

Software Release Note

AlliedWare Plus™ Version 5.4.1-0.1

For SwitchBlade x908, x900 Series, and x600 Series Switches

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Introduction

This release note describes the new features and enhancements in AlliedWare Plus™ software version 5.4.1 since version 5.3.4. For more information, see the Software Reference for your switch. Software and documentation and software can be downloaded from the Support area of our website at <http://www.alliedtelesis.com>. Note that to download software, you will need to log in to your account. Software file details for this version are listed in **Table 1** below. There is a new GUI file for this version; the GUI file listed in the table below to use with software version 5.4.1-0.1 is not the same as for software version 5.3.4-0.1.

Table 1: Switch models and software file names

Models	Series	Software File	Date	GUI File ¹
x600-24Ts, x600-24Ts/XP, x600-48Ts, x600-48Ts/XP	x600	r6-5.4.1-0.1.rel	4 Mar 2011	gui_541_20.jar
x600-24Ts-POE	x600	r6-5.4.1-0.1.rel	4 Mar 2011	gui_541_20.jar
x600-24Ts-POE+	x600	r6-5.4.1-0.1.rel	4 Mar 2011	gui_541_20.jar
x900-12XT/S, x900-24	x900	r1-5.4.1-0.1.rel	4 Mar 2011	gui_541_20.jar
SwitchBlade x908	SwitchBlade	r1-5.4.1-0.1.rel	4 Mar 2011	gui_541_20.jar

1. GUI updates: This GUI version supports configuring PoE+ on the x600-24Ts-POE+. Support for the XEM-2XT module for x908/x900 series switches has been added.



Caution Using a software version file for the wrong switch model may cause unpredictable results, including disruption to the network.



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Acknowledgements

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New Features and Enhancements

This software version includes the following new features. For a list of all new and enhanced features and commands, see “Changes in this Version” on page 5. For more information see the Software Reference for your switch. Unless otherwise stated, all new features and enhancements are available on all switch models running this version of AlliedWare Plus™.

Support for XEM-2XT Expansion Module (x900/x908)

This software version includes support for the XEM-2XT expansion module. This provides a lower cost 10GbE expansion option for shorter distances, and an excellent complement to the XEM-2XP 10GbE fiber expansion module for longer distance deployment. The XEM-2T provides 2 x 10GbE copper ports and requires RJ-45 CAT6/CAT6A Ethernet cabling.

IEEE 802.3at PoE+ support (x600-24Ts-POE+)

IEEE 802.3at PoE+ supplying up to 30W per Powered Device (PD) is supported on the x600-24Ts-POE+ model switch. See the revised Power over Ethernet Introduction and Commands chapters in the AlliedWare Plus 5.4.1 Software References for information about PoE+.

Enhanced PoE support (x600-24Ts-POE)

Enhanced PoE supplying up to 20W per PD is supported on the x600-24Ts-POE model switch. See the revised PoE introduction and commands chapters in the AlliedWare Plus 5.4.1 Software References for information about Enhanced PoE.

TACACS+ (x600/x900/x908)

TACACS+ provides a method for securely managing multiple network access points from a single management service. The AlliedWare Plus implementation of TACACS+ provides authentication and authorization only, configured on the same server.

AAA authentication support for TACACS+ (x600/x900/x908)

TACACS+ servers can now be included in an authentication method list of authentication servers for user login.

VRF-Lite (x900 only)

VRF-Lite provides Layer 3 network virtualization by dividing a single router into multiple independent virtual routing domains. With independent routing domains, IP addresses can overlap without causing conflict, allowing multiple customers to have their own secure virtual network within the same physical infrastructure. VRF-Lite is supported on the x900 series only.

GVRP (x600/x900/x908)

GVRP enables the automatic VLAN configuration of connected switches by allowing GVRP enabled switches to exchange VLAN configuration information with each other. Without GVRP, you must manually configure your switches to ensure VLANs are configured across any connected switches. GVRP automatically configures VLANs across connected switches for you.

OSPFv3 (x600/x900/x908)

OSPFv3 (OSPF for IPv6) is available with the IPv6 and Advanced Layer 3 Routing licenses.

Private VLAN operation with ports in access mode (x600/x900/x908)

Private VLAN trunk ports allow you to combine traffic for private isolated VLANs over a trunk. A port in trunk mode can be enabled as either a promiscuous port or a secondary port.

DNS Relay (x600/x900/x908)

DNS Relay provides a local virtual DNS server on your switch, which can then service DNS lookup requests sent to it from local hosts. Optionally, DNS name resolver caching may be enabled on the DNS Relay.

DHCP 120 day lease (x600/x900/x908)

The maximum DHCP server lease time that can be specified before an IP address obtained from the DHCP server on the switch expires has been increased from 30 days to 120 days.

DHCP Option 82 (x600/x900/x908)

You can now specify values for the Remote ID and Circuit ID sub-options of the Option 82 field.

DHCP Lease Probing (x600/x900/x908)

Probing is used by the DHCP server to check whether an IP address it wants to lease to a client is already being used by another host.

ASN4 for BGPv4 (x600/x900/x908)

BGP supported 16-bit (2-octet) autonomous system numbers (ASNs). This has been increased to support for 32-bit (4-octet) ASNs. The range for a BGP confederation identifier was limited to 16-bit (2-octet) values. This range has increased to support 32-bit (4-octet) values.

Continuous Reboot Prevention (x600/x900/x908)

You can now configure a switch to stop rebooting if the device gets into a cycle of continuous rebooting. The user can configure the time period, the maximum number of times the switch can reboot within the specified time period and the action to take if the threshold is exceeded.

Disabled Master Monitoring (x600/x900/x908)

The Disabled Master Monitoring (DMM) feature checks the status of the Active Master via the stack resiliency link. If the Active Master fails, then the Disabled Master changes state to Active Master to recover the stack.

Stack License Management (x600/x900/x908)

The management of feature licenses across all members of a stack has been simplified. You can now manage feature licenses across all members of a stack concurrently by using the license member command.

AT-LICENSE-MIB (x600/x900/x908)

New objects have added to support the management of feature licenses across devices in a Virtual Chassis Stacking (VCS) configuration.

Save Power With the Ecofriendly Feature (x600/x900/x908)

You can conserve power by enabling the eco-friendly feature. When enabled, this feature disables power to the port LEDs and a change of port status will not affect the display of the associated LED.

SFP Speed options (x600)

On the x600-48Ts you can now specify the speed of the copper SFP ports as either 10, 100 or 1000 Mbps and can specify the speed or speeds to be autonegotiated, so that autonegotiation is only attempted at the specified speeds.

Intermediate Level CLI Security (x600/x900/x908)

You can now set an intermediate CLI security level (privilege level 7) to allows CLI users to access all the show commands in Privileged Exec mode and all the commands in User Exec mode, but not configuration commands in Privileged Exec mode.

SD Card Enhancements (x600/x900/x908)

You can now specify that the configuration file to use and the release file to load during the next boot cycle are on a SD card. Backup configuration and release files must be in the Flash filesystem. Triggers can be applied to use SDHC cards and to specify restart after card insertion. Bootloader 1.1.6 or later is required to support SD Card Enhancement features in this release.

AW+ GUI Enhancements (x600/x900/x908)

The **System > File Management** menu tab allows you to create, copy, delete, upload or download boot and backup release and configuration files to and from the switch.

Changes in this Version

Table 2: New and modified features lists all the new and modified features in this version as documented in the Software References.

Table 2: New and modified features

Feature	Status	x600	x806	x900	Software Reference Chapter	Description
Save Power With the Ecofriendly Feature	New	Y	Y	Y	Getting Started	You can conserve power by enabling the eco-friendly feature. When enabled, this feature disables power to the port LEDs and a change of port status will not affect the display of the associated LED.
Continuous Reboot Prevention	New	Y	Y	Y	Getting Started	You can configure a switch to stop rebooting if the device gets into a cycle of continuous rebooting. The user can configure the time period, the maximum number of times the switch can reboot within the specified time period and the action to take if the threshold is exceeded.
SD Card Enhancement	Modified	Y	Y	Y	Creating and Managing Files	You can now specify that the configuration file to use and the release file to load during the next boot cycle are on a SD card. Backup configuration and release files must be in the Flash filesystem. Triggers can be applied to use SDHC cards and to specify restart after card insertion. Bootloader 1.1.6 or later is required to support SD Card Enhancement features in this release.
SFP Speed options	Modified	Y	N	N	Switching Introduction	On the x600-48Ts you can now specify the speed of the copper SFP ports as either 10, 100 or 1000 Mbps and can specify the speed or speeds to be autonegotiated, so that autonegotiation is only attempted at the specified speeds.
Private VLANs for trunked ports	New	Y	Y	Y	VLAN Introduction	Private VLAN trunk ports allow you to combine traffic for private isolated VLANs over a trunk. A port in trunk mode can be enabled as either a promiscuous port or a secondary port. A port in trunk mode enabled as a promiscuous port can carry both multiple isolated private VLANs and non-private VLANs. A promiscuous port in trunk mode allows you to combine multiple isolated VLANs on a single trunk port. A port in trunk mode enabled as a secondary port can combine traffic for multiple isolated VLANs over a trunk.
Enhanced PoE support for x600-24Ts-POE	New	Y	N	N	Power over Ethernet Introduction	Enhanced PoE supplying up to 20W per Powered Device (PD) is supported on the x600-24Ts-POE model switch.
IEEE 802.3at PoE+ support for x600-24Ts-POE+	New	Y	N	N	Power over Ethernet Introduction	IEEE 802.3at PoE+ supplying up to 30W per PD is supported on the x600-24Ts-POE+ model switch.
GVRP	New	Y	Y	Y	GVRP Introduction	GVRP enables the automatic VLAN configuration of connected switches by allowing GVRP enabled switches to exchange VLAN configuration information with each other. Without GVRP, you must manually configure your switches to ensure VLANs are configured across any connected switches. GVRP automatically configures VLANs across connected switches for you.
DNS Relay	New	Y	Y	Y	Internet Protocol (IP) Addressing and Protocols	DNS Relay provides the presence of a local virtual DNS server on your AlliedWare Plus device which can service DNS lookup requests sent to it from local hosts. Optionally, DNS name resolver caching may be enabled on the DNS Relay.

Feature	Status	x600	x908	x900	Software Reference Chapter	Description
OSPFv3 Introduction	New	Y	Y	Y	OSPFv3 for IPv6 Introduction and Configuration	This chapter introduces OSPFv3 (OSPF using IPv6) followed by some basic configuration examples.
VRF-Lite	New	N	N	Y	VRF-Lite Introduction and Configuration (x900 only)	Virtual Routing and Forwarding Lite (VRF-Lite) provides layer 3 virtual networking by enabling a single router to operate multiple independent and isolated virtual routing domains. This isolation enables these domains to operate with overlapping IP addresses without conflict. These features enable multiple customers to operate their own virtual networks within the router. VRF-Lite is currently supported on the x900 series only.
TACACS+	New	Y	Y	Y	TACACS+ Introduction and Configuration	TACACS+ provides a method for securely managing multiple network access points from a single management service. The AlliedWare Plus implementation of TACACS+ provides authentication and authorization only, configured on the same server.
AAA authentication support for TACACS+	Modified	Y	Y	Y	AAA Commands	TACACS+ servers can now be included in an authentication method list of authentication servers for user login.
ASN4 for BGPv4	Modified	Y	Y	Y	BGP Commands	Previously, BGP support 16-bit (2-octet) Autonomous System Numbers (ASNs). This has been increased to support for 32-bit (4-octet) ASNs, as specified by RFC 4893. The range for a BGP confederation identifier was also limited to 16-bit (2-octet) values. This range has increased to support 32-bit (4-octet) confederation identifiers.
DHCP Option 82	Modified	Y	Y	Y	DHCP Snooping Introduction and Configuration	You can now specify values for the Remote ID and Circuit ID sub-options of the Option 82 field.
DHCP Lease Probing	New	Y	Y	Y	Dynamic Host Configuration Protocol (DHCP) Introduction	Probing is used by the DHCP server to check whether an IP address it wants to lease to a client is already being used by another host.
DHCP Relay Agent Option 82	Modified	Y	Y	Y	Dynamic Host Configuration Protocol (DHCP) Introduction	You can now specify a value for the Remote ID sub-option of the Option 82 field.
DHCP 120 day lease	Modified	Y	Y	Y	DHCP Commands	The maximum DHCP server lease time that can be specified before an IP address obtained from the DHCP server on the switch expires has been increased from 30 days to 120 days.
AT-LICENSE-MIB	Modified	Y	Y	Y	SNMP MIBs	New objects have added to support the management of feature licenses across devices in a Virtual Chassis Stacking (VCS) configuration.
Disabled Master Monitoring (DMM)	New	Y	Y	Y	Stacking Introduction	The Disabled Master Monitoring (DMM) feature checks the status of the active master via the stack resiliency link. If the active master fails then the disabled master changes state to active master.
Stack License Management	New	Y	Y	Y	Stacking Introduction	The management of feature licenses across all members of a stack has been simplified. You can now manage feature licenses across all members of a stack concurrently with the license member command.
AW+ GUI Enhancements	New	Y	Y	Y	Appendix C: GUI Reference	The System > File Management menu tab allows you to create, copy, delete, upload or download boot and backup release and configuration files to and from the switch.

Table 3: New and modified commands lists all the new and modified commands in this version as documented in the Software References.

If your existing configurations include commands modified or deprecated in this version (see the Status column), check whether you need to modify these configurations. For full command descriptions, modes and examples, see the appropriate Software Reference for your switch.

Table 3: New and modified commands

Command	Status	x600	x908	x900	Software Reference Chapter	Description
enable password	Modified	Y	Y	Y	User Access Commands	This command sets a local password to control access to various privilege levels. From release 5.4.1 onwards, a user can now have an intermediate CLI security level set with this command for privilege level 7 to access all the show commands in Privileged Exec mode and all the commands in User Exec mode.
privilege level	Modified	Y	Y	Y	User Access Commands	This command sets a privilege level for VTY or console connections. From release 5.4.1 onwards, a user can now have an intermediate CLI security level set with this command for privilege level 7 to access all the show commands in Privileged Exec mode and all the commands in User Exec mode.
show privilege	Modified	Y	Y	Y	User Access Commands	This command displays the current privilege level of the user. From release 5.4.1 onwards, a user can now have an intermediate CLI security level set with this command for privilege level 7 to access all the show commands in Privileged Exec mode and all the commands in User Exec mode.
show telnet	Modified	Y	Y	Y	User Access Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
telnet	Modified	N	N	Y	User Access Commands	This command can now be run for specific VRF instances. VRF-Lite is supported on x900 series only.
username	New	Y	Y	Y	User Access Commands	This command creates or modifies a user. From release 5.4.1 onwards, a user can now have an intermediate CLI security level set with this command for privilege level 7 to access all the show commands in Privileged Exec mode and all the commands in User Exec mode, but not any configuration commands in Privileged Exec mode.
boot backup (Deprecated)	Deprecated	Y	Y	Y	File Management Commands	This command has been deprecated. You now use the boot config-file command to set a backup configuration file to load during the next boot cycle.
boot config-file	Modified	Y	Y	Y	File Management Commands	You can now specify that the configuration file to use during the next boot cycle is on a SD card. In addition, use this command to set a backup configuration file to use if the main configuration file cannot be accessed. Backup configuration files must be in the Flash filesystem.
boot system	Modified	Y	Y	Y	File Management Commands	You can now specify that the release file to load during the next boot cycle is on a SD card. In addition, use this command to set a backup release file to use if the main release file cannot be loaded. Backup release files must be in the Flash filesystem.
show boot	Modified	Y	Y	Y	File Management Commands	The output displayed by this command has changed. The filename of the backup boot configuration file is now displayed, if set.
continuous-reboot-prevention	New	Y	Y	Y	System Configuration and Monitoring Commands	Use this command to enable and configure the continuous reboot prevention feature.

Table 3: New and modified commands

Command	Status	x600	x800	x900	Software Reference Chapter	Description
ecofriendly led	New	Y	Y	Y	System Configuration and Monitoring Commands	Use this command to enable the eco-friendly feature which turns off power to the port LEDs.
show continuous-reboot-prevention	New	Y	Y	Y	System Configuration and Monitoring Commands	This command displays the current continuous reboot prevention configuration.
show debugging	Modified	Y	Y	Y	System Configuration and Monitoring Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show debugging nsm	Modified	Y	Y	Y	System Configuration and Monitoring Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ecofriendly	New	Y	Y	Y	System Configuration and Monitoring Commands	This command displays the switch's eco-friendly configuration status.
show interface memory	New	Y	Y	Y	System Configuration and Monitoring Commands	This command displays the shared memory used by either all interfaces, or the specified interface or interfaces.
show memory shared	New	Y	Y	Y	System Configuration and Monitoring Commands	This command displays shared memory allocation information.
show process	Modified	Y	Y	Y	System Configuration and Monitoring Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show reboot history	New	Y	Y	Y	System Configuration and Monitoring Commands	This command shows the switch's reboot history.
show router-id	Modified	Y	Y	Y	System Configuration and Monitoring Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
clear loop-protection counters	Modified	Y	Y	Y	Switching Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
clear port counter	Modified	Y	Y	Y	Switching Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show flowcontrol interface	Modified	Y	Y	Y	Switching Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show loop-protection	Modified	Y	Y	Y	Switching Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show mirror	Modified	Y	Y	Y	Switching Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show mirror interface	Modified	Y	Y	Y	Switching Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show platform	Modified	Y	Y	Y	Switching Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).

Table 3: New and modified commands

Command	Status	009x	808x	900x	Software Reference Chapter	Description
show platform port	Modified	Y	Y	Y	Switching Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show port-security interface	Modified	Y	Y	Y	Switching Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show port-security intrusion	Modified	Y	Y	Y	Switching Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show storm-control	Modified	Y	Y	Y	Switching Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show vlan	Modified	Y	Y	Y	VLAN Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show vlan classifier group	Modified	Y	Y	Y	VLAN Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show vlan classifier interface group	Modified	Y	Y	Y	VLAN Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show vlan classifier rule	Modified	Y	Y	Y	VLAN Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show vlan private-vlan	Modified	Y	Y	Y	VLAN Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
switchport mode private-vlan trunk secondary	New	Y	Y	Y	VLAN Commands	Use this command to enable a port in trunk mode to be a secondary port for a private VLAN.
switchport mode private-vlan trunk promiscuous	New	Y	Y	Y	VLAN Commands	Use this command to enable a port in trunk mode to be a promiscuous port for isolated VLANs.
show debugging lacp	Modified	Y	Y	Y	Link Aggregation Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show diagnostic channel-group	New	Y	Y	Y	Link Aggregation Commands	Use this command to display dynamic and static channel group interface configuration information. The output of this command is useful for Allied Telesis authorized service personnel for diagnostic purposes.
show lacp-counter	Modified	Y	Y	Y	Link Aggregation Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
power-inline max	Modified	Y	N	N	Power over Ethernet Commands	This command sets the maximum power supplied to a Power over Ethernet (PoE and PoE+) port. The amount of power supplied to a PoE or PoE+ port depends on the model of PoE or PoE+ switch configured.
show debugging power-inline	Modified	Y	N	N	Power over Ethernet Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show power-inline	Modified	Y	N	N	Power over Ethernet Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show power-inline counters	Modified	Y	N	N	Power over Ethernet Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show power-inline interface	Modified	Y	N	N	Power over Ethernet Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).

Table 3: New and modified commands

Command	Status	009x	808x	900x	Software Reference Chapter	Description
show power-inline interface detail	Modified	Y	N	N	Power over Ethernet Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
clear gvrp statistics	New	Y	Y	Y	GVRP Commands	Use this command to clear GVRP statistics for all switchports or for a specific switchport.
debug gvrp	New	Y	Y	Y	GVRP Commands	Use this command to debug GVRP packets and commands, sending output to the console. Use the no variant of this command to turn off debugging for GVRP packets and commands.
gvrp (interface)	New	Y	Y	Y	GVRP Commands	Use this command to enable GVRP for switchport interfaces. Use the no variant of this command to disable GVRP for switchport interfaces.
gvrp dynamic-vlan-creation	New	Y	Y	Y	GVRP Commands	Use this command to enable dynamic VLAN creation globally for the switch. Use the no variant of this command to disable dynamic VLAN creation globally for the switch.
gvrp enable (global)	New	Y	Y	Y	GVRP Commands	Use this command to enable GVRP globally for the switch. Use the no variant of this command to disable GVRP globally for the switch.
gvrp registration	New	Y	Y	Y	GVRP Commands	Use this command to set GVRP registration to normal, fixed, and forbidden registration modes.
gvrp timer	New	Y	Y	Y	GVRP Commands	Use this command to set GVRP timers in Interface Configuration mode for a given interface. Use the no variant of this command to reset the GVRP timers to the default values.
show debugging gvrp	New	Y	Y	Y	GVRP Commands	Use this command to display the GVRP debugging option set.
show gvrp configuration	New	Y	Y	Y	GVRP Commands	Use this command to display GVRP configuration data for a switch.
show gvrp machine	New	Y	Y	Y	GVRP Commands	Use this command to display the state machine for GVRP.
show gvrp statistics	New	Y	Y	Y	GVRP Commands	Use this command to display a statistical summary for a switch.
show gvrp timer	New	Y	Y	Y	GVRP Commands	Use this command to display data for the timers.
arp (IP address MAC address)	Modified	N	Y	Y	IP Addressing and Protocol Commands	You can now optionally use this command for a specific VRF instance.
clear arp-cache	Modified	N	Y	Y	IP Addressing and Protocol Commands	You can now optionally clear the dynamic ARP entries for specific VRF instances.
clear ip dns forwarding cache	New	Y	Y	Y	IP Addressing and Protocol Commands	This command removes clears the DNS Relay name resolver cache.
debug ip dns forwarding	New	Y	Y	Y	IP Addressing and Protocol Commands	This command enables DNS Relay debugging.
ip dns forwarding	New	Y	Y	Y	IP Addressing and Protocol Commands	This command enables DNS Relay, the forwarding of incoming DNS queries for IP hostname-to-address translation.
ip dns forwarding cache	New	Y	Y	Y	IP Addressing and Protocol Commands	This command sets the DNS Relay name resolver cache size and the cache entry lifetime.

Table 3: New and modified commands

Command	Status	x600	x908	x900	Software Reference Chapter	Description
ip dns forwarding retry	New	Y	Y	Y	IP Addressing and Protocol Commands	This command sets the number of times DNS Relay will retry to forward DNS queries.
ip dns forwarding source-interface	New	Y	Y	Y	IP Addressing and Protocol Commands	This command sets the interface to use for forwarding and receiving DNS queries.
ip dns forwarding timeout	New	Y	Y	Y	IP Addressing and Protocol Commands	This command sets the time period for the DNS Relay to wait for a DNS response.
ip redirects	New	Y	Y	Y	IP Addressing and Protocol Commands	This command enables ICMP redirects for a device.
ping	Modified	N	N	Y	IP Addressing and Protocol Commands	This command can now be run for specific VRF instances. VRF-Lite is supported on x900 series only.
show arp	Modified	N	Y	Y	IP Addressing and Protocol Commands	You can now use this command to additionally display ARP entries in the routing and forwarding tables for specific VRF routing instances.
show debugging ip dns forwarding	New	Y	Y	Y	IP Addressing and Protocol Commands	This command displays the DNS Relay debugging status.
show hosts	Modified	Y	Y	Y	IP Addressing and Protocol Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip dns forwarding	New	Y	Y	Y	IP Addressing and Protocol Commands	This command displays the DNS Relay status.
show ip dns forwarding cache	New	Y	Y	Y	IP Addressing and Protocol Commands	This command displays the DNS Relay name resolver cache.
show ip domain-list	Modified	Y	Y	Y	IP Addressing and Protocol Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip domain-name	Modified	Y	Y	Y	IP Addressing and Protocol Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip forwarding	Modified	Y	Y	Y	IP Addressing and Protocol Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip interface	Modified	N	N	Y	IP Addressing and Protocol Commands	This command can now be used to display protocol and status information about configured interfaces and their assigned IP addresses, for either the global routing and forwarding database, or for a specified VRF instance. VRF-Lite is supported on x900 series only.
show ip interface brief	Modified	Y	Y	Y	IP Addressing and Protocol Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip irdp	Modified	Y	Y	Y	IP Addressing and Protocol Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip irdp interface	Modified	Y	Y	Y	IP Addressing and Protocol Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip name-server	Modified	Y	Y	Y	IP Addressing and Protocol Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).

Table 3: New and modified commands

Command	Status	x600	x908	x900	Software Reference Chapter	Description
tcpdump	Modified	N	N	Y	IP Addressing and Protocol Commands	This command can now be run for specific VRF instances. VRF-Lite is supported on x900 series only.
traceroute	Modified	N	N	Y	IP Addressing and Protocol Commands	This command can now be run for specific VRF instances. VRF-Lite is supported on x900 series only.
show ipv6 forwarding	Modified	Y	Y	Y	IPv6 Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ipv6 interface brief	Modified	Y	Y	Y	IPv6 Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ipv6 neighbors	Modified	Y	Y	Y	IPv6 Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ipv6 route	Modified	Y	Y	Y	IPv6 Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ipv6 route summary	Modified	Y	Y	Y	IPv6 Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
ip route	Modified	N	N	Y	Routing Commands	You can now apply this command to configure a static inter-VRF (Virtual Routing and Forwarding) route to a destination gateway that is located in a different VRF instance. VRF-Lite is supported on x900 series only.
show ip route	Modified	Y	N	Y	Routing Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#). You now specify either the global routing domain or a named VRF when using this command. VRF-Lite is supported on x900 series only.
show ip route database	Modified	Y	N	Y	Routing Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#). You now specify either the global routing domain or a named VRF when using this command. VRF-Lite is supported on x900 series only.
show ip route summary	Modified	Y	N	Y	Routing Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#). You can now optional specify either the global routing domain or a named VRF when using this command. VRF-Lite is supported on x900 series only.
address-family ipv4 vrf (RIP)	Modified	N	N	Y	RIP Commands	You can now configure this command for a specific VRF instance. VRF-Lite is supported on x900 series only.
clear ip rip route	Modified	N	N	Y	RIP Commands	You can now apply this command to either the global routing environment, or to a specific VRF instance. VRF-Lite is supported on x900 series only.
default-metric (RIP)	Modified	Y	N	Y	RIP Commands	You can now apply this command to either the global routing environment, or to a specific VRF instance. VRF-Lite is supported on x900 series only.
distance (RIP)	Modified	N	N	Y	RIP Commands	You can now apply this command to either the global routing environment, or to a specific VRF instance. VRF-Lite is supported on x900 series only.
distribute-list (RIP)	Modified	N	N	Y	RIP Commands	You can now apply this command to either the global routing environment, or to a specific VRF instance. VRF-Lite is supported on x900 series only.

Table 3: New and modified commands

Command	Status	x600	x808	x900	Software Reference Chapter	Description
fullupdate (RIP)	Modified	N	N	Y	RIP Commands	You can now run this command for selected VRF instances. VRF-Lite is supported on x900 series only.
network (RIP)	Modified	N	N	Y	RIP Commands	This command can now be applied to specific VRF instances. VRF-Lite is supported on x900 series only.
offset-list (RIP)	Modified	N	N	Y	RIP Commands	You can now apply this command to specific VRF instances. VRF-Lite is supported on x900 series only.
passive-interface (RIP)	Modified	N	Y	Y	RIP Commands	You can now apply this command to specific VRF instances.
redistribute (RIP)	Modified	N	N	Y	RIP Commands	This command can now also be applied to a specific VRF instance. VRF-Lite is supported on x900 series only.
route (RIP)	Modified	N	N	Y	RIP Commands	You can now configure this command for a specific VRF instance. VRF-Lite is supported on x900 series only.
show ip protocols rip	Modified	Y	Y	Y	RIP Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip rip	Modified	Y	Y	Y	RIP Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip rip database	Modified	Y	Y	Y	RIP Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip rip interface	Modified	Y	Y	Y	RIP Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip rip vrf interface	New	N	N	Y	RIP Commands	Use this command to display information about the RIP database that is associated with a specific VRF instance. VRF-Lite is supported on x900 series only.
show ip rip vrf interface	New	N	N	Y	RIP Commands	Use this command to display information about the RIP interfaces that are associated with a specific VRF instance. VRF-Lite is supported on x900 series only.
timers (RIP)	Modified	N	N	Y	RIP Commands	When running VRF-Lite, you can now apply this command to a specific VRF instance. VRF-Lite is supported on x900 series only.
version	Modified	N	N	Y	RIP Commands	When running VRF-Lite, you can now apply this command to a specific VRF instance. VRF-Lite is supported on x900 series only.
show ipv6 protocols rip	Modified	Y	Y	Y	RIPng Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ipv6 rip	Modified	Y	Y	Y	RIPng Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ipv6 rip database	Modified	Y	Y	Y	RIPng Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ipv6 rip interface	Modified	Y	Y	Y	RIPng Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
distribute-list (OSPF)	Modified	Y	Y	Y	OSPF Commands	You can now use this command to apply a distribute list to a route-map.
redistribute (into OSPF)	Rename d	Y	Y	Y	OSPF Commands	This command has been renamed (into OSPF) for clarity.
router ospf	Modified	N	N	Y	OSPF Commands	This command can now be used to associate a process-id with a VRF-instance. VRF-Lite is supported on x900 series only.
show ip ospf	Modified	Y	Y	Y	OSPF Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).

Table 3: New and modified commands

Command	Status	x600	x908	x900	Software Reference Chapter	Description
show ip ospf border-routers	Modified	Y	Y	Y	OSPF Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip ospf database	Modified	Y	Y	Y	OSPF Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip ospf database asbr-summary	Modified	Y	Y	Y	OSPF Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip ospf database external	Modified	Y	Y	Y	OSPF Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip ospf database network	Modified	Y	Y	Y	OSPF Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip ospf database nssa-external	Modified	Y	Y	Y	OSPF Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip ospf database opaque-area	Modified	Y	Y	Y	OSPF Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip ospf database opaque-as	Modified	Y	Y	Y	OSPF Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip ospf database opaque-link	Modified	Y	Y	Y	OSPF Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip ospf database router	Modified	Y	Y	Y	OSPF Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip ospf database summary	Modified	Y	Y	Y	OSPF Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip ospf interface	Modified	Y	Y	Y	OSPF Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip ospf neighbor	Modified	Y	Y	Y	OSPF Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip ospf route	Modified	Y	Y	Y	OSPF Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip ospf virtual-links	Modified	Y	Y	Y	OSPF Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip protocols ospf	Modified	Y	Y	Y	OSPF Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
timers spf (Deprecated)	Deprecat ed	Y	Y	Y	OSPF Commands	This command is now deprecated.
timers spf exp (Deprecated)	Deprecat ed	Y	Y	Y	OSPF Commands	This command is now deprecated.
area default-cost (OSPFv3 for IPv6)	New	Y	Y	Y	OSPFv3 for IPv6 Commands	This command specifies a cost for the default summary route sent into a stub or NSSA area
area range (IPv6 OSPF)	New	Y	Y	Y	OSPFv3 for IPv6 Commands	This command summarizes OSPF routes at an area boundary. By default, this feature is disabled.
area stub (IPv6 OSPF)	New	Y	Y	Y	OSPFv3 for IPv6 Commands	This command defines an OSPF area as a stub area. By default, no stub area is defined.
area virtual-link (IPv6 OSPF)	New	Y	Y	Y	OSPFv3 for IPv6 Commands	This command configures a link between two backbone areas that are physically separated through other non-backbone areas.

Table 3: New and modified commands

Command	Status	x600	x808	x900	Software Reference Chapter	Description
auto-cost reference bandwidth (IPv6 OSPF)	New	Y	Y	Y	OSPFv3 for IPv6 Commands	This command controls how OSPF calculates default metrics for the interface.
bandwidth (duplicate)	New	Y	Y	Y	OSPFv3 for IPv6 Commands	This command specifies the maximum bandwidth used for a particular VLAN interface. The same command is used for OSPFv2.
clear ipv6 ospf process	New	Y	Y	Y	OSPFv3 for IPv6 Commands	This new command clears and restarts the OSPFv3 routing process.
debug ipv6 ospf events	New	Y	Y	Y	OSPFv3 for IPv6 Commands	This command enables OSPFv3 debugging for event troubleshooting.
debug ipv6 ospf ifsm	New	Y	Y	Y	OSPFv3 for IPv6 Commands	This command specifies debugging options for OSPFv3 Interface Finite State Machine (IFSM) troubleshooting.
debug ipv6 ospf lsa	New	Y	Y	Y	OSPFv3 for IPv6 Commands	This command enables debugging options for OSPFv3 Link State Advertisements (LSA) troubleshooting.
debug ipv6 ospf n fsm	New	Y	Y	Y	OSPFv3 for IPv6 Commands	This command enables debugging options for IPv6 OSPF Neighbor Finite State Machines (NFSMs).
debug ipv6 ospf packet	New	Y	Y	Y	OSPFv3 for IPv6 Commands	This command enables debugging options for IPv6 OSPF packets.
debug ipv6 ospf route	New	Y	Y	Y	OSPFv3 for IPv6 Commands	This command enables debugging of route calculation.
default-metric (IPv6 OSPF)	New	Y	Y	Y	OSPFv3 for IPv6 Commands	This command sets default metric values for the IPv6 OSPF routing protocol.
ipv6 ospf cost	New	Y	Y	Y	OSPFv3 for IPv6 Commands	This command explicitly specifies the cost of the link-state metric in a router-LSA.
ipv6 ospf dead-interval	New	Y	Y	Y	OSPFv3 for IPv6 Commands	This command sets the interval during which no hello packets are received and after which a neighbor is declared dead.
ipv6 ospf display route single-line	New	Y	Y	Y	OSPFv3 for IPv6 Commands	Use this command to change the result of the show ipv6 route command to display each route entry on a single line.
ipv6 ospf hello-interval	New	Y	Y	Y	OSPFv3 for IPv6 Commands	This command specifies the interval between hello packets.
ipv6 ospf priority	New	Y	Y	Y	OSPFv3 for IPv6 Commands	This command sets the router priority, which is a parameter used in the election of the designated router for the network.
ipv6 ospf retransmit-interval	New	Y	Y	Y	OSPFv3 for IPv6 Commands	This command sets the router priority, which is a parameter used in the election of the designated router for the network.
ipv6 ospf transmit-delay	New	Y	Y	Y	OSPFv3 for IPv6 Commands	Use this command to set the estimated time it takes to transmit a link-state-update packet on the VLAN interface.
ipv6 router ospf	New	Y	Y	Y	OSPFv3 for IPv6 Commands	Use this command to enable OSPFv3 routing on an interface.
max-concurrent-dd (IPv6 OSPF)	New	Y	Y	Y	OSPFv3 for IPv6 Commands	Use this command to limit the number of neighbors that can be concurrently processed in the database exchange.
passive-interface (IPv6 OSPF)	New	Y	Y	Y	OSPFv3 for IPv6 Commands	Use this command to suppress the sending of Hello packets on a specified interface.
redistribute (IPv6 OSPF)	New	Y	Y	Y	OSPFv3 for IPv6 Commands	Use this command to redistribute routes from other routing protocols, static routes and connected routes into an OSPFv3 routing table.

Table 3: New and modified commands

Command	Status	x600	x800	x900	Software Reference Chapter	Description
restart ipv6 ospf graceful	New	Y	Y	Y	OSPFv3 for IPv6 Commands	Use this command to force the OSPFv3 process to restart. You may optionally specify a grace-period value. If a grace-period is not specified then a default value of 120 seconds is applied. You should specify a grace-period value of 120 seconds or more. Low grace-period values may cause the graceful restart process on neighboring routers to terminate with routes missing.
router ipv6 ospf	New	Y	Y	Y	OSPFv3 for IPv6 Commands	Use this command to enter Router Configuration mode to configure an IPv6 OSPF routing process.
router-id (IPv6 OSPF)	New	Y	Y	Y	OSPFv3 for IPv6 Commands	Use this command to specify a router ID for the OSPFv3 process.
show debugging ipv6 ospf	New	Y	Y	Y	OSPFv3 for IPv6 Commands	Use this command to display which OSPF debugging options are currently enabled.
show ipv6 ospf	New	Y	Y	Y	OSPFv3 for IPv6 Commands	Use this command to display general information about all OSPFv3 routing processes.
show ipv6 ospf database	New	Y	Y	Y	OSPFv3 for IPv6 Commands	Use this command to display a database summary for OSPFv3 information.
show ipv6 ospf database external	New	Y	Y	Y	OSPFv3 for IPv6 Commands	Use this command to display information about the external LSAs.
show ipv6 ospf database network	New	Y	Y	Y	OSPFv3 for IPv6 Commands	Use this command to display information about the network LSAs.
show ipv6 ospf database router	New	Y	Y	Y	OSPFv3 for IPv6 Commands	Use this command to display information only about the router LSAs.
show ipv6 ospf interface	New	Y	Y	Y	OSPFv3 for IPv6 Commands	Use this command to display interface information for OSPF.
show ipv6 ospf neighbor	New	Y	Y	Y	OSPFv3 for IPv6 Commands	Use this command to display information on OSPF neighbors. Include the process ID parameter with this command to display information about specified processes.
show ipv6 ospf route	New	Y	Y	Y	OSPFv3 for IPv6 Commands	Use this command to display the OSPF routing table. Include the process ID parameter with this command to display the OSPF routing table for specified processes.
undebug ipv6 ospf events	New	Y	Y	Y	OSPFv3 for IPv6 Commands	This command applies the functionality of the no debug ipv6 ospf events command.
undebug ipv6 ospf ifsm	New	Y	Y	Y	OSPFv3 for IPv6 Commands	This command applies the functionality of the no debug ospf ifsm command.
undebug ipv6 ospf lsa	New	Y	Y	Y	OSPFv3 for IPv6 Commands	This command applies the functionality of the no debug ipv6 ospf lsa command.
undebug ipv6 ospf n fsm	New	Y	Y	Y	OSPFv3 for IPv6 Commands	This command applies the functionality of the no debug ipv6 ospf n fsm command.
undebug ipv6 ospf nsm	New	Y	Y	Y	OSPFv3 for IPv6 Commands	This command applies the functionality of the no debug ipv6 ospf n fsm command.
undebug ipv6 ospf packet	New	Y	Y	Y	OSPFv3 for IPv6 Commands	This command applies the functionality of the no debug ipv6 ospf packet command.
undebug ipv6 ospf route	New	Y	Y	Y	OSPFv3 for IPv6 Commands	This command applies the functionality of the no debug ipv6 ospf route command.
address-family ipv4 vrf (BGP)	Modified	N	N	Y	BGP Commands	You can now configure this command for a specific VRF instance. VRF-Lite is supported on x900 series only.

Table 3: New and modified commands

Command	Status	x600	x908	x900	Software Reference Chapter	Description
bgp confederation identifier	Modified	Y	Y	Y	BGP Commands	Previously, BGP supported 16-bit autonomous system numbers (ASNs). This has been increased to support 32-bit (4-octect) ASNs, as specified by RFC 4893. For all BGP commands that use ASNs, the ASN range has increased from <1-65535> to <1-4294967295>.
bgp confederation peers	Modified	Y	Y	Y	BGP Commands	Previously, BGP supported 16-bit autonomous system numbers (ASNs). This has been increased to support 32-bit (4-octect) ASNs, as specified by RFC 4893. For all BGP commands that use ASNs, the ASN range has increased from <1-65535> to <1-4294967295>.
clear bgp (ASN)	Modified	Y	Y	Y	BGP Commands	Previously, BGP supported 16-bit autonomous system numbers (ASNs). This has been increased to support 32-bit (4-octect) ASNs, as specified by RFC 4893. For all BGP commands that use ASNs, the ASN range has increased from <1-65535> to <1-4294967295>.
clear ip bgp *	Modified	N	N	Y	BGP Commands	You can now reset IP BGP connections for a specific VRF instance. VRF-Lite is supported on x900 series only.
clear ip bgp (ip address)	Modified	N	N	Y	BGP Commands	You can now clear IP BGP connections for a specified IP address and VRF instance. VRF-Lite is supported on x900 series only.
clear ip bgp (ASN)	Modified	Y	Y	Y	BGP Commands	Previously, BGP supported 16-bit autonomous system numbers (ASNs). This has been increased to support 32-bit (4-octect) ASNs, as specified by RFC 4893. For all BGP commands that use ASNs, the ASN range has increased from <1-65535> to <1-4294967295>.
ip extcommunity-list standard	Modified	Y	Y	Y	BGP Commands	Previously, BGP supported 16-bit autonomous system numbers (ASNs). This has been increased to support 32-bit (4-octect) ASNs, as specified by RFC 4893. For all BGP commands that use ASNs, the ASN range has increased from <1-65535> to <1-4294967295>.
neighbor next-hop-self	Modified	N	N	Y	BGP Commands	When running VRF-Lite, you can now apply this command to individual VRF instances. VRF-Lite is supported on x900 series only.
neighbor password	Modified	N	N	Y	BGP Commands	When running VRF-Lite, you can now apply this command to individual VRF instances. VRF-Lite is supported on x900 series only.
neighbor remote-as	Modified	Y	Y	Y	BGP Commands	Previously, BGP supported 16-bit autonomous system numbers (ASNs). This has been increased to support 32-bit (4-octect) ASNs, as specified by RFC 4893. For all BGP commands that use ASNs, the ASN range has increased from <1-65535> to <1-4294967295>. When running VRF-Lite, this command can also be run for specific VRF instances.
redistribute (into BGP)	Modified	N	N	Y	BGP Commands	This command has been renamed (previously, redistribute route-map) can now be applied to a specific VRF instance. VRF-Lite is supported on x900 series only.
router bgp	Modified	Y	Y	Y	BGP Commands	Previously, BGP supported 16-bit autonomous system numbers (ASNs). This has been increased to support 32-bit (4-octect) ASNs, as specified by RFC 4893. For all BGP commands that use ASNs, the ASN range has increased from <1-65535> to <1-4294967295>.

Table 3: New and modified commands

Command	Status	x600	x800	x900	Software Reference Chapter	Description
router bgp view	Modified	Y	Y	Y	BGP Commands	Previously, BGP supported 16-bit autonomous system numbers (ASNs). This has been increased to support 32-bit (4-octect) ASNs, as specified by RFC 4893. For all BGP commands that use ASNs, the ASN range has increased from <1-65535> to <1-4294967295>.
show bgp nexthop-tracking	Modified	Y	Y	Y	BGP Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip bgp	Modified	Y	Y	Y	BGP Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip bgp attribute-info	Modified	Y	Y	Y	BGP Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip bgp cidr-only	Modified	Y	N	Y	BGP Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#). You now specify either the global routing domain or a named VRF when using this command. VRF-Lite is supported on x900 series only.
show ip bgp community	Modified	Y	N	Y	BGP Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#). You now specify either the global routing domain or a named VRF when using this command. VRF-Lite is supported on x900 series only.
show ip bgp community-info	Modified	Y	Y	Y	BGP Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip bgp community-list	Modified	Y	N	Y	BGP Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#). You now specify either the global routing domain or a named VRF when using this command. VRF-Lite is supported on x900 series only.
show ip bgp dampening	Modified	Y	N	Y	BGP Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#). You now specify either the global routing domain or a named VRF when using this command. VRF-Lite is supported on x900 series only.
show ip bgp filter-list	Modified	Y	N	Y	BGP Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#). You now specify either the global routing domain or a named VRF when using this command. VRF-Lite is supported on x900 series only.
show ip bgp inconsistent-as	Modified	Y	N	Y	BGP Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#). You now specify either the global routing domain or a named VRF when using this command. VRF-Lite is supported on x900 series only.
show ip bgp longer-prefixes	Modified	Y	N	Y	BGP Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#). You now specify either the global routing domain or a named VRF when using this command. VRF-Lite is supported on x900 series only.

Table 3: New and modified commands

Command	Status	x900	x908	x900	Software Reference Chapter	Description
show ip bgp neighbors	Modified	Y	Y	Y	BGP Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip bgp paths	Modified	Y	Y	Y	BGP Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip bgp prefix-list	Modified	Y	N	Y	BGP Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#). You now specify either the global routing domain or a named VRF when using this command. VRF-Lite is supported on x900 series only.
show ip bgp quote-regexp	Modified	Y	N	Y	BGP Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#). You now specify either the global routing domain or a named VRF when using this command. VRF-Lite is supported on x900 series only.
show ip bgp regexp	Modified	Y	N	Y	BGP Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#). You now specify either the global routing domain or a named VRF when using this command. VRF-Lite is supported on x900 series only.
show ip bgp route-map	Modified	Y	N	Y	BGP Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#). You now specify either the global routing domain or a named VRF when using this command. VRF-Lite is supported on x900 series only.
show ip bgp scan	Modified	Y	Y	Y	BGP Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip bgp summary	Modified	Y	N	Y	BGP Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#). You now specify either the global routing domain or a named VRF when using this command. VRF-Lite is supported on x900 series only.
show ip bgp view	Modified	Y	Y	Y	BGP Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip bgp view neighbors	Modified	Y	Y	Y	BGP Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip bgp view summary	Modified	Y	Y	Y	BGP Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip community-list	Modified	Y	Y	Y	BGP Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip extcommunity-list	Modified	Y	Y	Y	BGP Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip protocols bgp	Modified	Y	Y	Y	BGP Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
description (VRF)	New	N	N	Y	VRF-Lite Commands (x900 only)	This new command adds descriptive text for a VRF instance. VRF-Lite is supported on x900 series only.
export map	New	N	N	Y	VRF-Lite Commands (x900 only)	This new command associates a route map with the specified VRF instance. VRF-Lite is supported on x900 series only.

Table 3: New and modified commands

Command	Status	x600	x800	x900	Software Reference Chapter	Description
import map	New	N	N	Y	VRF-Lite Commands (x900 only)	This new command associates a route map with a specified VRF instance. VRF-Lite is supported on x900 series only.
ip route static inter-vrf	New	N	N	Y	VRF-Lite Commands (x900 only)	This new command enables static inter-VRF routing. VRF-Lite is supported on x900 series only.
ip vrf	New	N	N	Y	VRF-Lite Commands (x900 only)	This new command creates a VRF instance and specifies its unique name. VRF-Lite is supported on x900 series only.
ip vrf forwarding	New	N	N	Y	VRF-Lite Commands (x900 only)	This new command creates a VRF instance and specifies its unique name. VRF-Lite is supported on x900 series only.
rd (route distinguisher)	New	N	N	Y	VRF-Lite Commands (x900 only)	This new command forms part of the route table creation process for a VRF-Lite instance - used only for BGP. VRF-Lite is supported on x900 series only.
route-target	New	N	N	Y	VRF-Lite Commands	This new command is used to create, and list, a route-target extended community for a specified VRF instance. VRF-Lite is supported on x900 series only.
router-id (VRF)	New	N	N	Y	VRF-Lite Commands (x900 only)	This new command specifies a router identifier (in IP address format). If VRF is defined, the router-id is configured for the specified VRF instance. VRF-Lite is supported on x900 series only.
show ip vrf	New	N	N	Y	VRF-Lite Commands (x900 only)	This new command displays brief configurations for a specific VRF instance. VRF-Lite is supported on x900 series only.
show ip vrf detail	New	N	N	Y	VRF-Lite Commands (x900 only)	This new command displays detailed configuration for a specific VRF instance. VRF-Lite is supported on x900 series only.
show ip vrf interface	New	N	N	Y	VRF-Lite Commands (x900 only)	This new command displays protocol, operational status, and address information, for interfaces existing within either a specified VRF instance or all VRF instances. VRF-Lite is supported on x900 series only.
show running-config vrf	New	N	N	Y	VRF-Lite Commands (x900 only)	This new command displays the running system VRF related configurations for all VRF instances. VRF-Lite is supported on x900 series only.
ip multicast forward-first-packet	New	Y	Y	Y	Multicast Introduction and Commands	Use this command to enable multicast to forward the first multicast packet coming to the device.
show ip mroute	Modified	Y	Y	Y	Multicast Introduction and Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip mvif	Modified	Y	Y	Y	Multicast Introduction and Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip rpf	Modified	Y	Y	Y	Multicast Introduction and Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip igmp groups	Modified	Y	Y	Y	IGMP and IGMP Snooping Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip igmp interface	Modified	Y	Y	Y	IGMP and IGMP Snooping Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).

Table 3: New and modified commands

Command	Status	009x	008x	0090	Software Reference Chapter	Description
show ip igmp snooping mrouter	Modified	Y	Y	Y	IGMP and IGMP Snooping Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip igmp snooping routermode	Modified	Y	Y	Y	IGMP and IGMP Snooping Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip igmp snooping statistics	Modified	Y	Y	Y	IGMP and IGMP Snooping Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
ip pim ext-srcs-directly-connected	New	Y	Y	Y	PIM-SM Commands	Use this command to configure PIM to treat all source traffic arriving on the interface as though it was sent from a host directly connected to the interface.
show ip pim sparse-mode bsr-router	Modified	Y	Y	Y	PIM-SM Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip pim sparse-mode interface	Modified	Y	Y	Y	PIM-SM Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip pim sparse-mode interface detail	Modified	Y	Y	Y	PIM-SM Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip pim sparse-mode mroute	Modified	Y	Y	Y	PIM-SM Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip pim sparse-mode mroute detail	Modified	Y	Y	Y	PIM-SM Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip pim sparse-mode neighbor	Modified	Y	Y	Y	PIM-SM Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip pim sparse-mode nexthop	Modified	Y	Y	Y	PIM-SM Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip pim sparse-mode rp-hash	Modified	Y	Y	Y	PIM-SM Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip pim sparse-mode rp mapping	Modified	Y	Y	Y	PIM-SM Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show debugging pim dense-mode	Modified	Y	Y	Y	PIM-DM Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip pim dense-mode interface	Modified	Y	Y	Y	PIM-DM Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip pim dense-mode interface detail	Modified	Y	Y	Y	PIM-DM Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip pim dense-mode mroute	Modified	Y	Y	Y	PIM-DM Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip pim dense-mode neighbor	Modified	Y	Y	Y	PIM-DM Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip pim dense-mode neighbor detail	Modified	Y	Y	Y	PIM-DM Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).

Table 3: New and modified commands

Command	Status	009x	808x	900x	Software Reference Chapter	Description
show ip pim dense-mode nexthop	Modified	Y	Y	Y	PIM-DM Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ipv6 mld groups	Modified	Y	Y	Y	MLD Snooping Introduction and Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ipv6 mld interface	Modified	Y	Y	Y	MLD Snooping Introduction and Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ipv6 mld snooping mrouter	Modified	Y	Y	Y	MLD Snooping Introduction and Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ipv6 mld snooping statistics	Modified	Y	Y	Y	MLD Snooping Introduction and Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show class-map	Modified	Y	Y	Y	QoS Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show mls qos aggregate-policer	Modified	N	Y	Y	QoS Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show mls qos fabric-queue	Modified	N	Y	Y	QoS Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show mls qos interface	Modified	Y	Y	Y	QoS Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show mls qos interface policer-counters	Modified	Y	Y	Y	QoS Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show mls qos interface queue-counters	Modified	Y	Y	Y	QoS Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show mls qos interface storm-status	Modified	Y	Y	Y	QoS Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show mls qos maps cos-queue	Modified	Y	Y	Y	QoS Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show mls qos maps fabric-queue	Modified	N	Y	Y	QoS Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show mls qos maps policed-dscp	Modified	N	Y	Y	QoS Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show mls qos maps premark-dscp	Modified	Y	Y	Y	QoS Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show mls qos queue-set	Modified	N	Y	Y	QoS Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show policy-map	Modified	Y	Y	Y	QoS Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show dot1x	Modified	Y	Y	Y	802.1X Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show dot1x diagnostics	Modified	Y	Y	Y	802.1X Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show dot1x interface	Modified	Y	Y	Y	802.1X Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).

Table 3: New and modified commands

Command	Status	009x	008x	000	Software Reference Chapter	Description
show dot1x sessionstatistics	Modified	Y	Y	Y	802.1X Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show dot1x statistics interface	Modified	Y	Y	Y	802.1X Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show dot1x supplicant	Modified	Y	Y	Y	802.1X Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show dot1x supplicant interface	Modified	Y	Y	Y	802.1X Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show auth-mac	Modified	Y	Y	Y	Authentication Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show auth-mac diagnostics	Modified	Y	Y	Y	Authentication Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show auth-mac interface	Modified	Y	Y	Y	Authentication Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show auth-mac sessionstatistics	Modified	Y	Y	Y	Authentication Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show auth-mac statistics interface	Modified	Y	Y	Y	Authentication Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show auth-mac supplicant	Modified	Y	Y	Y	Authentication Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show auth-mac supplicant interface	Modified	Y	Y	Y	Authentication Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show auth-web	Modified	Y	Y	Y	Authentication Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show auth-mac diagnostics	Modified	Y	Y	Y	Authentication Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show auth-web interface	Modified	Y	Y	Y	Authentication Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show auth-mac sessionstatistics	Modified	Y	Y	Y	Authentication Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show auth-web statistics interface	Modified	Y	Y	Y	Authentication Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show auth-web supplicant	Modified	Y	Y	Y	Authentication Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show auth-web supplicant interface	Modified	Y	Y	Y	Authentication Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show auth-web-server	Modified	Y	Y	Y	Authentication Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
aaa authentication login	Modified	Y	Y	Y	AAA Commands	You can now specify TACACS+ servers as the authentication servers for user login.
tacacs-server host	New	Y	Y	Y	TACACS+ Commands	This command specifies a remote TACACS+ server host for authentication and authorization and is used to set the shared secret key to use with the TACACS+ server.

Table 3: New and modified commands

Command	Status	x900	x908	x900	Software Reference Chapter	Description
tacacs-server key	New	Y	Y	Y	TACACS+ Commands	This command sets a global secret key for TACACS+ authentication and authorization. The shared secret text string is used for TACACS+ authentication and authorization between the switch and all TACACS+ servers.
tacacs-server timeout	New	Y	Y	Y	TACACS+ Commands	This command specifies the TACACS+ global timeout value. The timeout value is how long the device waits for a reply to a TACACS+ request before considering the server to be dead.
show tacacs+	New	Y	Y	Y	TACACS+ Commands	This command shows the current TACACS+ server configuration and status.
crypto key pubkey-chain knownhosts	Modified	N	N	Y	Secure Shell (SSH) Commands	When running VRF-Lite, this command can now be applied to specific VRF instances. VRF-Lite is supported on x900 series only
show crypto key pubkey-chain knownhosts	Modified	N	N	Y	Secure Shell (SSH) Commands	Use this command to display information about the known host database from the specified VRF instance. VRF-Lite is supported on x900 series only
ssh	Modified	N	N	Y	Secure Shell (SSH) Commands	When running VRF-Lite, you can now apply this command to a specific VRF instance. VRF-Lite is supported on x900 series only.
ip dhcp snooping agent-option circuit-id vlantriplet	New	Y	Y	Y	DHCP Snooping Commands	Use this command to specify the Circuit ID sub-option of the Option 82 field as the VLAN ID and port number.
ip dhcp snooping agent-option remote-id	New	Y	Y	Y	DHCP Snooping Commands	Use this command to specify the Remote ID sub-option of the Option 82 field. The Remote ID identifies the host.
show ip dhcp snooping agent-option	New	Y	Y	Y	DHCP Snooping Commands	Use this command to display DHCP snooping Option 82 information for all interfaces, a specific interface or a range of interfaces.
show vrrp	Modified	Y	Y	Y	VRRP Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#). The new optional parameter brief displays brief summary output.
show vrrp counters	New	Y	Y	Y	VRRP Commands	This command displays VRRP SNMP counters on the console, as described in the VRRP MIB and RFC2787, for debugging use while you configure VRRP with commands in this chapter.
show vrrp (session)	Modified	Y	Y	Y	VRRP Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show debugging epsr	Modified	Y	Y	Y	EPSR Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show epsr	Modified	Y	Y	Y	EPSR Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show epsr word	Modified	Y	Y	Y	EPSR Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show epsr word counters	Modified	Y	Y	Y	EPSR Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show epsr counters	Modified	Y	Y	Y	EPSR Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show counter ntp	Modified	Y	Y	Y	NTP Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).

Table 3: New and modified commands

Command	Status	009x	808x	900x	Software Reference Chapter	Description
show ntp associations	Modified	Y	Y	Y	NTP Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ntp status	Modified	Y	Y	Y	NTP Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
clear ip dhcp binding	Modified	Y	Y	Y	Dynamic Host Configuration Protocol (DHCP) Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
ip dhcp leasequery enable	New	Y	Y	Y	Dynamic Host Configuration Protocol (DHCP) Commands	Use this command to enable the DHCP server to respond to DHCPLEASEQUERY packets.
ip dhcp-relay agent-option remote-id	New	Y	Y	Y	Dynamic Host Configuration Protocol (DHCP) Commands	Use this command to specify the Remote ID sub-option of the Option 82 field the DHCP relay agent inserts into client-request packets.
lease	Modified	Y	Y	Y	Dynamic Host Configuration Protocol (DHCP) Commands	The expiration time for a leased address has increased from 30 days to 120 days and the user now has the option to configure the lease expiry time in seconds. The minimum total lease time is 20 seconds.
probe enable	New	Y	Y	Y	Dynamic Host Configuration Protocol (DHCP) Commands	Use this command to enable lease probing for a DHCP pool. Probing is enabled by default.
probe packets	New	Y	Y	Y	Dynamic Host Configuration Protocol (DHCP) Commands	Use this command to specify the number of packets sent for each lease probe.
probe timeout	New	Y	Y	Y	Dynamic Host Configuration Protocol (DHCP) Commands	Use this command to set the timeout value in milliseconds that the server waits for a response after each probe packet is sent.
probe type	New	Y	Y	Y	Dynamic Host Configuration Protocol (DHCP) Commands	Use this command to set the probe type for a DHCP pool - either ARP or ping.
show counter dhcp-client	Modified	Y	Y	Y	Dynamic Host Configuration Protocol (DHCP) Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show counter dhcp-relay	Modified	Y	Y	Y	Dynamic Host Configuration Protocol (DHCP) Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show counter dhcp-server	Modified	Y	Y	Y	Dynamic Host Configuration Protocol (DHCP) Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).

Table 3: New and modified commands

Command	Status	009x	808x	900x	Software Reference Chapter	Description
show dhcp lease	Modified	Y	Y	Y	Dynamic Host Configuration Protocol (DHCP) Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip dhcp binding	Modified	Y	Y	Y	Dynamic Host Configuration Protocol (DHCP) Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip dhcp pool	Modified	Y	Y	Y	Dynamic Host Configuration Protocol (DHCP) Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip dhcp-relay	Modified	Y	Y	Y	Dynamic Host Configuration Protocol (DHCP) Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip dhcp server statistics	Modified	Y	Y	Y	Dynamic Host Configuration Protocol (DHCP) Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ip dhcp server summary	Modified	Y	Y	Y	Dynamic Host Configuration Protocol (DHCP) Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show counter snmp-server	Modified	Y	Y	Y	SNMP Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show snmp-server	Modified	Y	Y	Y	SNMP Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show snmp-server community	Modified	Y	Y	Y	SNMP Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show snmp-server group	Modified	Y	Y	Y	SNMP Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show snmp-server user	Modified	Y	Y	Y	SNMP Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show snmp-server view	Modified	Y	Y	Y	SNMP Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
snmp-server engineID local reset	New	Y	Y	Y	SNMP Commands	This command forces the switch to generate a new pseudo-random SNMPv3 engine ID by resetting the SNMPv3 engine.
show rmon alarm	Modified	Y	Y	Y	RMON Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show rmon event	Modified	Y	Y	Y	RMON Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show rmon history	Modified	Y	Y	Y	RMON Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show rmon statistics	Modified	Y	Y	Y	RMON Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).

Table 3: New and modified commands

Command	Status	x600	x808	x900	Software Reference Chapter	Description
type card	New	Y	Y	Y	Trigger Commands	Use this command to configure a trigger that activates on either the removal or the insertion of a Secure Digital (SD) or Secure Digital High Capacity (SDHC) card.
show counter ping-poll	Modified	Y	Y	Y	Ping Polling Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show ping-poll	Modified	Y	Y	Y	Ping Polling Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
license member	New	Y	Y	Y	Stacking Commands	This command enables the specified licensed software feature set on either a specific stack member, or on all stack members. The no variant of this command disables the specified feature set.
show counter stack	Modified	Y	Y	Y	Stacking Commands	This command is now only available from the Privileged Exec command mode prompt (awplus#).
show license member	New	Y	Y	Y	Stacking Commands	This command displays license information about either a specific licensed software feature, or all software feature licenses enabled on either a specific stack member or all stack members.
stack disabled-master-monitoring	New	Y	Y	Y	Stacking Commands	This command enables the Disabled Master Monitoring (DMM) feature. If a stack member becomes a disabled master, the DMM feature will use the stack resiliency link to continue monitoring the health of the separated stack master.

Installing this Software Version

To use this software version, your switch must already be running AlliedWare Plus™. Contact your distributor or reseller for more information. The software file is available from the Support area of the Allied Telesis website at: <http://www.alliedtelesis.com>.

To install and enable this software version, use the following steps:

1. **Copy the software version file (.rel) onto your TFTP server.**
2. **If necessary, delete or move files to create space in the switch's Flash memory for the new file.**

To see the memory usage, use the command:

```
awplus#show file systems
```

To list files, use the command:

```
awplus#dir
```

To delete files, use the command:

```
awplus#del <filename>
```

You cannot delete the current boot file.

3. **Copy the new release from your TFTP server onto the switch.**

```
awplus#copy tftp flash
```

Follow the onscreen prompts to specify the server and file.

4. **Set the switch to reboot with the new software version either for x600 series switches:**

```
awplus#configure terminal
```

```
awplus(config)#boot system r6-5.4.1.rel
```

or for x908 / x900 series switches:

```
awplus#configure terminal
```

```
awplus(config)#boot system r1-5.4.1.rel
```

Return to Privileged Exec mode and check the boot settings, by using the commands:

```
awplus(config)#exit
```

```
awplus#show boot
```

5. **Reboot using the new software version.**

```
awplus#reload
```

Installing the GUI

This section describes how to install and set up the AlliedWare Plus GUI using an SD card or a TFTP server. The GUI Java applet file is available in a compressed (.zip) file from the Support area of the Allied Telesis website: <http://www.alliedtelesis.com>. The version number in the GUI Java applet filename (.jar) gives the earliest version of the software file (.rel) that the GUI can operate with.

To install and run the AlliedWare Plus GUI requires the following system products and setup:

- PC Platform:
Windows XP SP2 and up / Windows Vista SP1 and up
- Browser: (must support Java Runtime Environment (JRE) version 6)
Microsoft Internet Explorer 7.0 and up / Mozilla Firefox 2.0 and up

To install the GUI on your switch, use the following steps:

1. Copy to the GUI Java applet file (.jar extension) onto your TFTP server or SD card.
2. Connect to the switch's management port, then log into the switch.
3. If necessary, delete or move files to create space in the switch's Flash memory for the new file.

To see the memory usage, use the command:

```
awplus#show file systems
```

To list files, use the command:

```
awplus#dir
```

To delete files, use the command:

```
awplus#del <filename>
```

You cannot delete the current boot file.

4. Assign an IP address for connecting to the GUI. Use the commands:

```
awplus#configure terminal
```

```
awplus(config)#interface vlan1
```

```
awplus(config-if)#ip address <address>/<prefix-length>
```

Where <address> is the IP address that you will subsequently browse to when you connect to the GUI Java applet. For example, to give the switch an IP address of 192.168.2.6, with a subnet mask of 255.255.255.0, use the command:

```
awplus(config-if)#ip address 192.168.2.6/24
```

5. If required, configure a default gateway for the switch.

```
awplus(config-if)#exit
```

```
awplus(config)#ip route 0.0.0.0/0 <gateway-address>
```

Where <gateway-address> is the IP address for your gateway device. You do not need to define a default gateway if you browse to the switch from within its own subnet.

6. **Copy the GUI file onto your switch from the TFTP server or SD card.**

TFTP server: Use the command:

```
awplus#copy tftp://<server-address>/<filename.jar> flash:/
```

where <server-address> is the IP address of the TFTP server; and where <filename.jar> is the filename of the GUI Java applet.

SD card: Insert the SD card into the SD slot on the front of your switch, and use the command:

```
awplus#copy card:/<filename.jar> flash:/
```

where <filename.jar> is the filename of the GUI Java applet.

7. **Create a user account for logging into the GUI.**

```
awplus(config)#username <username> privilege 15 guiuser password  
<password>
```

You can create multiple users to log into the GUI. For information about the **username** command, see the AlliedWare Plus Software Reference.

8. **Log into the GUI.**

Start a browser and enter the switch's IP address. The GUI starts up and displays a login screen. Log in with the username and password specified in the previous step.