



## Omni Switch 6850E/ 6855 / 9000E

### Release 6.4.6.278.R01

The following is a list of issues that have been identified and corrected in AOS software release. This document is intended to be used as a pre-upgrade guide and does not replace the Release Notes which are created for every GA release of software.

**Important Notice:** For a copy of software release not posted on the Web or if you have any question or concern please contact Alcatel’s Technical Support Department.

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## Problems Fixed Between Builds 126 and 167

PR	<b>184858</b>	Build:	6.4.6.126.R01
Summary:	DDM threshold temperature alarm.		
Explanation:	Code changes done to prevent warning message until SFP reads the exact DDM values.		
PR	<b>184393</b>	Build:	6.4.6.126.R01
Summary:	After power cycle the snmp access is allowed for few minutes without aaa authentication default I		
Explanation:	Fix done to disallow the access to the snmp server immediately after power cycle, when there is no aaa authentication snmp configuration.		
PR	<b>184016</b>	Build:	6.4.6.126.R01
Summary:	Unable to retrieve entire Mac-address table per port through SNMP		
Explanation:	Fix done to retrieve all the static mac entries on LPS port through the snmp.		
PR	<b>182223</b>	Build:	6.4.6.127.R01
Summary:	OS6850 stack switch has been crashed "tCS_PRB & talpni" task is suspended.		
Explanation:	changes done to drop the ARP packets received on higit port		
PR	<b>187475</b>	Build:	6.4.6.127.R01
Summary:	Show interfaces link-monitoring statistics command not executing past interface 3/42		
Explanation:	Fix done to handle the proper mip overflow condition to execute the " Show interfaces link-monitoring statistics command" correctly.		
PR	<b>182585</b>	Build:	6.4.6.128.R01
Summary:	Issue with DHCP-snooping		
Explanation:	<ol style="list-style-type: none"> <li>1. When the NI is powered up, the Chassis supervision sends a NI_UP message to UDP relay application, after this, UDP relay initiates socket communication with the NI and, when this is successful we consider that the NI is ready.</li> <li>2. For incorrect linkagg port entry, we have implemented a method to automatically scan all trusted ports using a timer (runs 240 secs after the application is initialized and during takeover) which are a part of a linkagg and update the linkagg port details in UDP relay CMM context if they are not updated correctly.</li> </ol>		
PR	<b>185616</b>	Build:	6.4.6.128.R01
Summary:	Traffic stops while the LED remains lit on OS9702E.		
Explanation:	Rectifying discrepancy in setting speed to 100 in a dual speed SFP		
PR	<b>185994</b>	Build:	6.4.6.128.R01
Summary:	Issues getting the SFP-DUAL-MM 100/1000 SFP to run at 100Mb in a 6850E setup		
Explanation:	Changes done to support 100 Mbps in SFP-DUAL-MM on combo ports		
PR	<b>187210</b>	Build:	6.4.6.129.R01
Summary:	OS6850E crashed with suspending tCS_PRB and talpni and rebooted however after rebooting OS6850E work		
Explanation:	we introduce semaphore for the global structure with timeout value 2 , to avoid simultaneous access by more than one task		

PR	<b>188137</b>	Build:	6.4.6.129.R01
Summary:	OS6850E linkagg blocking issue.		
Explanation:	STP Ni and CMM task communication optimized.		
PR	<b>186466</b>	Build:	6.4.6.129.R01
Summary:	Unable to generate the trap 223 on 6850E		
Explanation:	Added debug trap for chassis backup power supply (BPS) state change		
PR	<b>185448</b>	Build:	6.4.6.130.R01
Summary:	ERP ring got blocked due to UDLD flood and switch got crashed with generating PMD file with suspended		
Explanation:	Prevent UDLD configuration for aggregate port or tagged aggregate port		
PR	<b>187130</b>	Build:	6.4.6.131.R01
Summary:	lanpower cli on port 1/43 is reversed with port 1/44 and vice versa		
Explanation:	Code changes done to mapping the phy port to device channel in proper order		
PR	<b>187370</b>	Build:	6.4.6.132.R01
Summary:	Issue with IGMP membership report on MVRP-registered VLAN		
Explanation:	Updating dynamic vlans information to IPMS.		
PR	<b>188541</b>	Build:	6.4.6.133.R01
Summary:	MED extended power over mdi TLV not advertised on OS6850E		
Explanation:	Fix done to retrieve correct port power and priority info for appropriate PoE controller for 6850E and 6855 switches to perform power negotiation over lldp.		
PR	<b>184369</b>	Build:	6.4.6.133.R01
Summary:	Interface Alias information in swlog event when link goes UP/DOWN for the all AOS product which i		
Explanation:	Code changes for including the interface alias name information in the swlog messages. When port link status changes up/down.		
PR	<b>188695</b>	Build:	6.4.6.134.R01
Summary:	Issue with ip dos anti-spoofing clear command.		
Explanation:	statistics command will not change the configuration status of the switch		
PR	<b>187156</b>	Build:	6.4.6.134.R01
Summary:	Malformed BPDU (wrong length) for default VLAN in XNI modules- BPDU dropped in firewall		
Explanation:	Added a control variable to set the BPDU length on 10Gig ports ,to force the length field of the BPDU to be equal the standard length 39.		
PR	<b>185272</b>	Build:	6.4.6.135.R01
Summary:	Port Monitoring Issue.		
Explanation:	Removal of ambiguous message, from show port monitoring file output.		
PR	<b>188684</b>	Build:	6.4.6.135.R01
Summary:	DHCP hanging issue		
Explanation:	Buffer is cleared if its failed to reach CMM socket		
PR	<b>181508</b>	Build:	6.4.6.135.R01

Summary: ntp server configuration does not store IP Address of NTP server, instead it resolves NTP server to

Explanation: Controlling the snapshot of NTP configuration to store the IP address

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PR **187504** Build: 6.4.6.135.R01  
 Summary: CPU at 97% with task bcmRx and taUdpRelay hogging the CPU  
 Explanation: DHCP ACK's Will not be flooded in the network by the neighboring Relay agents

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PR **190680** Build: 6.4.6.137.R01  
 Summary: Specific "system contact" command raises boot.cfg.1.err on next reboot  
 Explanation: Changes have been made to store string in boot.cfg in double quotes irrespective of special symbols (' ' ? ' !', which will consider as delimiter)

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PR **189730** Build: 6.4.6.138.R01  
 Summary: OS6855 allows the command to change mode to OS6850E.  
 Explanation: Changes are done to not allow command to change stack mode in 6855.

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PR **190576** Build: 6.4.6.140.R01  
 Summary: ip helper dhcp-snooping option-82 command not saved in boot.cfg  
 Explanation: error will be thrown if dhcp-snooping related configurations are done before enabling snooping

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PR **190971** Build: 6.4.6.146.R01  
 Summary: "zcSend" CODE 3997698 0x3d0002" error seen in logs and unable to save the configuration  
 Explanation: Merge done in 645R02 for to avoid the web view permanent stuck due to temporary socket errors and hence web view communication with the other tasks will not be affected.

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PR **181549** Build: 6.4.6.147.R01  
 Summary: SSH vulnerabilities in OS9800: SSL Version 2 (v2) Protocol Detection which reportedly suffers from s  
 Explanation: Disabled the ssl-v2 support due to vulnerabilities

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PR **190230** Build: 6.4.6.148.R01  
 Summary: VRRP tracking commands getting cleared on a stack of OS6850E switches when primary unit reloads.  
 Explanation: Validation of slot availability is avoided during reload and takeover

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PR **189881** Build: 6.4.6.149.R01  
 Summary: Issue with time synchronization with NTP on Layer 2 switch  
 Explanation: Changes have been made to set the dispersion value to the sample dispersion value in the case of global variable "ntpAccept" enabled.

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PR **170503** Build: 6.4.6.150.R01  
 Summary: dshell is currently in use, try again later;CHASSIS warning unable to post semaphore, 6250 over memo  
 Explanation: Recover dshell for debug purpose

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PR **190900** Build: 6.4.6.153.R01  
 Summary: SSH connection to 127.2.X.1 (NIX) is refused  
 Explanation: dshell flag is introduced that will open up the telnet session to the NIs for some time by calling the function "debugTelnetEnable" in dshell, in case the telnet is disabled.

PR	<b>182755</b>	Build:	6.4.6.154.R01
Summary:	OV traps seen Vs switch logs events discrepancies.		
Explanation:	Rectifying discrepancy of timestamp between OV and the switch.		
PR	<b>192189</b>	Build:	6.4.6.158.R01
Summary:	UNP configuration issue (same command repeated twice in boot.cfg) with OS6850E Stack.		
Explanation:	inIndex is updated with the correct ifIndex value from where the display has to be continued when there is a overflow		
PR	<b>193688</b>	Build:	6.4.6.163.R01
Summary:	ALU branded SFP-GIG-T (triple speed) is not working with 100Mbps / 10Mbps.		
Explanation:	Code change done to accept the ALU Branded triple speed copper SFP part number as triple speed SFP.		
PR	<b>193861</b>	Build:	6.4.6.166.R01
Summary:	Power supply state of NI2 is not correct.		
Explanation:	Code change is done to notify that there is a change in the status of the power supply when the power supply is pulled.		
PR	<b>186908</b>	Build:	6.4.6.147.R01
Summary:	Switch crashing because of vlan name lenght.		
Explanation:	The size of the data structure that holds the VLAN name was increased to avoid overflow.		
PR	<b>184284</b>	Build:	6.4.6.128.R01
Summary:	Repeated crash on the stack.		
Explanation:	Fix done to handle power fail interrupts in such a way that it does not cause any abnormal system hang.		
PR	<b>185998</b>	Build:	6.4.6.152.R01
Summary:	Finisar 10Gig SFP is not working with VFL link however same SFP transceiver is working with non-VFL		
Explanation:	Changes made to support VFLs on 1G/10G Finisar dual speed 1g/10g SFP (FTLX8571D3BCV-AF)		
PR	<b>191795</b>	Build:	6.4.6.144.R01
Summary:	Static route not showing the snapshot but however throwing the message "Static route already exists"		
Explanation:	Including the entry causing mip_overflow in show configuration snapshot ip-routing.		
PR	<b>192062</b>	Build:	6.4.6.154.R01
Summary:	onex_process_aging(862): incoming msg for port 3007, reason 12, mac 0x336092f0, vlanId 0 onex_pro		
Explanation:	Debug logs are now correctly controlled and will not dump on the screen.		
PR	<b>191769</b>	Build:	6.4.6.161.R01
Summary:	ifConnectorPresent MIB (ifXTable) displays true value instead of False for LACP aggregate links.		
Explanation:	Condition introduced to check for the linkagg and update the value of ifconnector present.		

PR	<b>190033</b>	Build:	6.4.6.139.R01
Summary:	NIs on 9700E down, Multiple PMDs generated.		
Explanation:	Increase the slbProbe task priority so that it can compete for CPU attention.		
PR	<b>185296</b>	Build:	6.4.6.130.R01
Summary:	TACACS Authorization not working properly when server becomes unreachable and then becomes reachable		
Explanation:	Tacacs authorization will be handled properly during the change in server status from unreachable to reachable.		
PR	<b>183948</b>	Build:	6.4.6.149.R01
Summary:	Stack crashed due to tCS_PRB and Qos task suspension when QOS is added or deleted.		
Explanation:	When qos is added or deleted switch wont crash.		
PR	<b>185223</b>	Build:	6.4.6.128.R01
Summary:	DHCP Ip helper not working after upgrading the OS6400 to 6.4.5.474.R02.		
Explanation:	cleared the buffer after processing the dying gasp message		
PR	<b>183591</b>	Build:	6.4.6.129.R01
Summary:	OS9802E: port mapping on port 22, 23, 24 is leaking broadcast into other ports on different NI.		
Explanation:	Proper Port Mapping Validation for GNI-U24 / C-24 Boards in Hardware for specific ports has been modified		
PR	<b>184085</b>	Build:	6.4.6.133.R01
Summary:	OS6580 at Alcova ES crashed.		
Explanation:	defense fix to avoid invalid memory access		
PR	<b>185527</b>	Build:	6.4.6.126.R01
Summary:	IGMP general query packet creating loop.		
Explanation:	Fixed the issue with IGMP query getting loop backed when hash-control non-ucast is enabled.		
PR	<b>192072</b>	Build:	6.4.6.153.R01
Summary:	SAA shows negative value for Max RTT & Max jitter		
Explanation:	Do not update the aggregate record if the latest iteration value is -		
PR	<b>192562</b>	Build:	6.4.6.158.R01
Summary:	OS9700 Console access is getting freeze when we do "debug show multi-chassis peer-linkagg port"		
Explanation:	Changes are done such that session will not freeze after issuing the command "debug show multi-chassis peer-linkagg port"		
PR	<b>191740</b>	Build:	6.4.6.166.R01
Summary:	High Memory issue on OS6850.		
Explanation:	Code changes are done to free the allocated memory for HIC Svr monitoring packet.		
PR	<b>191069</b>	Build:	6.4.6.149.R01
Summary:	How to change the default DNS keyword list for 802.1x CP		
Explanation:	Fix was done for proper handling of disabling the dns keyword list for 802.1x		

## captive portal

PR	<b>188063</b>	Build:	6.4.6.129.R01
Summary:	A CLI debug command to control "bcmSwitchL3UcTtlErrToCpu"		
Explanation:	A new debug cli command bcmSwitchL3UcTtlErrToCpu introduced. bcmSwitchL3UcTtlErrToCpu = 0 means IP error packets will not be sent to CPU		
PR	<b>181724</b>	Build:	6.4.6.129.R01
Summary:	SrcLrn, tOddJob, tSlcAgeTimer, tSlcHgTimer, la_cmm_tick, stpTick & tahw_l2		
Explanation:	As per our analysis the RCA of the issue is currently we have not validating the length of the buffer received for IPC transmission. This result in crash on the system whenever the buffer size is Zero. We have done code changes for validating the length of the buffer before sending to the destination Application.		
PR	<b>179716</b>	Build:	6.4.6.135.R01
Summary:	Third Party GBPTControl frames (DA mac 01:00:0c:cd:cd:d0) tunneled by software in 6.6.3.R01		
Explanation:	Implemented CLI command to enable and disable MAC tunneling as below: ethernet-service mac-tunneling enable/disable (usage: To enable or disable the mac-tunneling feature).		
	show ethernet-service mac-tunneling (usage: To know the status of the mac-tunnel feature like whether the feature is enabled or disabled and applied or not).		
	In 6.6.X releases the uni profile treatment should be tunnel for following protocols in order to tunnel along with the above command in order to tunnel the DA MAC 01:00:0c:cd:cd:d0		
	PAGP UDLD CDP VTP DTP PVST VLAN UPLINK		
PR	<b>186966</b>	Build:	6.4.6.139.R01
Summary:	Unable to issue command through GUI		
Explanation:	CMM index value is updated from chassis mib when the stacking is disabled-so that the copy working certified from flash-sync applied successfully		
PR	<b>191587</b>	Build:	6.4.6.142.R01
Summary:	IGMP traffic not received, when port security is disabled.		
Explanation:	Receiving IGMP traffic with port-security disabled		
PR	<b>187480</b>	Build:	6.4.6.133.R01
Summary:	OS6850E unable to certify the switches after the daylight changes are applied.		
Explanation:	Code changes done to perform CERTIFY process successfully when DST is enabled.		
PR	<b>189534</b>	Build:	6.4.6.137.R01
Summary:	Reachability issue with ERP setup with LACP Linkagg.		
Explanation:	IP Interface Status will be updated for vlans Associated with ERP Linkagg Ports.		



PR	<b>188896</b>	Build:	6.4.6.134.R01
Summary:	High CPU on distribution switches and DHCP issue on OS9 core switches		
Explanation:	Fixed the crash issue while trying to resolve the incomplete ARPs		
PR	<b>185058</b>	Build:	6.4.6.136.R01
Summary:	tDvmrp0 ,tCsCSMtask2 and tCS_PRB. These are the tasks suspended and locked.		
Explanation:	Fix to avoid null pointer access		
PR	<b>184689</b>	Build:	6.4.6.149.R01
Summary:	qos trust Port got shutdown with protocol dhcp-server or dns-reply		
Explanation:	While processing for QOS shutdown, process only first packet of fragmented packet and not all the fragmented packets		
PR	<b>186157</b>	Build:	6.4.6.137.R01
Summary:	Configuration of SHA+AES on OS 9702E to work with whatsapp Gold.		
Explanation:	Code changes done to fix SHA/AES for snmpv3		
PR	<b>183281</b>	Build:	6.4.6.127.R01
Summary:	Port status is showing as forwarding in spite there is no link connected on the interface.		
Explanation:	When the port physically goes down it should not be displayed in "show spantree active ports" output		
PR	<b>184739</b>	Build:	6.4.6.134.R01
Summary:	Change the frequency of swlog messages.		
Explanation:	Code changes have been done for changing the frequency of printing low flash messages in swlog.		
PR	<b>191588</b>	Build:	6.4.6.153.R01
Summary:	BPDU Shutdown failure: qos user-port link-shutdown bpdu does not seem to shut down the ports		
Explanation:	With this change port shutdown properly.		
PR	<b>192654</b>	Build:	6.4.6.160.R01
Summary:	OS6850-802.1X users did not display in show command.		
Explanation:	Fix done to display all the onex clients information in global display when there are forced authorized ports present.		
PR	<b>189170</b>	Build:	6.4.6.141.R01
Summary:	Gbic "type" information missing in the Inventory in OV for 6450 & 6850E		
Explanation:	Changes are done to display GBIC type information in OV.		
PR	<b>189990</b>	Build:	6.4.6.165.R01
Summary:	ISFP is flapping in stack of OS6855-U24X.		
Explanation:	Changes done to avoid iSFP flapping in stack of OS6855-U24X.		
PR	<b>189848</b>	Build:	6.4.6.149.R01
Summary:	SFP showing incorrect DDM value.		
Explanation:	Fix done to show proper DDM value		



## Problems Fixed Between Builds 168 and 218

PR	<b>185794</b>	Build:	6.4.6.168.R01
Summary:	OS 6400 crash issue		
Explanation:	Additional debug addition for crash issue.		
PR	<b>193213</b>	Build:	6.4.6.169.R01
Summary:	port status trap regarding up/down is not working		
Explanation:	Port status trap is set to display at swlog info level when trap is enabled for that port.		
PR	<b>187081</b>	Build:	6.4.6.169.R01
Summary:	OS 6850 crashed with Stp task suspended.		
Explanation:	Defense validation while handling STP SNMP operations		
PR	<b>191232</b>	Build:	6.4.6.169.R01
Summary:	OS6450: Device physically connected to port 1/4, however its Mac is shown on port trunk port 1/23. M		
Explanation:	Added a recovery mechanism to reopen malfunctioning IPC socket.		
PR	<b>193900</b>	Build:	6.4.6.169.R01
Summary:	LPS query on learn-trap-threshold in OS6850 and OS6400		
Explanation:	Fix done to display the trap-threshold configured value if its not 0.		
PR	<b>180957</b>	Build:	6.4.6.170.R01
Summary:	Duplicate primary and secondary switch were noticed after we reload the entire stack		
Explanation:	Fix done to unblock AOS tasks when unable to write output on to the tty driver's write buffer.		
PR	<b>194186</b>	Build:	6.4.6.170.R01
Summary:	OS6850E: 802.1x issue for IP-Phones using mobile-tag rule.		
Explanation:	Fix done to update the vlan tag in the mac-address table when mobile tag is enabled.		
PR	<b>194026</b>	Build:	6.4.6.171.R01
Summary:	Documentation issue with AoS 6.4.5.R02 & AoS 6.4.6.R01 release Cli guide for "session prompt default		
Explanation:	Added CLI for "session prompt default system-name		
PR	<b>194408</b>	Build:	6.4.6.172.R01
Summary:	OS9700: Core switch crashed without any apparent reason.		
Explanation:	Defense fix added to avoid null pointer access		
PR	<b>194018</b>	Build:	6.4.6.174.R01
Summary:	Need to add show qos statistics and show qos config command in the show tech-support files.		
Explanation:	Added show qos statistics and show qos config commands in tech-support (layer3) log files.		
PR	<b>194004</b>	Build:	6.4.6.175.R01
Summary:	Output of show interface link-monitoring statistics missing few interfaces in all		

Explanation:	chassis after 3rd i Fix done to avoid MIP overflow		
PR	<b>193384</b>	Build:	6.4.6.176.R01
Summary:	Removing the power from primary, reloaded the entire stack with crash files in few units.		
Explanation:	Code changes done to avoid the display issue in "show stack topology" when stacking cable removed between primary and its neighboring unit (issue only in stack of 8). When the last iteration of neighbor list 1 is reached, ignore the check for last neighbor existence i.e. neighbor [8].Hence the link status for neighbor [8] will be set to link DOWN. When the link state goes up, existing implementation will take care that this gets updated when the reverse link (neighbor list 2) is iterated.		
PR	<b>194636</b>	Build:	6.4.6.178.R01
Summary:	OS9000E-synchronization issue after issuing the "interfaces clear-violation-all" command in AoS 6.4.		
Explanation:	Modified the behavior of show configuration status to sync with cmm configuration status		
PR	<b>193056</b>	Build:	6.4.6.181.R01
Summary:	Issue with ARP inconsistency in MCLag		
Explanation:	To reduce the time taken in processing the ARP_DEL message.		
PR	<b>194353</b>	Build:	6.4.6.181.R01
Summary:	OS6850E crashed with SNMPagt & tCS_PRB tasks		
Explanation:	Code changes done to ensure accessing valid varbind during bulk request		
PR	<b>191728</b>	Build:	6.4.6.182.R01
Summary:	Issue with MC-Lag consistency		
Explanation:	Implementation of To-do List to process MCM consistency TLVs.		
PR	<b>195369</b>	Build:	6.4.6.182.R01
Summary:	Connectivity issue to devices from one of the 2 OS9000E Core switches in MC-LAG		
Explanation:	Connectivity issues due to arp inconsistency in Mclag are resolved.		
PR	<b>195083</b>	Build:	6.4.6.182.R01
Summary:	OpenSSL vulnerability CVE-2014-0224 and CVE-2014-0160		
Explanation:	OpenSSL vulnerability CVE-2014-0224 and CVE-2014-0160 has been handled.		
PR	<b>195589</b>	Build:	6.4.6.184.R01
Summary:	OS6850-U24X: Omni switch crash without any apparent reason.		
Explanation:	Fix done to check the SVLAN ID 0 for Ethernet service.		
PR	<b>195554</b>	Build:	6.4.6.185.R01
Summary:	IP phone getting the IP address after 5 reboots		
Explanation:	Fix done to get the IP address from Ip phone,.		
PR	<b>195392</b>	Build:	6.4.6.186.R01

Summary: Memory leak in 6.4.5.442.R02.  
 Explanation: Buffer free is handled properly in all error cases.

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PR **195666** Build: 6.4.6.187.R01  
 Summary: In an ERP ring of 3 OS9000E switches, seeing newly added vlans as operational down  
 Explanation: Code changes are done to handle STG state properly for the linkagg's in ERP NI.

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PR **195485** Build: 6.4.6.188.R01  
 Summary: OS 6850E stack synchronization issues  
 Explanation: Code merge done to propagate the value of global variable from primary to secondary when a specific configuration change (like interface admin down or vlan creation etc) is done. Hence when PS is removed (or if primary unit goes down abruptly) and the reload status is displayed as "ALL STACK" in show running-directory then the whole stack will go for reload.

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PR **193396** Build: 6.4.6.189.R01  
 Summary: Connectivity issue after configuring the QoS for ingress bandwidth in OS9702E.  
 Explanation: Depth Configuring properly in hardware.

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PR **194561** Build: 6.4.6.190.R01  
 Summary: CP user mac-addresses are not learnt however authentication is successful.  
 Explanation: Fix done to add the captive portal authenticated mac addresses in the mac address table.

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PR **197031** Build: 6.4.6.194.R01  
 Summary: LBD is not working after switch reload even LBD configuration is present in boot.cfg.  
 Explanation: Code changes have been done to enable the loopback detection in standalone OS9700 chassis.

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PR **193462** Build: 6.4.6.194.R01  
 Summary: 6850: Disable IP interface 10.123.0.1 (captive portal) when 802.1x is not configured, so it won't re  
 Explanation: ARP replies for IP Default CP address 10.123.0.1 is not sent out when 802.1x is not configured.

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PR **195956** Build: 6.4.6.194.R01  
 Summary: LACP configuration lost instead of UDLD after software updating  
 Explanation: Now the configurations of LACP can be done prior to the UDLD configurations.

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PR **196450** Build: 6.4.6.200.R01  
 Summary: OS6850-U24X-Mac learning on port instead of Linkagg ID.  
 Explanation: made changes to avoid callback on ports part of linkagg

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PR **196448** Build: 6.4.6.201.R01  
 Summary: "ip helper dhcp-snooping option-82 policy" is not available in AOS 6.4.5.R02  
 Explanation: Implemented the "ip helper dhcp-snooping option-82 policy CLI.

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PR **191402** Build: 6.4.6.204.R01  
 Summary: mac-address not learnt by the switch due to I2 conflict  
 Explanation: As a workaround, Dual hashing algorithm for better indexing can be enabled via AlcatelDebug.cfg.

PR	<b>197202</b>	Build:	6.4.6.205.R01
Summary:	Issue with " violation-recovery-time" of a specific port		
Explanation:	Code merge done by correcting the index value for EISNAPPC data structure with hybrid port value.		
PR	<b>192200</b>	Build:	6.4.6.213.R01
Summary:	When we do flash synchro we notice error message in swlog "CCM_CSM_FLASH_SYNCHRO_RS-appError 24"		
Explanation:	Fix to avoid internal ftp hung issue during flash-synchro causing CVM timeout		
PR	<b>200212</b>	Build:	6.4.6.217.R01
Summary:	OS6850E-Stack having issues with "copy working certified"		
Explanation:	Code Changes done to avoid the time differences due to DST effect and due to time zone changes which will rectify the failure of certify process when DST is enabled.		
PR	<b>193125</b>	Build:	6.4.6.218.R01
Summary:	New Dual Speed SFP from SOURCEPHOTONICS can't negotiate to speed of 100		
Explanation:	Fix done to correct the default speed while using Dual speed SFP in OS9700 & OS68		
PR	<b>196326</b>	Build:	6.4.6.190.R01
Summary:	WCCP configuration get enabled after the reload		
Explanation:	WCCP configuration are proper after reload		
PR	<b>193617</b>	Build:	6.4.6.191.R01
Summary:	OSPF routes are installed with delay into the routing table		
Explanation:	first packet LSA handling and OSPF LSA length overflow handling		
PR	<b>189784</b>	Build:	6.4.6.174.R01
Summary:	Switch memory utilization increases and exceeds threshold.		
Explanation:	Code changes are done to prevent IPC congestion between STP CMM and STP NI		
PR	<b>199015</b>	Build:	6.4.6.211.R01
Summary:	BFD interfaces go down due to high CPU; will not re-establish automatically.		
Explanation:	BFD sessions are getting re-established once the CPU usage becomes normal		
PR	<b>182718</b>	Build:	6.4.6.194.R01
Summary:	Max command lengths are 250 for accounting and 259 for authorization		
Explanation:	The argument max length as per Tacacs+ packet format can support max of 255, thus if the argument length is more than 255, it is truncated to 255, so that accounting is succeeded.		
PR	<b>191570</b>	Build:	6.4.6.180.R01
Summary:	L3 slow path CPU processed packets caused network instability (CPU running at 100% utilization)		
Explanation:	By default ip packets with options won't be trapped to CPU. Only when IPV6 interface is present or ipv6 multicast is enabled, ip packets with options will be trapped to CPU.		
PR	<b>194549</b>	Build:	6.4.6.179.R01

Summary:	"ip helper dhcp-snooping bypass option-82-check enable" is lost after a reload		
Explanation:	Added "ip helper dhcp-snooping bypass option-82-check enable" cli after dhcp snooping enable/disable in snapshot		
PR	<b>191676</b>	Build:	6.4.6.172.R01
Summary:	OS6850 switch crashed with suspended tasks: tCS_PRB and talpni		
Explanation:	Defensive check added.		
PR	<b>193117</b>	Build:	6.4.6.174.R01
Summary:	768 VPA limit is not enforced in CLI		
Explanation:	Code changes done to log message while creating more than 768 VPA.		
PR	<b>193612</b>	Build:	6.4.6.168.R01
Summary:	Write memory flash synchronization and show configuration snapshot command output issue with OS9700		
Explanation:	Sflow Display Commands will not increase memory utilization		
PR	<b>194646</b>	Build:	6.4.6.181.R01
Summary:	Multiple issues with DHCP Snooping and IP helper		
Explanation:	If dhcp offer packet is received in client vlan by a relay agent, it will be dropped. In this specific customer scenario, since the gateway is made another switch instead of relay agent, offer packet is routed by that switch and sent to relay agent in client vlan. As a work around for this scenario, if allowRoutedReplyOnClientPort is set to 1 , offer packet will not dropped if it is received on client vlan.		
PR	<b>199162</b>	Build:	6.4.6.211.R01
Summary:	DHCP NAK packet not sent by switch acting as DHCP server		
Explanation:	On NAKing the client do subnet broadcast, when there is no relay agent.		
PR	<b>181179</b>	Build:	6.4.6.174.R01
Summary:	Reference PR# 173309: dhcpd server does not propagate global scope:		
Explanation:	DHCP options given in global scope will now be applied to local scope also.		
PR	<b>197568</b>	Build:	6.4.6.214.R01
Summary:	Multicast rp-candidate issue with OS6850E.		
Explanation:	PIM-Bootsrap fragmentation issues fixed		
PR	<b>198536</b>	Build:	6.4.6.210.R01
Summary:	IS-IS state is stuck in "INIT" between AOS and other device		
Explanation:	Changes made to bring Interoperability in isis		
PR	<b>195257</b>	Build:	6.4.6.183.R01
Summary:	DHCP offer packet is not forwarded by OS6450 udp relay		
Explanation:	Per vlan rtr mac destined changes		
PR	<b>194868</b>	Build:	6.4.6.178.R01
Summary:	OS6400 : Lanpower stops working, no logs reported. Available watts shows 0 in lpDumpData () output.		
Explanation:	Fix done to display the correct watts available in lpDumpData().		
PR	<b>196307</b>	Build:	6.4.6.189.R01
Summary:	XON-XOFF protocol gets enabled after reboot		

Explanation: Fix done to disabling the session XON-XOFF protocol by default.

---

PR **185576** Build: 6.4.6.173.R01  
 Summary: OS 6850 crash observed (reference to PR#182942)  
 Explanation: Defensive fix has been added to validate data portion of bcm packet.

---

PR **192263** Build: 6.4.6.190.R01  
 Summary: End user policy is violated when port-security is configured on all the ports.  
 Explanation: End-user profile check is added in LPS source learning.

---

PR **190094** Build: 6.4.6.179.R01  
 Summary: ARP packets dropped before reaching CPU on NI1  
 Explanation: ARP Packets wont be dropped.

## Problems Fixed Between Builds 219 and 278

---

PR **197847** Build: 6.4.6.222.R01  
 Summary: OS9702E HIGH CPU noticed due to SrcLrn Task.  
 Explanation: In OS6850E high cpu seen for the top task is 'SrcLrn' task. - increased the to do expiry from 1 sec to 3 sec.

---

PR **201123** Build: 6.4.6.224.R01  
 Summary: OS6850E: error NI[3/0]: Field 56 in table config is NULL.  
 Explanation: Invalid Error wont be thrown in QoS log.

---

PR **199983** Build: 6.4.6.224.R01  
 Summary: OS9700 10G NI is not working properly.  
 Explanation: Debug provided to track the events during the issue

---

PR **199092** Build: 6.4.6.224.R01  
 Summary: OS9000E (6.4.5.569.R02), mac address displayed in two different ports in the CP table (aaa-device al  
 Explanation: Code changes has been done to update the current timer correctly in case of CP authentication

---

PR **201124** Build: 6.4.6.225.R01  
 Summary: OS6855 power supply trap not proper issue  
 Explanation: Changes done to send psOperable trap when we insert power supply to the unit and power supply is working.

---

PR **201431** Build: 6.4.6.229.R01  
 Summary: Issue with assigning IPV6 static Route.  
 Explanation: IPV6 static route is configured with proper interface and works fine on reload.

---

PR **198801** Build: 6.4.6.230.R01  
 Summary: Loop back Detection feature is not working in OS9000E on Slot-8  
 Explanation: Fix done for proper slot check while configuring LBD

---

PR **201269** Build: 6.4.6.230.R01  
 Summary: OS6850E VRRP IP address is not reachable after NI takeover  
 Explanation: No ping loss for VRRP IP on takeover



PR	<a href="#">198323</a>	Build:	6.4.6.232.R01
Summary:	OS6850: LACP problem with hub in between LACP peers		
Explanation:	Code changes done to attach the port properly when primary NI goes down (with hub in between links)		
PR	<a href="#">197778</a>	Build:	6.4.6.235.R01
Summary:	OS6850E interface goes down and up when the other end switch is rebooting.		
Explanation:	New FPGA version to avoid bringing PHY out of reset to prevent link flapping during switch reboot		
PR	<a href="#">201763</a>	Build:	6.4.6.237.R01
Summary:	OS6850E switch crashed tCS_PRB & SNMPagt task suspended.		
Explanation:	Check the pointer value is valid or not while dumping last 10 SNMP traps to PMD.		
PR	<a href="#">201931</a>	Build:	6.4.6.240.R01
Summary:	Broadcast traffic from other vlans received on the OS6850E mobile port where default vlan restore is		
Explanation:	Fix done to delete the port bit map of the mobile vlan in the hardware when the port becomes as a fixed port from the mobile port.		
PR	<a href="#">202567</a>	Build:	6.4.6.243.R01
Summary:	OS6855 power supply trap is not proper when Power supply is removed		
Explanation:	New trap for insertion and removal of power supply		
PR	<a href="#">197501</a>	Build:	6.4.6.245.R01
Summary:	OS6450 showing many lbdProcessMsg:459 messages in swlogs		
Explanation:	Setting appropriate debug level for LDB switch log message		
PR	<a href="#">203188</a>	Build:	6.4.6.247.R01
Summary:	IGMP General Membership Queries getting sent to queue 0 instead of 4.		
Explanation:	Send IGMP General Membership Queries to queue 4		
PR	<a href="#">203807</a>	Build:	6.4.6.253.R01
Summary:	IGMP gourp messages dropped on mobile/802.1x ports		
Explanation:	After reload, IGMP report packet on mobile port will be learnt properly		
PR	<a href="#">204191</a>	Build:	6.4.6.254.R01
Summary:	boot.cfg.1.err is created after reboot when user password-policy cannot-contain-username enable is a		
Explanation:	Fix the CLI save format for "user password-policy cannot-contain-username enable"		
PR	<a href="#">204064</a>	Build:	6.4.6.255.R01
Summary:	DHCP Server configuration modified after reload		
Explanation:	Update boot.cfg when default vrf is removed from dhcp-server		
PR	<a href="#">204114</a>	Build:	6.4.6.256.R01
Summary:	The command "show ip bgp policy prefix-list" fails to display the output once in every 3 times.		
Explanation:	Fix the display issue with "show ip bgp policy prefix-list" CLI output		



PR	<b>203334</b>	Build:	6.4.6.258.R01
Summary:	100% CPU with task vstkcmm after OS6850 NI takeover		
Explanation:	Fix high CPU seen in vstkcmm on repeated takeover		
PR	<b>204021</b>	Build:	6.4.6.259.R01
Summary:	"OID not increasing" error is noticed while SNMP walk is performed to fetch ERP port status.		
Explanation:	Fix done to avoid the error "OID not increasing" noticed during SNMP walk to fetch ERP port status.		
PR	<b>204237</b>	Build:	6.4.6.260.R01
Summary:	Unable to display serial number of external Power supply in stack from OV2500 inventory page.		
Explanation:	Display serial number of Backup Power supply in secondary and idle units		
PR	<b>204879</b>	Build:	6.4.6.267.R01
Summary:	6850E stack - ERP not converging		
Explanation:	Code changes done to update the ERP ring id properly when NI went down in order to converge the ERP.		
<b>Under Verification:</b>			
PR	<b>189124</b>	Build:	6.4.6.169.R01
Summary:	Permanent MAC cannot be changed from one vlan to another VLAN in the LPS port		
Explanation:	Fix done to allow changing permanent MAC address from one vlan to another VLAN on the LPS port. And do not change tagged vlan of the LPS port during boot up.		
PR	<b>197425</b>	Build:	6.4.6.215.R01
Summary:	Randomly switches losses the SSH and Console access to the switch		
Explanation:	Forcefully deleting sftp task after waiting for certain time at sshd task		
PR	<b>199440</b>	Build:	6.4.6.216.R01
Summary:	Vulnerability in SSLv3 (POODLE / CVE -2014- 3566)		
Explanation:	Disable SSLv3 to mitigate POODLE attack		
PR	<b>199151</b>	Build:	6.4.6.219.R01
Summary:	OS9702E running on the code 6.4.5.528 crashed.		
Explanation:	Dump lat 10 SNMP traps to PMD to aid crash debugging.		
PR	<b>198147</b>	Build:	6.4.6.220.R01
Summary:	Multicast loss for 1 sec if the client sends leave message in the IPMS.		
Explanation:	Reduced delay in processing and egressing out the IGMP Leave Packets in software		
PR	<b>200620</b>	Build:	6.4.6.222.R01
Summary:	LLDPDU crashing the switch 6855-14		
Explanation:	Code changes done to avoid switch crashing while processing the LLDP packets.		
PR	<b>188374</b>	Build:	6.4.6.222.R01
Summary:	duplicate line appear in boot.cfg file		

Explanation: Changes done to prevent MIP overflow in Ethernet service and interfaces modules.

---

PR **200684** Build: 6.4.6.223.R01  
 Summary: Link flapping noticed for the ports of OS6850E switches on NMS.  
 Explanation: Fix done to avoid high CPU in SAA

---

PR **199642** Build: 6.4.6.224.R01  
 Summary: OS9702E crashed when issued slcDumpEvtLog and crash reason Exception in interrupt context  
 Explanation: Fix done to avoid the crash while dumping the "slcDumpEvtLog" from the dshell.

---

PR **198917** Build: 6.4.6.224.R01  
 Summary: high cpu noticed when we poll the device from OV  
 Explanation: Introduction of debug variable to control the healthMonDeviceTrap generated from switch when CPU crosses threshold limits.

---

PR **200234** Build: 6.4.6.226.R01  
 Summary: LLDP traps are generated by the 6850E switches  
 Explanation: Code changes have been done to avoid the traps which are generated by processing Special LLDP packets.

---

PR **201367** Build: 6.4.6.227.R01  
 Summary: PIM SM routing stops after reconvergence in STP ring  
 Explanation: Multicast Traffic loss during the STP convergence is fixed. Multicast source movement from one port to another port will create a proper h/w entry.

---

PR **201241** Build: 6.4.6.228.R01  
 Summary: OS6850E: Issue with ISSU upgrade from 6.4.6.167.R01 to 6.4.6.218.R01.  
 Explanation: During ISSU takeover happens successfully.

---

PR **198594** Build: 6.4.6.229.R01  
 Summary: Error while issuing "write-memory flash synchro" on stack of OS6850E.  
 Explanation: Set longCommandStatus as complete after auto sync.

---

PR **198572** Build: 6.4.6.230.R01  
 Summary: Error "ntpGetResponse: Error 4 (No data available), final pkt"  
 Explanation: Bug fix for NTP peer creation and deletion issue. On NTP peer definition, if passive association exists already with peer, remove this association and instead create an active peering association with same peer. Also fixed the problem in passive peer deletion.

---

PR **199609** Build: 6.4.6.230.R01  
 Summary: OS6850E erp-ring <num> enable command missing after the reboot issue  
 Explanation: erp-ring <num> enable command is exists after reload. No Error will be thrown in boot.cfg.err file

---

PR **199127** Build: 6.4.6.231.R01  
 Summary: DHCP relay issue on MC-LAG with multi-net configuration.  
 Explanation: Relay agent takes the primary vip-address IP configured to the Vlan.

---

PR **198473** Build: 6.4.6.231.R01  
 Summary: High Memory utilization seen on OS9000E with slcMsgHandler task holding the

Explanation:	memory Made the changes to free the allocated memory and added the debug to trace the places wherever memory is allocating and freeing.
PR	<b>191506</b> Build: 6.4.6.232.R01
Summary:	Source Learning task, re-engineering needed due to issue faced under PR 190033
Explanation:	Code changes has been done to reconnect the socket in case of broken pipe between NI and CMM
PR	<b>192052</b> Build: 6.4.6.233.R01
Summary:	OS6450: Need to know TACACS server status in the Omni switch.
Explanation:	Tacacs server down messages will be logged in swlog
PR	<b>199662</b> Build: 6.4.6.233.R01
Summary:	Failover failed with "NI 2 DOWN, Excessive wait for Takeover Ack" and "
Explanation:	Code changes done to handle NI takeover timeout properly for primary NI.
PR	<b>201881</b> Build: 6.4.6.238.R01
Summary:	NTP Vulnerability query - CVE-2014-9293 CVE-2014-9294 CVE-2014-9295 CVE-2014-9296 CVE-2013-5211
Explanation:	Code changes done to fix NTP vulnerabilities CVE-2014-9295 & CVE-2013-5211. Other vulnerabilities (CVE-2014-9293,CVE-2014-9294,CVE-2014-9296) do not affect AOS.
PR	<b>202371</b> Build: 6.4.6.241.R01
Summary:	DTLS Vulnerability query - CVE-2014-3571 CVE-2015-0206
Explanation:	Fixed openssl vulnerabilities CVE-2014-3571 CVE-2015-0206.
PR	<b>199875</b> Build: 6.4.6.249.R01
Summary:	Power supply Display issue-show power shows AC instead of DC supply
Explanation:	Corrected the power supply type display issue
PR	<b>198476</b> Build: 6.4.6.250.R01
Summary:	OS9702E HIGH CPU_IPMEM
Explanation:	Fix high cpu in ipmem due to timers
PR	<b>201216</b> Build: 6.4.6.251.R01
Summary:	802.1x having issues with Random clients
Explanation:	Fix done to avoid the onex and SL table mismatch in case of client is getting moved from supplicant to non-supp and vice versa with the same vlan.
PR	<b>201947</b> Build: 6.4.6.251.R01
Summary:	MAC movement in one VLAN flushing MAC in all VLANs when using 802.1x
Explanation:	Fix done to avoid the onex and SL table mismatch in case of client is getting moved from supplicant to non-supp and again non-suppliant with diff vlan on diff ports
PR	<b>184682</b> Build: 6.4.6.251.R01
Summary:	Linkagg issue in a Vlan stacking configuration
Explanation:	Packets with Double tags egressing out of uni port across Ni will not be losing inner tag .
PR	<b>203221</b> Build: 6.4.6.258.R01

Summary: Radius Accounting Interim updates is not sent in irregular intervals.  
 Explanation: Code changes done to send the radius accounting packets properly for all clients.

---

PR **203222** Build: 6.4.6.258.R01  
 Summary: 802.1x table entry is not deleted though MAC entry is deleted.  
 Explanation: Fix to remove non-suppllicant captive portal entry on timer expiry

---

PR **204275** Build: 6.4.6.260.R01  
 Summary: Multicast stream not forwarded after the firewall fail-over / Source Failover  
 Explanation: Ensure multicast forwarding when source moves from agg to normal

---

PR **203577** Build: 6.4.6.261.R01  
 Summary: Secondary unit of a stack is rebooting after a hard takeover.  
 Explanation: Fix the flash sync flags between primary and secondary unit

---

PR **202351** Build: 6.4.6.262.R01  
 Summary: OS6400 crash with 'memPartAlloc: block too big - 4136 in partition 0x5622c4' messages  
 Explanation: Code change done to fix high memory issue in taSTP task

---

PR **204890** Build: 6.4.6.265.R01  
 Summary: Ipv4 multicast traffic not forwarding after toggling static linkagg  
 Explanation: Ensure multicast forwarding by updating L2MC bitmap when source movement from or to LINKAGG

---

PR **205339** Build: 6.4.6.268.R01  
 Summary: Unable to enable the loopback detection on the slot number 9 to 16  
 Explanation: Enable the loopback detection configuration on the slot number 9 to 16

---

PR **188382** Build: 6.4.6.224.R01  
 Summary: Detach in HW in not re initializing the NI properly after a crash, vlan port bitmap is missing, beca  
 Explanation: Ni re-initialization is handled properly after a sudden crash .

---

PR **201948** Build: 6.4.6.251.R01  
 Summary: MAC address learnt through 802.1x state is Captive-portal CP In-Progress.  
 Explanation: Fix the mac-address table inconsistency after continuous mac move

---

PR **198841** Build: 6.4.6.238.R01  
 Summary: BGP route for multi-hop neighbor learnt correctly but IPRM shows incorrect gateway for this route.  
 Explanation: BGP route for multi-hop neighbor learnt correctly and IPRM shows correct gateway for this route.

---

PR **202046** Build: 6.4.6.238.R01  
 Summary: NTPD Vulnerability: ntpd version 4.2.7 and previous versions allow attackers to overflow several bu  
 Explanation: Code changes done to fix NTP vulnerabilities CVE-2014-9295 & CVE-2013-5211. Other vulnerabilities do not affect AOS.

---

PR **198350** Build: 6.4.6.232.R01  
 Summary: High CPU noticed in UNIT 1 in the stack of 5 switches due to the task UdpRly

Explanation: Code change has been done to check the interface status before processing the dhcp packet.

---

PR [197294](#) Build: 6.4.6.229.R01

Summary: OS6850 crashed with Memory dump file

Explanation: Code change to avoid NULL pointer access.

---

PR [198586](#) Build: 6.4.6.224.R01

Summary: OpenSSH version upgrade query. OS6850E.

Explanation: CVE-2010-5107, CVE-2011-5000, CVE-2010-4755 : Vulnerabilities for OpenSSH 5.0

---

PR [198819](#) Build: 6.4.6.222.R01

Summary: MAC address learnt through 802.1x state is Captive-portal CP In-Progress.

Explanation: Fix done to synchronize the onex and mac table during mac move on different ports with different vlan.

---

PR [203508](#) Build: 6.4.6.266.R01

Summary: I2 C error messages seen in OS 6855 switch

Explanation: Fix high cpu by increase the read delay incrementally in steps when temperature sensor i2c read failures

## Known Issues:

PR [202480](#)

Summary: Need to bypass the authentication for a server when user is in restricted role

Explanation: Implementation of Byod White-list Ip-address

## New Features:

### 1. Configuration File Management

**Hosted AOS SW Release:** 6.4.6.167.R01

#### Introduction:

The configuration file management feature is to modify the configuration file label corresponding to the directory it resides, without affecting any functionality. Earlier when configuration file is retrieved from working and certified directories of Omni switch, they all have the same label as in old directory in the beginning of file regardless if you retrieve the file in working or certified directory. So after retrieving, it's difficult to find from where the configuration file belongs. The operations of existing configuration file management system:

While performing certify and/or synchronization or restoration process in Omni switch the configuration file of source directory will be copied to the destination directory based on the below conditions.

- a) If the configuration file doesn't exist in the destination directory.
- b) The file exists but differs in size and/or time stamp.

If any of the above condition is true, the configuration file will be copied to the destination directory and the timestamp of source directory configuration file will be re-applied on the copied configuration file in destination directory.

After the source configuration file contents copied to destination configuration file, the label in destination configuration file will be modified and the time stamps of source configuration file will be re applied.

**Platforms Supported:**

Omni Switch 6850E  
Omni Switch 6855  
Omni Switch 9000E

**Command Usage:**

While executing the commands in the below table configuration file header should be updated showing the directory it is located and re-apply the source directory configuration file timestamp.

Command	Process Involved
copy working certified	certify process
copy flash-synchro	certify and flash synchronization
copy working certified flash-synchro	certify and flash synchronization
write memory flash-synchro	Save configuration, certify and flash synchronization
copy certified working	Restoring process
show running-directory	Synchronization status

Table 1 - Commands involved in verifying the implementation

**Expected Outcome:**

After issuing certify/synchronization commands mentioned in table 1, the process should complete without any errors and the label inside the boot.cfg file of certified directory should contain certified directory in the label.

Sample output:

```
!=====!  
! File: /flash/working/boot.cfg !  
!=====!
```

After issuing commands for restoring the files (mentioned in table 1), the process should complete without any errors and the label inside the boot.cfg file of working directory should be remain unchanged.

Sample output:

```
!=====!  
! File: /flash/certified/boot.cfg !  
!=====!
```

There should not be any functional impact on existing synchronization status determining logic.

Sample output:

```
Topo(A1)_DUT1 - - >> show running-directory
CONFIGURATION STATUS
Running CMM           : PRIMARY,
CMM Mode              : DUAL CMMs,
Current CMM Slot     : 1,
Running configuration : WORKING,
Certify/Restore Status : CERTIFIED
SYNCHRONIZATION STATUS
Flash Between CMMs   : SYNCHRONIZED,
Running Configuration : SYNCHRONIZED,
Stacks Reload on Takeover : PRIMARY ONLY
```

#### Limitations:

None

## 2. Multicast Dynamic Control (MDC)

---

**Platforms:** OS6850E, OS6855-U24X, OS9E

**Hosted AOS SW Release:** 6.4.6.218.R01

In AOS, IPv4 and IPv6 multicast protocols are by default always copied to CPU. The high CPU usually impacts the normal operations of the Omni Switch protocols such as LACP, ERP.

In Order to resolve this high CPU issue, this feature is introduced to control the processing of the IPv4 multicast protocols.

The processing of all IPv6 multicast protocols is globally controlled by the presence of an IPv6 Interface.

- No IPv6 interface configured  
All protocols in the ff02:0::/32 range are transparently forwarded and not copied to CPU.
- At least one IPv6 interface configured  
All protocol packets in the ff02:0::/32 range are copied to CPU on all vlans irrespective on which vlan

IPv6 interface is enabled.

IGMP packets are copied to CPU based on the global ipms status. When IPMS is globally enabled, IGMP packets are copied to CPU. When IPMS is globally disabled, IGMP packets are not copied to CPU.

MLD packets are copied to CPU based on the global ipms status. When IPMS is globally enabled, MLD packets are copied to CPU. When IPMS is globally disabled, MLD packets are not copied to CPU.

#### Command Usage:

1. To enable/disable global multicast dynamic-control status  
*ip multicast dynamic-control status [{enable|disable}]*



**Guidelines:** By default this status is disabled. If it is enabled, IPv4 multicast well-known protocol packets alone will be trapped to CPU and the other multicast packets will be dropped. Well-known IPv4 protocols are given below in Note section

2. To enable/disable multicast dynamic-control drop-all status  
*ip multicast dynamic-control drop-all status [{enable/disable}]*

**Guidelines:** By default this status is disabled. If it is enabled, all ipv4 multicast packets including ipv4 multicast well-known protocol packets will be dropped.

Note:

- Drop-all status can be enabled only after enabling global dynamic control status.
- Below are the well-known IPv4 multicast protocol packets,
 

OSPF:	224.0.0.5/32 + IP protocol 89
OSPF:	224.0.0.6/32 + IP protocol 89
VRRP:	224.0.0.18/32 + IP protocol 112
RIPv2:	224.0.0.9 + UDP port 520
PIM:	224.0.0.13/32
DVMRP:	224.0.0.4/32

### Examples

```
ip multicast dynamic-control status enable
ip multicast dynamic-control status disable
```

```
ip multicast dynamic-control drop-all status enable
ip multicast dynamic-control drop-all status disable
ip multicast status enable
ip multicast status disable
ipv6 multicast status enable
ipv6 multicast status disable
```

```
->show ip multicast
Status                = enabled,
Querying              = enabled,
Proxying              = disabled,
Spoofing              = disabled,
Zapping              = disabled,
Querier Forwarding   = disabled,
Flood Unknown        = disabled,
Dynamic control status = disabled,
Dynamic control drop-all status = disabled,
Buffer Packet        = disabled,
Version              = 2,
Robustness           = 7,
Query Interval (seconds) = 125,
Query Response Interval (tenths of seconds) = 100,
Last Member Query Interval (tenths of seconds) = 10,
Unsolicited Report Interval (seconds) = 1,
Router Timeout (seconds) = 90,
Source Timeout (seconds) = 30,
Max-group            = 0,
Max-group action     = none
Helper-address       = 0.0.0.0
```

```
->show configuration snapshot ipms
```

! IPMS :

```
ip multicast dynamic-control status enable
ip multicast dynamic-control drop-all status enable
```

#### Limitations

- The proposed solution does not address the DOS attack concern
- Injecting a high rate of well-known protocol on a port will still cause a high CPU.
- Dynamic-Control “drop-all” feature should not be enabled if a routing protocol or VRRP is configured on the Omni-Switch as protocol packet will be dropped.

### 3. DHCP SERVER PER VRF

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**Platforms:** OS6850E, OS6855-U24X, OS9E

**Hosted AOS SW Release:** 6.4.6.218.R01

The internal DHCP server was initially only supported on the default VRF. Now, the internal DHCP server can be supported on multiple VRFs, including the default VRF. The switch still supports a single instance for the internal DHCP server that is unaware of the VRFs. This means the DHCP scopes are common for all VRFs. A new command is implemented to configure the VRFs on which the internal DHCP server is active, also giving flexibility to include or exclude the default VRF. By default, the internal DHCP server is only active on the default VRF.

#### Command Usage

1. To enable/disable/restart internal DHCP server  
-> dhcp-server {enable | disable | restart}

#### Guidelines

This command controls the single internal DHCP server instance and impacts all configured VRFs.

2. To include a given VRF in the internal DHCP server  
-> dhcp-server vrf {default | vrfname}

#### Guidelines

The command checks the given VRF name exists.

To add multiple VRFs, invoke the command for each VRF.

The command “dhcp-server vrf default” is optional as the internal DHCP server is by default active on the default VRF.

3. To exclude a given VRF from the internal DHCP server  
-> dhcp-server no vrf {default |vrfname}

#### Guidelines

To add multiple VRFs, invoke the command for each VRF.

4. To display the configuration of Internal DHCP Server.  
-> show dhcp-server config

#### Guidelines

The command displays:

- The global status of the internal DHCP server
- The list of VRFs on which the internal DHCP server is active

#### Examples

Enable Internal DHCP Server on Default VRF

```
-> dhcp-server enable
-> show dhcp-server config
    DHCP-SERVER Status : Enabled
    VRF                  : default
```

Note: When DHCP server is disabled, the default VRF is not displayed. This will be displayed only if default VRF is explicitly configured

```
-> dhcp-server disable
-> show dhcp-server config
    DHCP-SERVER Status : Disabled
    VRF                  :
-> dhcp-server vrf default
-> show dhcp-server config
    DHCP-SERVER Status : Enabled
    VRF                  : default
```

Enable Internal DHCP Server on VRF “default” and “abc”

```
-> vrf abc
-> dhcp-server vrf abc
-> dhcp-server enable

-> show dhcp-server config
    DHCP-SERVER Status : Enabled
    VRF                  : default ,abc
```

Enable Internal DHCP Server on VRF “default”, “abc” and “xyz”

```
-> vrf abc
-> vrf xyz
-> dhcp-server vrf abc
-> dhcp-server vrf xyz
-> dhcp-server enable

-> show dhcp-server config
    DHCP-SERVER Status : Enabled
    VRF                  : default ,abc ,xyz
```

Enable Internal DHCP Server on VRF “abc” only

```
-> vrf abc
-> vrf xyz
-> dhcp-server vrf abc
-> dhcp-server no vrf default
-> dhcp-server enable

-> show dhcp-server config
    DHCP-SERVER Status : Enabled
    VRF                  : abc
```

### Limitations

- The MAX\_VRF count supported on hardware dictates the choice of VRF on which the Internal DHCP Server can be activated.
- Enabling Internal DHCP Server on VRF <vrfname> takes precedence over DHCP relay and hence DHCP relay would not work this VRF

## 4. DHCP Snooping Global Mode

---

**Platforms:** OS6850E, OS6855, OS9000E

**Hosted AOS SW Release:** 646.278.R01

In order to have the DHCP snooping feature operational, the hardware must first identify DHCP packet and trap such packet to CPU for software processing.

Currently, the hardware identifies a DHCP packet as follow:

- Source UDP port = 67 and Destination UDP port = 68  
Or
- Source UDP port = 68 and Destination UDP port = 67

These hardware settings are optimized for all the DHCP snooping use cases, and have the property that any DHCP transactions between a Relay Agent Router and the DHCP Server using a source and destination UDP port 67 are transparently forwarded by hardware. This allows a L2 switch or L3 router in the path between the Relay Agent Router and the DHCP server to be configured with DHCP snooping and still forward the DHCP Relay message.

However, these settings do not allow the detection of a DHCP rogue server that may be connected on a DHCP snooping switch in the path between the Relay Agent Router and the actual DHCP server. One important function of the DHCP snooping feature is to discard DHCP Reply received on client ports. In this specific case, the rogue DHCP server will reply with both source and destination UDP port 67 to the Relay Agent and Reply will be transparently forwarded by hardware.

In this new AOS release, a new hardware mode is configurable to also identify DHCP packet with source and destination UDP port 67.

This is only configurable with a debug variable “debug set udpGblSbUturn 3” in the AlcatelDebug.cfg.

In this mode, DHCP packet with source and destination UDP port 67 will be processed by software and bridged or routed accordingly.

### Usage:

In AlcatelDebug.cfg

```
debug set udpGblSbUturn { 0 | 3}
```

### Recommendation:

It is still recommended to only use the default mode (udpGblSbUturn=0) as the new mode will add extra load on the system as all DHCP packets will be processed.

As workaround for the rogue DHCP rogue server issue, it is recommended to use the “qos user-port filter dhcp-server” or “qos user-port shutdown dhcp-server” feature to protect the switch against DHCP reply on the ports configured on the “qos port group UserPorts”

### Limitations:

None

## 5. SSH PORT

**Platforms:** OS6850E, OS9000E, OS6855

**Hosted AOS SW Release:** 646.278.R01

In the existing implementation, AOS uses the default SSH TCP port (port 22) to establish an SSH session.

With the new implementation, when the user configures the TCP port number for SSH session, it will be saved in the switch file “/flash/network/sshConfig.cfg”. In order to use the configured port number while establishing the SSH session, the switch must be rebooted.

While the switch boots up, if the file “/flash/network/sshConfig.cfg” exists, it will be parsed to read the TCP port number that should be used to establish the SSH session, otherwise the default SSH TCP port shall be used.

### Usage

Command to configure TCP-PORT number for establishing SSH Session.

```
ssh tcp-port <port-number>
```

<port-number >in the range 0-65535

**Example:** ssh tcp-port 35

Note: Well-known reserved TCP port numbers and the IP ports which are internally used in AOS are excluded in assigning to SSH TCP port.

### Limitations

- Switch must be rebooted after configuring the TCP port number so as to use the configured TCP port number when establishing SSH sessions.
- Well-known reserved TCP port numbers(ports 20,21,23,25,69,80,161,389,443) and the IP ports which are internally used(defined in system\_ipport.sh) are excluded in assigning to SSH TCP port. Error will be thrown when these ports are tried to be configured for SSH port.

## New Hardware:

### 1. Dual-Speed Ethernet Transceivers

**Platforms:** OS6850E,OS9700E

Dual speed SFP optical transceiver with following specifications tested for support.

#### SFP-DUAL-MM

Dual-Speed SFP Optical Transceiver.

Connector	Type LC
Standards Supported	802.3z, 802.3ah, SFP MSA
Connections Supported	100Base-FX, 1000Base-LX
Fiber Type	MMF

Wavelength	1310 nm
Average Power Output	100Base-FX: -20 to -14 dBm 1000Base-LX: -11.5 to -3 dBm
Receiver Sensitivity	100Base-FX: -28 dBm 1000Base-LX: -22 dBm
Transmission Distance	550 m at 1000 Mbps 2 km at 100 Mbps
Operating Temperature	0°C to 70°C
Digital Diagnostic Monitoring Not Supported	