# Omni Switch 6850E/ 6855 / 9000E

## Release 6.4.6.440.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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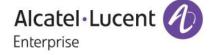
<mark>Problems F</mark>	Fixed Between Builds 126 and 167			
PR Summary: Explanation:	184858Build:6.4.6.126.R01DDM threshold temperature alarm.Code changes done to prevent warning message until SFP reads the exact DDM values.			
PR	<b>184393</b> Build: 6.4.6.126.R01			
Summary:	After power cycle the snmp access is allow for few minutes without aaa			
Explanation:	authentication default I 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: Explanation:	Unable to retrieve entire Mac-address table per port through SNMP 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: Explanation:	OS6850 stack switch has been crashed "tCS_PRB & talpni" task is suspended. changes done to drop the ARP packets received on high gig port			
PR	<b>187475</b> Build: 6.4.6.127.R01			
Summary: Explanation:	Show interfaces link-monitoring statistics command not executing past interface 3/42 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: Explanation:	Issue with DHCP-snooping			
	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.			
	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.			
PR Summary:	<b>185616</b> Build:6.4.6.128.R01Traffic 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: Explanation:	Issues getting the SFP-DUAL-MM 100/1000 SFP to run at 100Mb in a 6850E setup Changes done to support 100 Mbps in SFP-DUAL-MM on combo ports			



PR	<b>184284</b> Build:	6.4.6.128.R01	
Summary:	Repeated crash on the stack.		
Explanation:		interrupts in such a way that it does not cause any	
	abnormal system hang.		
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 iss		
Explanation:	STP Ni and CMM task comm	unication optimised.	
PR	186466 Build:	6.4.6.129.R01	
Summary:	Unable to generate the trap 2		
Explanation:	Added debug trap for chassis	backup power supply (BPS) state change	
PR	185448 Build:	6.4.6.130.R01	
Summary:	ERP ring got blocked due to L PMD file with suspend.	JDLD flood and switch got crashed with generating	
Explanation:		or aggregate port or tagged aggregate port	
PR	<b>187130</b> Build:	6.4.6.131.R01	
Summary:		versed with port 1/44 and vice versa	
Explanation:	Code changes done to mappi	ng the phy port to device channel in proper order	
PR	<b>187370</b> Build:	6.4.6.132.R01	
Summary:		report on MVRP-registered VLAN	
Explanation:	Updating dynamic vlans inforr	nation to IPMS.	
PR	188541 Build:	6.4.6.133.R01	
Summary:	•	di TLV not advertised on OS6850E	
Explanation:	Fix done to retrieve correct port power and priority info for appropriate PoE controlle for 6850E and 6855 switches to perform power negotiation over lldp.		
PR	184369 Build:	6.4.6.133.R01	
Summary:	Interface Alias information in s	swlog event when link goes UP/DOWN	
· · · · <b>·</b> · · · · · · · · · · · · · ·	for the all AOS product which	1	
Explanation:	Code changes for including the interface alias name information in the swlog		
	messages. When port link sta	tus changes up/down.	
PR	188695 Build:	6.4.6.134.R01	
Summary:	Issue with ip dos anti-spoofing clear command.		
Explanation:	statistics command will not ch	ange 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 droppe		
Explanation:	firewall 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: Explanation:	Port Monitoring Issue. Removal of ambiguous message, from show port monitoring file output.		
PR	<b>188684</b> Build: 6.4.6.135.R01		
Summary: Explanation:	DHCP hanging issue 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.		
Explanation:	Controlling the snapshot of NTP configuration to store the IP address		
PR	<b>187504</b> Build: 6.4.6.135.R01		
Summary: Explanation:	CPU at 97% with task bcmRx and taUdpRelay hogging the CPU DHCP ACK'sWill not be flodded in the network by the neighboring Relay agents		
PR Summary: Explanation:	190680Build:6.4.6.137.R01Specific "system contact" command raises boot.cfg.1.err on next rebootChanges has been made to store string in boot.cfg in double quotes irrespective ofspecial symbols (',' '?' '!', which will consider as delimiter)		
PR	<b>189730</b> Build: 6.4.6.138.R01		
Summary: Explanation:	OS6855 allows the command to change mode to OS6850E. changes are done to not allow command to change stack mode in 6855.		
PR	<b>190576</b> Build: 6.4.6.140.R01		
Summary: Explanation:	ip helper dhcp-snooping option-82 command not saved in boot.cfg error will be thrown if dhcp-snooping related configurations are done before enabling snooping		
PR	<b>190971</b> Build: 6.4.6.146.R01		
	"zcSend" CODE 3997698 0x3d0002" error seen in logs and unable to save the		
Summary:	configuration		
Explanation:	Merge done in 645R02 for to avoid the webview permanent		
	stuck due to temporary socket errors and hence webview		



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PR	<b>181549</b> Build: 6.4.6.147.R01		
	SSH vulnerabilities in OS9800: SSL Version 2 (v2) Protocol Detection which		
Summary:	reportedly suffers from s		
Explanation:	Disabled the ssl-v2 support due to vulnerabilities		
PR	<b>190230</b> Build: 6.4.6.148.R01		
Summary:	VRRP tracking commands getting cleared on a stack of OS6850E switches when primary unit reloads. Validation of slot availability is avoided during reload and takeover		
Explanation:			
PR	<b>189881</b> 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.		
PR	<b>170503</b> Build: 6.4.6.150.R01		
Summary:	dshell is currently in use, try again later; CHASSIS warning unable to post		
Explanation:	semaphore, 6250 over memo Recover dshell for debug purpose		
PR	<b>190900</b> 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:	Stack. inIndex is updated with the correct ifIndex value from where the display has to be continued when there is a overflow		
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>185998</b> Build: 6.4.6.152.R01		
Summary:	Finisar 10Gig SFP is not working with VFL link however same SFP transciever is		
Explanation:	working with non-VFL Changes made to support VFLs on 1G/10G Finisar dual speed 1g/10g SFP		
	(FTLX8571D3BCV-AF).		

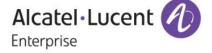
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PR	<b>186908</b> Build: 6.4.6.147.R01		
Summary:	Switch crashing because of vlan name length.		
Explanation:	The size of the data structure that holds the VLAN name was increased to avoid		
	overflow.		
PR	<b>190033</b> Build: 6.4.6.139.R01		
Summary:	NIs on 9700E down, Multiple PMDs generated.		
Explanation:	Increase the slbProbe task priorty so that it can compete for CPU attention.		
PR	<b>192062</b> Build: 6.4.6.154.R01		
Summary:	onex_process_aging(862): incoming msg for port 3007, reason 12, mac 0x336092f0, vlanld 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>191795</b> Build: 6.4.6.144.R01		
Summary:	Static route not showing the snapshot but however throwing the message "Static		
Explanation:	route already exists" Including the entry causing mip_overflow in show configuration snapshot ip-routing.		
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>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:	deleted. When qos is added or deleted switch wont crash.		
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 loopbacked when hash-control non-ucast is enabled.		



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>185296</b> Build: 6.4.6.130.R01		
Summary:	TACACS Authorization not working properly when server becomes unreachable an		
Explanation:	then becomes reachable Tacacs authorsiation will be handled properly during the change in server status from		
1			
	unreachable to reachable.		
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>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>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>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>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 -1.		
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		
Explanation:	6.6.3.R01 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

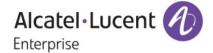
VTP DTP

PVST

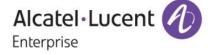
VLAN

UPLINK

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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		
			or IPC transmission. This result in crash on the system
			Zero. We have done code changes for validating the
	length of the	buffer before se	nding to the destination Application.
PR	188896	Build:	6.4.6.134.R01
Summary:	High CPU on	distribution swit	ches and DHCP issue on OS9 core switches
Explanation:			ying to resolve the incomplete ARPs
PR	187480	Build:	6.4.6.133.R01
Summary:	OS6850E un	able to certify the	e switches after the daylight changes are applied.
Explanation:	Code change	es done to perfor	m CERTIFY process successfully when DST is enabled
PR	186966	Build:	6.4.6.139.R01
Summary:	Unable to issue command through GUI		
			from chassis mib when the stacking is disabled-so that
	the copy wor	king certified from	m flash-sync applied successfully
PR	191587	Build:	6.4.6.142.R01
Summary:	IGMP traffic not received, when port security is disabled.		
Explanation:	Receiving IGMP traffic with port-security disabled.		
	5		,
PR	189534	Build:	6.4.6.137.R01
PR Summary:	Reachability	issue with ERP s	setup with LACP Linkagg.
	Reachability	issue with ERP s	



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		
Explanation:	interface. When the port physically goes down it should not be displayed in "show spantree active ports" output		
PR	<b>186157</b> Build: 6.4.6.137.R01		
Summary: Explanation:	Configuration of SHA+AES on OS 9702E to work with whatsup Gold. Code changes done to fix SHA/AES for snmpv3		
PR	<b>185058</b> Build: 6.4.6.136.R01		
Summary: Explanation:	tDvmrp0 ,tCsCSMtask2 and tCS_PRB. These are the tasks suspended and locked. Fix to avoid null pointer access		
PR	<b>184739</b> Build: 6.4.6.134.R01		
Summary: Explanation:	Change the frequency of swlog messages. Code changes has been done for changing the frequency of printing low flash messages in swlog.		
PR	<b>184689</b> Build: 6.4.6.149.R01		
Summary: Explanation:	qos trust Port got shutdown with protocol dhcp-server or dns-reply While processing for QOS shutdown, process only first packet of fragmented packet and not all the fragmented packets		
PR	<b>189170</b> Build: 6.4.6.141.R01		
Summary: Explanation:	Gbic "type" information missing in the Inventory in OV for 6450 & 6850E Changes are done to display GBIC type information in OV.		
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>189848</b> Build: 6.4.6.149.R01		
Summary: Explanation:	SFP showing incorrect DDM value. Fix done to show proper DDM value		
PR	<b>189990</b> Build: 6.4.6.165.R01		
Summary: Explanation:	ISFP is flapping in stack of OS6855-U24X. Changes done to avoid iSFP flapping in stack of OS6855-U24X.		
PR	<b>192654</b> Build: 6.4.6.160.R01		
Summary: Explanation:	OS6850-802.1X users did not display in show command. Fix done to display all the onex clients information in global display when there are forced authorized ports present.		



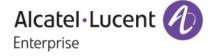
Problems	s Fixed Between Builds 168 and 218		
PR	<b>185794</b> Build: 6.4.6.168.R01		
Summary:			
Explanation:	Additional debug addition for crash issue.		
PR	<b>193213</b> Build: 6.4.6.169.R01		
Summary:	port status trap regarding up/down is not working		
Explanation:	Port status trap is set to display at swlog info level when trap is en	abled for that port.	
PR	<b>189124</b> Build: 6.4.6.169.R01		
Summary:	Permanent MAC cannot be changed from one vlan to another VL/		
Explanation:	Fix done to allow to change 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>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 trunk port 1/23. M	c is shown on port	
Explanation:	Added a recovery mechanism to reopen malfunctioning IPC socke	et.	
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: Explanation:	Duplicate primary and secondary switch were noticed after we reload the entire stack 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 m	obile 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	e Cli guide for	
Explanation:	"session prompt default 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		

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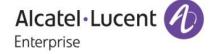
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PR	<b>189784</b> Build: 6.4.6.174.R01			
Summary:	Switch memory utilization increases and exceeds threshold.			
Explanation:	Code changes are done to prevent IPC congestion between STP CMM and STP NI			
PR	<b>194004</b> Build: 6.4.6.175.R01			
Summary:	Output of show interface link-monitoring statistics missing few interfaces in all chassis after 3rd input.			
Explanation:	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: Explanation:	Issue with MC-Lag consistency Implementation of ToDo List to process MCM consistency			
	TLVs.			

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PR Summary: Explanation:	-		6.4.6.182.R01 one of the 2 OS9000E Core switches in MC-LAG onsistency in Mclag is resolved.
PR Summary: Explanation:			6.4.6.184.R01 without any apparent reason. for Ethernet service.
PR Summary: Explanation:	<b>195554</b> IP phone getting t Fix done to get th		
PR Summary: Explanation:	<b>195392</b> Memory leak in 6 Buffer free is hand		6.4.6.186.R01 Ill error cases.
PR Summary: Explanation:	down		6.4.6.187.R01 ches, seeing newly added vlans as operational STG state properly for the linkagg's in ERP NI.
PR Summary: Explanation:	secondary when a creation etc) is do	e to propagate th a specific configu- one.Hence when reload status is o	e value of global variable from primary to iration change ( like interface admin down or vlan PS is removed (or if primary unit goes down displayed as "ALL STACK" in show running-
PR Summary: Explanation:	<b>193396</b> Connectivity issue Depth Configuring		6.4.6.189.R01 g the QoS for ingress bandwidth in OS9702E. Iware.
PR Summary: Explanation:			6.4.6.190.R01 arnt however authentication is successful. authenticated mac addresses in the mac address
PR Summary: Explanation:		-	6.4.6.194.R01 oad even LBD configuration is present in boot.cfg. enable the loopback detection in standalone OS97E
PR Summary: Explanation:	so it won't re		6.4.6.194.R01 0.1 (captive portal) when 802.1x is not configured, dress 10.123.0.1 is not sent out when 802.1x is not



PR	<b>196450</b> 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		
PR	<b>196448</b> 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.		
PR	<b>191402</b> 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 datastructure 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" Fix to avoid internal ftp hung issue during flash-synchro causing CVM timeout		
Explanation:			
PR	<b>199440</b> Build: 6.4.6.216.R01		
Summary:	Vulnerability in SSLv3 (POODLE / CVE20143566)		
Explanation:	Disable SSLv3 to mitigate POODLE attack		
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		
	timezone 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 OS97E & OS6850E		
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		

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PR Summary: Explanation:	<b>197425</b> Build:6.4.6.215.R01Randomly switches losses the SSH and Console access to the switchForcefully deleting sftp task after waiting for certain time at sshd task
PR Summary: Explanation:	195956Build:6.4.6.194.R01LACP configuration lost instead of UDLD after software updatingNow the configurations of LACP can be done prior to the UDLD configurations.
PR Summary: Explanation:	195083Build:6.4.6.182.R01OpenSSL vulnerabilityCVE-2014-0224 and CVE-2014-0160OpenSSL vulnerabilityCVE-2014-0224 and CVE-2014-0160 has been handled.
PR Summary: Explanation:	<b>196326</b> Build:6.4.6.190.R01WCCP configuration get enabled after the reloadWCCP configuration are proper after reload
PR Summary: Explanation:	<b>199015</b> Build:6.4.6.211.R01BFD interfaces goes down due to high CPU; will not re-establish automatically.BFD sessions are getting re-established once the CPU usage becomes normal
PR Summary: Explanation:	182718Build:6.4.6.194.R01Max command lengths are 250 for accounting and 259 for authorizationThe 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 accountingis succeeded.
PR Summary: Explanation:	191570Build:6.4.6.180.R01L3 slow path CPU processed packets caused network instability (CPU running at 100% utilization)9By 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 Summary: Explanation:	<b>193117</b> Build:6.4.6.174.R01768 VPA limit is not enforced in CLICode changes done to log message while creating more than 768 VPA.
PR Summary: Explanation:	<b>191676</b> Build: 6.4.6.172.R01 OS6850 switch crashed with suspended tasks: tCS_PRB and talpni Defensive check added.
PR Summary: Explanation:	193612Build:6.4.6.168.R01Write memory flash synchronization and show configuration snapshot command output issue with OS9700Sflow Display Commands will not increase memory utilization



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
Explanation:	tech-support files. Added ?show qos statistics? and ?show qos config? commands in tech-support (layer3) log files.
PR	<b>194646</b> Build: 6.4.6.181.R01
Summary: Explanation:	Multiple issues with DHCP Snooping and IP helper 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>194549</b> Build: 6.4.6.179.R01
Summary: Explanation:	"ip helper dhcp-snooping bypass option-82-check enable" is lost after a reload Added "ip helper dhcp-snooping bypass option-82-check
	enable" cli after dhcp snooping enable/disable in snapshot
PR	<b>199162</b> Build: 6.4.6.211.R01
Summary: Explanation:	DHCP NAK packet not sent by switch acting as DHCP server On NAKing the client do subnet broadcast, when there is no relay agent.
PR	<b>181179</b> Build: 6.4.6.174.R01
Summary: Explanation:	Reference PR# 173309: dhcpd server does not propagate global scope: DHCP options given in global scope will now be applied to local scope also.
PR	<b>185576</b> 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	<b>190094</b> Build: 6.4.6.179.R01
Summary: Explanation:	ARP packets dropped before reaching CPU on NI1 ARP Packets wont be dropped.
PR	<b>192263</b> Build: 6.4.6.190.R01
Summary: Explanation:	End user policy is violated when port-security is configured on all the ports. End-user profile check is added in LPS source learning.
PR	<b>198536</b> Build: 6.4.6.210.R01
Summary: Explanation:	IS-IS state is stuck in "INIT" between AOS and other device Changes made to bring Interoperability in isis
PR	<b>195257</b> Build: 6.4.6.183.R01
Summary: Explanation:	DHCP offer packet is not forwarded by OS6450 udp relay Per vlan rtr mac destined changes



PR	196307	Build:	6.4.6.189.R01
Summary:	XON-XOFF protocol gets enabled after reboot		
Explanation:	Fix done to c	disabling the sess	sion XON-XOFF protocol by default.
PR	194868	Build:	6.4.6.178.R01
Summary:	OS6400 : La lpDumpData		orking, no logs reported. Available watts shows 0 in
Explanation:	• •	· ·	t watts available in lpDumpData().
PR	197568	Build:	6.4.6.214.R01
Summary:	Multicent we	candidate issue v	

Explanation:	PIM-Bootsrap fragmentation issues fixed

#### **Problems Fixed Between Builds 219 and 278**

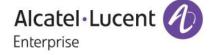
PR	188374	Build:	6.4.6.222.R01
Summary:	duplicate line appear in boot.cfg file		
Explanation:	Changes done to prevent MIP overflow in ethernet service and interfaces modules.		

PR	197847	Build:	6.4.6.222.R01	
Summary:	OS9702E HIGH	CPU noticed du	e to SrcLrn Task.	
Explanation:		cpu seen for th	e top task is 'SrcLrn' task increased the to	do
PR	198586	Build:	6.4.6.224.R01	
Summary:	OpenSSH versio	n upgrade query	/. OS6850E.	
Explanation:	•		0, CVE-2010-4755 : Vulnerabilities for Open	SSH 5.0
PR	201123	Build:	6.4.6.224.R01	
Summary:	OS6850E: error I	NI[3/0]: Field 56	in table config is NULL.	
Explanation:	Invalid Error won	t be thrown in Q	loS log.	
PR	199983	Build:	6.4.6.224.R01	
Summary:	OS9700 10G NI i	s not working p	roperly.	
Explanation:	Debug provided t	o track the ever	nts during the issue	
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
Explanation:	Ni re-initialization is handled properly after a sudden crash .



PR	<b>199642</b> Build: 6.4.6.224.R01		
	OS9702E crashed when issued ?slcDumpEvtLog? and crash reason ?Exception in		
Summary:	interrupt context?		
Explanation:	Fix done to avoid the crash while dumping the "slcDumpEvtLog" from the dshell.		
PR	<b>201124</b> Build: 6.4.6.225.R01		
Summary: Explanation:	OS6855 power supply trap not proper issue Changes done to send psOperable trap when we insert power supply to the unit and power supply is working.		
PR	<b>200234</b> Build: 6.4.6.226.R01		
Summary:	LLDP traps are generated by the 6850E switches		
Explanation:	Code changes has been done to avoid the traps which are generated by processing Special LLDP packets.		
PR	<b>201367</b> Build: 6.4.6.227.R01		
Summary:	PIM SM routing stops after re-convergence 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	<b>201241</b> Build: 6.4.6.228.R01		
Summary: Explanation:	OS6850E: Issue with ISSU upgrade from 6.4.6.167.R01 to 6.4.6.218.R01. During ISSU takeover happens successfully.		
PR	<b>197294</b> Build: 6.4.6.229.R01		
Summary:	OS6850 crashed with Memory dump file		
Explanation:	Code change to avoid NULL pointer access.		
PR	<b>201431</b> Build: 6.4.6.229.R01		
Summary: Explanation:	Issue with assigning IPV6 static Route. IPV6 static route is configured with proper interface and works fine on reload.		
PR	<b>198594</b> 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	<b>198572</b> 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	<b>198801</b> 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	<b>199609</b> Build:	6.4.6.230.R01
Summary: Explanation:		command missing after the reboot issue s exists after reload. No Error will be thrown in
PR	<b>201269</b> Build:	6.4.6.230.R01
Summary: Explanation:	OS6850E VRRP IP address is not No ping loss for VRRP IP on takeo	
PR	<b>199127</b> Build:	6.4.6.231.R01
Summary: Explanation:	DHCP relay issue on MC-LAG with Relay agent takes the primary vip-a	-
PR	<b>191506</b> Build:	6.4.6.232.R01
Summary: Explanation:	<b>u</b>	ng needed due to issue faced under PR 190033 econnect the socket in case of broken pipe
PR	<b>192052</b> Build:	6.4.6.233.R01
Summary: Explanation:	OS6450: Need to know TACACS s Tacacs server down messages will	
PR	<b>201763</b> Build:	6.4.6.237.R01
Summary: Explanation:	OS6850E switch crashed tCS_PRE Check the pointer value is valid or r	3 & SNMPagt task suspended. not while dumping last 10 SNMP traps to PMD.
PR	<b>201881</b> Build:	6.4.6.238.R01
Summary:	NTP Vulnerability query - CVE-201 2014-9296 CVE-2013-5211	4-9293 CVE-2014-9294 CVE-2014-9295 CVE-
Explanation:	Code changes done to fix NTP vulr	nerabilities CVE-2014-9295 & CVE-2013-5211. 93,CVE-2014-9294,CVE-2014-9296) do not affect
PR	<b>201931</b> Build:	6.4.6.240.R01
Summary:	Broadcast traffic from other vlans re default vlan restore is	eceived on the OS6850E mobile port where
Explanation:		of the mobile vlan in the hardware when the port nobile port.
PR	203188 Build:	6.4.6.247.R01
Summary: Explanation:	IGMP General Membership Querie Send IGMP General Membership (	s getting sent to queue 0 instead of 4. Queries to queue 4



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>203807</b> Build: 6.4.6.253.R01		
Summary:	IGMP group messages dropped on mobile/802.1x ports		
Explanation:	After reload, IGMP report packet on mobile port will be learnt properly		
PR	<b>204191</b> 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	<b>204064</b> 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	<b>204114</b> 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>204275</b> 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	<b>204890</b> Build: 6.4.6.265.R01		
Summary:	[TYPE1] 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	<b>203508</b> 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		
	sonson izo i cau tallules		



PR	<b>205339</b> 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	<b>202371</b> Build: 6.4.6.241.R01
Summary:	DTLS Vulnerability query - CVE-2014-3571 CVE-2015-0206
Explanation:	Fixed open ssl vulnerabilities CVE-2014-3571 CVE-2015-0206.
PR	<b>198323</b> 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	<b>198473</b> Build: 6.4.6.231.R01
Summary:	High Memory utilization seen on OS9000E with slcMsgHandler task holding the memory
Explanation:	Made the changes to free the allocated memory and added the debug to trace the
	places wherever memory is allocating and freeing.
PR	<b>198819</b> Build: 6.4.6.222.R01
Summary:	MAC address learnt though 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	<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>202567</b> 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	<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>197778</b> 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	<b>197501</b> 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 Summary: Explanation:	204237Build:6.4.6.260.R01Unable to display serial number of external Power supply in stack from OV2500inventory page.Display serial number of Back up Power supply in secondary and idle units
PR Summary: Explanation:	204879Build:6.4.6.267.R016850E stack - ERP not convergingCode changes done to update the ERP ring id properly when NI went down in orderto converge the ERP.
PR Summary: Explanation:	<b>199151</b> Build:6.4.6.219.R01OS9702E running on the code 6.4.5.528 crashed.Dump lat 10 SNMP traps to PMD to aid crash debugging.
PR Summary: Explanation:	200684Build:6.4.6.223.R01Link flapping noticed for the ports of OS6850E switches on NMS.Fix done to avoid high CPU in SAA
PR Summary: Explanation:	<b>198917</b> Build:6.4.6.224.R01high cpu noticed when we poll the device from OVIntroduction of debug variable to control the healthMonDeviceTrap generated fromswitch when CPU crosses threshold limits.
PR Summary: Explanation:	201947Build:6.4.6.251.R01MAC movement in one VLAN flushing MAC in all VLANs when using 802.1xFix done to avoid the onex and SL table mismatch in case of client is getting movedfrom supplicant to non-supp and again non-supplicant with diff vlan on diff ports
PR Summary: Explanation:	199092Build:6.4.6.224.R01OS9000E (6.4.5.569.R02), mac address displayed in two different ports in the CPtable (aaa-device alCode changes has been done to update the current timer correctly in case of CPauthentication

## **Problems Fixed Between Builds 279 and 302**

PR	205639	Build:	6.4.6.282.R01
Summary:	OS6850E	- Port-Security issue	е
Explanation:	Changes t	o drop ARP based o	on LPS state

PR	205761	Build:	6.4.6.288.R01
Summary:	code upgrade to	6.4.6.218.	8v Invalid" message seen on OS6855-14 after
Explanation:		message on 48V	if proper POE PS is connected to OS6855-

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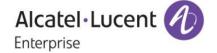


PR	<b>205580</b> Build:	6.4.6.288.R01
Summary:	DHCP client not getting ip address tunnel.	from DHCP server when traffic is through GRE
Explanation:	Send GRE with DHCP packet to up	dp relay context in IPEDR
PR	<b>205756</b> Build:	6.4.6.289.R01
Summary:	Auth server down: 802.1x user-nar Server reachable fails	ne and MAC not updated on user authentication.
Explanation:	Fix the inconsistency between 802 context	.1x table and source learning when deleting
PR	<b>205524</b> Build:	6.4.6.289.R01
Summary:		-supplicant when Auth-server Down UNP policy.
Explanation:	Do not reauthenticate non supplica	ints until server reachable when autheserv down
PR	<b>207966</b> Build:	6.4.6.299.R01
Summary:	Switch crashed with the task Onex	and tcs_prb suspended.
Explanation:	Code changes done to avoid onex devices classified under auth serve	crash during re-authentication of non-supplicant er timeout policy.
PR	<b>208280</b> Build:	6.4.6.300.R01
Summary:		y time when `show saa statistics aggregate?
	command is used.	

## **Problems Fixed Between Builds 303 and 339**

PR Summary: Explanation:	•		6.4.6.303.R01 tion in tech-support logs. np statistics' information in tech_support.log
PR	208269	Build:	6.4.6.303.R01
Summary:	802.1x Auth-Ser unreachable	ver Dwn- server n	nay be reachable message seen though server is
Explanation:	Attempt reauther	ntication for suppli	cant only when server is reachable
PR Summary: Explanation:	Changes done to	Build: rs availability and o fix SLB TCP pro when server is sto	be issue. Server status will move from "In Service"
PR Summary: Explanation:		Build: is not seen in OV one to display the	6.4.6.307.R01 inventory report. XFP information in OV inventory report.

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PR Summary: Explanation:	208997Build:6.4.6.308.R01OSPF status changes due to BFDBFD ECHO packets are dropped because enabling ?qos port monitor? sets wrongQOS flags. Because of this, OSPF neighbor ship breaks.
PR Summary: Explanation:	210227Build:6.4.6.309.R01OS6850E Learned Port Security Issue.Corrected error seen in sending LPS config on a stack of 8
PR Summary: Explanation:	210091Build:6.4.6.311.R01"NI 3 is not ready yet. Try it later!" message is appeared on console prompt.Code changes done to properly detect/report errors when IPC failure occurs in Multi-Chassis.
PR Summary: Explanation:	210193Build:6.4.6.312.R01AOS forces to "flush" the mac-address of an authenticated successful user When moving between the 802 Code changes done to handle proper mac move
PR Summary: Explanation:	210087Build:6.4.6.312.R013x6850E:802.1X High CPU and crash on Unit-1 of stackChanges done to prevent onex crash in case of congestion
PR Summary: Explanation:	<b>210402</b> Build:6.4.6.313.R01IPMS, delay between IGMP join and first multicast packet is very high Although PR description talks about the delay between the client sending report and the client getting the first source packet, issue can be narrowed down in a simpler way. Assume switch connected to a client and querier. The time taken for the multicast enabled switch to process the IPMS report packet from client and send it to the querier port is high.The introduction of reactor sockets changed the way a packet was handled in IPMS CMM. It was simple with 6.4.4 without reactor sockets, but in 6.4.6, we have 2 extra timers involved which was causing delay. With the current code, report packet is processed in CMM in the same tick as the Q-Disp, but the switch only sends out the
PR Summary: Explanation:	<b>209842</b> Build:       6.4.6.315.R01         OS6850E: High CPU in the switch due to tSrcLrn.         Corrected issue seen in sending Bulk LPS config through TOdo list
PR Summary: Explanation:	210917Build:6.4.6.316.R01RIPv1 packets trigger high CPU utilization even if MDC is enabledRIPV1 packets are not trapped to CPU when MDC drop-all enabled

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Sensitivity: Internal & Restricted

PR		6.4.6.316.R01	
Summary:	qosipmsipv4rate variable setting is not working via AlcatelDebug.cfg		
Explanation:	Changes done to use qosipmsipv4ra	ate in AlcatelDebug.cfg effectively.	
PR	<b>210836</b> Build: 6	6.4.6.316.R01	
Summary:	NI ports are not ready due to mcmC	mm task in 9702	
Explanation:	Code changes done to bring NI ports	s up after CMM goes through unexpected reboot.	
PR	<b>210157</b> Build: 6	6.4.6.317.R01	
Summary:	High CPU due to source learning tas	sk.	
Explanation:	Corrected issue in todo list timer har	ndling	
PR		6.4.6.317.R01	
Summary:	High CPU due to SaaCMM		
Explanation:	Code changes done to correct high (	CPU due to todo list	
PR		6.4.6.317.R01	
Summary:	High CPU due to 'SaaCmm' task.		
Explanation:	Changes done to clean up reactor co	Dde	
PR		6.4.6.318.R01	
Summary:	Accounting configuration are getting		
Explanation:	After reboot, accounting configuratio	ns are displayed property.	
PR		6.4.6.319.R01	
Summary:	OS6850E has LDAP crashed with th		
Explanation:	Avoid switch crash by fixing the data	access exception in Idap authentication.	
PR		6.4.6.321.R01	
Summary:	802.1x authentication issue		
Explanation:	Ensured PC MAC is removed from c	onex context when EAP LOGOFF is received.	
PR		6.4.6.322.R01	
Summary:	Error file created when enable swlog appid <> level debug3		
Explanation:	"-VRF" is removed from the app-nan ospf,bgp,ipmrm,iprm,vrrp,pim and rip		
PR	211507 Build: 6	6.4.6.326.R01	
Summary:	False traps after enabling the debug		
Explanation:		tch when the switch was reloaded with "no aaa figured with "aaa authentication default".	
PR	<b>207936</b> Build: 6	6.4.6.327.R01	
Summary:	OSPF issue between OS9702E swit		
Explanation:		t 2 interfaces in active-standby and although only	

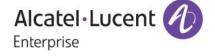


one interface is OSPF active, both interface addresses are sent in router LSA as TRANSIT routes.

When the transit route which is not part of OSPF is the first entry in the router LSA, our switch compares this address with its own neighbor table and rejects the whole LSA because of which one of the routes is not installed in the routing table. If the transit route to which we have a neighbor entry is present as the first entry of the packet from neighbor, we parse the LSA correctly and install the route without any issues.

PR	<b>212038</b> Bu	uild:	6.4.6.328.R01			
Summary:	Write memory flash					
Explanation:			on failure due to Daylight Savings Time settings.			
PR		uild:	6.4.6.329.R01			
Summary:	OS6450: info messa					
Explanation:	Handling DHCP pac	kets with no e	end options on trust ports			
PR	<b>212344</b> Bu	uild:	6.4.6.331.R01			
Summary:	Error file created wh	ien enable sw	log appid <802.1x> level debug3			
Explanation:	802.1x appid saved	as onex in sw	log			
PR	<b>211780</b> Bu	uild:	6.4.6.332.R01			
Summary:	aaa authentication is	ssue since los	st the connectivity			
Explanation:	Code changes done	to prevent pa	acket drops in IPNI.			
	-					
PR	<b>208103</b> Bu	uild:	6.4.6.335.R01			
Summary:	Multicast group life t	ime expire iss	sue			
Explanation:	Audit and Reset the CPU/HighGig Ports to default in "asic" usage /Hardware if set					
	due to Port Mapping	g configuratior	1.			
PR	<b>212653</b> Bu	uild:	6.4.6.336.R01			
Summary:			the upgrade the switch to OS_6.4.6.334.R01			
Explanation:			e file ?userTable5? for saving user details in the			
·			userTable7. There is a difference in userTable			
	structures used in u	serTable5 and	d userTable7 as there were new features requiring			
			e. There was an issue in code while copying			
			loing an upgrade from 645 to 646.334.R01. This is			
	corrected and user of	details are nov	w copied correctly from userTable5 to userTable7.			
	While upgrading the	While upgrading the switch software from 645R02 to 646.334.R01, userTables(if				
	any) in ?/flash/network? Directory other than userTable5 needs to be removed for					
	proper migration of	users from 64	5R02 to 646.334.R01.			
PR	<b>211954</b> Bu	uild:	6.4.6.339.R01			
Summary:	OS6850 show active	e policy list sh	owing empty lines			

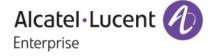
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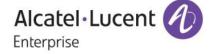
Problems	Fixed Between Builds 340 and 361
PR Summary: Explanation:	212714Build:6.4.6.340.R01OS6850E: stack crashed due to DHCP/UDP flooding.The splx() which frees the networking semaphore gets stuck with UdpRIy when the task tries to send out a packet, along with ARP activity in the switch. We make sure that splx() is called successfully in all cases thus ensuring system stability.
PR Summary: Explanation:	212552         Build:         6.4.6.341.R01           Open SSL CVE-2015-1794, CVE-2015-3193, CVE-2015-3194, CVE-2015-3195,         CVE-2015-3196           CVE-2015-3196         Code changes done to overcome the OpenSSL vulnerability - CVE-2015-3195.
PR Summary: Explanation:	212954Build:6.4.6.342.R01"csCsmMainTimerSet : CmmState = 14 time = 15000" messages are seen in the swlog file. Info messages moved to systrace.
PR Summary: Explanation:	213614Build:6.4.6.344.R01show aaa switch-access priv-maskresults in memory leak in AAAMemory is released in AAA module.
PR Summary: Explanation:	210911Build:6.4.6.344.R01LACP BPDUs received on UNI trigger linkagg flappingCancelling rate limit for LACP packets in NNI ports.
PR Summary: Explanation:	209640Build:6.4.6.347.R01static dhcp binding entry over written to dynamic entry when client receives an ip dynamically on the table.If the client can successfully acquire an IP address, and when the DHCP snooping enabled device writes a binding entry, if a static entry for the same client is already present, do not replace the static entry with the dynamic entry.
PR Summary:	<b>213908</b> Build: 6.4.6.349.R01 MIB polling to alaDot1xDeviceStatusVlan has no data retrieved for non-supplicant CF pass.
PR Summary: Explanation:	214144Build:6.4.6.350.R01Debug commands effecting the running configuration statusCode changes done to display configuration status properly.
PR Summary: Explanation:	213721Build:6.4.6.350.R01OS6855:False SFP alarms on down portsCode changes done to display SFP DDM values only when link is up.



PR	<b>212185</b> Build: 6.4.6.353.R01			
Summary:	ClearPass Captive portal webpage loaded with delay due to concurrent ses	sions are		
	not allowed.			
Explanation:	Avoided the delay in Web Page redirection for BYOD users.			
PR	<b>210741</b> Build: 6.4.6.353.R01			
Summary:	IGMP General Membership Queries are sent on non-PRIMARY linkagg ports in non-unicast hashing enabled			
Explanation:	An IPMS enabled switch would trap IGMP query packets to CPU, save few parameters and flood the packet back in the same VLAN. When non-unicas is enabled, the same behavior applies except for the fact that packets going linkagg can also go through non-primary ports depending on the packet par using RAW mode. With current implementation, Q-Driver only supports sen unicast packets over primary ports of linkagg in RAW mode and this leads t problem where selective non-unicast packets are dropped	y out of a cameters ding non-		
PR	<b>213699</b> Build: 6.4.6.354.R01			
Summary: Explanation:	OS6850E: Unable to execute the ssh session from the codenomicon tool. Code changes to prevent system crash while processing malformed ssh pa	ckets.		
PR	<b>213416</b> Build: 6.4.6.355.R01			
Summary: Explanation:	clarification 9702e - info on UNP webview page Authentication timestamp is displayed in date and time format.			
<b>Problems</b>	s Fixed Between Builds 362 and 380			
PR	<b>215437</b> Build: 6.4.6.362.R01			
Summary: Explanation:	OS6850E connected to OS6900 makes port moving into LIST state Now we won't delete the source port bit map of UNI profiles so that port doe move into LIST state.	∍s not		
PR	<b>216102</b> Build: 6.4.6.363.R01			
Summary:	Need to know reason for the error message - STP error stpCMM_linkAggVpaUpdate – 6.4.6.340.R01			
Explanation:	Now when configuring a ERP ring port as LACP port, the logged messages info type.	will be of		
PR	<b>217337</b> Build: 6.4.6.364.R01			
Summary:	Query on vulnerabilities CVE-2016-2107 and CVE-2016-2108			
PR	<b>215625</b> Build: 6.4.6.365.R01			
Summary:	PIM DENSE mode stop forwarding traffic after a few manual fiber link remo	ve and		
Explanation:	reinsertion went to pause state Code changes done to prevent race condition when SFP is plugged in/ pulle 6855	əd out in		



PR	<b>218061</b> Build: 6.4.6.366.R01
Summary: Explanation:	OS6850E: Query on "show running-directory" and "show configuration status" Changes made in the running configuration field from synchronized to not- synchronized when vlan commands are given.
PR	<b>217477</b> Build: 6.4.6.366.R01
Summary:	IGMP not working on 6850E after reboot
Explanation:	Any failure in programming the rules should have been logged in QOS NI but the buffer for logging was filled with statistics information. So, made code changes to make sure the statistics information were not logged by default as INFO. Moved the logs to DEBUG1. We will have to increase logging level to DEBUG1 to check statistics logs.
PR	<b>218577</b> Build: 6.4.6.367.R01
Summary: Explanation:	OS6850E: Query on "show running-directory" and "show configuration status" For all vrrp commands, "show running-directory" shows synchronized for 'running- configuration' eventhough "show configuration status" shows the configuration are different. Code changes has been done such that the configuration change will be reflected properly in show running-directory.
PR	<b>215727</b> Build: 6.4.6.368.R01
Summary:	CMM Crashed in 9800 switch.
Explanation:	Code changes done to send Trap to NMS when CMM/NI crashes due to Processor parity error.
PR	<b>218252</b> Build: 6.4.6.369.R01
Summary: Explanation:	OS6850E - Bad SAA statistics for the same destination IP over a linkagg Software improvising for handling SAA IP ping packets on different Nis
PR	<b>216404</b> Build: 6.4.6.369.R01
Summary: Explanation:	OS9700 - loop not detected in MC-LAG and crashed. Defensive fix to avoid deadlock condition when primary of MCLAG tries to send the received ARP information to the peer chassis when the socket communication is not ready
PR	<b>217194</b> Build: 6.4.6.370.R01
Summary:	OS6855 reboots when AlcatelDebug.cfg file is present in working and certified
Explanation:	directories. Code changes done to check the maximum cell limit for low water mark and dyncell.
PR	<b>219634</b> Build: 6.4.6.371.R01
Summary:	OS6850E stack - IP service is not consistent after takeover
Explanation:	IP service is not consistent after takeover. Code changes are done in such a way to bring the IP service status back to its previous state, after takeover.
PR	<b>219567</b> Build: 6.4.6.372.R01
Summary:	OS6855 switch crashed if bgp is configured
Explanation:	cli does not support the community option "no-adv" for the command "ip bgp policy route-map com-out 1 community no-adv". So cli regenerated after removing the community option "no-adv".
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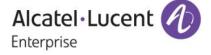
PR	219354	Build:	6.4.6.374.R01	
Summary:		rface configurati	on of aclman are deleted when CMM takeover	
Explanation:	aclman.cfg w primary.	ill be parsed only	y by the primary CMM or when secondary becomes	
PR	217478	Build:	6.4.6.375.R01	
Summary:	ERP ring loop	o after switch reb	boot, probably RPL node	
Explanation:	Defense check switch(neight		the ERP SIGNAL fail packet if it is coming from own	
PR	220221	Build:	6.4.6.376.R01	
Summary:	The OS6850-48X crashed due to Debug exception has occurred due to tNiSup&Prb PC : 0x37e5c4 task.			
Explanation:	Code change	s done to avoid	crash in NI Supervision and Prober module.	
PR	218263	Build:	6.4.6.378.R01	
Summary: Explanation:	6850E - fiber hybrid port not coming up after reboot Fix for the fiber link issue on combo port.			

#### **Problems Fixed Between Builds 381 and 399**

PR	221391	Build:	6.4.6.385.R01	
Summary:	4XOS6850E	switch crashed w	vith sftp task suspended.	
Explanation:	Defensive fix	done to avoid cr	ash.	
PR	221299	Build:	6.4.6.386.R01	

PR	221299	Bulla:	6.4.6.386.R01
Summary:	OS6850E - Cras	h with tCsCSMtas	k2, tCS_PRB, UdpRly, taUdldNi suspended tasks.
Explanation:	Drop all the malf	ormed packets if i	t comes from same source mac consecutively

PR	221683	Build:	6.4.6.387.R01		
Summary:	OS6850E: SNMP community map was getting lost upon reload				
Explanation:	Restricting ch	Restricting character '%' in snmp community map string.			
PR	221429	Build:	6.4.6.388.R01		
Summary:		When a AP connected to OS6450 switch if the power of AP exceeds the configured power the AP reboots.			
Explanation:	Logging port (	OFF during over	load detection.		
PR	216292	Build:	6.4.6.389.R01		
Summary:	rmtCfgParse()	) has character	short string buffer.		
Explanation:	Corrected stri	ng manipulation			
PR	216291	Build:	6.4.6.390.R01		
Summary:	LGS: confSyn	taxOnlyParse()	buffer overflow risk.		
Explanation:	Used strncpy as part of configuration file syntax parsing.				
PR	210780	Build:	6.4.6.390.R01		
Summary:		LGS: HTTP cookies sent without HttpOnly flag Request to add flag.			
Explanation:	HttpOnly flag is added in set-cookie directive.				



PR	222462	Build:	6.4.6.392.R01				
Summary:	4XOS6850E	4XOS6850E switch crashed with tShell task suspended.					
Explanation:	Introduced new message to be logged in idle unit's swlog if telnet to idle unit is attempted.						
PR	222743	Build:	6.4.6.395.R01				
Summary:	Different NAS	3 port are seen i	n the aaa accounting session.				
Explanation:	nas-port set	nas-port set to 0 for ASA accounting.					
PR	223001	Build:	6.4.6.395.R01				
Summary:	Incorrect ping	presentation af	fter upgrading firmware 6.4.6.380.R01.				
Explanation:	Trip time valu	Trip time value precised to 2 decimal points.					
PR	222973	Build:	6.4.6.396.R01				
Summary:	6850E in 6.4	.6.380 Crash of	the stack.				
Explanation:	no mem leak	on takeover wit	h router guard port configuration.				
PR	221824	Build:	6.4.6.397.R01				
Summary:		rmittent CPU sp	bike with tcs_PRB(1 to 2 minutes) and i2c error				
	message.		used by eaching the clobel flow				
Explanation:	intermittent C		uced by enabling the global flag				

## **Problems Fixed Between Builds 400 and 413**

PR	223025	Build:	6.4.6.401.R01		
Summary:	OS6850 IPTV channel is not streaming. captured packets shows it received multicast packets, but doesn't send it out				
Explanation:	Removed the		m hardware which is having zero index so that the		
PR	223581	Build:	6.4.6.403.R01		
Summary:	HTTP CP logo	out page is not s	served in the private image given.		
PR	223460	Build:	6.4.6.404.R01		
Summary:	OS6850E-P48	X : Switch rebo	poted on 4th January. RCA requested.		
Explanation:	Defensive fix o	lone to avoid W	/atchdog PMD.		
PR	224318	Build:	6.4.6.405.R01		
Summary:	OS6850E - M/	AC learned on p	port mirroring destination port		
Explanation:	Code changes done to flush MAC address in port mirroring destination ports during initial configuration.				
PR	224554	Build:	6.4.6.411.R01		
Summary:			in row error on the OV2500 while looking for the accession status of the OS6850E stack.		

Explanation: Removed the stale entries from hardware which is having zero index so that the source packets will not be dropped.

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#### **Problems Fixed Between Builds 414 and 424**

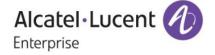
NOTE : All the 14 changes done for this release are pending verification update from support team. Hence the details for those CSPRs are placed below in "Under Verification" section.

## **Problems Fixed Between Builds 425 and 432**

PR	<b>227336</b> Bu	ıild:	6.4.6.425.R01
Summary:	OS6850E VLAN-STACKING error message need explanation.		
Explanation:	Update UNI profile d	etails for NI, th	nat have joined with delay.
PR	<b>226941</b> Bu	uild:	6.4.6.426.R01
Summary:	OS6850E: CP authe	nticated user's	Mac address is not learnt in MAC table.
Explanation:	if onexDebug=1, one	ex will be printir	ng into the console log and if onexDebug=2, it will
	be printing into the s	witch log.	
PR	<b>229087</b> Bu	uild:	6.4.6.428.R01
Summary:			equired to activate the configured SSH port"
-			he cli command "ssh tcp-port 2000".
PR		uild:	6.4.6.429.R01
Summary:			wrong - raising alarms to NMS. Actual Low not
-	following data-sheets		
Explanation:			ned accordingly with calibration particular sfp
			plemented for External calibration DDM SFP
	device, as suggested		
PR		uild:	6.4.6.429.R01
Summary:		-	oshot is not showing any output.
Explanation:	Correct show configu	uration snapsh	ot issue
PR	<b>229130</b> Bu	uld:	6.4.6.430.R01
Summary:	OS6855: EBGP peer	rs not resetting	g when a link is disconnected
Explanation:	Ignore BFD_NBR_D	OWN message	e, if BGP neighbor is not established.
PR	<b>230490</b> Bu	uild:	6.4.6.432.R01
	802.1X clients not re	authentcated b	by the switch after the authentication server
Summary:	became reachable		-

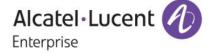
## Problems Fixed Between Builds 433 and 440

PR	227004	Build:	6.4.6.433.R01			
Summary:	OS9700E: O	OS9700E: OSPF and VRRP toggled because of 828 days uptime issue.				
Explanation:	Fix is to conv	ert 32-bit tick ba	sed timer variables into 64-bit variables and			
	correspondin	g APIs to suppor	t the same in OSPF and VRRP modules.			
PR	227004	Build:	6.4.6.434.R01			
Summary:	Reverting the	Reverting the change number 232705(PR#227004)				
Explanation:	Reverted bac	:k				
PR	231290	Build:	6.4.6.436.R01			
Summary:	OS6850E: Packet drop for every 5 sec during ERP convergence.					
Explanation:	•	tion in flush logic and node ID pa	to check needtostore bit is set when we recognize a ir.			



PR	229734	Build:	6.4.6.436.R01
Summary:	Unable to do telnet or SSH to OS6850E-48X.		
Explanation:	Code changes bind failure.	done to reset	the entry in session manager and socket address during
PR	231256	Build:	6.4.6.436.R01
Summary:	OS6850E-48 crashed need root cause analysis		
Explanation:	Code changes block is deleted		ade to mark a queued job as invalid if its MAC control
PR	230376	Build:	6.4.6.436.R01
Summary:	IP interface down after powering down the primary unit.		
Explanation:	Code changes prevented is re		ther processing of enabling vlan and activating IP is
PR	210775	Build:	6.4.6.437.R01
Summary: Explanation:	New CLI has b	een introduce	ation in clrtrap feature of ntpd d, when configured using the CLI it will restrict the and mode 7 packets.

<mark>Under Ver</mark> i	ification:		
PR	198147	Build:	6.4.6.220.R01
Summary:			client sends leave message in the IPMS.
Explanation:	Reduced dela	y in processing	and egressing out the IGMP Leave Packets in software
PR	199875	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	201216	Build:	6.4.6.251.R01
Summary:	802.1x having	g issues with R	andom clients
Explanation:			nd SL table mismatch in case of client is getting moved and vice versa with the same vlan.
PR	184682	Build:	6.4.6.251.R01
Summary:	Linkagg issue	in a Vlan stack	king configuration
Explanation:	Packets with I tag .	Double tags eg	ressing out of uni port acrsossNi will not be losing inner
PR	203222	Build:	6.4.6.258.R01
Summary:	802.1x table e	entry is not dele	eted though MAC entry is deleted.
Explanation:	Fix to remove	non-supplican	t captive portal entry on timer expiry
PR	203221	Build:	6.4.6.258.R01
Summary:	Radius Accou	nting Interim u	pdates are not sent in irregular intervals.
Explanation:	Code changes	s done to send	the radius accounting packets properly for all clients.
PR	202351	Build:	6.4.6.262.R01
Summary:	OS6400 crash messages	n with 'memPar	tAlloc: block too big - 4136 in partition 0x5622c4'
Explanation:	Code change	done to fix higl	n memory issue in taSTP task



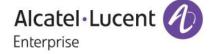
PR Summary: Explanation:	198350Build:6.4.6.277.R01High CPU noticed in UNIT 1 in the stack of 5 switches due to the task? UdpRly?Code change has been done to check the interface status before processing the dhcp packet.
PR	<b>204988</b> Build: 6.4.6.279.R01
Summary: Explanation:	Ping is not working when LPS is enabled. Fixed source learning IPC reactor socket communication failure
PR	<b>205239</b> Build: 6.4.6.280.R01
Summary:	6850E stack : DHCP clients are no longer able to get dhcp address after rebooting unit-2
Explanation:	Revert back to default VRF when processing over on non-default VRF
PR	<b>204698</b> Build: 6.4.6.283.R01
Summary:	"Trunk Destroy Failed!! Slot1 unit:0" were seen for the linkagg ports in swlog of OS6850E.
Explanation:	Code changes done to learn mac address properly without throwing the message "Trunk Destroy Failed!!".
PR	<b>205738</b> Build: 6.4.6.285.R01
Summary: Explanation:	OS9000E: Crashed with AAA and tDrcIpmrm0 tasks suspended. Defensive check added to prevent IPMRM crash when deleting skip list
PR	<b>204755</b> Build: 6.4.6.285.R01
Summary: Explanation:	Impact analysis on your products with CVE-2015-0291 t1_lib.c in OpenSSL 1.0.2. OpenSSL Vulnerability - CVE-2015-0287,CVE-2015-0289,CVE-2015-0292,CVE- 2015-0209,CVE-2015-0288
PR	<b>205086</b> Build: 6.4.6.285.R01
Summary:	ARP table is not getting updated.
Explanation:	<ul> <li>(a) when ip loopback0 interface is removed it is not getting removed from ipni route list,</li> </ul>
	<ul> <li>(b) this is removed (b) while checking whether an ip is part of local interface, the AOS special condition of looback0 == interface ip is not taken care properly, modified the same.</li> </ul>
PR	<b>205494</b> Build: 6.4.6.286.R01
Summary: Explanation:	SLB is not working properly when we use TCP probe. Fixed SLB probe socket state issue
PR Summon <i>i</i>	<b>205223</b> Build: 6.4.6.289.R01
Summary: Explanation:	MAC address table and 802.1x table inconsistency issue Code changes done to update the SL CMM data base properly when LPS enabled.



PR	<b>207326</b> Build: 6.4.6.293.R01				
Summary:	System throws an error during bootup				
Explanation:	Avoid Source learning bootup errors on console				
PR	<b>207332</b> Build: 6.4.6.296.R01				
Summary:	AAA info AAA Unknown				
Explanation:	Code changes done to update the Radius Interim-update messages properly in swlogs.				
PR	<b>208318</b> Build: 6.4.6.304.R01				
Summary:	PSU LED turns Amber, when one of the PS is turned OFF/ON.				
Explanation:	code changes done to avoid wrong PSU LED status on removal/insertion of PS.				
PR	<b>209005</b> Build: 6.4.6.305.R01				
Summary:	Request to change the order of outputs in tech-support log file.				
Explanation:	Added 'Show user' and 'Show snmp statistics' information to tech_support.log				
PR	<b>209107</b> Build: 6.4.6.310.R01				
Summary:	OS6850E stack suspended with Ipmem (1226ec00) @ 100 SUSPEND lckd=0 ME DS stk 1226ec00-1226ad80				
Explanation:	Code changes done to fix Ipmem crash during double takeover.				
PR	<b>210264</b> Build: 6.4.6.312.R01				
Summary:	Show mac-address table not showing correctly in Stack of 8				
Explanation:	Show mac address table command displays the correct output.				
PR	<b>210580</b> Build: 6.4.6.313.R01				
Summary:	OS6850E LLDP messages in the logs				
Explanation:	Code changes done so that the warning messages are not logged in the swlog when valid LLDP packets are send				
PR	<b>211379</b> Build: 6.4.6.323.R01				
Summary:	OS6850E switch crashed with tOddJob task				
Explanation:	Defensive fix done to avoid crash during buffer creation.				
PR	<b>211443</b> Build: 6.4.6.327.R01				
Summary:	DHCP Snooping leaking issue on 6400				
Explanation:	AOS uses PROTOCOL_PKT_CONTROL register in third party to control behavior of				
	DHCP packets. A DHCP packet when received by a snooping enabled switch should get trapped to CPU with the settings in this register, and without snooping enabled				
	DHCP packets are mirrored to CPU. In the customers case, with DHCP snooping				
	enabled, the hardware entries were not programmed for DHCP snooping so packets				
	were being mirrored, as if snooping was not enabled in hardware.				
PR	<b>212060</b> Build: 6.4.6.333.R01				
Summary:	OS6850E-P48: High CPU due to "tPim0" task				
Explanation:	debugs added				



PR Summary: Explanation:	210609Build:6.4.6.338.R01OS6850E POE Restarts when powerdraw from the POE port exceeds the classificationFix done to disable the class setting by default. In case needed, it can be enabled by global variable in AlcatelDebug.cfg
PR Summary: Explanation:	212609Build:6.4.6.339.R01SNMP walk failure du to OID ordering failureCode changes done to fix OID ordering failure.
PR Summary: Explanation:	<b>212706</b> Build:6.4.6.339.R01.p priority is lost for IGMP frames in a QinQ envirovement setupWhen a IPMS Query packet is received in a multicast enabled switch, it is trapped toCPU and flooded back in the same VLAN. When received through a NNI port with a.1q priority stamped, it is trapped to the CPU and when flooding back to UNI ports(with SAP profile as TRANSLATE), Q-Driver does not copy the priority from theSVLAN to the CVLAN.
PR Summary: Explanation:	210869Build:6.4.6.343.R01OS6850E: Switch crashMemory is freed in AAA module
PR Summary:	<b>210587</b> Build:6.4.6.345.R01OS6850E: Switch crashes for the codenomicon test case ID 3583.
PR Summary: Explanation:	<b>210239</b> Build:6.4.6.347.R01Bogus DHCP packet to customer dhcp server.Root Cause Analysis:When a DHCP client is enabled on a switch, the variable"dhcpInfoFromServer.serverIp" should hold the IP address of the server which leasedIP address to the switch. Assume DHCP snooping is enabled, and the DHCP clientinterface in switch gets IP from Server A, and other clients using the snooping servicefrom the switch gets IP from DHCP server B, after some time, the DHCP client in theswitch sends its own DHCP request to the Server B, instead of Server A whichoriginally leased the IP address to our switch.This is because, when any ACK packet (from any server) is received, we update the"dhcpInfoFromServer.serverIp", so the server IP address can change for any/alltransactions.Solution details:Code change to make sure that only the ACK received for the DHCPaddress of the switch is used to change the "dhcpInfoFromServer.serverIp".
PR Summary: Explanation:	<b>211453</b> Build:6.4.6.348.R01OS6850 ethernet-service nni command missing in configurationAll the commands are displayed properly in the configuration snapshot
PR Summary: Explanation:	214760Build:6.4.6.358.R01OS6850E: Trap value decodingCode changes were done to add the missing bitmaps in the object syntax.



PR Summary: Explanation:	<b>211127</b> Build: 6.4.6.319.R01 OS6850 crashed with tCS_PRB and Stp task suspending. Defense fix while handling STP SNMP operations				
PR	<b>198841</b> Build: 6.4.6.238.R01 BGP route for multi-hop neighbor learnt correctly but IPRM shows incorrect gateway				
Summary:	for this route.				
Explanation:	BGP route for multi-hop neighbor learnt correctly and IPRM shows correct gateway for this route.				
PR	<b>201948</b> Build: 6.4.6.251.R01				
Summary:	MAC address learnt though 802.1x state is Captive-portal CP In-Progress.				
Explanation:	Fix the mac-address table inconsistency after continuous mac move				
PR	<b>202046</b> Build: 6.4.6.238.R01				
Summary:	NTPD Vulnerability: ntpd version 4.2.7 and previous versions allow attackers to overflow several buses.				
Explanation:	Code changes done to fix NTP vulnerabilities CVE-2014-9295 & CVE-2013-5211. Other vulnerabilities do not affect AOS.				
PR	<b>203577</b> 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	<b>214605</b> Build: 6.4.6.359.R01				
Summary:	OS6850E Switch restarting after enabling PIM-SM onThird party with suspended task tPim0 We prevent invalid memory access when a group in range of (232.0.0.0/8) SSM is received.				
Explanation:					
PR	<b>181004</b> Build: 6.4.6.337.R01				
Summary:	Switch crash while enabling mobile tag.				
Explanation:	Fix for preventing crash while enabling mobile tag				
PR	<b>209400</b> Build: 6.4.6.324.R01				
•	OS6850E-48X 6.4.5.608.R02 standalone switch we are receiving the below error				
Summary:	Error Couldo't got bu				
Explanation:	Error: Couldn't get bu Errors were displayed because there were no available buffers in Q-Driver to send out LLDP context. These buffers were occupied by BCMrx task to send out STP				
	packets through HiGig in a standalone box.				
PR	<b>212850</b> Build: 6.4.6.339.R01				
Summary:	The command "gos port x/y default classification 802.1p" is not removed from the				
Explanation:	configuration when By default the traffic classification is by dscp for the ports, and hence when the				
	classification is changed to 802.1p/tos the config will be reflected in qos snapshot . When the same port is configured with svlan and tagged with a UNI/NNI , default classification will be 802.1p . However still the default config will be shown in 'show configuration snapshot qos' due to mismatch in the Return handling.				



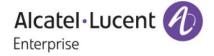
PR Summary: Explanation:	<b>212652</b> Build:6.4.6.336.R01OS6850E: user got deleted after upgrade the switch to OS_6.4.6.334.R01Software version 645R02 uses the file ?userTable5? For saving user details in theflash, similarly 646.334.R01 uses userTable7. There is a difference in user Tablestructures used in userTable5 and userTable7 as there were new features requiringmodification in user Table structure. There was an issue in code while copyinguserTable5 to userTable7 when doing an upgrade from 645 to 646.334.R01. This iscorrected and user details are now copied correctly from userTable5 to userTable7.While upgrading the switch software from 645R02 to 646.334.R01, user Tables(ifany) in ?/flash/network? Directory other than userTable5 needs to be removed forproper migration of users from 645R02 to 646.334.R01.				
PR	<b>206012</b> Build: 6.4.6.282.R01				
Summary:	Port change resulting in ARP relearning, post which MAC not updated in				
Explanation:	hardware. Refer Source learning LPS table to process ARP				
PR	<b>205391</b> Build: 6.4.6.292.R01				
Summary:	4xOS6850E-P48 Link flapping on stacks running code 6.4.6.218 R01				
Explanation:	Set appropriate debug level for link up/down message in swlog if trap is not enabled				
PR	<b>222061</b> Build: 6.4.6.391.R01				
Summary:	PR#220140: OS6855: "power supply removed/inserted " traps on OV				
Explanation:	Changes done not to log the power supply down message for 10 seconds				
PR	<b>155409</b> Build: 6.4.6.393.R01				
Summary:					
Explanation:	tcp sync flood, smurf, pepsi, teardrop and anti-spoof attacks are removed from "show ip dos statistics" in cli and webview				
PR	<b>222437</b> Build: 6.4.6.394.R01				
Summary:	Block CLI command for secure-http in enhanced mode				
Explanation:	CLI command for secure-http is blocked in enhanced mode				
PR	<b>219159</b> Build: 6.4.6.397.R01				
Summary:	clarification on dhcp relay when the dhcp reply interface is disabled				
Explanation:	Do not relay DHCP discover packets if IP interface is disabled				
PR	<b>223246</b> Build: 6.4.6.398.R01				
Summary:	Router Guard cosmetic bug				
Explanation:	Cosmetic bug for router-guard port is fixed				
PR	<b>223173</b> Build: 6.4.6.400.R01				
Summary:	source learning cmm and ni redirected to swlog				
PR	<b>223230</b> Build: 6.4.6.401.R01				
Summary:	.1p Lost in QinQ translation for IGMP frames				



PR	<b>224807</b> Build: 6.4.6.406.R01		
Summary:	.1p Lost in QinQ translation for IGMP frames		
PR	<b>222061</b> Build: 6.4.6.408.R01		
Summary:	"power supply removed/inserted " traps on OV		
Explanation:	Changes done not to log the power supply down message for 10 seconds, when two power supplies are available in Etna chassis. Provide psECFix=1 in dshell, to enable the fix. This fix works for all Etna chassis. You can change the 'psECFixTimer' to the no. of seconds you want to hold the error message. The default value is 10 seconds. Previously available fix for EtnaC14 chassis is now made available to all Etna chassis. Please note 'psEC14Fix' flag will not be available anymore.		
PR	<b>224920</b> Build: 6.4.6.417.R01		
Summary:	The umac-64@openssh.com MAC is broken in VxWorks when trying to connect OS6450 via SSH.		
Explanation: Removed unsupported MAC ( umac-64@openssh.com,hmac-ripemd160 and ripemd160@openssh.com) from hash list			
PR	<b>224853</b> Build: 6.4.6.417.R01		
Summary:	AOS 6.7.1.108.R04 DHCP Decline sent by switch during RCL contains garbage in servername field.		
Explanation:	Fix done so that no garbage value is seen for any of the DHCP parameters in the decline packet. The host name is now seen as not given in the packet capture.		
PR	<b>224244</b> Build: 6.4.6.417.R01		
Summary: Explanation:	OS6850 topology age remains 00:00:00 when the switch up time is 828 days Do not reset the topology age in " show spantree [vlan] " when switch up time is 828.5 days.		
PR	<b>225418</b> Build: 6.4.6.418.R01		
Summary:	6xx webview : displaying OS9000 image in header and landing page		
Explanation:	Fuji image removed in 6X webview login page and made similar to 7X		
PR	<b>221808</b> Build: 6.4.6.418.R01		
Summary:	6450 client MAC learnt on 802.1x and MAC table (connected by hub) though the		
Output       device is disconnected.         Explanation:       Check added to delete a Mac-address in OnexCmm			
PR	<b>226472</b> Build: 6.4.6.419.R01		
Summary:	DSCP values are getting striped by AOS switches		
Explanation:	Code changes done to send qtagged configs to NI		
PR	<b>227357</b> Build: 6.4.6.419.R01		
Summary:	OS6850E - ERP ring status shows as "Idle" though RPL is in Forwarding state		
Explanation:	ERP ring is set to init state when ring is administratively disabled		



PR	<b>227629</b> Build: 6.4.6.420.R01				
Summary:	SFP-DUAL-BX-U and SFP-DUAL-BX-D Optics works only as 1G Speed, but not in 100M speed on OS9702				
Explanation:	Added support for new dual speed SFP (SFP-DUAL-BX-U and SFP-DUAL-BX-D)				
PR	<b>226671</b> Build: 6.4.6.421.R01				
Summary: Explanation:	OS6850E - Topology changes counter is incrementing when the ring is closed Code changes done to prevent STP BPDU drops in NNI port.				
PR	<b>224354</b> Build: 6.4.6.422.R01				
Summary:	Debug changes are done to log the ERP debugs in swlog as a option				
Explanation:	ERP debugs redirected to swlog				
PR	<b>227739</b> Build: 6.4.6.422.R01				
Summary:	NTP mode 6 scanner vulnerability detected.				
Explanation:	Changes done to avoid sending the NTP info packet to the restricted interface,				
PR	<b>226634</b> Build: 6.4.6.423.R01				
Summary:	Redirecting the bfdNi debugs to swlogs				
Explanation:	Redirecting the bfdNiDbg into the swlogs and condition is added as : if bfdNiDbg = 1 it will redirect the logs to console and if bfdNidbg = 2 the logs will be redirected to swlogs. To disable the bfdNi logs "bfdNiDbg = 0 "				
PR	<b>227493</b> Build: 6.4.6.424.R01				
Summary:	EOAS timeout during reboot on an upgrade from 646.340R01 to 646.413R01.				
Explanation:	Code changes done to avoid crash during OS9800E upgrade				
PR	<b>227827</b> Build: 6.4.6.424.R01				
	Crash with Ktrace file generated in Ni1 and Ni2 respectively of OS6850E, while issue				
Summary:	takeover				
Explanation:	Changes done to avoid crash during xmap.				
PR	<b>227934</b> Build: 6.4.6.427.R01				
Summary:	SFP-DUAL-BX-U and SFP-DUAL-BX-D Optics work at 100M even if the speed is set to 1G.				
Explanation:	Code changes done to set proper speed for SFP TRBUG1CDBC000E2G and TRBUG1CUBC000E2G.				
PR	<b>224350</b> Build: 6.4.6.428.R01				
Summary:	OS6450: SSH into OS6450, the password prompt is not displayed until 'Enter Key is				
•	hit 5 times				
Explanation:	Code changes have been done to include the password prompt information in the "prompt" field of the packet instead of "instruction" field				
PR	<b>228612</b> Build: 6.4.6.428.R01				
Summary:	3XOS6450: After the reload "show running-directory" command shows stack is not synchronized				
Explanation:	Qos configs applied through OV are always reapplied after reload. A condition is added to check if qosConfigSet is called to load Idap initial configuration. If true then don't set cmm is out of sync.				
PR	<b>230389</b> Build: 6.4.6.431.R01				
	OS6850E: Disconnecting stacking cable causes slave unit to crash				
Summary: Explanation:	Defensive check to avoid crash.				



PR	228960	Build:	6.4.6.438.R01		
Summary:	OS6855-Uplink SFPs are not coming up after upgrading the switch to the 6.4.6.399.R01 Code changes done to do port reinitialization whenever 100Base-FX SFPs are inserted.				
Explanation:					
PR	232332	Build:	6.4.6.438.R01		
Summary:	OS6400 switch crash when Ildp packets are received from Labris Network UTM devices				
Explanation:	Fix done for crash, when malformed packets are received from Labris devices .Fix done to delete the MSAP node before freeing it.				
PR	231928	Build:	6.4.6.439.R01		
Summary:	CPU at 100%, suspect culprit may be multicast traffic. IPMS is configured but no local groups or sources Changes done to move VPA to blocking, if VLAN is disabled though they are ERP ports				
Explanation:					
PR	230676	Build:	6.4.6.435.R01		
Summary:	OS6850: Remote Denial of Service vulnerability in OS6850		e vulnerability in OS6850		
Explanation:			NULL validation and also changed strcpy to strncpy		

# Known Issues:

PR	223750	Build:	6.4.6.409.R01
Summary:	4xOS6850E: Copper Combo ports does not work when connecting a IP camera		
CR	CRAOS6X-6 Hybrid Ports		6.4.6.440.R01 In after reload in OS6855-24
Summary:	Hybrid Ports are not coming up after reload in OS6855-24. (Workaround – Toggling the port once will bring the port operationally up)		
CR	CRAOS6X-6	91 Build:	6.4.6.440.R01
Summary:	After takeover vlan associated port is not getting displayed in "show vlan port "command even though configuration is present in switch		



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# **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:**

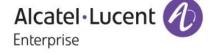
While executing the commands in the below table configuration file header should be updated showing the directory it is located and re-apply the source directory configuration file timestamp.

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/certified/boot.cfg !	
1		ł

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/working/boot.cfg	!
!======================================	=!

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

Sample output:

Topo (A1) \_DUT1 - ->> show running-directory

CONTIGUIATION STATUS	
Running CMM	: PRIMARY,
CMM Mode	: DUAL CMMs,
Current CMM Slot	: 1,
Running configuration	: WORKING,
Certify/Restore Status	: CERTIFIED
SYNCHRONIZATION STATU	S
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

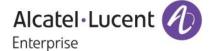
In AOS, IPv4 and IPv6 multicast protocols are by default always copied to CPU. The high CPU usually impacts the normal operations of the Omni Switch protocols such as LACP, ERP.

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.

• If no IPv6 interface configured All protocols in the ff02:0: /32 ranges are transparently forwarded and not copied to CPU.

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• If at least one IPv6 interface configured

All protocol packets in the ff02:0: /32 ranges 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. RIPV1 packets are not trapped to CPU when MDC drop-all enabled

#### **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 Querying Proxying Spoofing

= enabled, = enabled, = disabled, = 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

### 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}

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#### 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

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-> 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 on this VRF

# 4. DHCP Snooping Global Mode

### Platforms: OS6850E, OS6855, OS9000E

### Hosted AOS SW Release: 646.278.R01

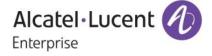
In order to have the DHCP snooping feature operational, the hardware must first identify DHCP packet and trap such packet to CPU for software processing.

- 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.

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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



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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.

#### 6. Support for Telnet and SSH Clients within every VRF

Platforms: OS9702E, OS6850E, OS6855-U24X

#### Hosted AOS SW Release: 646.302.R01

This feature 'Support for Telnet and SSH clients in VRF' will allow telnet and SSH sessions from clients within every vrf instance to the reachable Telnet and SSH server. All the Telnet and SSH Clients should be configured in non-default VRF, while AOS will support Telnet and SSH server should be configured in default VRF.

#### Usage

#### To take telnet/ssh session from the VRF instance:

Maximum number of telnet session is 4 across the entire VRF instance at a time.

#### For Telnet:

Topo(A2)\_DUT2-->> Topo(A2)\_DUT2-->> vrf three1 three1::Topo(A2)\_DUT2-->> telnet 3.3.3.2 Trying 3.3.3.2... Connected to 3.3.3.2. Escape character is '^]'. login : admin password :

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S1\_stack\_6850E-->



#### For SSH:

Maximum number of SSH session is 1 across the entire VRF instance at a time.

three1::Topo(A2)\_DUT2-->> three1::Topo(A2)\_DUT2-->> ssh 3.3.3.2 login as: admin admin's password for keyboard-interactive method:

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S1\_stack\_6850E-->

#### To take telnet/ssh session by using the command vrf vrfname telnet/ssh x.x.x.x

#### For Telnet:

Maximum number of telnet session 4 across the entire VRF instance at a time.

Topo(A2)\_DUT2-->> vrf three1 telnet 3.3.3.2 Trying 3.3.3.2... Connected to 3.3.3.2. Escape character is '^]'. login : admin password :

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S1\_stack\_6850E-->

For SSH: Maximum number of SSH session 1 across all the VRF instance at a time

Topo(A2)\_DUT2-->> Topo(A2)\_DUT2-->> vrf three1 ssh 3.3.3.2 login as: admin admin's password for keyboard-interactive method:

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S1\_stack\_6850E-->

#### 7. Extended Support for 12 VRF sessions in OS6855-U24X

#### Platforms: OS6855-U24X

#### Hosted AOS SW Release: 646.302.R01

This Feature is to extend the parallel VRF sessions to 12 from current limit of 8 in an OS6855-U24x platform. Refer VRF in OS6850E network config or switch management guide for additional details about VRF and its detail.

#### Usage:

To create a non-default VRF vrf vrfname

To Configure interfaces on the created vrf ip interface interface\_name address ip\_address mask vlan vlan\_id

To Display the created vrf and configuration show vrf

To Delete the created vrf no vrf vrfname

#### **Examples:**

cli>vrf one1 cli>vrf two2 2:cli>ip interface vrfone address 100.1.1.1/24 vlan 100 2:cli>ip interface vrftwo address 101.1.1.1/24 vlan 101 2:cli>show vrf

Virtual Routers Protocols

default one1 two2

-----RIP OSPF BGP

2:cli>no vrf one1 2:cli>no vrf two2

cli>show vrf



Virtual Routers Protocols

**RIP OSPF BGP** default

#### Limitation:

There will be a increase in memory usage after creating maximum vrfs and loading all the protocols while verifying for load testing.

#### 8. Monitoring Inter-Stack Connections

Platforms: OS6850E,OS6855-U24X

#### Hosted AOS SW Release: 646.302.R01

In the existing implementation, there are no CLI commands to monitor the status and statistics of Stacking interfaces. The requirement is to provide the ability for the user to monitor the status and statistics/counters of the stacking links (if the product is stackable) in addition to normal user interfaces using the below CLI Commands

Following new CLI commands are introduced to store the stacking ports details.

show stacking interfaces show stacking interfaces status show stacking interfaces counters show stacking interfaces counters errors

#### Usage

To display general interface information for the stacking ports show stacking interfaces

To display interface counters information (for example, unicast, broadcast, and multi-cast packets received or transmitted) for the stacking ports show stacking interfaces counters

To display interface error frame information (for example, CRC errors, transit errors, and receive errors) for the stacking ports show stacking interfaces counters errors

To display the interface line settings (for example, speed, and mode) for the stacking ports show stacking interfaces status

To display the interface line settings (for example, speed, and mode) information for the specific stack port entered in the command show stacking interfaces <slot/port> status

To display interface counter information (for example, unicast, packets received/transmitted) for the specific stack port entered in the command

show stacking interfaces <slot/port> counters

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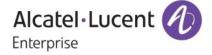
To display interface error frame information (for example, CRCerrors, transit errors, and receive errors) for the specific stack port entered in the command.

show stacking interfaces <slot/port> counters errors

This command will clear the counter statistics related to the stack port specified in the command stacking interfaces <slot/port> no l2 statistics

#### Examples

-> <b>show stacking interfaces</b> Slot/Port 1/51 : Operational Status : dow Last Time Link Changed :	TUE JUL 28 19:04:01,		
Number of Status Change:			
Type : Stacking			
BandWidth (Megabits) : Rx :	-, Duplex :-,		
Bytes Received :	0, Unicast Frames :	0,	
Broadcast Frames:	0, M-cast Frames :	О,	
UnderSize Frames:	0, OverSize Frames:	0,	
Lost Frames :	0, Error Frames :	0,	
CRC Error Frames:	0, Alignments Err :	0,	
Tx :	-		
Bytes Xmitted :	0, Unicast Frames :	0,	
Broadcast Frames:	0, M-cast Frames :	0,	
UnderSize Frames:	0, OverSize Frames:	0,	
Lost Frames :	0, Collided Frames:	0,	
Error Frames :	0		
Slot/Port 1/52 :			
Operational Status : up,			
Last Time Link Changed :	TUE JUL 28 19:04:01,		
Number of Status Change:	0,		
Type : Stacking	,		
BandWidth (Megabits) :	10000, Duplex	Full,	
Rx :			
Bytes Received : 10	03100016, Unicast Frames :	85856,	
Broadcast Frames:	0, M-cast Frames :	12,	
UnderSize Frames:	0, OverSize Frames:	0,	
Lost Frames :	0, Error Frames :	0,	
CRC Error Frames:	0, Alignments Err :	0,	
Tx :		·	
Bytes Xmitted : 38	383702, Unicast Frames :	45872,	
Broadcast Frames:	1948, M-cast Frames :	813,	
UnderSize Frames:	0, OverSize Frames:	0,	
Lost Frames :	0, Collided Frames:	0,	
	-	-	



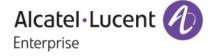
Error Frames : 0

-> show stacking interfaces status Slot/ AutoNego Speed Duplex				
Port		(Mbps)		
+		++-		
1/51	-			
1/52	-	10000	Full	
3/27	-	10000	Full	
3/28	-			

-> show	stacking	interfaces	counters	
4/50				

1/52,		
InOctets =	108040828, OutOctets =	4065016,
InUcastPkts =	89957, OutUcastPkts =	48056,
InMcastPkts =	12, OutMcastPkts =	868,
InBcastPkts =	0, OutBcastPkts =	2006,
InPauseFrames =	0, OutPauseFrames =	0,
Sampling Interval 5	seconds	
InPkts/s =	28, OutPkts/s =	16,
InBits/s =	268016, OutBits/s =	9720
3/27,		
InOctets =	4012826, OutOctets =	108129633,
InUcastPkts =	48045, OutUcastPkts =	89945,
InMcastPkts =	868, OutMcastPkts =	12,
InBcastPkts =	2006, OutBcastPkts =	0,
InPauseFrames =	0, OutPauseFrames =	0,
Sampling Interval 5	seconds	
InPkts/s =	16, OutPkts/s =	29,
InBits/s =	9840, OutBits/s =	270352
-> show stacking in	terfaces counters errors	
1/52,		
IfInErrors =	0,	
Undersize pkts =	0, Oversize pkts =	0
->stacking interface	s 1/27 no l2 statistics	
•	faces 1/27 counters	
1/27,		
InOctets =	0, OutOctets =	0,

InOctets =	0, OutOctets =	0,	
InUcastPkts =	0, OutUcastPkts =	0,	
InMcastPkts =	0, OutMcastPkts =	0,	
InBcastPkts =	0, OutBcastPkts =	0,	
InPauseFrames =	0, OutPauseFrames =		0,
Sampling Interval 5 seco	onds		



InPkts/s	=	0, OutPkts/s	=	0,
InBits/s	=	0, OutBits/s	=	0

#### Limitations

We cannot ideally verify the error count directly. For stacking links, error counters will increase only in scenarios where the packets transmitted internally are corrupted by chance.

#### 9. Bypass DNS lookup by NTP on boot-up

Platforms Supported: OS9702E, OS6850E, OS6855

#### Hosted AOS SW Release: 6.4.6.302.R01

If DNS server is configured in the network, NTP will do a DNS lookup and convert the name into IP address. This allows NTP server to be configured as a name or IP address. Earlier, variable by name ntpSkipDNSLookUp was introduced that could be set using the AlcatelDebug.cfg which when set to "1" makes NTP to skip/bypass the DNS lookup and use the configured IP address. Currently this has been enhanced such that without requiring setting of any variable either through debug flag or through CLI NTP module ignores DNS lookup failure during boot up & retries once the system is ready.

#### Usage:

NA as this is the default behavior

# Limitations:

None

#### 10. SNMPv3 Dual Password – different auth and private passwords

Platforms Supported: OS6850E, OS9700E, OS6855

#### Hosted AOS SW Release: 646.331.R01

#### Introduction:

Existing AOS implementation allows configuration of only one password for any user created in the switch. For a SNMPv3 user with authentication/encryption enabled, hash key computed from this password is used for both authentication as well as encryption of SNMPv3 frames.

This new feature facilitates configuring a SNMPv3 user with different passwords for authentication and encryption of SNMPv3 frames.

User creation CLI command is enhanced such that there will be an additional option to configure privacy password for SNMPv3 users. The configured "password" will be used for authentication and "priv-password" will be used for encryption of SNMPv3 frames.

If SNMPv3 user is created without configuring "priv-password", then existing "password" parameter shall be used for both authentication and encryption of SNMPv3 frames.

The "priv-password" token shall be accepted only when SNMPv3 encryption is configured by the user in the same command. If SNMP encryption is not configured and "priv-password" is configured, then CLI command shall be rejected with error.

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A new file "userPrivPasswordTable "will be created in "/flash/network" directory to store the privacy password details of a user. When user creation is done with privacy password configured, the user name and hash key of this password will be updated in "/flash/network/userPrivPasswordTable" file. The password will be hashed with the hash algorithm chosen by the user during user configuration. SNMP Epilogue database will also be updated with user configured privacy password details.

When SNMPv3 user is created without privacy password configured, no entry will be made in the "userPrivPasswordTable". User password will be used for authentication and encryption of SNMPv3 frames.

### <u>Usage:</u>

Command to configure privacy password for a user.

user <username> password <user\_password> read-write all sha+aes priv-password <priv\_password>

Minimum length for priv-password is 8 and Maximum length for priv-password is 30 characters.

### Example:

user test password xxxxx read-write all md5+des **priv-password yyyyyy** user test1 password xxxxx read-write all md5+aes **priv-password yyyyy** user test2 password xxxxx read-write all sha+aes **priv-password yyyyy** user test3 password xxxxx read-write all sha+des **priv-password yyyyy** 

Creates a SNMPv3 user with authentication/encryption. The configured 'password' shall be used for authentication and 'priv-password' shall be used for encryption of SNMPv3 frames sent/received in the switch. 'priv-password' will be an optional parameter and if user creation/modification is done without this optional key word, then existing "password" itself shall be used for authentication as well as encryption.

-> user test password alcatel123 read-write all sha priv-password alcatel123 ERROR: Priv Password configuration allowed only for users with SNMP encryption level.

### Limitations:

- Password policy will not be applicable for the new optional parameter "priv-password"
- Password prompting with "password-prompt" option will not be available for "priv-password".
- Existing "auth password" will be used for both authentication and encryption, if the optional parameter "priv-password" is not configured for a user.
- Privacy encryption is applicable only for SNMP transactions. Other switch access methods such as telnet, ssh, ftp, webview etc uses only authentication.
- When the SNMP authentication/ encryption algorithm (security level) for an existing user with privacy
  password configured is changed, then previously configured privacy password will not be used with
  the new SNMP security level. Privacy password need to be re-configured when SNMP security level
  is changed for an existing user.
- NMS must use AOS supported encryption algorithm for successful encrypted transactions

### 11. Router-Guard



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#### Platforms Supported: OS6850E, OS9E, OS6855

#### Hosted AOS SW Release: 646.380.R01

#### Introduction:

The router-guard feature has been introduced as an enhancement to IPv4/v6 multicast switching. This enhancement is expected to address the issue which occurs when a client device sends a multicast group-specific query. In general when a group specific query is received, the packet is sent to the other customer ports and will reduce the member's life to limited interval and wait for a response. When switch sees no response and drops the specific multicast stream for all customers on the switch.

Normally client devices do not send group-specific queries, however this can occur when a customer incorrectly wires a LAN switch port on their Pace/Actiontec device running an IGMP Proxy. The requirement is to avoid processing the router packets.

The Router Guard feature allows you to designate a specified port only as a multicast host port and not as a multicast router port. Any port can become a multicast router port if the switch receives one of the multicast router control packets, such as IGMP general query, PIM hello, or CGMP hello. When a port becomes a multicast router port, all multicast traffic (both known and unknown source traffic) is sent to all multicast router ports. With router-guard feature enabled, multicast router control packets received on this port are not processed.

• A Router Guard command applies a user policy globally, to a vlan, to an access port or trunk port.

• The Router Guard feature does not require IGMP snooping to be enabled.

• Router Guard is typically used in access switches connected to end-user boxes in Ethernet-to-home deployment scenarios.

• The following packet types are not processed if they are received on a port that has Router Guard enabled: IGMP query messages, IPv4 PIMv2 messages, IGMP PIM messages (PIMv1), IGMP DVMRP messages

#### Usage:

Command to configure router-guard feature. *ip multicast router-guard {enable/disable} ip multicast router-guard {enable/disable} ip multicast port <port-num> router-guard {enable/disable} ipv6 multicast router-guard {enable/disable} ipv6 multicast port <port-num> router-guard {enable/disable} ipv6 multicast port <port-num> router-guard {enable/disable} show ip multicast vlan <vid>* 

The command *"ip multicast router-guard"* resets back to the default configuration. By default, ip/ipv6 router-guard is disabled for a switch.

(Port level configuration takes higher priority, vlan level configuration takes second priority whereas global takes the least when global/vlan/port level configurations are combined)

Example 1:

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*ip multicast router-guard enable ip multicat vlan 50 router-guard disable ip multicast port 1/1 router-guard enable* 

Consider port 1/1 belongs to vlan 50. At this case other ports belonging to vlan 50 excluding port 1/1 processes multicast control packets and port 1/1 do not process control packets like IP multicast group specific queries.

#### Example 2:

*ipv6 multicast router-guard disable ipv6 multicast vlan 50 router-guard enable ipv6 multicast port 1/1 router-guard disable* 

Consider port 1/1 belongs to vlan 50. At this case other ports belonging to vlan 50 excluding port 1/1 does not process multicast control packets and port 1/1 processes control packets like IP multicast group specific queries

#### Limitations:

- Multicast routing configuration and router-guard feature are mutually exclusive and the feature works only for IP/IPv6 multicast switching
- Global level router-guard configuration can only be enabled in a switch where IPMS is disabled. This
  is because, the IGMP query packets from IGMP querying device fails to get processed when routerguard is enabled globally and thus IGMP membership reports fails to travel to querying device. Hence
  the router-guard feature has to be enabled at port level at each client connected port in case IPMS is
  enabled for the switch
- The above description applies for vlan level router-guard and IPMS combination. In multicast switching since router-guard configuration at vlan level applies to both client and source/ router connected port, the switch fails to forward the IGMP/ICMPv6 membership reports as it fails to process the query packet from the IGMP querying device. This can be tackled by disabling the router-guard at port level on the port connected to the querying device.
- The group specific queries through the other ports where router-guard is disabled can limit the lifetime of the group belonging to the router-guard enabled port (this happens when the router-guard enabled port and router-guard disabled port contains same multicast group)
- On CPU hike, when LACP port associated on the Linkagg flaps, router guard configuration may fail to act. In this case multicast configuration has to be toggled to retain functionality.

# **New Hardware:**



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# 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** 

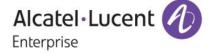
Connector	Type LC
Standards Supported	802.3z, 802.3ah, SFP MSA
Connections Supported	100Base-FX, 1000Base-LX
Fiber Type	MMF
Wavelength	1310 nm
Average Power Output	100Base-FX: -20 to -14 dBm 1000Base-LX: -11.5 to -3 dBm
Receiver Sensitivity	100Base-FX: -28 dBm 1000Base-LX: -22 dBm
Transmission Distance	550 m at 1000 Mbps 2 km at 100 Mbps
Operating Temperature	0°C to 70°C

Digital Diagnostic Monitoring Not Supported.

# **OS6855 Memory Utilization for Routing**

The below table details the memory utilization as a percentage of total memory on the OS6855 product range:

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OS6855 / OS6855U24X Default Memory	80%
Standalone 6855-U24X with 100 VLAN + 100 802.1q VLAN + 10 LACP (Link Aggregation) with no Routing	83%
Loading BGP, OSPF and PIM protocol	85%

The below table gives the additional memory utilization for various Routing Configurations:

Each Additional VRF	1%
Addition of Protocols (OSPF / BGP / PIM)	1%
Addition of 1500 Routes	1%

**Recommended System Limits:** 

VRF	Routes	L2 MAC
12	1K	2K
10	2K	2K
8	4K	2K
6	6K	4K
4	8K	4K
2	10K	8K

Overall memory utilization: To be restricted below 94% to allow stable system operation.

# **Downgrade Instruction**

As part of the 646.338.R01 Maintenance Release, format for storing Switch User Data has been modified. Existing user data will automatically be migrated to this new format upon upgrade. Any new user configuration or modification of existing user information is updated in this new format. Upon downgrade to earlier releases, any changes (addition or modification) of users done will be lost. There will be no impact on the user data which existed before the upgrade.



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