Software Release Note

AlliedWare Plus™ Version 5.3.3-0.3

For SwitchBlade® x908, x900 Series, and x600 Series Switches

Contents

Introduction

This release note describes the new features and enhancements in the AlliedWare Plus™ Operating System version 5.3.3-0.3 since version 5.3.2-0.1. For more information, see the Software Reference for your switch. Software and documentation can be downloaded from the Support area of our website at http://www.alliedtelesis.com. Note that to download software, you will need a user account.

Software file details for this version are listed in Table 1 below.

Table 1: Switch models and software file names

Models	Series	Software File	Date	GUI File
x600-24Ts, x600-24Ts/XP, x600-24Ts-POE x600-48Ts, x600-48Ts/XP	x600	r6-5.3.3-0.3.rel	25 Nov 2009	gui_531_36.jar
x900-12XT/S, x900-24	x900	r1-5.3.3-0.3.rel	25 Nov 2009	gui_531_36.jar
SwitchBlade x908	SwitchBlade	r1-5.3.3-0.3.rel	25 Nov 2009	gui_531_36.jar

Caution: Using a software version file for the wrong switch model may cause unpredictable results, including disruption to the network.
Information in this release note is subject to change without notice and does not represent a commitment on the part of Allied Telesis, Inc. While every effort has been made to ensure that the information contained within this document and the features and changes described are accurate, Allied Telesis, Inc. can not accept any type of liability for errors in, or omissions arising from, the use of this information.

Acknowledgements

New Features and Enhancements

This software version includes the following main new features. For a list of all new and enhanced features and commands, see "Changes in this Version" on page 4. For more information about all features on the switch, 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.

Power over Ethernet (PoE)—x600-24Ts-POE

This release introduces support for a PoE-enabled x600 switch, the x600-24Ts-POE. With PoE, you no longer need to provide a separate power connection to the growing list of PoE-enabled media endpoints such as IP phones, security cameras, wireless access points and card readers. PoE reduces your costs, as there is no need to supply electrical wiring to each endpoint, and it gives you greater flexibility for endpoint location.

Link Layer Discovery Protocol - Media Endpoint Discovery (LLDP-MED)

LLDP-MED extends LLDP's basic network discovery and management functions. LLDP-MED allows for media endpoint specific messages, providing detailed information on power requirements, network policy, location discovery (for Emergency Call Services) and inventory. LLDP-MED is an important new feature for simplifying VoIP, security camera and WLAN deployments.

Voice VLAN

With the Voice VLAN feature, LLDP-MED on the switches can automatically propagate special VLAN configuration for voice traffic to connected IP phones. QoS configuration can then be applied to prioritize the delay-sensitive voice traffic in the voice-dedicated VLAN.

Roaming Authentication

The Roaming Authentication feature improves the usability of network security by enabling users to move within the network without requiring them to re-authenticate each time they move.

Local RADIUS Server License

Software licensing has been introduced to limit the number of local RADIUS server users and Network Access Servers (NAS). The details are as follows:

Without the license installed:

- Maximum number of local RADIUS users: 100
- Maximum number of NAS: 24

With the license installed:

- Maximum number of local RADIUS users: 5000
- Maximum number of NAS: 1000

For ordering details for the local RADIUS server license, see the data sheets for the x600 Series, x900 Series, and SwitchBlade x908 switch.

Fixed or Virtual MAC Addressing

A VCStack can now operate using a single 'virtual' MAC address.

VLAN Statistics

This feature provides a series of data counters each able to count both the number of received frames and the number of received bytes (octets) belonging to a particular VLAN.

Changes in this Version

Table 2 below lists all new and modified features and commands in this version.

If your existing configurations include commands that have been modified or deleted in this version (see the Status column), check whether you need to modify these configurations. For full command descriptions, see the Software Reference for your switch.

Table 2: New and modified features and commands

Feature/Command	Type	Status	x600	x900 and SB x908	Software Reference Chapter	Description
Power over Ethernet (PoE)						
Power over Ethernet (PoE)	Feature	New	Y	-	Power over Ethernet Introduction	x600-24Ts-POE switch only. Power over Ethernet (PoE) is a technology allowing powered devices, such as IP phones, to receive power over existing LAN cabling.
show running-config power-inline	Command	New	Y	-	File Management Commands	Use this command to show the Power over Ethernet (PoE) running system status and configuration details.
clear power-inline counters interface	Command	New	Y	-	Power over Ethernet Commands	This command clears all the PoE counters supported in the Power Ethernet MIB (RFC 3621) from a specified port, a range of ports, or all ports on the switch.
debug power-inline	Command	New	Y	-	Power over Ethernet Commands	This command enables the specified PoE debugging messages.
power-inline allow-legacy	Command	New	Y	-	Power over Ethernet Commands	This command enables detection of pre-IEEE 802.3af Power Ethernet standard legacy Powered Devices (PDs).
power-inline description	Command	New	Y	-	Power over Ethernet Commands	This command adds a description for a Powered Device (PD) connected to a port.
power-inline enable	Command	New	Y	-	Power over Ethernet Commands	This command enables Power over Ethernet (PoE) to detect a connected Powered Device (PD) and supply power from the switch.
power-inline max	Command	New	Y	-	Power over Ethernet Commands	This command sets the maximum power supplied to a PoE port.
power-inline priority	Command	New	Y	-	Power over Ethernet Commands	This command sets the Power over Ethernet (PoE) priority level of a PoE port to one of three available priority levels.
power-inline usage-threshold	Command	New	Y	-	Power over Ethernet Commands	This command sets the level at which the switch detects that the power supplied to all Powered Devices (PDs) has reached a critical level of the nominal power rating for the PSE.
service power-inline	Command	New	Y	-	Power over Ethernet Commands	This command enables Power over Ethernet (PoE) globally on the switch for all PoE ports.
show debugging power-inline	Command	New	Y	-	Power over Ethernet Commands	This command displays Power over Ethernet (PoE) debug settings.

Table 2: New and modified features and commands (cont.)

Feature/Command	Type	Status	x600	x900 and SB x908	Software Reference Chapter	Description
show platform power-inline	Command	New	Y	-	Power over Ethernet Commands	This command is intended for Allied Telesis Field Support use only.
show power-inline	Command	New	Y	-	Power over Ethernet Commands	This command displays the Power over Ethernet (PoE) status for all ports on the switch.
show power-inline counters	Command	New	Y	-	Power over Ethernet Commands	This command displays PoE event counters for ports on the switch. The PoE event counters displayed correspond with the objects in the PoE MIB (RFC 3621).
show power-inline interface	Command	New	Y	-	Power over Ethernet Commands	This command displays a summary of Power over Ethernet (PoE) information for specified ports.
show power-inline interface detail	Command	New	Y	-	Power over Ethernet Commands	This command displays detailed information for specified Power over Ethernet (PoE) ports on the switch.
LLDP-MED						
LLDP-MED	Features	New	Y	Y	LLDP Introduction	Link Layer Discovery Protocol for Media Endpoint Devices (LLDP-MED), is an extension of LLDP used between LAN network connectivity devices, such as this switch, and the media endpoint devices connected to them, such as IP phones.
lldp faststart-count	Command	New	Y	Y	LLDP Commands	Use this command to set the fast start count for LLDP-MED. The fast start count determines how many fast start messages LLDP sends when it starts transmitting LLDP-MED advertisements from a port.
lldp med-notifications	Command	New	Y	Y	LLDP Commands	Use this command to enable LLDP to send LLDP-MED Topology Change Detected SNMP notifications relating to the specified ports.
lldp med-tlv-select	Command	New	Y	Y	LLDP Commands	Use this command to enable or disable LLDP-MED Organizationally Specific TLVs for transmission in LLDP advertisements via the specified ports.
lldp non-strict-med-tlv-order-check	Command	New	Y	Y	LLDP Commands	Use this command to enable non-strict TLV order checking on LLDP-MED LLDPDUs received.
lldp tlv-select	Command	Modified	Y	Y	LLDP Commands	This command now allows the selection of additional optional TLVs: MAC/PHY Configuration/Status, Power Via MDI, Link Aggregation, and Maximum Frame Size TLVs.
lldp transmit receive	Command	Modified	Y	Y	LLDP Commands	The default for this command has changed. By default, both transmission and reception of LLDP advertisements are now enabled on all ports when LLDP is enabled by the **lldp run** command.

Table 2: New and modified features and commands (cont.)

Feature/Command	Type	Status	x600	x900 and SB x908	Software Reference Chapter	Description
location civic-location configuration	Command	New	Y	Y	LLDP Commands	Use these commands to configure a civic address location.
location civic-location identifier	Command	New	Y	Y	LLDP Commands	Use this command to enter the Civic Address Location Configuration mode to configure the specified location.
location civic-location-id	Command	New	Y	Y	LLDP Commands	Use this command to assign a civic address location to the ports.
location coord-location configuration	Command	New	Y	Y	LLDP Commands	Use this command to configure a coordinate-based location.
location coord-location identifier	Command	New	Y	Y	LLDP Commands	Use this command to enter the Coordinate Configuration mode to configure this location.
location coord-location-id	Command	New	Y	Y	LLDP Commands	Use this command to assign a coordinate location to the ports.
location elin-location	Command	New	Y	Y	LLDP Commands	Use this command to create or modify an ELIN location.
location elin-location-id	Command	New	Y	Y	LLDP Commands	Use this command to assign an ELIN location to the ports.
show lldp	Command	Modified	Y	Y	LLDP Commands	This command now also displays the fast start count for LLDP-MED.
show lldp interface	Command	Modified	Y	Y	LLDP Commands	This command now displays additional TLVs and a notification setting for LLDP-MED.
show lldp local-info	Command	Modified	Y	Y	LLDP Commands	This command now displays additional information for LLDP-MED, and has new options for selecting which local information to display.
show lldp neighbors	Command	Modified	Y	Y	LLDP Commands	This command now also displays LLDP-MED neighbor information for the ports.
show lldp neighbors detail	Command	Modified	Y	Y	LLDP Commands	This command now displays additional information for LLDP-MED, and has new options for selecting which detailed neighbor information to display.
show location	Command	New	Y	Y	LLDP Commands	Use this command to display location information configured on the switch.
Voice VLAN						
Voice VLAN	Features	New	Y	Y	LLDP Introduction	The Voice VLAN feature uses LLDP-MED to convey configuration information for the voice traffic to the IP phone. In response, the IP phone sends voice traffic according to this configuration.
switchport voice dscp	Command	New	Y	Y	VLAN Commands	Use this command to configure the layer 3 DSCP value advertised when the transmission of LLDP-MED network policy for voice devices is enabled.

Table 2: New and modified features and commands (cont.)

Feature/Command	Type	Status	x600	x900 and SB x908	Software Reference Chapter	Description
switchport voice vlan	Command	New	Y	Y	VLAN Commands	Use this command to configure the Voice VLAN tagging advertised when the transmission of LLDP-MED network policy for voice devices is enabled.
switchport voice vlan priority	Command	New	Y	Y	VLAN Commands	Use this command to configure the Voice VLAN user priority advertised when the transmission of LLDP-MED network policy for voice devices is enabled.
egress-vlan-id	Command	New	Y	Y	Local RADIUS Server Commands	Use this command to configure the standard RADIUS attribute 'Egress-VLANID (56)' for the local RADIUS Server user group.
egress-vlan-name	Command	New	Y	Y	Local RADIUS Server Commands	Use this command to configure the standard RADIUS attribute 'Egress-VLAN-Name (58)' for the Local RADIUS Server user group.
Roaming Authentication						
Roaming Authentication	Feature	New	Y	Y	Authentication Configuration	The Roaming Authentication feature improves the usability of network security by enabling users to move within the network without requiring them to re-authenticate each time they move.
auth roaming disconnected	Command	New	Y	Y	Authentication Commands	This command enables the roaming authentication feature on an authenticated interface that is link down, so a supplicant does not need to be reauthenticated when moved between authenticated interfaces.
auth roaming enable	Command	New	Y	Y	Authentication Commands	This command enables the roaming authentication feature on an authenticated interface that is link up, so a supplicant does not need to be reauthenticated when moved between authenticated interfaces.
Authentication over Link Aggregators						
auth critical	Command	Modified	Y	Y	Authentication Commands	These commands can now be configured on static channel group (or static aggregator) and dynamic (or LACP) channel group interfaces in addition to switch ports.
auth dynamic-vlan-creation	Command	Modified	Y	Y	Authentication Commands	
auth guest-vlan	Command	Modified	Y	Y	Authentication Commands	
auth host-mode	Command	Modified	Y	Y	Authentication Commands	
auth max-supplicant	Command	Modified	Y	Y	Authentication Commands	
auth reauthentication	Command	Modified	Y	Y	Authentication Commands	
auth supplicant-mac	Command	Modified	Y	Y	Authentication Commands	
auth timeout quiet-period	Command	Modified	Y	Y	Authentication Commands	

Table 2: New and modified features and commands (cont.)

Feature/Command	Type	Status	x600	x900 and SB x908	Software Reference Chapter	Description
auth timeout reauth-period	Command	Modified	Y	Y	Authentication Commands	These commands can now be configured on static channel group (or static aggregator) and dynamic (or LACP) channel group interfaces in addition to switch ports.
auth timeout server-timeout	Command	Modified	Y	Y	Authentication Commands	
auth timeout supp-timeout	Command	Modified	Y	Y	Authentication Commands	
auth-mac enable	Command	Modified	Y	Y	Authentication Commands	
auth-mac method	Command	Modified	Y	Y	Authentication Commands	
auth-mac reauth-relearning	Command	Modified	Y	Y	Authentication Commands	
auth-web enable	Command	Modified	Y	Y	Authentication Commands	
auth-web forward	Command	Modified	Y	Y	Authentication Commands	
auth-web max-auth-fail	Command	Modified	Y	Y	Authentication Commands	
auth-web method	Command	Modified	Y	Y	Authentication Commands	
show auth-mac diagnostics	Command	Modified	Y	Y	Authentication Commands	
show auth-mac interface	Command	Modified	Y	Y	Authentication Commands	
show auth-mac sessionstatistics	Command	Modified	Y	Y	Authentication Commands	These commands can now show information for static channel (or static aggregator) and dynamic (or LACP) channel group interfaces in addition to switch ports.
show auth-mac statistics interface	Command	Modified	Y	Y	Authentication Commands	
show auth-mac supplicant interface	Command	Modified	Y	Y	Authentication Commands	
show auth-web diagnostics	Command	Modified	Y	Y	Authentication Commands	
show auth-web interface	Command	Modified	Y	Y	Authentication Commands	
show auth-web sessionstatistics	Command	Modified	Y	Y	Authentication Commands	
show auth-web statistics interface	Command	Modified	Y	Y	Authentication Commands	
show auth-web supplicant interface	Command	Modified	Y	Y	Authentication Commands	

Table 2: New and modified features and commands (cont.)

Feature/Command	Type	Status	x600	x900 and SB x908	Software Reference Chapter	Description
802.1X over Link Aggregators						
dot1x control-direction	Command	Modified	Y	Y	802.1X Commands	These commands can now be configured on static channel group (or static aggregator) and dynamic (or LACP) channel group interfaces in addition to switch ports.
dot1x eapol-version	Command	Modified	Y	Y	802.1X Commands	
dot1x initialize interface	Command	Modified	Y	Y	802.1X Commands	
dot1x keytransmit	Command	Modified	Y	Y	802.1X Commands	
dot1x max-reauth-req	Command	Modified	Y	Y	802.1X Commands	
dot1x port-control	Command	Modified	Y	Y	802.1X Commands	
dot1x timeout tx-period	Command	Modified	Y	Y	802.1X Commands	
show dot1x diagnostics	Command	Modified	Y	Y	802.1X Commands	These commands can now show information for static channel group (or static aggregator) and dynamic (or LACP) channel group interfaces in addition to switch ports.
show dot1x interface	Command	Modified	Y	Y	802.1X Commands	
show dot1x sessionstatistics	Command	Modified	Y	Y	802.1X Commands	
show dot1x statistics interface	Command	Modified	Y	Y	802.1X Commands	
show dot1x supplicant interface	Command	Modified	Y	Y	802.1X Commands	
VCStack Virtual MAC Addressing						
Fixed or Virtual MAC Addressing	Feature	New	Y	Y	Stacking Introduction	A stack can now operate using a single "virtual" MAC address. This feature is enabled using the **stack virtual-mac** command and the address is set by using the **stack virtual-chassis-id** command.
stack virtual-chassis-id	Command	New	Y	Y	Stacking Commands	This command specifies the VCStack virtual chassis ID. The ID selected will determine which virtual MAC address the stack will use. The MAC address assigned to a stack must be unique within its network.
stack virtual-mac	Command	New	Y	Y	Stacking Commands	This command enables the VCStack virtual MAC address feature.
VLAN Statistics						
VLAN Statistics	Feature	New	Y	-	VLAN Introduction	This feature provides a series of data counters each able to count both the number of received frames and the number of received bytes (octets) belonging to a particular VLAN.
clear vlan statistics	Command	New	Y	-	VLAN Commands	This command resets the counters for either a specific VLAN statistics instance or (by not specifying an instance) resets all instances.

Table 2: New and modified features and commands (cont.)

Feature/Command	Type	Status	x600	x900 and SB x908	Software Reference Chapter	Description
show vlan statistics	Command	New	Y	-	VLAN Commands	This command displays the current configuration for either a specific VLAN statistics instance, or all VLAN statistics instances.
vlan statistics	Command	New	Y	-	VLAN Commands	This command creates a VLAN statistics instance, and enables you to add one or more ports to a defined VLAN statistics instance. This command can only be applied to switch ports. You cannot apply it to aggregated links or eth ports.
Multicast Enhancements						
show ip pim sparse-mode interface	Command	Modified	Y	Y	PIM-SM Commands	This command now also displays the number of configured and active PIM Sparse Mode interfaces, and the maximum number of PIM-SM interfaces that can be configured.
ip pim propagation-delay	Command	Modified	Y	Y	PIM-DM Commands	This command now has a range from 1000 to 5000 milliseconds propagation delay and a default of 1000 milliseconds. (Earlier releases had a range from 500 to 5000 milliseconds and a default of 500 milliseconds.)
show ip pim dense-mode interface	Command	Modified	Y	Y	PIM-DM Commands	This command now also displays the number of configured and active PIM Dense Mode interfaces, and the maximum number of PIM-DM interfaces that can be configured.
ip igmp limit	Command	Modified	Y	Y	IGMP Multicast Commands	This command sets the maximum number of IGMP group membership entries. The range of values that can be configured is now: ■ x600 Series switches: from 2 to 512 ■ x900 Series and SwitchBlade x908 switches: from 2 to 2097152.
ipv6 mld limit	Command	Modified	Y	Y	MLD Snooping Commands	This command sets the maximum number of MLD group membership entries. The range of values that can be configured is now from 2 to 2097152.
SNMP and MIBs						
snmp trap link-status	Command	New	Y	Y	SNMP Commands	Use this command to enable or disable the sending of link status SNMP notifications (traps) for the interfaces.
snmp trap link-status suppress	Command	New	Y	Y	SNMP Commands	Use this command to enable or disable the suppression of link status SNMP notifications (traps) for the interfaces after a threshold is crossed.
show interface	Command	Modified	Y	Y	Interface Commands	This command now also displays link status SNMP notification and suppression settings.
snmp-server enable trap	Command	Modified	Y	Y	SNMP Commands	This command can now enable the switch to send power-inline (PoE) and VRRP notifications (traps). This command can no longer enable link status notifications; see the **snmp trap link-status** command.

Table 2: New and modified features and commands (cont.)

Feature/Command	Type	Status	x600	x900 and SB x908	Software Reference Chapter	Description
AT-PRODUCT-MIB	MIB	Modified	Y	Y	SNMP MIBs	A new MIB object has been added to support the x600-24Ts-POE switch.
AT-BOARDS-MIB	MIB	Modified	Y	Y	SNMP MIBs	A new MIB object has been added to support the x600-24Ts-POE switch.
AT-VLAN-MIB	MIB	New	Y	-	SNMP MIBs	This new MIB defines objects for managing VLANs. The MIB contains a sub-tree for managing VLAN statistics.
AT-VCSTACK-MIB	MIB	Modified	Y	Y	SNMP MIBs	Additional objects have been added to the AT-VCSTACK-MIB to support the new Virtual MAC Addressing feature.
LLDP-EXT-DOT3-MIB	MIB	New	Y	Y	SNMP MIBs	The LLDP-EXT-DOT3-MIB is based on IEEE Standard 802.1AB-2005, Annex G, IEEE 802.3 Organizationally Specific TLVs, Section G.7.1, IEEE 802.3 LLDP extension MIB module.
LLDP-EXT-MED-MIB	MIB	New	Y	Y	SNMP MIBs	The LLDP-EXT-MED-MIB is based on ANSI/TIA-1057- 2006, Section 13.3, LLDP-MED MIB Definition.
POE-MIB	MIB	New	Y	-	SNMP MIBs	The POE-MIB is based on RFC 3621, Power Ethernet MIB. RFC 3621 supports the IEEE 802.3af standard.
VRRP-MIB	MIB	New	Y	Y	SNMP MIBs	The VRRP-MIB is based on RFC 2787. Definitions of Managed Objects for the Virtual Router Redundancy Protocol. All objects with read-write and read-create access are implemented as read-only.
Other						
wait	Command	New	Y	Y	Scripting Commands	This command pauses execution of the active script for the specified period of time.
mtu	Command	Modified	Y	Y	Interface Commands	The MTU (Maximum Transmission Unit) size range for an interface specified by this command has changed from <64-9208> bytes to <68-9208> bytes. The **no** form of this command now restores the default MTU size of 1500 bytes.
show interface status	Command	New	Y	Y	Interface Commands	Use this command to display the status of specified interfaces, or all interfaces.
show platform classifier statistics utilization brief	Command	New	Y	Y	Switching Commands	This command displays the total memory space, and free memory space of CAM (Content-Addressable Memory).
default-metric (OSPF)	Command	Modified	Y	Y	OSPF Commands	This command sets default metric values for the OSPF routing protocol. The minimum metric value that can be set is now 1.
auto-summary	Command	New	Y	Y	BGP Commands	Use this command to enable sending summarized routes by a BGP speaker to its peers in the router configuration mode or in the address-family configuration mode. BGP uses auto-summary to advertise summarized routes.

Table 2: New and modified features and commands (cont.)

Feature/Command	Type	Status	x600	x900 and SB x908	Software Reference Chapter	Description
ip extcommunity-list standard	Command	Modified	Y	Y	BGP Commands	Use this command to create or delete a standard extended community list. This command has been modified to include new parameters to add the route target and the site of origin of the extended community to a standard extended community list.
set community	Command	Modified	Y	Y	Route Map Commands	This command adds a community set clause to a route map entry. Autonomous System (AS) numbers can now be entered in integer format <1-65535> in addition to AA:NN format.
clear radius local-server statistics	Command	New	Y	Y	Local RADIUS Server Commands	This command clears the statistics stored on the switch for the local RADIUS Server, the NAS (Network Access Server), and local RADIUS Server users.
copy fdb-radius-users (to file)	Command	New	Y	Y	Local RADIUS Server Commands	This command creates a set of local RADIUS server users from the MAC addresses in the local FDB. A local RADIUS server user created using this command can be used for MAC authentication. For details, see the **copy fdb-radius-users (to file) command on page 16**.
clear counter stack	Command	New	Y	Y	Stacking Commands	This command clears all VCStack counters for all stack members. For details, see the **clear counter stack command on page 17**.
remote-command clear counter stack	Command	New	Y	Y	Stacking Commands	This command executes the clear counter stack command remotely from a VCStack master. For details, see the **remote-command (clear counter stack) command on page 17**.
remote-command show counter stack	Command	New	Y	Y	Stacking Commands	This command executes the show counter stack command remotely from a VCStack master. For details, see the **remote-command (show counter stack) command on page 18**.
show counter stack	Command	New	Y	Y	Stacking Commands	This command displays VCStack related counter information. For details, see the **show counter stack command on page 18**.
Local RADIUS Server License	License	New	Y	Y	-	Software licensing has been introduced to limit the number of local RADIUS server users and NAS devices. Without the license installed: ■ Max RADIUS users: 100 ■ Max NAS: 24 With the license installed: ■ Max RADIUS users: 5000 ■ Max NAS: 1000

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.**

   ```
   awplus#configure terminal
   awplus(config)#boot system r1-5.3.3-0.3.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 at 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
  Server: Windows Server 2003 SP2 and up / Windows Server 2008 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 panel 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.

Additional Commands

The following commands were omitted from the software references for this software version.

copy fdb-radius-users (to file)

Use this command to create a set of local RADIUS server users from MAC addresses in the local FDB. A local RADIUS server user created using this command can be used for MAC authentication.

Syntax

```
copy fdb-radius-users {local-radius-user-db|flash|nvs|card|debug|
   tftp|scp|<url>} [interface <port>] [vlan <vid>] [group <name>]
```

Parameter	Description
local-radius-user-db	Copy the local RADIUS server users created to the local RADIUS server.
flash	Copy the local RADIUS server users created to flash memory.
nvs	Copy the local RADIUS server users created to NVS memory.
card	Copy the local RADIUS server users created to SD card.
debug	Copy the local RADIUS server users created to debug.
tftp	Copy the local RADIUS server users created to the TFTP destination.
scp	Copy the local RADIUS server users created to the SCP destination.
<*url*>	Copy the local RADIUS server users created to a specified URL or file name.
interface <*port*>	Copy only MAC addresses learned on a specified switch port. Wildcards may be used when specifying an interface name. For example, when you specify interface port1.* then this command generates RADIUS server users for MAC addresses learned on stack 1.
vlan <*vid*>	Copy only MAC addresses learned on a specified VLAN.
group <*name*>	Assign a group name to the local RADIUS server users created.

Mode Privileged Exec

Usage The local RADIUS server users created are written to a specified destination file in local RADIUS user CSV (Comma Separated Values) format. The local RADIUS server users can then be imported to a local RADIUS server using the **copy local-radius-user-db (from file)** command.

The name and password of the local RADIUS server users created use a MAC address, which can be used for MAC authentication.

This command does not copy a MAC address learned by the CPU or the management port.

This command can filter FDB entries by the interface name and the VLAN ID. When the interface name and the VLAN ID are specified, this command generates RADIUS server users from only the MAC addresses learned on the specified interface and on the specified VLAN.

Examples To register the local RADIUS server users from the local FDB directly to the local RADIUS server, use the command:

```
awplus# copy fdb-radius-users local-radius-user-db
```

To register the local RADIUS server users from the interface port1.0.1 to the local RADIUS server, use the command:

```
awplus# copy fdb-radius-users local-radius-user-db interface
        port1.0.1
```

To copy output generated as local RADIUS server user data from MAC addresses learned on `vlan10` on interface `port1.0.1` to the file `radius-user.csv`, use the command:

```
awplus# copy fdb-radius-users radius-user.csv interface port1.0.1
        vlan10
```

Related Commands **copy local-radius-user-db** (to file)
copy local-radius-user-db (from file)

clear counter stack

This command clears all VCStack counters for all stack members.

Syntax

```
clear counter stack
```

Mode Privileged Exec

Example To clear all VCStack counters, use the command:

```
awplus# clear counter stack
```

Related Commands **remote-command (clear counter stack)**
show counter stack

remote-command (clear counter stack)

This command executes the **clear counter stack** command remotely from a VCStack master.

Syntax

```
remote-command <1-8> clear counter stack
```

Parameter	Description
<1-8>	The ID of the stack member to execute the command remotely on.

Mode Privileged Exec

Example To execute the **clear counter stack** command on stack member 2 from the stack master, use the command:

```
awplus# remote-command 2 clear counter stack
```

Related Commands **clear counter stack**

remote-command (show counter stack)

This command executes the **show counter stack** command remotely from a VCStack master.

Syntax `remote-command <1-8> show counter stack`

Parameter	Description
<1-8>	The ID of the stack member to execute the command remotely on.

Mode Privileged Exec

Example To execute the **show counter stack** command on stack member 2 from the stack master to display the stacking counter information about stack member 2, use the command:

```
awplus# remote-command 2 show counter stack
```

Related Commands show counter stack

show counter stack

This command displays VCStack related counter information.

Syntax `show counter stack`

Default All counters are reset when the stack member is rebooted.

Mode Exec and Privileged Exec

Usage If this command is entered on the stack master, it will display all the stacking counter information on every stack member.

When used as a host-directed command, it will display only the stacking counter information for the specific stack member.

Examples To display the stacking counter information about the whole stack, use the command on the stack master:

```
awplus# show counter stack
```

Related Commands clear counter stack
remote-command (show counter stack)

Errata to the Software Reference

The following command descriptions include are corrections to the *QoS Commands* chapters in the *Software References for AlliedWare Plus™ Operating System Version 5.3.3-0.1*.

egress-rate-limit (SwitchBlade x908 and x900 Series Switches)

This command sets a limit on the amount of traffic that can be transmitted per second from this port.

Use the **no egress-rate-limit** command to disable the limiting of traffic egressing on the interface.

Syntax

```
egress-rate-limit <bandwidth>

no egress-rate-limit
```

Parameter	Description
<bandwidth>	The bandwidth, in the range <1-10000000> Kbits per second, followed by the unit: k (Kbps - default unit), m (Mbps), or g (Gbps). The egress rate limit can be configured in multiples of 651Kbps. If you configure a value that is not an exact multiple of 651Kbps, then the value will be rounded up to the next highest exact multiple of 651Kbps. **The minimum actual egress rate limit is 651 Kbps**

Default No egress rate limit.

Mode Interface Configuration

Examples To set egress rate limiting on port 1.0.1 to 500Mbps, enter the commands:

```
awplus# configure terminal
awplus(config)# interface port1.0.1
awplus(config-if)# egress-rate-limit 500m
% Egress rate limit has been set to 500 Mb
```

To disable egress rate limiting on a port enter the commands:

```
awplus# configure terminal
awplus(config)# interface port1.0.1
awplus(config-if)# no egress-rate-limit
```

egress-rate-limit (x600 Series Switches)

Sets a limit on the amount of traffic that can be transmitted per second from this port.

Use the **no egress-rate-limit** command to disable the limiting of traffic egressing on the interface.

Syntax

```
egress-rate-limit <bandwidth>
no egress-rate-limit
```

Parameter	Description
<bandwidth>	The bandwidth, in the range <1-10000000> Kbits per second, followed by the unit: k (Kbps - default unit), m (Mbps), or g (Gbps). The egress rate limit can be configured in multiples of 64Kbps. If you configure a value that is not an exact multiple of 64Kbps, then the value will be rounded up to the nearest higher exact multiple of 64Kbps. **The minimum actual egress rate limit is 64 Kbps**

Default No egress rate limit.

Mode Interface Configuration

Examples To set the egress rate limiting on port 1.0.1 to 64 Kbps, enter the commands:

```
awplus# configure terminal
awplus(config)# interface port1.0.1
awplus(config-if)# egress-rate-limit 64k
% Egress rate limit has been set to 64 Kb
```

To disable egress rate limiting on a port enter the commands:

```
awplus# configure terminal
awplus(config)# interface port1.0.1
awplus(config-if)# no egress-rate-limit
```