



## CHAPTER

# Catalyst 4500 Series IOS Commands

## New Commands for IOS XE 3.4.2SG

license right-to-use activate  
license right-to-use deactivate  
show license

## New Commands for IOS XE 3.4.0SG

debug device-sensor  
device-sensor filter-list  
device-sensor filter-list dhcp  
device-sensor filter-spec  
device-sensor notify  
profile flow  
show device-sensor cache

### VSS Commands

dual-active detection (virtual switch)  
dual-active recovery ip address  
interface (virtual switch)  
mac-address (virtual switch)  
show interfaces (virtual switch)  
show interfaces counters (virtual switch)  
show pagp dual-active (virtual switch)  
show switch virtual (virtual switch)  
show vslp (virtual switch)  
switch (virtual switch)  
switch convert mode (virtual switch)

switch virtual domain (virtual switch)  
switch virtual link (virtual switch)  
vslp interval (virtual switch)

## Revised Commands

### A Commands

aaa accounting dot1x default start-stop group radius  
aaa accounting system default start-stop group radiusclear mac-address-table  
access-group mode  
access-list hardware capture mode  
access-list hardware entries  
access-list hardware region  
action  
apply  
ancp client server  
ancp mode client  
apply  
arp access-list  
attach module  
authentication control-direction  
authentication critical recovery delay  
authentication event  
authentication fallback  
authentication host-mode  
authentication open  
authentication order  
authentication periodic  
authentication port-control  
authentication priority  
authentication timer  
authentication violation  
auto qos classify  
auto qos classify police  
auto qos srnd4  
auto qos trust  
auto qos video

```
auto qos voip
auto qos voip cisco-softphone
auto-sync
average-packet-size (netflow-lite monitor submode)
```

## C Commands

```
call-home (global configuration)
call-home request
call-home send
call-home send alert-group
call-home test
channel-group
channel-protocol
cisp enable
class-map
clear counters
clear errdisable
clear hw-module slot password
clear interface gigabitethernet
clear interface vlan
clear ip access-template
clear ip arp inspection log
clear ip arp inspection statistics
clear ip dhcp snooping binding
clear ip dhcp snooping database
clear ip dhcp snooping database statistics
clear ip igmp group
clear ip mfib counters
clear ip mfib fastdrop
clear ip wccp
clear lacp counters
clear netflow-lite exporter statistics
clear netflow-lite monitor statistics interface
clear nmsp statistics
clear mac-address-table dynamic
clear pagp
clear port-security
```

```
clear pppoe intermediate-agent statistics  
clear qos  
clear vlan counters  
clear vmps statistics  
control-plane  
cos (netflow-lite exporter submode)  
counter
```

## D Commands

```
debug adjacency  
debug backup  
debug condition interface  
debug condition standby  
debug condition vlan  
debug device-sensor  
debug dot1x  
debug etherchnl  
debug interface  
debug ip dhcp snooping event  
debug ip dhcp snooping packet  
debug ip verify source packet  
debug ipc  
debug lacp  
debug monitor  
debug nmfp  
debug nvram  
debug pagp  
debug platform packet protocol lacp  
debug platform packet protocol pagp  
debug pm  
debug port-security  
debug pppoe intermediate-agent  
debug redundancy  
debug spanning-tree  
debug spanning-tree backbonefast  
debug spanning-tree switch  
debug spanning-tree uplinkfast
```

```
debug sw-vlan
debug sw-vlan ifs
debug sw-vlan notification
debug sw-vlan vtp
debug udld
debug vqpc
define interface-range
deny
destination (netflow-lite exporter submode)
device-sensor filter-list
device-sensor filter-list dhcp
device-sensor filter-spec
device-sensor notify
diagnostic fpga soft-error recover
diagnostic monitor action
diagnostic start
dot1x auth-fail max-attempts
dot1x auth-fail vlan
dot1x credentials (global configuration)
dot1x critical
dot1x critical eapol
dot1x critical recovery delay
dot1x critical vlan
dot1x control-direction
dot1x guest-vlan
dot1x guest-vlan supplicant
dot1x host-mode
dot1x initialize
dot1x mac-auth-bypass
dot1x max-reauth-req
dot1x max-req
dot1x port-control
dot1x re-authenticate
dot1x re-authentication
dot1x system-auth-control
dot1x timeout
dscp (netflow-lite exporter submode)
dual-active detection (virtual switch)
```

duplex  
dual-active recovery ip address  
duplex

## E Commands

erase  
errdisable detect  
errdisable recovery  
export-protocol (netflow-lite exporter submode)  
exporter (netflow-lite monitor submode)

## F Commands

flowcontrol

## H Commands

hardware statistics  
hw-module beacon  
hw-module module start  
hw-module module stop  
hw-module port-group  
hw-module power  
hw-module system max-queue-limit  
hw-module uplink mode  
hw-module uplink select

## I Commands

instance  
interface  
interface (virtual switch)  
interface port-channel  
interface range  
interface vlan  
ip admission proxy http refresh-all  
ip arp inspection filter vlan  
ip arp inspection limit (interface)  
ip arp inspection log-buffer

ip arp inspection trust  
ip arp inspection validate  
ip arp inspection vlan  
ip arp inspection vlan logging  
ip cef load-sharing algorithm  
ip dhcp snooping  
ip dhcp snooping binding  
ip dhcp snooping database  
ip dhcp snooping information option  
ip dhcp snooping information option allow-untrusted  
ip dhcp snooping limit rate  
ip dhcp snooping trust  
ip dhcp snooping vlan  
ip device tracking maximum  
ip igmp filter  
ip igmp max-groups  
ip igmp profile  
ip igmp query-interval  
ip igmp snooping  
ip igmp snooping report-suppression  
ip igmp snooping vlan  
ip igmp snooping vlan explicit-tracking  
ip igmp snooping vlan immediate-leave  
ip igmp snooping vlan mrouter  
ip igmp snooping vlan static  
ip local-proxy-arp  
ip mfib fastdrop  
ip route-cache flow  
ip source binding  
ip sticky-arp  
ip verify header vlan all  
ip verify source  
ip verify unicast source reachable-via  
ip wccp  
ip wccp check services all  
ip wccp group-listen  
ip wccp redirect  
ip wccp redirect exclude in

ipv6 mld snooping  
 ipv6 mld snooping last-listener-query-count  
 ipv6 mld snooping last-listener-query-interval  
 ipv6 mld snooping listener-message-suppression  
 ipv6 mld snooping robustness-variable  
 ipv6 mld snooping tcn  
 ipv6 mld snooping vlan  
 issu abortversion  
 issu acceptversion  
 issu commitversion  
 redundancy config-sync mismatched-commands  
 issu loadversion  
 issu runversion  
 issu set rollback-timer

## L Commands

l2protocol-tunnel  
 l2protocol-tunnel cos  
 l2protocol-tunnel drop-threshold  
 l2protocol-tunnel shutdown-threshold  
 lacp port-priority  
 lacp system-priority  
 lldp tlv-select power-management  
 logging event trunk-status global (global configuration)  
 logging event link-status global (global configuration)  
 logging event trunk-status global (global configuration)  
 logging event link-status global (global configuration)  
 logging event link-status (interface configuration)  
 logging event trunk-status (interface configuration)

## M Commands

mac access-list extended  
 mac-address (virtual switch)  
 mac-address-table aging-time  
 mac-address-table dynamic group protocols  
 mac-address-table learning vlan  
 mac-address-table notification

mac-address-table static  
macro apply cisco-desktop  
macro apply cisco-phone  
macro apply cisco-router  
macro apply cisco-switch  
macro auto device  
macro auto execute (built-in function)  
macro auto execute (remotely-defined trigger)  
macro auto execute (user-defined function)  
macro auto global processing  
macro auto mac-address-group  
macro auto monitor  
macro auto processing  
macro auto sticky  
macro global apply cisco-global  
macro global apply system-cpp  
macro global description  
main-cpu  
match  
match flow ip  
mdix auto  
media-type  
mode  
monitor capture {access-list | class-map}  
monitor capture [clear | export]  
monitor capture [interface | vlan | control-plane]  
monitor capture file location buffer-size  
monitor capture limit  
monitor capture mycap match  
monitor capture start  
monitor session  
mtu

## N Commands

name  
netflow-lite exporter  
netflow-lite monitor

netflow-lite sampler  
nmsp  
nmsp attachment suppress

## O Commands

options timeout (netflow-lite exporter submode)

## P Commands

packet-offset (netflow-lite sampler submode)  
packet-rate (netflow-lite sampler submode)  
packet-section size (netflow-lite sampler submode)  
pagp learn-method  
pagp port-priority  
passive-interface  
permit  
policy-map  
power efficient-ethernet auto  
port-channel load-balance  
port-channel standalone-disable  
port-security mac-address  
port-security mac-address sticky  
port-security maximum  
power dc input  
power inline  
power inline consumption  
power inline four-pair forced  
power inline logging global  
power inline police  
power redundancy combined max inputs  
power redundancy-mode  
pppoe intermediate-agent (global)  
pppoe intermediate-agent (interface)  
pppoe intermediate-agent (interface vlan-range)  
pppoe intermediate-agent format-type (global)  
pppoe intermediate-agent limit rate  
pppoe intermediate-agent trust  
pppoe intermediate-agent vendor-tag strip

priority  
private-vlan  
private-vlan mapping  
private-vlan synchronize  
profile  
profile flow

## **Q Commands**

qos account layer-all encapsulation  
qos account layer2 encapsulation  
qos trust  
queue-limit

## **R Commands**

redundancy  
redundancy force-switchover  
redundancy reload  
remote login module  
remote-span  
renew ip dhcp snooping database  
reset  
revision

## **S Commands**

sampler (netflow-lite monitor submode)  
service-policy (interface configuration)  
service-policy (policy-map class)  
service-policy input (control-plane)  
session module  
set  
set cos  
set dscp  
set precedence  
set qos-group  
shape (interface configuration)  
shell trigger  
show monitor capture

show netflow-lite exporter  
show netflow-lite monitor  
show netflow-lite sampler  
snmp ifindex clear  
snmp ifindex persist  
snmp-server enable traps  
snmp-server ifindex persist  
snmp-server ifindex persist compress  
snmp trap mac-notification change  
source (netflow-lite exporter submode)  
spanning-tree backbonefast  
spanning-tree bpdufilter  
spanning-tree bpduguard  
spanning-tree cost  
spanning-tree etherchannel guard misconfig  
spanning-tree extend system-id  
spanning-tree guard  
spanning-tree link-type  
spanning-tree loopguard default  
spanning-tree mode  
spanning-tree mst  
spanning-tree mst configuration  
spanning-tree mst forward-time  
spanning-tree mst hello-time  
spanning-tree mst max-age  
spanning-tree mst max-hops  
spanning-tree mst root  
spanning-tree pathcost method  
spanning-tree portfast (interface configuration mode)  
spanning-tree portfast bpdufilter default  
spanning-tree portfast bpduguard default  
spanning-tree portfast default  
spanning-tree port-priority  
spanning-tree uplinkfast  
spanning-tree vlan  
speed  
storm-control  
storm-control

storm-control broadcast include multicast  
switch (virtual switch)  
switch convert mode (virtual switch)  
switch virtual domain (virtual switch)  
switch virtual link (virtual switch)  
switchport  
switchport access vlan  
switchport autostate exclude  
switchport block  
switchport mode  
switchport port-security  
switchport private-vlan association trunk  
switchport private-vlan host-association  
switchport private-vlan mapping  
switchport private-vlan trunk allowed vlan  
switchport private-vlan trunk native vlan tag  
switchport trunk  
switchport vlan mapping  
system mtu

## Show Commands

show access-group mode interface  
show adjacency  
show ancp multicast  
show arp access-list  
show authentication  
show auto install status  
show auto qos  
show bootflash:  
show bootvar  
show cable-diagnostics tdr  
show call-home  
show cdp neighbors  
show class-map  
show device-sensor cache  
show diagnostic content  
show diagnostic result module

show diagnostic result module test  
show diagnostic result module test 2  
show diagnostic result module test 3  
show dot1x  
show environment  
show errdisable detect  
show errdisable recovery  
show etherchannel  
show flowcontrol  
show hw-module port-group  
show hw-module uplink  
show idprom  
show interfaces  
show interfaces (virtual switch)  
show interfaces counters  
show interfaces counters (virtual switch)  
show interfaces description  
show interfaces link  
show interfaces mtu  
show interfaces private-vlan mapping  
show interfaces status  
show interfaces switchport  
show interfaces transceiver  
show interfaces trunk  
show ip arp inspection  
show ip arp inspection log  
show ip cef vlan  
show ip dhcp snooping  
show ip dhcp snooping binding  
show ip dhcp snooping database  
show ip igmp interface  
show ip igmp profile  
show ip igmp snooping  
show ip igmp snooping membership  
show ip igmp snooping mrouter  
show ip igmp snooping vlan  
show ip interface  
show ip mfib

show ip mfib fastdrop  
show ip mroute  
show ip source binding  
show ip verify source  
show ip wccp  
show ipc  
show ipv6 mld snooping  
show ipv6 mld snooping mrouter  
show ipv6 mld snooping querier  
show ipv6 snooping counters  
show issu capability  
show issu clients  
show issu comp-matrix  
show issu endpoints  
show issu entities  
show issu fsm  
show issu message  
show issu negotiated  
show issu rollback-timer  
show issu sessions  
show issu state  
show l2protocol-tunnel  
show lacp  
show mab  
show mac access-group interface  
show mac-address-table address  
show mac-address-table aging-time  
show mac-address-table count  
show mac-address-table dynamic  
show mac-address-table interface  
show mac address-table learning  
show mac-address-table multicast  
show mac-address-table notification  
show mac-address-table protocol  
show mac-address-table static  
show mac-address-table vlan  
show macro auto mac-address-group  
show macro auto device

show macro auto interface  
show macro auto monitor clients  
show macro auto monitor device  
show macro auto monitor type  
show module  
show monitor  
show nmfp  
show pagg  
show pagg dual-active (virtual switch)  
show policy-map  
show policy-map control-plane  
show policy-map interface  
show policy-map interface vlan  
show port-security  
show power  
show power inline police  
show qos  
show pppoe intermediate-agent interface  
show qos  
show qos aggregate policer  
show qos dbl  
show qos interface  
show qos maps  
show redundancy  
show redundancy config-sync  
show running-config  
show slavebootflash:  
show slaveslot0:  
show slot0:  
show spanning-tree  
show spanning-tree mst  
show storm-control  
show switch virtual (virtual switch)  
show system mtu  
show tech-support  
show udld  
show vlan  
show vlan access-map

show vlan counters  
show vlan dot1q tag native  
show vlan group  
show vlan internal usage  
show vlan mapping  
show vlan mtu  
show vlan private-vlan  
show vlan remote-span  
show vmps  
show vslp (virtual switch)  
show vtp

## T Commands

template data timeout (netflow-lite exporter submode)  
test cable-diagnostics tdr  
traceroute mac  
traceroute mac ip  
transport udp (netflow-lite exporter submode)  
trust  
ttl (netflow-lite exporter submode)  
tx-queue

## U Commands

udld (global configuration mode)  
udld (interface configuration mode)  
udld reset  
unidirectional  
username

## V Commands

verify  
vlan (VLAN Database mode)  
vlan access-map  
vlan configuration  
vlan database  
vlan dot1q tag native  
vlan filter

vlan group  
vlan internal allocation policy  
vmpls reconfirm (global configuration)  
vmpls reconfirm (privileged EXEC)  
vmpls retry  
vmpls server  
vrf (netflow-lite exporter submode)  
vsdp interval (virtual switch)  
vtp (global configuration mode)  
vtp client  
vtp domain  
vtp password  
vtp pruning  
vtp server  
vtp transparent  
vtp v2-mode