 2, 1 normal, 1 stub, 0 nssa
        Number of active areas is 0, 0 normal, 0 stub, 0 nssa
          Area (0.0.0.10) (Inactive)
                Area has existed for 00:12:18
                Interfaces in this area: 0 Active interfaces: 0
                Passive interfaces: 0  Loopback interfaces: 0
                This area is a STUB area
                Generates stub default route with cost 25
                Simple password authentication
                SPF calculation has run 1 times
                 Last SPF ran for 0.000122s
                Area ranges are
                Area-filter in 'FilterLSAs'
                Number of LSAs: 0, checksum sum 0
          Area (0.0.0.15) (Inactive)
                Area has existed for 00:20:18
                Interfaces in this area: 1 Active interfaces: 0
                Passive interfaces: 1  Loopback interfaces: 0
                No authentication available
                SPF calculation has run 1 times
                 Last SPF ran for 0.000020s
                Area ranges are
                Number of LSAs: 0, checksum sum 0
switch#
```

Table 1 describes the significant fields shown in the display.

Table 1   show ip ospf Field Descriptions

Field	Description
Routing Process...	OSPF instance tag and OSPF router ID.
Stateful High Availability	Status of stateful restart capability.
Supports...	Number of types of service supported (Type 0 only).
Administrative distance	Administrative distance for the OSPFv2 instance.
Reference Bandwidth	Bandwidth used for cost calculation.
Initial SPF schedule delay	Delay time of SPF calculations.
Initial LSA generation delay	Delay time of LSA generations.
Minimum LSA arrival	Minimum interval between link-state advertisements.
Maximum paths to destination	Maximum paths to the neighbor.
Number of...	Number and type of link-state advertisements that have been received.
Number of areas is...	Number and type of areas configured for the router.
Number of active areas is	Number and type of active areas configured on the router.

Related Commands

Command	Description
show running-config ospf	Displays the OSPF running configuration.

show ip ospf border-routers

To display the Open Shortest Path First (OSPF) routing table entries to an Area Border Router (ABR) and Autonomous System Boundary Router (ASBR), use the **show ip ospf border-routers** command.

show ip ospf [*instance-tag*] **border-routers** [**vrf** *vrf-name*]

Syntax Description		
	instance-tag	(Optional) Name of the OSPF instance. Use this tag to display OSPF information about a specific OSPF instance. The *instance-tag* argument can be a maximum of 20 alphanumeric characters.
	vrf *vrf-name*	(Optional) Specifies the name of the virtual routing and forwarding (VRF) instance. The *vrf-name* argument can be specified as any case-sensitive, alphanumeric string up to 32 characters. The strings "default" and "all" are reserved VRF names.

Command Default   None

Command Modes   Any command mode

Command History	Release	Modification
	5.0(3)N1(1)	This command was introduced.

Usage Guidelines   Use the **show ip ospf border-routers** command to display information on ABRs. and ASBRs.

This command requires the LAN Base Services license.

Examples   This example shows how to display information about border routers:

```
switch# show ip ospf border-routers
```

Related Commands	Command	Description
	show running-config ospf	Displays the OSPF running configuration.

show ip ospf database

To display the Open Shortest Path First (OSPF) database for a specific router, use the **show ip ospf database** command.

> **show ip ospf** [*instance-tag*] **database** [*area-id*] [*link-state-id*] [**adv-router** *ip-address* | **self-originated**] [**detail**] [**vrf** *vrf-name*]

> **show ip ospf** [*instance-tag*] **database asbr-summary** [*area-id*] [*link-state-id*] [**adv-router** *ip-address* | **self-originated**] [**detail**] [**vrf** *vrf-name*]

> **show ip ospf** [*instance-tag*] **database database-summary** [**vrf** *vrf-name*]

> **show ip ospf** [*instance-tag*] **database external** [**ext_tag** *value*] [*link-state-id*] [**adv-router** *ip-address* | **self-originated**] [**detail**] [**vrf** *vrf-name*]

> **show ip ospf** [*instance-tag*] **database network** [*area-id*] [*link-state-id*] [**adv-router** *ip-address* | **self-originated**] [**detail**] [**vrf** *vrf-name*]

> **show ip ospf** [*instance-tag*] **database nssa-external** [*area-id*] [*link-state-id*] [**adv-router** *ip-address* | **self-originated**] [**detail**] [**vrf** *vrf-name*]

> **show ip ospf** [*instance-tag*] **database opaque-area** [*area-id*] [*link-state-id*] [**adv-router** *ip-address* | **self-originated**] [**detail**] [**vrf** *vrf-name*]

> **show ip ospf** [*instance-tag*] **database opaque-as** [*link-state-id*] [**adv-router** *ip-address* | **self-originated**] [**detail**] [**vrf** *vrf-name*]

> **show ip ospf** [*instance-tag*] **database opaque-link** [*area-id*] [*link-state-id*] [**adv-router** *ip-address* | **self-originated**] [**detail**] [**vrf** *vrf-name*]

> **show ip ospf** [*instance-tag*] **database router** [*area-id*] [*link-state-id*] [**adv-router** *ip-address* | **self-originated**] [**detail**] [**vrf** *vrf-name*]

> **show ip ospf** [*instance-tag*] **database summary** [*area-id*] [*link-state-id*] [**adv-router** *ip-address* | **self-originated**] [**detail**] [**vrf** *vrf-name*]

Syntax Description		
instance-tag	(Optional) Name of the OSPF instance. The name can be a maximum of 20 alphanumeric characters.	
area-id	(Optional) Area number used to define the particular area. Specify as either an IP address or a number from 0 to 4294967295.	
link-state-id	(Optional) Portion of the Internet environment that is being described by the advertisement. The value entered depends on the advertisement's link-state type. Specify in the form of an IP address.	
adv-router *ip-address*	(Optional) Displays all the link-state advertisements (LSAs) of the specified router.	
self-originate	(Optional) Displays self-originated LSAs (from the local router).	
asbr-summary	(Optional) Displays information about the autonomous system boundary router summary LSAs.	
database-summary	(Optional) Displays each type of LSA for each area in the database, and the total number of LSAs.	

external	(Optional) Displays information about the external LSAs.
ext_tag *value*	(Optional) Displays information based on an external tag. The range is from 1 to 4294967295.
network	(Optional) Displays information about the network LSAs.
nssa-external	(Optional) Displays information about the not-so-stubby area (NSSA) external LSAs.
opaque-area	(Optional) Displays information about the opaque area LSAs.
opaque-as	(Optional) Displays information about the opaque AS LSAs.
opaque-link	(Optional) Displays information about the opaque link-local LSAs.
router	(Optional) Displays information about the router LSAs.
summary	(Optional) Displays information about the summary LSAs.
vrf *vrf-name*	(Optional) Specifies the name of the virtual routing and forwarding (VRF) instance. The *vrf-name* argument can be specified as any case-sensitive, alphanumeric string up to 32 characters. The strings "default" and "all" are reserved VRF names.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines   Use the **ip ospf database** command to display information about different OSPF LSAs.

When the link state advertisement is describing a network, the *link-state-id* argument can take one of two forms:

- The network's IP address (such as Type 3 summary link advertisements and autonomous system external link advertisements).
- A derived address obtained from the link state ID. (Note that masking a network links advertisement's link state ID with the network's subnet mask yields the network's IP address.)
- When the link state advertisement is describing a router, the link state ID is always the described router's OSPF router ID.
- When an autonomous system external advertisement (LS Type = 5) is describing a default route, its link state ID is set to Default Destination (0.0.0.0).

This command requires the LAN Base Services license.

Examples   This example shows how to display the OSPF database:

```
switch# show ip ospf database
```

This example shows how to display a summary of autonomous system border routers:

```
switch# show ip ospf database asbr-summary
```

This example shows how to display information about external links:

```
switch# show ip ospf database external
```

This example shows how to display a summary of the OSPF database:

```
switch# show ip ospf database database-summary
```

Related Commands	Command	Description
	show running-config ospf	Displays the OSPF running configuration.

show ip ospf interface

To display Open Shortest Path First (OSPF)-related interface information, use the **show ip ospf interface** command.

> **show ip ospf interface** [*instance-tag*] [{**ethernet** *slot/port* | **loopback** *if_number* | **port-channel** *number*}] [**brief**] [**vrf** *vrf-name*]

Syntax Description

instance-tag	(Optional) Name of the OSPF instance. The name can be a maximum of 20 alphanumeric characetrs.
ethernet *slot/port*	(Optional) Specifies the Ethernet interface. The slot number is from 1 to 255, and the port number is from 1 to 128.
loopback *if_number*	(Optional) Specifies the loopback interface. The loopback interface number is from 0 to 1023.
port-channel *number*	(Optional) Specifies the EtherChannel interface and EtherChannel number. The range is from 1 to 4096.
brief	(Optional) Displays brief overview information for OSPF interfaces, states, addresses, masks, and areas on the router.
vrf *vrf-name*	(Optional) Specifies the name of the virtual routing and forwarding (VRF) instance. The *vrf-name* argument can be specified as any case-sensitive, alphanumeric string up to 32 characters. The strings "default" and "all" are reserved VRF names.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines

Use the **show ip ospf interface** command to display the OSPF status for the interface.

This command requires the LAN Base Services license.

Examples

This example shows how to display OSPF information for Ethernet interface 1/5:

```
switch# show ip ospf interface ethernet 1/5
Ethernet1/5 is up, line protocol is down
    IP address 192.0.2.1, Process ID 201 VRF RemoteOfficeVRF, area 0.0.0.10
    Enabled by interface configuration
    State DOWN, Network type BROADCAST, cost 4
    Index 1, Transmit delay 1 sec, Router Priority 1
    No designated router on this network
    No backup designated router on this network
```

```
        0 Neighbors, flooding to 0, adjacent with 0
        Timer intervals: Hello 10, Dead 40, Wait 40, Retransmit 5
        No authentication
        Number of opaque link LSAs: 0, checksum sum 0
switch#
```

Table 2 describes the significant fields shown in the display.

Table 2   show ip ospf interface Field Descriptions

Field	Description
Ethernet	Status of physical link and operational status of protocol.
IP Address	Interface IP address, subnet mask, and area address.
VRF	Virtual routing and forwarding (VRF) instance.
Transmit Delay	Transmit delay, interface state, and router priority.
designated router	Designated router ID and interface IP address.
backup designated router	Backup designated router ID and interface IP address.
Timer intervals	Configuration information of timer intervals.
Hello	Number of seconds until next hello packet is sent out this interface.

This example shows how to display OSPF information for all VRFs:

```
switch# show ip ospf interface vrf all
VL1-0.0.0.10-10.1.2.3 is down, line protocol is down
    IP address 0.0.0.0, Process ID 201 VRF default, area 0.0.0.0
    State DOWN, Network type P2P, cost 65535
    Index 2, Transmit delay 2 sec
    0 Neighbors, flooding to 0, adjacent with 0
    Timer intervals: Hello 25, Dead 50, Wait 50, Retransmit 50
    Message-digest authentication, using key id 21
    Number of opaque link LSAs: 0, checksum sum 0

switch#
```

This example shows how to display OSPF information in a brief format:

```
switch# show ip ospf interface brief
 OSPF Process ID 201 VRF default
 Total number of interface: 1
 Interface            ID     Area           Cost   State   Neighbors Status
 VL1                  2      0.0.0.0        65535  DOWN    0         down

switch#
```

Related Commands	Command	Description
	show running-config ospf	Displays the OSPF running configuration.

show ip ospf lsa-content-changed-list

To display a list of all link-state advertisements (LSAs) with changed content, use the **show ip ospf lsa-content-changed-list** command.

> **show ip ospf lsa-content-changed-list** *neighbor-id* {**ethernet** *slot/port* | **loopback** *if_number* | **port-channel** *number*}

Syntax Description		
	neighbor id	Router ID for the neighbor in the format *A.B.C.D*.
	ethernet *slot/port*	Specifies the Ethernet interface and the slot number and port number. The slot number is from 1 to 255, and the port number is from 1 to 128.
	loopback *if_number*	Specifies the loopback interface. The loopback interface number is from 0 to 1023.
	port-channel *number*	Specifies the EtherChannel interface and EtherChannel number. The range is from 1 to 4096.

Command Default   None

Command Modes   Any command mode

Command History	Release	Modification
	5.0(3)N1(1)	This command was introduced.

Usage Guidelines   This command requires the LAN Base Services license.

Examples   This example shows how to display a list of LSAs that changed for Ethernet 2/1:

```
switch# show ip ospf lsa-content-changed-list 192.0.2.2 ethernet 2/1
```

Related Commands	Command	Description
	show running-config ospf	Displays the OSPF running configuration.

show ip ospf neighbors

To display Open Shortest Path First (OSPF)-neighbor information on a per-interface basis, use the **show ip ospf neighbors** command.

show ip ospf [*instance-tag*] **neighbors** [{**ethernet** *slot*/*port* | **loopback** *if_number* | **port-channel** *number*}] [*neighbor-id*] [**detail**] [**summary**] [**vrf** {*vrf-name* | **all** | **default** | **management**}]

Syntax Description

instance-tag	(Optional) Name of the OSPF instance. Specify as an alphanumeric string of 20 characters.
ethernet *slot*/*port*	(Optional) Specifies the Ethernet interface and the slot number and port number. The slot number is from 1 to 255, and the port number is from 1 to 128.
loopback *if_number*	(Optional) Specifies the loopback interface. The loopback interface number is from 0 to 1023.
port-channel *number*	(Optional) Specifies the EtherChannel interface and EtherChannel number. The range is from 1 to 4096.
neighbor-id	(Optional) Router ID of the neighbor. Specify as an IP address.
detail	(Optional) Displays all neighbors given in detail (lists all neighbors).
summary	(Optional) Displays a summary of the neighbors.
vrf	(Optional) Specifies a virtual routing and forwarding (VRF) instance.
vrf-name	VRF name. The name can be a maximum of 32 alphanumeric characters and is case sensitive.
all	Specifies all VRF entries.
default	Specifies the default VRF.
management	Specifies the management VRF.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines   Use the **show ip ospf neighbors** command to display information about all or some of the neighbors for this OSPF instance.

This command requires the LAN Base Services license.

Examples   This example shows how to display the summary information about the neighbor that matches the neighbor ID:

```
switch# show ip ospf neighbors 10.199.199.137
```

This example shows how to display the neighbors that match the neighbor ID on an interface:

```
switch# show ip ospf neighbors ethernet 2/1 10.199.199.137
```

This example shows how to display detailed information about OSPF neighbors:

```
switch# show ip ospf neighbors detail
```

Related Commands

Command	Description
show running-config ospf	Displays the OSPF running configuration.

show ip ospf policy statistics area

To display Open Shortest Path First (OSPF) policy statistics for an area, use the **show ip ospf policy statistics area** command.

show ip ospf [*instance-tag*] **policy statistics area** *area-id* **filter-list** {**in** | **out**} [**vrf** *vrf-name*]

Syntax Description

instance-tag	(Optional) Name of the OSPF instance. Specify as an alphanumeric string.
area *area-id*	Specifies the area number used to define the particular area. The area ID can be an IP address or a number from 0 to 4294967295.
filter-list	Filters prefixes between OSPF areas.
in	Displays policy statistics for incoming routes.
out	Displays policy statistics for outgoing routes.
vrf *vrf-name*	(Optional) Specifies the name of the virtual routing and forwarding (VRF) instance. The *vrf-name* argument can be specified as any case-sensitive, alphanumeric string up to 32 characters. The strings "default", "management", and "all" are reserved VRF names.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines

Use the **show ip ospf policy statistics area** command to display information about the filter lists applied to an area.

This command requires the LAN Base Services license.

Examples

This example shows how to display policy statistics for OSPF:

```
switch# show ip ospf policy statistics area 201 filter-list in
```

Related Commands

Command	Description
area filter-list (OSPF)	Filters incoming or outgoing Network Summary (type 3) link-state advertisements (LSAs) on an Area Border Router (ABR).

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Command	Description
copy running-config startup-config	Saves the configuration changes to the startup configuration file.
show running-config ospf	Displays the OSPF running configuration.

show ip ospf policy statistics redistribute

To display Open Shortest Path First (OSPF) policy statistics, use the **show ip ospf policy statistics redistribute** command.

show ip ospf [*instance-tag*] **policy statistics redistribute** {**bgp** *id* | **direct** | **eigrp** *id* | **ospf** *id* | **rip** *id* | **static**} [**vrf** *vrf-name*]

Syntax Description

instance-tag	(Optional) Name of the OSPF instance. Specify as an alphanumeric string.
bgp	Displays policy statistics for the Border Gateway Protocol (BGP).
direct	Displays policy statistics for directly connected routes only.
eigrp	Displays policy statistics for the Enhanced Interior Gateway Routing Protocol (EIGRP).
ospf	Displays policy statistics for OSPF.
rip	Displays policy statistics for the Routing Information Protocol (RIP).
static	Displays policy statistics for IP static routes.
id	For the **bgp** keyword, an autonomous system number. The range for 2-byte numbers is from 1 to 65535.
	For the **eigrp** keyword, an autonomous system number. The range is from 1 to 65535.
	For the **ospf** and **rip** keywords, an instance name from which routes are to be redistributed. The value takes the form of a string. You can enter a decimal number, but Cisco NX-OS stores it internally as a string.
vrf *vrf-name*	(Optional) Specifies the name of the virtual routing and forwarding (VRF) instance. The *vrf-name* argument can be specified as any case-sensitive, alphanumeric string up to 32 characters. The strings "default", "management", and "all" are reserved VRF names.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines   Use the **show ip ospf policy statistics redistribute** command to display redistribution statistics.

This command requires the LAN Base Services license.

Examples   This example shows how to display policy statistics for redistributed routes:

```
switch# show ip ospf policy statistics redistribute
```

Related Commands	Command	Description
	show running-config ospf	Displays the OSPF running configuration.

show ip ospf request-list

To display a list of all link-state advertisements (LSAs) requested by a router, use the **show ip ospf request-list** command.

show ip ospf request-list *neighbor-id* {**ethernet** *slot*/*port* | **loopback** *if_number* | **port-channel** *number*}

Syntax Description

neighbor-id	Router ID of the neighbor. Specify as an IP address.
ethernet *slot*/*port*	(Optional) Specifies the Ethernet interface and the slot number and port number. The slot number is from 1 to 255, and the port number is from 1 to 128.
loopback *if_number*	(Optional) Specifies the loopback interface. The loopback interface number is from 0 to 1023.
port-channel *number*	(Optional) Specifies the EtherChannel interface and EtherChannel number. The range is from 1 to 4096.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines   Use the **show ip ospf request-list** command to troubleshoot Open Shortest Path First (OSPF) routing operations.

This command requires the LAN Base Services license.

Examples   This example shows how to display a list of all LSAs requested by a router:

```
switch# show ip ospf request-list 40.40.40 ethernet 2/1
```

Related Commands

Command	Description
show running-config ospf	Displays the OSPF running configuration.

show ip ospf retransmission-list

To display a list of all link-state advertisements (LSAs) waiting to be resent to neighbors, use the **show ip ospf retransmission-list** command.

> **show ip ospf retransmission-list** *neighbor-id* {**ethernet** *slot*/*port* | **loopback** *if_number* | **port-channel** *number*}

Syntax Description

neighbor-id	Router ID of the neighbor. Specify as an IP address.
ethernet *slot*/*port*	(Optional) Specifies the Ethernet interface and the slot number and port number. The slot number is from 1 to 255, and the port number is from 1 to 128.
loopback *if_number*	(Optional) Specifies the loopback interface. The loopback interface number is from 0 to 1023.
port-channel *number*	(Optional) Specifies the EtherChannel interface and EtherChannel number. The range is from 1 to 4096.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines

Use the **show ip ospf retransmission-list** command to troubleshoot Open Shortest Path First (OSPF) routing operations.

This command requires the LAN Base Services license.

Examples

This example shows how to display all LSAs waiting to be resent to neighbors:

```
switch# show ip ospf retransmission-list 192.0.2.11 ethernet 2/1
```

Related Commands

Command	Description
show running-config ospf	Displays the OSPF running configuration.

show ip ospf route

To display the Open Shortest Path First (OSPF) topology table, use the **show ip ospf routes** command.

show ip ospf [*instance-tag*] **routes** [*prefix/length* | **summary**} [**vrf** *vrf-name*]

Syntax Description		
	instance-tag	(Optional) Name of the OSPF instance. Specify as an alphanumeric string of 20 characters.
	prefix/length	(Optional) IP prefix, which limits output to a specific route. Indicate the length as a slash (/) and number from 1 to 31. For example, /8 indicates that the first eight bits in the IP prefix are network bits.
	summary	(Optional) Displays a summary of all routes.
	vrf *vrf-name*	(Optional) Specifies the name of the virtual routing and forwarding (VRF) instance. The *vrf-name* argument can be specified as any case-sensitive, alphanumeric string up to 32 characters. The strings "default", "management", and "all" are reserved VRF names.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines   Use the **show ospf routes** command to display the OSPF private routing table (which contains only routes that are calculated by OSPF). If something is wrong with a route in the routing information base (RIB), then you should check the OSPF copy of the route to determine if it matches the RIB contents. If it does not match, a synchronization problem exists between OSPF and the RIB.

This command requires the LAN Base Services license.

Examples   This example shows how to display OSPF routes:

```
switch# show ip ospf route
```

Related Commands

Command	Description
show running-config ospf	Displays the OSPF running configuration.

show ip ospf statistics

To display Open Shortest Path First (OSPF) shortest path first (SPF) calculation statistics, use the **show ip ospf statistics** command.

> **show ip ospf** [*instance-tag*] **statistics** [**vrf** *vrf-name*]

Syntax Description

instance-tag	(Optional) Name of the OSPF instance. Specify as an alphanumeric string up to 20 characters.
vrf *vrf-name*	(Optional) Name of the VRF. The *vrf-name* argument can be specified as any case-sensitive, alphanumeric string up to 32 characters. The strings "default", "management", and "all" are reserved VRF names.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines   Use the **show ip ospf statistics** command to display information about link-state advertisements (LSAs). This information can be useful for both OSPF network maintenance and troubleshooting. For example, we recommend that you use the **show ip ospf statistics** command as the first troubleshooting step for LSA flapping.

This command requires the LAN Base Services license.

Examples   This example shows how to display information about the SPF calculations:

```
switch# show ip ospf statistics
 OSPF Process ID 201 VRF default, Event statistics (cleared 00:10:45 ago)
  Router ID changes: 1
  DR elections: 0
  Older LSAs received: 0
  Neighbor state changes: 0
  Neighbor dead postponed: 0
  Neighbor dead interval expirations: 0
  Neighbor bad lsreqs: 0
  Neighbor sequence number mismatches: 0
  SPF computations:  2 full, 0 summary, 0 external

        LSA Type Generated Refreshed   Flushed  Aged out
          Router         0         0         0         0
         Network         0         0         0         0
     Summary Net         0         0         0         0
    Summary ASBR         0         0         0         0
     AS External         0         0         0         0
```

```
        Opaque Link         0          0          0          0
        Opaque Area         0          0          0          0
         Opaque AS          0          0          0          0

Following counters can not be reset:

LSA deletions: 0 pending, 0 hwm, 0 deleted, 0 revived, 0 runs
Hello queue: 0/200, hwm 0, drops 0
Flood queue: 0/350, hwm 0, drops 0
LSDB additions failed: 0

      Buffers:   in use    hwm permanent    alloc     free
      128 bytes         0        0        0        0        0
      512 bytes         0        0        0        0        0
     1520 bytes         0        0        0        0        0
     4500 bytes         0        0        0        0        0
          huge          0        0        0        0        0

switch#
```

Table 3 describes the significant fields shown in the display.

Table 3   ***show ip ospf statistics Field Descriptions***

Field	Description
OSPF process	Unique value assigned to the OSPF instance in the configuration.
VRF	Virtual routing and forwarding (VRF) for this OSPF instance.
DR elections	Number of times that a new designated router was elected.
Neighbor...	Details about neighbors.
LSA Type	Number of each type of LSA sent.
Hello queue	Queue of hello packets to be processed: • current number in queue/maximum number allowed in queue. • hwm—high water mark. The maximum number of packets ever stored in the queue. • drops—The number of packets dropped because the queue was full.
Flood queue	Queue of flood packets to be processed.
Buffers	Chunks of memory used to store packets.

Related Commands

Command	Description
show running-config ospf	Displays the OSPF running configuration.

show ip ospf summary-address

To display a list of all summary address redistribution information configured in an Open Shortest Path First (OSPF) instance, use the **show ip ospf summary-address** command.

show ip ospf [*instance-tag*] **summary-address** [**vrf** *vrf-name*]

Syntax Description		
instance-tag		(Optional) Name of the OSPF instance. The name can be a maximum of 20 alphanumeric characters.
vrf *vrf-name*		(Optional) Specifies the name of the virtual routing and forwarding (VRF) instance. The *vrf-name* argument can be specified as any case-sensitive, alphanumeric string up to 32 characters. The strings "default", "management", and "all" are reserved VRF names.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines   This command requires the LAN Base Services license.

Examples   This example shows how to display information about summary addresses:

```
switch# show ip ospf summary-address
```

Related Commands

Command	Description
show running-config ospf	Displays the OSPF running configuration.

show ip ospf traffic

To display Open Shortest Path First (OSPF) traffic statistics, use the **show ip ospf traffic** command.

show ip ospf [*instance-tag*] **traffic** [**ethernet** *slot/port* | **loopback** *if_number* | **port-channel** *number*] [**vrf** *vrf-name*]

Syntax Description

instance-tag	(Optional) Name of the OSPF instance. The name can be a maximum of 20 alphanumeric characters.
ethernet *slot/port*	(Optional) Specifies the Ethernet interface and the slot number and port number. The slot number is from 1 to 255, and the port number is from 1 to 128.
loopback *if_number*	(Optional) Specifies the loopback interface. The loopback interface number is from 0 to 1023.
port-channel *number*	(Optional) Specifies the EtherChannel interface and EtherChannel number. The range is from 1 to 4096.
vrf *vrf-name*	(Optional) Specifies the name of the virtual routing and forwarding (VRF) instance. The *vrf-name* argument can be specified as any case-sensitive, alphanumeric string up to 32 characters. The strings "default", "management", and "all" are reserved VRF names.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines   Use the **show ip ospf traffic** command to display traffic statistics for one or more OSPF instances.

This command requires the LAN Base Services license.

Examples   This example shows how to display OSPF traffic statistics for interface 1/5:

```
switch# show ip ospf traffic ethernet 1/5
 OSPF Process ID 201 VRF RemoteOfficeVRF, Packet Counters (cleared 00:26:04 ago)
 Interface Ethernet1/5, Area 0.0.0.0
  Total: 0 in, 0 out
  LSU transmissions: first 0, rxmit 0, for req 0, nbr xmit 0
  Flooding packets output throttled (IP/tokens): 0 (0/0)
  Ignored LSAs: 0, LSAs dropped during SPF: 0
  LSAs dropped during graceful restart: 0
  Errors: drops in       0, drops out       0, errors in       0,
          errors out     0, hellos in       0, dbds in          0,
          lsreq in       0, lsu in          0, lsacks in        0,
```

```
        unknown in      0, unknown out     0, no ospf         0,
        bad version     0, bad crc         0, dup rid         0,
        dup src         0, invalid src     0, invalid dst     0,
        no nbr          0, passive         0, wrong area      0,
        pkt length      0, nbr changed rid/ip addr           0
        bad auth        0

            hellos      dbds      lsreqs      lsus      acks
    In:          0         0           0         0         0
   Out:          0         0           0         0         0

switch#
```

Table 4 describes the significant fields shown in the display.

Table 4 ***show ospf traffic Field Descriptions***

Field	Description
OSPF Process	OSPF instance tag for these traffic statistics.
VRF	Virtual routing and forwarding (VRF) for this OSPF instance.
Interface ...	Interface information.
Errors	
drops	Number of packets dropped.
bad version	Number of packets received with bad version.
dup src	Number of packets with a duplicate source address.
no nbr	Number of packets from a router that is not a full neighbor.
nbr changed rid/ip addr	Number of packets with router-id/ip address pair not matching our neighbor's values.
lsreq	Number of packets of type LSREQ (LSA required).
acks	Number of packets of type LSACK (LSA acknowledged).

Related Commands

Command	Description
clear ip ospf traffic	Clears OSPF traffic statistics.
show running-config ospf	Displays the OSPF running configuration information.

show ip ospf virtual-links

To display parameters and the current state of Open Shortest Path First (OSPF) virtual links, use the **show ip ospf virtual-links** command.

show ip ospf [*instance-tag*] **virtual-links** [**brief**] [**vrf** *vrf-name*]

Syntax Description

instance-tag	(Optional) Instance tag. The name can be a maximum of 20 alphanumeric characters.
brief	(Optional) Displays a summary of the configured virtual links.
vrf *vrf-name*	(Optional) Name of the OSPF VRF. The *vrf-name* argument can be specified as an arbitrary string of 32 alphanumeric characters. The strings "default", "management", and "all" are reserved *vrf-names*.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines   Use the **show ip ospf virtual-links** command to display information about configured virtual links.

This command requires the LAN Base Services license.

Examples   This example shows how to display information about virtual links:

```
switch# show ip ospf virtual-links
 Virtual link VL1 to router 10.1.2.3 is down
    Transit area 0.0.0.10, via interface (null), remote addr 0.0.0.0
    IP address 0.0.0.0, Process ID 201 VRF default, area 0.0.0.0
    State DOWN, Network type P2P, cost 65535
    Index 2, Transmit delay 2 sec
    0 Neighbors, flooding to 0, adjacent with 0
    Timer intervals: Hello 25, Dead 50, Wait 50, Retransmit 50
    Message-digest authentication, using key id 21
    Number of opaque link LSAs: 0, checksum sum 0
    Adjacency Information

switch#
```

Table 5 describes the significant fields shown in the display.

Table 5   show ip ospf virtual-links Field Descriptions

Field	Description
Virtual Link	OSPF neighbor and whether the link to that neighbor is up or down.
VRF	Virtual routing and forwarding (VRF) for this OSPF instance.
Transit area...	Transit area through which the virtual link is formed.
via interface...	Interface through which the virtual link is formed.
cost	Cost of reaching the OSPF neighbor through the virtual link.
Transmit delay	Transmit delay (in seconds) on the virtual link.
Timer intervals...	Various timer intervals configured for the link.
Hello	Time when the next hello is expected from the neighbor.

This example shows how to display information about virtual links in brief format:

```
switch# show ip ospf virtual-links brief
 OSPF Process ID 201 VRF default
 Total number of vlinks: 1
 Remote Router    ID     Transit Area    Cost     Status
 10.1.2.3         1      0.0.0.10        65535    down

switch#
```

Related Commands	Command	Description
	show running-config ospf	Displays the OSPF running configuration.

show ip prefix-list

To display prefix lists for the Border Gateway Protocol (BGP), use the **show ip prefix-list** command.

show ip prefix-list [*name*]

Syntax Description

name	(Optional) Name of community list. The name can be any case-sensitive, alphanumeric string up to 63 characters.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Examples   This example shows how to display the prefix lists:

```
switch(config)# show ip prefix-list
```

Related Commands

Command	Description
ip prefix-list	Configures a BGP prefix list.

show ip process

To display formation about the IP process, use the **show ip process** command.

show ip process [**vrf** *vrf-name*]

Syntax Description

vrf *vrf-name*	(Optional) Specifies the name of the virtual routing and forwarding (VRF) instance. The *vrf-name* argument can be specified as any case-sensitive, alphanumeric string up to 32 characters. The strings "default" and "all" are reserved VRF names.

Command Default None

Command Modes Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Examples This example shows details about the IP process:

```
switch(config)# show ip process
VRF default
  VRF id is 1
  Base table id is 1
  Auto discard is disabled
  Auto discard is not added
  Auto Null broadcast is configured
  Auto Punt broadcast is configured
  Static discard is not configured
  Number of static default route configured is 0
  Number of ip unreachable configured is 0
  Iodlist: 73 74
  Local address list:  1.1.1.1        2.2.2.1        21.1.1.1
switch(config)#
```

show ip rip

To display the configuration and status of the Routing Information Protocol (RIP), use the **show ip rip** command in any mode.

show ip rip [*instance-tag*] [**vrf** *vrf-name*]

Syntax Description	*instance-tag*	(Optional) RIP instance. The instance tag can be a maximum of 20 alphanumeric characters.
	vrf *vrf-name*	(Optional) Specifies the name of the virtual routing and forwarding (VRF) instance. The *vrf-name* argument can be specified as any case-sensitive, alphanumeric string up to 32 characters. The strings "default" and "all" are reserved VRF names.

Command Default   No default behavior or values

Command Modes   Any command mode

Command History	Release	Modification
	5.0(3)N1(1)	This command was introduced.

Examples   This example shows how to display the RIP configuration information:

```
switch(config-if)# show ip rip
```

Related Commands	Command	Description
	show ip rip interface	Displays RIP information for an interface.
	show ip rip neighbor	Displays RIP neighbor information.
	show ip rip policy statistics	Displays RIP policy statistics.
	show ip rip route	Displays RIP route information.
	show ip rip statistics	Displays RIP statistics.

show ip rip interface

To display interface entry information from the Routing Information Protocol (RIP) topology table, use the **show ip rip interface** command in any mode.

show ip rip interface [*type slot/port*] [**vrf** *vrf-name*]

Syntax Description

interface *type slot/port*	(Optional) Specifies the interface.
vrf *vrf-name*	(Optional) Specifies the name of the virtual routing and forwarding (VRF) instance. The *vrf-name* argument can be specified as any case-sensitive, alphanumeric string up to 32 characters. The strings "default" and "all" are reserved VRF names.

Command Default This command has no default settings.

Command Modes Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Examples This example shows how to display the neighbor information for a specified interface from the RIP topology table:

```
switch(config-if)# show ip rip interface ethernet 1/2
```

Related Commands

Command	Description
show ip rip	Displays RIP information.
show ip rip neighbor	Displays RIP neighbor information.
show ip rip policy statistics	Displays RIP policy statistics.
show ip rip route	Displays RIP route information.
show ip rip statistics	Displays RIP statistics.

show ip rip neighbor

To display the neighbor information from the Routing Information Protocol (RIP) topology table, use the **show ip rip neighbor** command in any mode.

show ip rip neighbor [*interface-type instance*] [**vrf** *vrf-name*]

Syntax Description

interface-type	(Optional) Interface type. For more information, use the question mark (**?**) online help function.
instance	(Optional) Either a physical interface instance or a virtual interface instance.
vrf *vrf-name*	(Optional) Specifies the name of the virtual routing and forwarding (VRF) instance. The *vrf-name* argument can be specified as any case-sensitive, alphanumeric string up to 32 characters. The strings "default" and "all" are reserved VRF names.

Command Default   No default behavior or values

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Examples   The following is sample output from the **show rip neighbor** command:

```
switch(config-if)# show ip rip neighbor
```

Related Commands

Command	Description
show ip rip	Displays RIP information.
show ip rip interface	Displays RIP information for an interface.
show ip rip policy statistics	Displays RIP policy statistics.
show ip rip route	Displays RIP route information.
show ip rip statistics	Displays RIP statistics.

show ip rip policy statistics

To display the policy statistics for the Routing Information Protocol (RIP), use the **show ip rip policy statistics** command in any mode.

show ip rip policy statistics redistribute {**bgp** *id* | **direct** | **eigrp** *id* | **ospf** *id* | **static**} [**vrf** *vrf-name*]

Syntax Description		
	bgp	Displays policy statistics for the Border Gateway Protocol (BGP).
	direct	Displays policy statistics for directly connected routes only.
	eigrp	Displays policy statistics for Enhanced Interior Gateway Routing Protocol (EIGRP).
	ospf	Displays policy statistics for Open Shortest Path First (OSPF) protocol.
	static	Displays policy statistics for IP static routes.
	id	For the **bgp** keyword, an autonomous system number. The range for 2-byte numbers is from 1 to 65535. The range for 4-byte numbers is from 1.0 to 65535.65535.
		For the **eigrp** keyword, an EIGRP instance name from which routes are to be redistributed. The value takes the form of a string. You can enter a decimal number, but Cisco NX-OS stores it internally as a string.
		For the **ospf** keyword, an OSPF instance name from which routes are to be redistributed. The value takes the form of a string. You can enter a decimal number, but Cisco NX-OS stores it internally as a string.
	vrf *vrf-name*	(Optional) Specifies the name of the virtual routing and forwarding (VRF) instance. The *vrf-name* argument can be specified as any case-sensitive, alphanumeric string up to 32 characters. The strings "default" and "all" are reserved VRF names.

Command Default No default behavior or values.

Command Modes Any command mode

Command History	Release	Modification
	5.0(3)N1(1)	This command was introduced.

Examples This example shows how to show policy statistics for EIGRP:

```
switch# show ip rip policy statistics redistribute eigrp 201
```

Send comments to nexus5k-docfeedback@cisco.com

Related Commands	Command	Description
	clear ip rip policy statistics	Clears policy statistics for RIP.
	show ip rip	Displays RIP information.
	show ip rip interface	Displays RIP information for an interface.
	show ip rip neighbor	Displays RIP information for a neighbor.
	show ip rip route	Displays RIP route information.
	show ip rip statistics	Displays RIP statistics.

show ip rip route

To display route information from the Routing Information Protocol (RIP) topology table, use the **show ip rip route** command in any mode.

> **show ip rip route** [*prefix/length*] [**summary**] [**vrf** *vrf-name*]

Syntax Description

prefix/length	(Optional) IP prefix about which routing information should be displayed.
summary	(Optional) Displays information about summary routes.
vrf *vrf-name*	(Optional) Specifies the name of the virtual routing and forwarding (VRF) instance. The *vrf-name* argument can be specified as any case-sensitive, alphanumeric string up to 32 characters. The strings "default" and "all" are reserved VRF names.

Command Default

No default behavior or values

Command Modes

Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Examples

This example shows how to display route information from the RIP topology table:

```
switch# show ip rip route
```

Related Commands

Command	Description
show ip rip	Displays RIP information.
show ip rip interface	Displays RIP information for an interface.
show ip rip neighbor	Displays RIP information for a neighbor.
show ip rip policy statistics	Displays policy statistics for RIP.
show ip rip statistics	Displays RIP statistics.

show ip rip statistics

To display statistical entry information from the Routing Information Protocol (RIP) topology table, use the **show ip rip statistics** command in any mode.

show ip rip statistics [*interface-type instance*] [**vrf** *vrf-name*]

Syntax Description

interface-type	(Optional) Interface type. For more information, use the question mark (**?**) online help function.
instance	(Optional) Either a physical interface instance or a virtual interface instance.
vrf *vrf-name*	(Optional) Specifies the name of the virtual routing and forwarding (VRF) instance. The *vrf-name* argument can be specified as any case-sensitive, alphanumeric string up to 32 characters. The strings "default" and "all" are reserved VRF names.

Command Default   No default behavior or values.

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Examples   This example shows how to display the RIP statistics:

```
switch# show ip rip statistics
```

Related Commands

Command	Description
show ip rip	Displays RIP information.
show ip rip interface	Displays RIP information for an interface.
show ip rip neighbor	Displays RIP information for a neighbor.
show ip rip policy statistics	Displays policy statistics for RIP.
show ip rip route	Displays RIP route information.

show ip route

To display routes from the unicast Routing Information Base (RIB), use the **show ip route** command.

show ip route [**all** | *addr* | *hostname* | *prefix* | *route-type* | **interface** *type number* | **next-hop** *addr*]]
[**vrf** *vrf-name*]

Syntax Description

all	(Optional) Displays all routes.
addr	(Optional) IPv4 address. The format is x.x.x.x.
hostname	Hostname. The *name* can be any case-sensitive, alphanumeric string up to 80 characters.
prefix	(Optional) IPv4 prefix. The format is x.x.x.x/length. The length range is from 1 to 32.
route-type	(Optional) Type of route. Use **?** to see the list of types.
interface *type number*	(Optional) Displays the routes for an interface. Use **?** to see the supported interfaces.
next-hop *addr*	(Optional) Displays routes with this next-hop address. The format is x.x.x.x.
vrf *vrf-name*	(Optional) Specifies the virtual router context (VRF) name. The name can be any case-sensitive, alphanumeric string up to 32 characters.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Examples

This example shows how to display the route table:

```
switch(config)# show ip route all
```

Related Commands

Command	Description
clear ip route	Clears entries in the route table.

show ip static-route

To display static routes from the unicast Routing Information Base (RIB), use the **show ip static-route** command.

show ip static-route [**vrf** {*vrf-name* | **all**}]

Syntax Description

vrf *vrf-name*	(Optional) Specifies the virtual router context (VRF) name. The name can be any case-sensitive, alphanumeric string up to 32 characters.
all	(Optional) Specifies all virtual router contexts (VRF) name.

Command Default None

Command Modes Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Examples This example shows how to display the static routes:

```
switch(config)# show ip static-route
```

Related Commands

Command	Description
ip route	Configures a static route.

show ip traffic

To display IP traffic information, use the **show ip traffic** command.

show ip traffic

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Examples

This example shows how to display the IP traffic information:

```
switch(config)# show ip traffic

IP Software Processed Traffic Statistics
----------------------------------------
Transmission and reception:
  Packets received: 103598, sent: 32093, consumed: 2,
  Forwarded, unicast: 0, multicast: 0, Label: 0
Opts:
  end: 0, nop: 0, basic security: 0, loose source route: 0
  timestamp: 0, record route: 0
  strict source route: 0, alert: 0,
  other: 0
Errors:
  Bad checksum: 0, packet too small: 0, bad version: 0,
  Bad header length: 0, bad packet length: 0, bad destination: 0,
  Bad ttl: 0, could not forward: 990, no buffer dropped: 0,
  Bad encapsulation: 2, no route: 0, non-existent protocol: 0
  Stateful Restart Recovery: 0
  MBUF pull up fail: 0
Fragmentation/reassembly:
  Fragments received: 0, fragments sent: 0, fragments created: 0,
  Fragments dropped: 0, packets with DF: 0, packets reassembled: 0,
  Fragments timed out: 0

ICMP Software Processed Traffic Statistics
------------------------------------------
Transmission:
  Redirect: 2, unreachable: 0, echo request: 0, echo reply: 0,
  Mask request: 0, mask reply: 0, info request: 0, info reply: 0,
  Parameter problem: 0, source quench: 0, timestamp: 0,
  Timestamp response: 0, time exceeded: 0,
  Irdp solicitation: 0, irdp advertisement: 0
Reception:
  Redirect: 2, unreachable: 22048, echo request: 0, echo reply: 0,
```

```
        Mask request: 0, mask reply: 0, info request: 0, info reply: 0,
        Parameter problem: 0, source quench: 0, timestamp: 0,
        Timestamp response: 0, time exceeded: 0,
        Irdp solicitation: 0, irdp advertisement: 0,
        Format error: 0, checksum error: 0

Statistics last reset: never

switch(config)#
```

Related Commands	Command	Description
	show ip process	Displays information about the IP process.

show mac-list

To display the entries in a MAC list, use the **show mac-list** command.

show mac-list [*name*]

Syntax Description	*name*	(Optional) MAC list name. The name can be any case-sensitive, alphanumeric string up to 32 characters.

Command Default No match values are defined.

Command Modes Global configuration mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines This command requires the LAN Enterprise license.

Examples This example shows how to display information about the Red MAC list:

```
switch(config)# show mac-list Red
```

Related Commands

Command	Description
mac-list	Creates a MAC list.
match mac-list	Matches a MAC address in a MAC list.

show routing

To display routing information, use the **show routing** command.

show routing [**ip** | **ipv4**] [*address* | *hostname* | *prefix* | *route-type* | **clients** | **hidden-nh interface** *type number* | **next-hop** *addr* | **recursive-next-hop** [*addr*]] [**vrf** *vrf-name*]

Syntax Description		
	ip	(Optional) Displays the routing information for the network.
	ipv4	(Optional) Displays the routing information for the IPv4 network.
	address	(Optional) IPv4 address. IPv4 address format is x.x.x.x.
	hostname	Hostname. The *name* can be any case-sensitive, alphanumeric string up to 80 characters.
	prefix	(Optional) IPv4 prefix. IPv4 prefix format is x.x.x.x/length.
	route-type	(Optional) Type of route. Use **?** to see the list of types.
	clients	(Optional) Displays the routing clients.
	hidden-nh	(Optional) Displays hidden next-hop information.
	interface *type number*	(Optional) Displays the routes for an interface. The interface can be one of the following: • **mgmt**—Management interface. The default management interface is 0. • **vlan**—VLAN interface. The VLAN interface number is from 1 to 4094.
	next-hop *addr*	(Optional) Displays routes with this next-hop address. The format is x.x.x.x.
	recursive next-hop *addr*	(Optional) Displays routes with this recursive next-hop address. The format is x.x.x.x.
	vrf *vrf-name*	(Optional) Specifies the virtual router context (VRF) name. The VRF can be one of the following: • *vrf-name*—VRF name. The name can be any case-sensitive, alphanumeric string up to 32 characters. • **all**—Specifies all VRFs. • **default**—Specifies the default VRF. • **management**—Specifies the management VRF.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Examples   This example shows how to display the route table:

```
switch(config)# show ip routing
```

Related Commands	Command	Description
	clear ip route	Clears entries in the route table.

show routing memory estimate

To display an estimate of routing memory requirements, use the **show routing memory estimate** command.

show routing memory estimate [**routes** *num-routes* **next-hops** *num-hop-addresses*]

Syntax Description

routes	(Optional) Specifies the unicast Routing Information Base (RIB) memory estimate for the number of routes.
num-routes	Number of routes. The range is from 1000 to 1,000,000.
next-hops	(Optional) Specifies the unicast RIB memory estimate for the number of next hops per route.
num-hop-addresses	Number of next-hop addresses per route. The range is from 1 to 16.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines   Use the **show routing memory estimate** command to estimate the memory required for a selected number of routes and number of next-hop addresses per route.

Examples   This example shows how to display the route table:

```
switch# show routing memory estimate routes 1000 next-hops 1
Shared memory estimates:
  Current max    32 MB;  27495 routes with 16 nhs
         in-use   1 MB;     11 routes with  1 nhs (average)
  Configured max 32 MB;  27495 routes with 16 nhs
  Estimate        0 MB;   1000 routes with  1 nhs
```

show routing-context

To display the virtual routing and forwarding (VRF) scope for all EXEC commands, use the **show routing-context** command.

show routing-context

Syntax Description   This command has no arguments or keywords.

Command Default   None

Command Modes   EXEC mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Examples   This example shows how display the current routing context:

```
switch%management# show routing-context
Current Route Context: default
```

Related Commands

Command	Description
routing-context vrf	Configures the routing context.

show routing hash

To display the route selected for a particular source and destination address, use the **show routing hash** command.

show routing hash *source-addr dest-addr* [*source-port dest-port*]] [**vrf** *vrf-name*]

Syntax Description

source-addr	Source IPv4 address. IPv4 address format is x.x.x.x.
dest-addr	Destination IPv4 address. IPv4 address format is x.x.x.x.
source-port	(Optional) Source port. The range is from 1 to 65535.
dest-port	(Optional) Destination port. The range is from 1 to 65535.
vrf *vrf-name*	(Optional) Specifies the virtual router context (VRF) name. The name can be any case-sensitive, alphanumeric string up to 32 characters.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Examples   This example shows how to display the route selected to reach 30.0.0.2 from 10.0.0.5:

```
switch# show routing hash  10.0.0.5 30.0.0.2
```

Related Commands

Command	Description
clear ip route	Clears entries in the route table.

show running-config arp

To display the Address Resolution Protocol (ARP) configuration in the running configuration, use the **show running-config arp** command.

   show running-config arp [**all**]

Syntax Description	**all**	(Optional) Displays configured and default information.

Command Default   None

Command Modes   Any command mode

Command History	Release	Modification
	5.0(2)N1(1)	This command was introduced.

Examples   This example shows how to display the ARP configuration:

```
switch# show running-config arp

!Command: show running-config arp
!Time: Mon Aug 23 07:33:15 2010

version 5.0(2)N1(1)
ip arp timeout 2100
ip arp event-history errors size medium

interface Vlan10
  ip arp 192.0.11.37 00C0.4F00.0000

switch#
```

This example shows how to display the ARP configuration with the default information:

```
switch# show running-config arp all

!Command: show running-config arp all
!Time: Mon Aug 23 07:33:52 2010

version 5.0(2)N1(1)
ip arp timeout 1500
ip arp event-history cli size small
ip arp event-history snmp size small
ip arp event-history client-errors size small
ip arp event-history client-event size small
ip arp event-history lcache-errors size small
ip arp event-history lcache size small
ip arp event-history errors size small
ip arp event-history ha size small
ip arp event-history event size small
ip arp event-history packet size small
```

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```
interface Vlan10
  ip arp 192.0.11.37 00C0.4F00.0000
  ip arp gratuitous update
  ip arp gratuitous request

switch#
```

Related Commands	Command	Description
	copy running-config startup-config	Copies the running configuration to the startup configuration file.
	ip arp timeout	Configures an ARP timeout.
	show startup-config arp	Displays the ARP startup configuration.

show running-config eigrp

To display the running configuration for the Enhanced Interior Gateway Routing Protocol (EIGRP) for IPv4 networks, use the **show running-config eigrp** command.

show running-config eigrp

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines

This command requires the LAN Base Services license.

Examples

This example shows how to display the running configuration for EIGRP:

```
switch# show running-config eigrp

!Command: show running-config eigrp
!Time: Mon Feb 28 05:47:18 2011

version 5.0(3)N1(1)
feature eigrp

router eigrp Test1
  autonomous-system 65535
  default-metric 500000 30 200 1 1500
  redistribute direct route-map SVI-EIGRP

interface port-channel2000
  ip router eigrp Test1

interface port-channel2001
  ip router eigrp Test1

interface Ethernet1/26
  ip router eigrp Test1

interface Ethernet2/5
  ip router eigrp Test1

interface Ethernet2/6
  ip router eigrp Test1
```

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```
interface Ethernet2/7
  ip router eigrp Test1

interface Ethernet3/11
  ip router eigrp Test1

interface Ethernet3/12
  ip router eigrp Test1


switch#
```

Related Commands	Command	Description
	router ospf	Creates an OSPF instance.

show running-config ospf

To display the running configuration for Open Shortest Path First version 2 (OSPFv2) for IPv4 networks, use the **show running-config ospf** command.

show running-config ospf

Syntax Description   This command has no arguments or keywords.

Command Default   None

Command Modes   EXEC mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Usage Guidelines   This command does not require a license.

Examples   This example shows how to display the running configuration for OSPF:

```
switch# show running-config ospf

!Command: show running-config ospf
!Time: Tue Apr 15 09:09:15 2008

version 5.0(3)N1(1)
feature ospf

router ospf 201
  router-id 192.0.2.1
  default-information originate route-map DefaultRouteFilter
  area 0.0.0.10 virtual-link 192.0.2.3
    authentication message-digest
    authentication-key 3 15e76ee89406ccbf
    message-digest-key 21 md5 3 15e76ee89406ccbf
    dead-interval 50
    hello-interval 25
    retransmit-interval 50
    transmit-delay 2
  redistribute bgp 1 route-map FilterExtBGP
  redistribute maximum-prefix 1000 75 warning-only
  area 0.0.0.10 authentication
  area 0.0.0.10 default-cost 25
  area 0.0.0.10 filter-list route-map FilterLSAs in
  log-adjacency-changes
  maximum-paths 3
  default-metric 25
```

```
interface Ethernet1/5
  ip ospf authentication key-chain Test1
  ip ospf authentication-key 3 15e76ee89406ccbf
  ip ospf message-digest-key 21 md5 3 15e76ee89406ccbf
  ip ospf cost 25
  ip ospf dead-interval 50
  ip ospf hello-interval 25
  ip ospf passive-interface
  ip ospf priority 25
  ip ospf mtu-ignore
  ip router ospf 201 area 0.0.0.15

switch#
```

Related Commands

Command	Description
router ospf	Creates an OSPF instance.

show sockets client

To display information about the sockets clients, use the **show sockets client** command.

show sockets client [**pid** *id*] [**raw** | **tcp** | **udp**] [**detail**]

Syntax Description

pid *id*	(Optional) Displays the socket client information for a specific process. The *id* range is from 1 to 65535.
raw	(Optional) Displays information about the raw client.
tcp	(Optional) Displays information about the TCP client.
udp	(Optional) Displays information about the UDP client.
detail	(Optional) Displays information about the detailed client.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Examples

This example shows how to display the UDP socket client information:

```
switch# show sockets client udp

Total number of UDP clients: 9

client: syslogd, pid: 4367, sockets: 2

client: ntpd, pid: 4602, sockets: 3

client: ntp, pid: 4591, sockets: 2

client: radiusd, pid: 4586, sockets: 2

client: dhcp_snoop, pid: 5260, sockets: 1

client: pim, pid: 5296, sockets: 1

client: mcecm, pid: 5265, sockets: 1

client: snmpd, pid: 4609, sockets: 2

client: hsrp_engine, pid: 9588, sockets: 2

Statistics: Cancels 12777, Cancel-unblocks 11257, Cancel-misses 0
            Select-drops 1520, Select-wakes 11257,
switch#
```

Related Commands

Command	Description
clear sockets statistics	Clears socket statistics.
show sockets connection	Displays information about the socket connection.
show sockets statistics	Displays information about the socket statistics.

show sockets connection

To display information about the sockets connection, use the **show sockets connection** command.

show sockets connection [**pid** *id*] [**local** *address* | **foreign** *addres* | **raw** | **tcp** | **udp**] [**detail**]

Syntax Description

pid *id*	(Optional) Displays the socket client information for a specific process. the *id* range is from 1 to 65535.
local *address*	(Optional) Displays information about all the TCP connections with the specified local address. The *address* can be an IPv4 address.
foreign *address*	(Optional) Displays information about all the TCP connections with the specified foreign address. The *address* can be an IPv4 address.
raw	(Optional) Displays information about the raw client.
tcp	(Optional) Displays information about the TCP client.
udp	(Optional) Displays information about the UDP client.
detail	(Optional) Displays information about the detailed client.

Command Default None

Command Modes Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Examples

This example shows how to display the TCP socket connection information:

```
switch# show sockets connection tcp

Total number of tcp sockets: 4
Active connections (including servers)
Protocol State/      Recv-Q/   Local Address(port)/
         Context     Send-Q    Remote Address(port)
tcp6     LISTEN      0         *(22)
         Wildcard    0         *(*)

tcp6     LISTEN      0         *(23)
         Wildcard    0         *(*)

tcp      LISTEN      0         *(161)
         Wildcard    0         *(*)

tcp      ESTABLISHED 0         172.29.231.33(23)
         management  4         72.163.177.151(1559)


switch#
```

S e n d   c o m m e n t s   t o   n e x u s 5 k - d o c f e e d b a c k @ c i s c o . c o m

Related Commands	Command	Description
	clear sockets statistics	Clears the socket statistics.
	show sockets client	Displays information about the socket client.
	show sockets statistics	Displays the socket statistics.

show sockets statistics

To display the socket statistics, use the **show sockets statistics** command.

show sockets statistics [**all** | **raw** | **rawsum** | **tcp** | **tcpsum** | **udp** | **udpsum**]

Syntax Description		
	all	(Optional) Displays all the socket statistics.
	raw	(Optional) Displays the socket statistics for the raw IPv4 protocol socket statistics.
	rawsum	(Optional) Displays a summary of the socket statistics for the raw IPv4 protocol socket statistics.
	tcp	(Optional) Displays the socket statistics for the TCP IPv4 protocol.
	tcpsum	(Optional) Displays a summary of the socket statistics for the TCP IPv4 protocols.
	udp	(Optional) Displays the socket statistics for the UDP IPv4 protocol.
	udpsum	(Optional) Displays a summary of the socket statistics for the UDP IPv4 protocols.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Examples   This example shows how to display the TCP socket statistics:

```
switch# show sockets statistics tcp
TCP v4 Received:
        11622 packets total
        0 checksum error, 0 bad offset, 0 too short, 0 MD5 error
        8782 packets (33566 bytes) in sequence
        0 duplicate packets (0 bytes)
        0 partially dup packets (0 bytes)
        0 out-of-order packets (0 bytes)
        0 packets (0 bytes) with data after window
        0 packets after close
        0 window probe packets, 0 window update packets
        2 duplicate ack packets, 0 ack packets with unsent data
        9349 ack packets (890960 bytes)
TCP v4 Sent:
        9543 total, 0 urgent packets
        3 control packets
        9492 data packets (890955 bytes)
        0 data packets (0 bytes) retransmitted
        48 ack only packets
        0 window probe packets, 0 window update packets
TCP v4:
0 connections initiated, 6 connections accepted, 6 connections established
6 connections closed (including 2 dropped, 0 embryonic dropped)
```

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```
0 total rxmt timeout, 0 connections dropped in rxmt timeout
0 keepalive timeout, 0 keepalive probe, 0 connections dropped in keepalive
switch#
```

Related Commands	Command	Description
	clear sockets statistics	Clears socket statistics.
	show sockets client	Displays information about the socket client.
	show sockets connection	Displays information about the socket connection.

show startup-config arp

To display the Address Resolution Protocol (ARP) configuration in the startup configuration, use the **show startup-config arp** command.

show startup-config arp [**all**]

Syntax Description	all	(Optional) Displays configured and default information.

Command Default   None

Command Modes   Any command mode

Command History

Release	Modification
5.0(2)N1(1)	This command was introduced.

Examples   This example shows how to display the ARP startup configuration:

```
switch# show startup-config arp

!Command: show running-config arp
!Time: Mon Aug 23 07:33:15 2010

version 5.0(2)N1(1)
ip arp timeout 2100
ip arp event-history errors size medium

interface Vlan10
  ip arp 192.0.1.37 00C0.4F00.0000

switch#
```

Related Commands

Command	Description
copy running-config startup-config	Copies the running configuration to the startup configuration file.
ip arp timeout	Configures an ARP timeout.
show running-config arp	Displays the ARP running configuration.

show track

To show information about object tracking, use the **show track** command.

show track [*object-id*] [**interface** | **ip route**] [**brief**]

Syntax Description

object-id	(Optional) Tracking ID. The range can be from 1 to 500.
interface	(Optional) Displays information about tracked interfaces.
ip route	(Optional) Displays information about tracked IP routes.
brief	(Optional) Displays brief information about tracked objects.

Command Default   Display information for all tracked objects.

Command Modes   Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Examples   This example shows how to display information about tracked interfaces:

```
switch# show track interface
```

This example shows how to display information about tracked IP routes:

```
switch# show track ip route
```

This example shows how to display brief information about tracked objects:

```
switch# show track brief
```

Related Commands

Command	Description
track interface	Tracks the state of an interface.
track ip route	Tracks the state of an IP route.

show vrrp

To show information about the Virtual Router Redundancy Protocol (VRRP), use the **show vrrp** command.

show vrrp [**detail** | **statistics** | **summary**] [**interface** *if-number*] [**vr** *id*] [**backup** | **init** | **master**]

Syntax Description

detail	(Optional) Displays detailed information about VRRP.
statistics	(Optional) Displays VRRP statistics.
summary	(Optional) Displays the VRRP summary.
interface *if-number*	(Optional) Displays information about VRRP on an interface. Use **?** to see a list of supported interfaces.
vr *id*	(Optional) Displays information about VRRP for a group. The *id* range is from 1 to 255.
backup	(Optional) Displays information about VRRP groups in the backup state.
init	(Optional) Displays information about VRRP groups in the init state.
master	(Optional) Displays information about VRRP groups in the master state.

Command Default

Display information for all VRRP groups.

Command Modes

Any command mode

Command History

Release	Modification
5.0(3)N1(1)	This command was introduced.

Examples

This example shows how to display information about VRRP:

```
switch(config)# show vrrp
     Interface  VR IpVersion Pri   Time Pre State   VR IP addr
-------------------------------------------------------------
    Ethernet1/5   1   IPV4    200  200 s  Y    Init    192.0.1.10

switch(config)#
```

This example shows how to display the detailed configuration information about VRRP:

```
switch(config)# show vrrp detail

Ethernet1/5 - Group 1 (IPV4)
    State is Init(Administratively down)
    Virtual IP address is 192.0.1.10
    Priority 200, Configured 200
    Forwarding threshold(for VPC), lower: 1 upper: 200
    Advertisement interval 200
    Preemption enabled
    Virtual MAC address is 0000.5e00.0101
    Master router is Unknown
```

```
switch(config)#
```

This example shows how to displayinformation about a specific virtual router:

```
switch# show vrrp vr 1
      Interface  VR IpVersion Pri   Time Pre State   VR IP addr
-------------------------------------------------------------
    Ethernet1/5  1   IPV4    200  200 s  Y    Init    192.0.1.10
switch#
```

Table 6 describes the significant fields shown in the display.

Table 6   *show vrrp Field Descriptions*

Field	Description
Interface	Interface on which VRRP is configured.
VR	ID of the virtual router.
IPVersion	IP address on the interface.
Pri	Priority range of the virtual router.
Time	Checksum of the complete contents of the link state advertisement.
Pre	Preemption state of the virtual router.
State	VRRP group state. The state can be one of the following: • Init • Backup • Master
VR IP addr	Virtual IPv4 address for a VRRP group.

Related Commands

Command	Description
clear vrrp	Clears VRRP statistics.
feature vrrp	Enables the VRRP feature.