

show ip

This chapter describes the outputs of the **show ip** command.

- show ip chunks all-vrf, on page 1
- show ip framed-prefixes, on page 2
- show ip interface, on page 2
- show ip interface gre-keepalive, on page 3
- show ip neighbors vpp, on page 4
- show ip pool address pool-name, on page 4
- show ip pool summary, on page 5
- show ip pool verbose, on page 6
- show ip route, on page 10
- show ip traffic sctp, on page 11

show ip chunks all-vrf

Table 1: show ip chunks all-vrf Command Output Descriptions

Field	Description
VRF Name	Displays the configured VRF name.
Peer Address	Displays the peer IP address.
chunk-id	Displays the chunk ID.
chunk-size	Displays the chunk size.
start-addr	Displays the starting IP address of the pool.
end-addr	Displays the ending IP address of the pool.
used-addrs	Displays the number of IP addresses currently in use.

show ip framed-prefixes

Table 2: show ip framed-prefixes Command Output Descriptions

Field	Description
session-id	Displays the session identifier for the session corresponding to the framed-prefix.
Address/Mask	Displays the IP address.
vrf-name	Displays the VRF routing information.
pool-name	Displays the pool name used for framed prefixes.

show ip interface

Table 3: show ip interface Command Output Descriptions

Field	Description
Intf Name	Indicates the name of the IP interface for which information is displayed.
Intf Type	Indicates the type of IP interface for which information is displayed. Possible types are: • broadcast • loopback • point-to-point • tunnel
Description	Indicates the provided description for specific interface name.
VRF	Indicates the name of the configured virtual routing and forwarding (VRF) table for this IP interface.
IP State	Indicates the state of the IP interface. Possible values are: • UP • DOWN
IP Address	Indicates the primary IP address bound with this IP interface in IPv4/IPv6 notation.
Number of Secondary Addresses	Indicates the total number of secondary IP addresses bound with this IP interface.
Secondary IP Addresses	Indicates the secondary IP address bound with this IP interface in IPv4/IPv6 notation. This will be display only when secondary IP addresses are configured for this interface.

show ip interface gre-keepalive

Table 4: show ip interface gre-keepalive Command Output Descriptions

Field	Description
Intf Name	Indicates the name of the IP interface for which information is displayed.
Intf Type	Indicates the type of IP interface for which information is displayed. Possible types are: • broadcast • loopback • point-to-point • tunnel
Description	Indicates the provided description for specific interface name.
VRF	Indicates the name of the configured virtual routing and forwarding (VRF) table for this IP interface.
IP State	Indicates the state of the IP interface. Possible values are: • UP • DOWN
IP Address	Indicates the primary IP address bound with this IP interface in IPv4/IPv6 notation.
Number of Secondary Addresses	Indicates the total number of secondary IP addresses bound with this IP interface.
Secondary IP Addresses	Indicates the secondary IP address bound with this IP interface in IPv4/IPv6 notation. This will be displayed only when secondary IP address(es) are configured for this interface.
GRE Keepalives sent after receiving last response	Indicates the total number of GRE keepalive requests sent after last response was received.
Time remaining before sending next GRE Keepalive request	Indicates the time duration in seconds left after which next GRE keepalive request will be sent.
Time elapsed since last Keepalive from the remote	Indicates the time in seconds lapsed after last keepalive received from the remote node of GRE tunnel.
Total Number of GRE Keepalive requests sent	Indicates the total number of GRE keepalive requests sent by this node to remote GRE tunnel node during this session.
Total Number of GRE Keepalive responses received	Indicates the total number of GRE keepalive responses, in response to GRE keepalive requests from this node, received on this interface from remote GRE tunnel node during this session.

Field	Description
Total Number of GRE Keepalive requests received	Indicates the total number of GRE keepalive requests from remote GRE tunnel node, received by this node on this interface during this session.
Total Number of GRE Keepalive responses sent	Indicates the total number of GRE keepalive responses, in response to GRE keepalive requests from remote GRE tunnel node, sent by this node to remote GRE tunnel node during this session.

show ip neighbors vpp

Table 5: show ip neighbors vpp Command Output Descriptions

Field	Description
Time	Time at which the ARP/neighbor entry is added in VPP.
IP Address	IPv4 address from table.
Flags	One of the following flag codes: • I = Incomplete • R = Reachable • M = Permanent • S = Stale • D = Delay • P = Probe • F = Failed
Ethernet	Ethernet Address of the neighbor VPP.
Interface Slot/Port	Interface name Slot or port number of the neighbor VPP.

show ip pool address pool-name

Table 6: show ip pool address pool-name Command Output Descriptions

Field	Description
Busyout	Defines whether or not the associated IP address is unavailable due to a busyout command having been applied to the entire pool or a range of addresses within the pool.

Field	Description
Status	Identifies the current condition of the IP address. Valid conditions are: (F) - Free: IP address is available for use. (U) - Used: IP address is currently in use and is unavailable. (H) - Hold: IP address is unavailable and on hold for the subscriber that just disconnected in case a reconnect occurs within the range of the **address-hold-timer** value configured in the **ip pool** command. (R) - Release: IP address is in the process of being released (from general use or the hold state).
Address	Displays the IP address.
NAI/MSID Hash	A 64-bit value identifying the subscriber's MN in order to reapply a specific IP address should the subscriber return within the hold timer range.
Hold Timer	Specifies the amount of time, in seconds, that the IP address is placed on hold in the event that the subscriber, who last used the address, reconnects.
Session Start/Disconnect	Displays the session start time for IP addresses in use and the session disconnect time for IP addresses on hold.

show ip pool summary



Note This command must be executed from within the context in which the IP address pools are configured. As such, this command only provides information for the IP address pools configured in that context. Enter the **context** *context_name* command at the Execute prompt to switch between contexts.

Table 7: show ip pool summary Command Output Descriptions

Field	Description
Type	Identifies the type of IP address pool. (P) - Public: Indicates that the pool is comprised of public IP addresses. (R) - Private: Indicates that the pool is comprised of private IP addresses. (S) - Static: Indicates that the pool is comprised of statically assigned IP addresses. (E) - Resource: Indicates that the pool is comprised of resource IP addresses. (N) - NAT: Indicates that the pool is comprised of NAT IP addresses.

Field	Description
State	Identifies the state of the IP address pool. (G) - Good: Indicates that the pool is ready to provide addresses. (D) - Pending Delete: Indicates that the pool is in the process of being deleted. (R) - Resizing: Indicates that the pool is in the process of being resized. (I) - Inactive: Indicates that the pool is not being used.
Priority	Specifies the priority use of a public or private pool. Pools with lower priority numbers are used first.
Busyout	Indicates whether or not the pool has been configured for busyout.
Pool Name	Identifies the name of the IP address pool.
Start Address	Identifies the starting IP address of the pool.
Mask/End Address	Identifies the subnet mask or the ending IP address of the pool.
Used	Specifies the number of IP addresses currently in use.
Avail	Specifies the number of IP addresses currently available for use.
Total Pool Count	Specifies the total number of IP address pools in the summary.
Total Pool Kernel Routes	Specifies the total number of Kernal routes that exist across all pools in the summary.
Max Pool Kernel Routes	Specifies the maximum number of IP pool routes supported by the system.
Total Pool Explicit Host Routes	Specifies the total number of pool explicit routes that exist across all pools in the summary.
Max Pool Explicit Host Routes	Specifies the maximum number of pool explicit host routes supported by the system.

show ip pool verbose

Note This command must be executed from within the context in which the IP address pools are configured. As such, this command only provides information for the IP address pools configured in that context. Enter the **context** *context_name* command at the Execute prompt to switch between contexts.

Table 8: show ip pool verbose Command Output Descriptions

Field	Description
Group	If there are IP address pools configured as part of a defined pool group, this field displays the name of the pool group.

Field	Description
Ungrouped Public Pools	Displays information for IP address pools not part of defined pool groups.
Pool	Identifies the name of the IP Pool.
Start Address/End Address or mask	Identifies the starting IP address and the ending IP address (or the subnet mask) of the pool.
Pool Status	Identifies the status if the IP address pool. Good: Indicates that the pool is ready to provide addresses. Pending Delete: Indicates that the pool is in the process of being deleted. Resizing: Indicates that the pool is in the process of being resized. Inactive: Indicates that the pool is not being used.
Type	Identifies the type of IP address pool. Public: Indicates that the pool is comprised of public IP addresses. Private: Indicates that the pool is comprised of private IP addresses. Static: Indicates that the pool is comprised of statically assigned IP addresses. Resource: Indicates that the pool is comprised of resource IP addresses. NAT: Indicates that the pool is comprised of NAT IP addresses.
Priority	Identifies the priority of the IP pool (0 = highest, 10 = lowest)
Group	Identifies the group to which the IP pool belongs.
VRF	Identifies the VRF name.
Used	Specifies the number of IP addresses currently in use in this pool.
Free	Specifies the number of IP addresses currently available for use in this pool.
Hold	Specifies the number of IP addresses currently unavailable and on hold for the subscribers that just disconnected in case a reconnect occurs within the range of the **address-hold-timer** value configured in the **ip pool** command.
Released	Specifies the number of IP addresses in this pool that are in the process of being released (from general use or the hold state).
Addr-Hold-Timer	Identifies the **address-hold-timer** value configured in the **ip pool** command.
Limit Exceeded	Specifies the number of times the hold timer limit was exceeded and the IP address being held was returned to an available or free state.
Addr-Quarantine-Timer	dentifies the **address-quarantine-timer** value configured in the **ip pool** command.
Quarantine	Specifies the number of times the quarantine timer limit was exceeded and the IP address being quarantined was returned to an available or free state.
Total Alloc Req	Specifies the total number of IP address requests made to this pool.

Field	Description
Total Rel Req	Specifies the total number of IP address release requests made to this pool.
Input Label	Identifies the input label for the VRF.
Output Label	Identifies the output label for the VRF.
Network Reachability Detection Server	Identifies the name of a configured network reachability server that is bound to the IP pool.
Unicast Gratuitous-ARP Address	Identifies if the ability to perform a unicast gratuitous ARP to the specified IP address rather than broadcast gratuitous ARP when gratuitous ARP generation is required is enabled for this pool.
Nexthop Forwarding Address	Identifies the IP address of the next hop gateway where a subscriber that is assigned an IP address from this pool is forwarded.
Vlan ID	Identifies the VLAN ID that enables over-lapping IP address pool support and associates the pool with the specified virtual LAN (VLAN).
Suppress-Switchover-ARPS	Identifies if the ability to suppress corresponding gratuitous ARP generation when a line card switchover occurs is enabled or disabled for this pool.
Send-ICMP-Dest-Unreachable	Specifies whether or notvan ICMP destination unreachablevPDU is generated when the system receives a PDU destined for an unused address within the pool.
Explicit-Route-Advertise	If a pool is configured with this option, then none of the fragment addresses for this pool are added to the kernel. However, the fragment addresses are added to the NPU. As the calls come up and addresses from this pool (with the new option) are used, these addresses are added to the kernel.
Advertise-if-used	Indicates if the option is enabled to use advertise address or not.
Include-Network-Broadcast-Address	Indicates whether IP pool is configured to include network broadcast address or not.
Allow-Static-Allocation	Indicates whether IP pool configured to allow static allocation of IP address or not.
Group Available Threshold	Specifies the low threshold IP pool utilization percentage that must be met or passed within the polling interval to generate an alert or alarm. Clear: Specifies the high threshold IP pool utilization percentage that maintains a previously generated alarm condition. If the utilization percentage rises above the high threshold within the polling interval, a clear alarm will be generated.
Pool-Free Threshold	Specifies the low threshold IP pool utilization percentage that must be met or exceeded within the polling interval to generate an alert or alarm. Clear: Specifies the high threshold IP pool utilization percentage that maintains a previously generated alarm condition. If the utilization percentage rises above the high threshold within the polling interval, a clear alarm will be generated.

Field	Description
Pool-Used Threshold	Specifies the high threshold IP pool utilization percentage that must be met or exceeded within the polling interval to generate an alert or alarm. Clear: Specifies the low threshold IP pool utilization percentage that maintains a previously generated alarm condition. If the utilization percentage falls beneath the low threshold within the polling interval, a clear alarm will be generated.
Pool-Release Threshold	Specifies the high threshold IP pool utilization percentage that must be met or exceeded within the polling interval to generate an alert or alarm. Clear: Specifies the low threshold IP pool utilization percentage that maintains a previously generated alarm condition. If the utilization percentage falls beneath the low threshold within the polling interval, a clear alarm will be generated.
Pool-Hold Threshold	Specifies the high threshold IP pool utilization percentage that must be met or exceeded within the polling interval to generate an alert or alarm. Clear: Specifies the low threshold IP pool utilization percentage that maintains a previously generated alarm condition. If the utilization percentage falls beneath the low threshold within the polling interval, a clear alarm will be generated.
Pool-Qurantine Threshold	Specifies the high threshold IP pool utilization percentage that must be met or exceeded within the polling interval to generate an alert or alarm. Clear: Specifies the low threshold IP pool utilization percentage that maintains a previously generated alarm condition. If the utilization percentage falls beneath the low threshold within the polling interval, a clear alarm will be generated.
cip-local-pool-used Threshold	Specifies the high threshold IP pool utilization percentage that must be met or exceeded within the polling interval to generate an alert or alarm. Clear: Specifies the low threshold IP pool utilization percentage that maintains a previously generated alarm condition. If the utilization percentage falls beneath the low threshold within the polling interval, a clear alarm will be generated.
cip-local-pool-in-use-addr Threshold	Specifies the high threshold IP pool utilization percentage that must be met or exceeded within the polling interval to generate an alert or alarm. Clear: Specifies the low threshold IP pool utilization percentage that maintains a previously generated alarm condition. If the utilization percentage falls beneath the low threshold within the polling interval, a clear alarm will be generated.
Group Summary	This field and the related data are only displayed for pools that are part of a IP pool group.
Group Used	Specifies the number of IP addresses within the group that are currently in use.
Group Free	Specifies the number of IP addresses within the group that are currently available.
Group Hold	Specifies the number of IP addresses in the group that are unavailable and on hold for the subscribers that just disconnected in case a reconnect occurs within the range of the **address-hold-timer** value configured in the **ip pool** command.
Group Released	Specifies the number of IP addresses in the group that are in the process of being released (from general use or the hold state).

Field	Description
Group Effective Alarm Threshold %	Identifies the alarm threshold for the group. This parameter is based on the configured threshold of the first IP pool used in the group.
Group Effective Clear Threshold %	Identifies the clear threshold for the group. This parameter is based on the configured threshold of the first IP pool used in the group.
Group Current Usage %	Identifies the percentage of IP addresses currently in use within the group.
Group Status	Identifies the status of the group. (G) - Good: Indicates that the pool is ready to provide addresses. (D) - Pending Delete: Indicates that the pool is in the process of being deleted. (R) - Resizing: Indicates that the pool is in the process of being resized. (I) - Inactive: Indicates that the pool is not being used.
Total Pool Count	Specifies the total number of IP address pools in the summary.
Total Pool Kernel Routes	Specifies the total number of Kernal routes that exist across all pools in the summary.
Max Pool Kernel Routes	Specifies the maximum number of IP pool routes supported by the system.
Total Pool Explicit Host Routes	Specifies the total number of pool explicit routes that exist across all pools in the summary.
Max Pool Explicit Host Routes	Specifies the maximum number of pool explicit host routes supported by the system.

show ip route

Table 9: show ip route Command Output Descriptions

Field	Description
Destination	Designating ip address prefix/length
kernel-only	Displays information for only kernel routes (ip route kernel).
Next hop	Address of the directly connected next hop interface
Protocol	Connected Unconnected
Prec	Number of precedence bits set
Cost	Number of router hops to destination address
Interface	Name of the next hop interface
Total Route Count	Total number of routes

Field	Description
Unique route count	Number of unique routes
Connected	Number of connected routes

show ip traffic sctp

Table 10: show ip traffic sctp Command Output Descriptions

Field	Description
SctpCurrEstab	Displays the number of SCTP (Stream Control Transmission Protocol) associations for which the current state is either ESTABLISHED, SHUTDOWN-RECEIVED or SHUTDOWN-PENDING.
SctpActiveEstabs	Displays the number of times that associations have made a direct transition to the ESTABLISHED state from the COOKIE-ECHOED state. The upper layer initiated the association attempt.
SctpPassiveEstabs	Displays the number of times that associations have made a direct transition to the ESTABLISHED state from the CLOSED state. The remote endpoint initiated the association attempt.
SctpAborteds	Displays the number of times that associations have made a direct transition to the CLOSED state from any state using the primitive "ABORT". (Ungraceful termination of the association)
SctpShutdowns	Displays the number of times that associations have made a direct transition to the CLOSED state from either the SHUTDOWN-SENT state or the SHUTDOWN-ACK-SENT state. (Graceful termination of the association)
SctpOutOfBlues	Displays the number of out-of-the-blue packets received by the host. An out-of-the-blue packet is a correctly formed SCTP packet, including the proper checksum, but for which the receiver was unable to identify an appropriate association.
SctpChecksumErrors	Displays the number of SCTP packets received with an invalid checksum.
SctpOutCtrlChunks	Displays the number of SCTP control chunks sent; retransmissions are not included. Control chunks are those chunks different from DATA.
SctpOutOrderChunks	Displays the number of SCTP ordered data chunks sent; retransmissions are not included.
SctpOutUnorderChunks	Displays the the number of SCTP unordered chunks (data chunks in which the U bit is set to 1) sent; retransmissions are not included.
SctpInCtrlChunks	Displays the number of SCTP control chunks received; no duplicate chunks included.
SctpInOrderChunks	Displays the number of SCTP ordered data chunks received; no duplicate chunks included.

Field	Description
SctpInUnorderChunks	Displays the number of SCTP unordered chunks (data chunks in which the U bit is set to 1) received; no duplicate chunks are included.
SctpFragUsrMsg	Displays the number of user messages that have to be fragmented because of the MTU.
SctpReasmUsrMsgs	Displays the number of user messages reassembled, after conversion into DATA chunks.
SctpOutSCTPPacks	Displays the number of SCTP packets sent; retransmitted DATA chunks are included.
SctpInSCTPPacks	Displays the number of SCTP packets received; duplicates are included.