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Virtual Services Platform 9000
Software Release 3.4.4.0

1. Release Summary

Release Date: November 2014
Purpose: Software release to address customer found software issues.

2. Important Notes before Upgrading to This Release

None.

3. Platforms Supported

Virtual Services Platform 9000 (all models)

4. Special Instructions for Upgrade from previous releases

None.

5. Notes for Upgrade

Please see "*Virtual Services Platform 9000, Release Notes*" for software release 3.4.0.2 (NN46250-401, 05.04) available at http://www.avaya.com/support for details on how to upgrade your Switch.

File Names For This Release

File Name	Module or File Type	File Size (bytes)
VSP9K.3.4.4.0.tgz	Release 3.4.4.0 archived software distribution	114848072
VSP9K.3.4.4.0_modules.tgz	Release 3.4.4.0 Encryption Modules	41896
VSP9K.3.4.4.0_mib.zip	Archive of all MIB files	772053
VSP9K.3.4.4.0_mib.txt	MIB file	4854224
VSP9K.3.4.4.0_mib_sup.txt	MIB file	817684
VSP9000v340_HELP_EDM_gzip.zip	EDM Help file	4012849
VSP9000v3.4.3.0.zip	EDM plug-in for v3430/vsp9000, built on 8/5/14, based on svn #31565	5627960
VSP9K.3.4.4.0.md5	MD5 Checksums	452

Note about image download:

Ensure images are downloaded using the binary file transfer. Perform MD5 checksum check on downloaded files to ensure file integrity.

Check that the file type suffix is ".tgz" and the image names after download to device match those shown in the above table. Some download utilities have been observed to append ".tar" to the file name or change the filename extension from ".tgz" to ".tar". If file type suffix is ".tar" or file name does not exactly match the names shown in above table, rename the downloaded file to the name shown in the table above so that the activation procedures will operate properly.

Load activation procedure:

software add VSP9K.3.4.4.0.tgz
software add-modules 3.4.4.0.GA VSP9K.3.4.4.0_modules.tgz
software activate 3.4.4.0.GA

6. Version of Previous Release

Software Version 3.4.0.2, 3.4.1.0, 3.4.2.0, 3.4.2.1, 3.4.2.2, 3.4.3.0

7. Compatibility

8. Changes in 3.4.4.0

New Features in This Release

Add ssl certificate management support.

New ACLI commands:

ssl certificate

This command installs a new self-signed certificate with the option of specifying an expiration time. The default expiration time is 365 days.
If a certificate is already present, the user must confirm that it can be deleted before a new one is created.

ssl reset

This command installs an existing certificate or installs new self-signed one with one-year expiration

no ssl certificate

This command deletes the existing certificate and key. The certificate loaded in memory remains valid until *ssl reset* is invoked or the system is rebooted.

When a certificate is created and installed by either command, an INFO alarm is logged:
New default Server Certificate and Key are generated and installed
or
Current Server Certificate and Key are installed

```
ACLI shows this:

ssl ?
  certificate  Create and install a new self-signed SSL server certificate
  reset        Install current SSL server certificate; if missing, create and
               install a new self-signed certificate


ssl certificate?
validity-period-in-days  Number of days for which the certificate remains
                         valid (default 365)

ssl certificate validity-period-in-days ?
   <30-3650>

no ssl ?
  certificate  Delete SSL server certificate
```

Old Features Removed From This Release

Problems Resolved in This Release

ID	Description
wi01164674	Log message seen VSP 9048GT: GlobalRouter COP-SW ERROR BCMSDK ERROR: port 3:ge16: timeout draining packets (137 cells remain)
wi01176837, wi01180732	Failure to process HA control messages causes persistent out of FBUF condition that leads to standby CP reset. Alarm for out of buffer condition added and data collection logic added to determine cause of condition.
wi01179655	DDI not returning valid information for ports 33-48 on 9048GB
wi01180086	Running "show isis spbm multicast-fib summary" or "show isis spbm unicast-tree" may cause CP reset because of watchdog timeout.
wi01181410	As part of restarting slave CP when out of memory for HA fbufs, get corefile on the slave
wi01181439	Standby CP takes 20 minutes to detect & recover from QE Lockup condition.
wi01181629	Add support to track core files details such as software release and view name. output of "show core-files" now displays software view information. VSP-9012:1#show core-files ========== Core Files ========== Remote CP Directory: /intflash/coreFiles/2 1. File: core.cbcp-main.x.20140729185148.2.tar Size: 11578880 bytes Created: Tue Jul 29 18:51:48 2014 Software = 3.4.4.0/002, Build View = ningzh_cb34 Directory: /intflash/coreFiles/4 1. File: core.cbio-main.x.20140729185207.4.tar Size: 11146240 bytes Created: Tue Jul 29 18:54:43 2014

	Software = 3.4.4.0/002, Build View = ningzh_cb34 2. File: core.cbio-main.x.20140729185934.4.tar Size: 5437952 bytes Created: Tue Jul 29 19:01:59 2014 Software = 3.4.4.0/002, Build View = ningzh_cb34 Directory: /intflash/coreFiles/SF1 1. File: core.cbsf-main.x.20140729185102.SF1.tar Size: 496640 bytes Created: Tue Jul 29 18:51:05 2014 Software = 3.4.4.0/002, Build View = ningzh_cb34
wi01182548	After the BSR and bsr-candidate in a domain are disabled, the bootstrap router info isn't reset to its default value
wi01182742	Convert FB MMU parity error log messages to alarms to enhance visibility and severity.
wi01182766	Intermittent packet loss may occur during a "dirty fiber" condition. VLACP enhancement to log and count out-of-sequence VLACP packets which may occur in this situation. Functional only when adjacent VLACP enabled interface also supports this feature.
wi01183483	On EDM, 9012FC fan is showing up as “9012RC” instead of “9012FC”
wi01183515	MAC addresses may not be flushed after the SMLT ports were disabled on both sides of an IST cluster.
wi01184067	Enhance diagnostics and exception handling for fbuf utilization, crash if excessive, and display more detail in show khi performance fbuf stats
wi01184311	Tagged port with "untag-port-default-vlan" enabled may still send tagged packets for default vlan.
wi01184725	CP may reset when a directly connected route from the GlobalRouter is being redistributed to a VRF using OSPF and the nexthop has been deleted.
wi01185347	MAC addresses not aging out on an IST peer resulting in a very large FDB table.
wi01186939	After HA, setting boot config choice primary config-file and then power-cycling the DUT, the primary config file is not loaded.
wi01187206	High CPU utilization caused due to continuous console failed login

wi01187271	Suppress SNMP Community Strings Displayed in Log File.
wi01187286	Support Moscow timezone to UTC+3 with no daylight savings
wi01187649	Add ssl certificate management support and support 30-3650 day certificate validity.
wi01188210	EDM support for VLACP sequence number enhancement and associated VLACP port stats
wi01188620	SNMP get exact entry on table rcIpBgpTmpNlritable with invalid oid length may cause CP reset.
wi01189167	9012FCHS: On Boot up Top Fan Show Warning Status "Amber" While Bottom Fan Tray Shows "Fault". After boot up Both Fans will be set to Green. The System LED is cleared when all the over temperature alarms in the slots are cleared.
wi01189363	CP reset may occur due to malformed DHCP INFORM Packet, i.e. missing END option.
wi01189781	Default SSL certificate key lengths are only 1024 bits. Changed to 2048.
wi01189927	Expose and Report MAC-PHY Error Counters SUSTDEV-VSP4:1#show interfaces gigabitEthernet statistics 8/1 ========== Port Stats Interface ========== PORT IN OUT IN OUT RX MAC/PHY NUM OCTETS OCTETS PACKET PACKET ERRORS ---------- 8/1 465480575644 465480759778 665578032 665585847 8099 PORT IN OUT IN OUT OUTLOSS NUM FLOWCTRL FLOWCTRL PFC PFC PACKETS ---------- 8/1 0 0 0 0 0 SUSTDEV-VSP4:1#show interfaces gigabitEthernet error mac-phy 8/1 ========== Port Ethernet MAC-PHY Error ========== PORT FCS UNSUPP. ALIGN CODE FALSE OVERSZ JABBER MTU UNDERSZ NUM ERROR OPCODE ERROR ERROR CARRIER FRAME FRAME ERROR FRAME

	FRAG. ---------- 8/1 7932 0 0 537 0 0 0 0 0 0 SUSTDEV-VSP4:1#show khi forwarding mac-phy 8 ========== Forwarding KHI Details - MAC-PHY Errors - Slot 8 ========== PORT FCS UNSUPP. ALIGN CODE FALSE OVERSZ JABBER MTU UNDERSZ Total RX NUM ERROR OPCODE ERROR ERROR CARRIER FRAME FRAME ERROR FRAME FRAG. MAC/PHY Err ---------- 8/1 8014 0 0 540 0 0 0 0 0 0 8554
wi01190857	Log message seen during an SNMP query for dot3StatsTable entries for invalid port. IO10 [09/24/14 12:21:33.696] 0x0011052a 00000000 GlobalRouter COP-SW ERROR lcdPimPortToMac: invalid PIM_PORT[63]
wi01190869	Packet dropped with OSPF Router Id same as that of local switch without logged event.
wi01192295	CP may reset when executing “show isis spbm unicast-tree” or "show isis spbm multicast-fib summary"
wi01193828	Enabling OSPF on 120th L2VSN may cause missing LSM and VRRP transitions Across IST port
wi01194763, wi01196692	ACE action of permit redirect next hop failed to redirect to the configured next hop but instead redirected to that of the very first ACE whether enabled or not

10. Outstanding Issues

Please see "*Virtual Services Platform 9000, Release Notes* release 3.4.0.2" (NN46250-401, 05.04) available at http://www.avaya.com/support for details regarding Known Issues.

In addition, the following issues have been identified:

ID	Problem Description	Workaround
wi01133152	When port membership of an MLT is changed the MSTP spanning tree state is enabled for the MLT regardless of its previous state. That is, configure for any port in the mlt no spanning-tree mstp force-port-state enable and show spanning-tree mstp port role shows spanning tree disabled and port state forwarding for each port in the mlt. Now add a port to the mlt, or delete one. show spanning-tree mstp port role spanning tree is now enabled for each port in the mlt.	Delete MLT member ports from the MLT and re-add the MLT member ports back to the MLT
wi01134134	ACL filter "default" deny action with "permit" control-packet-action not working after line card power off/on.	Once in the bad state, simply re-keying in "filter acl set 30 default-action deny control-packet-action permit" restores the functionality.
wi01135592	When ip mroute stats is enable via EDM, "PktsPerSecond" count is always showing zero.	Display properly by performing "**show ip mroute stats**" on ACLI.
wi01136699	syslog with ip-header-type circuitless-ip not working.	Use syslog with the default management interface ip address.
wi01152560	ISIS adjacency over the IST port comes down and does not get re-established automatically when the IST is deconfigured.	The configuration of SMLT peer-system-id and SMLT virtual BMAC is tied to having a valid IST configuration on the switch. Deletion of IST on a switch running SPBM is a service impacting operation and the following procedure must be followed when doing so. • Disable ISIS • Clear the SMLT peer system-id

		• Clear the SMLT Virtual BMAC • Delete the IST peer configuration • Enable ISIS and • Bounce the ports that are/were part of the IST MLT. Here is an example session output following this procedure. /* disable ISIS */ CB15:1(config)#no router isis enable WARNING:Disable ISIS will cause traffic disruption Do you want to continue (y/n) ? y /* Clear the SMLT peer system-id */ CB15:1(config)#router isis CB15:1(config-isis)#spbm 1 smlt-peer-system-id 0000.0000.0000 /* Clear the SMLT Virtual BMAC */ CB15:1(config-isis)#spbm 1 smlt-virtual-bmac 0x00:0x00:0x00:0x00:0x00:0x00 CB15:1(config-isis)#exit /* delete IST peer configuration */ CB15:1(config)#interface mlt 2 CB15:1(config-mlt)#no ist enable WARNING : Disabling IST may cause loop in the network! Do you really want go DISABLE IST (y/n) ? y CB15:1(config-mlt)#no ist peer-ip CB15:1(config-mlt)#exit /* enable isis */ CB15:1(config)#router isis enable /* At this point, the interface still needs to be bounced */ CB15:1(config)#interface gigabitEthernet 10/17 CB15:1(config-if)#shut CB15:1(config-if)#no shut

wi01192436	MLT up/down trap is not sent when first port of the MLT transitions up or last port of the MLT transitions down.	Log messages of the MLT up and down events are written and sent to syslog servers if configured.
wi01198679	Previous to 3.4.0.0, Enforcement of the Max DHCP Relay forwarders limit of 512 per VRF did not work. Upgrading from pre 3.4.0.0 to 3.4.x.x release where enforcement is applied will cause loss of any forwarders above the 512 limit. The system limit was and still is 1024 DHCP Relay forwarders per chassis.	Decrease the number of DHCP Relay forwarders to 512 or less per VRF and 1024 per chassis.

11. Known Limitations

Please see "*Virtual Services Platform 9000, Release Notes* release 3.4.0.2" (NN46250-401, 05.04) available at http://www.avaya.com/support for details regarding Known Limitations.

MLT configuration recommendation:
MLT is designed for redundancy/robustness for when components/subsystems that comprise the network fail. To take advantage of this, it is suggested that MLT links span different IO cards so that if there is a failure on a card it only takes down one MLT link and the others continue to operate normally. If there are more MLT ports required on a single card, then those links should reside in different "slices" on a given card. A "slice" is a grouping of ports that are handled by a single forwarding engine on the IO card.

For 24x10G card, a "slice" is grouping of eight ports, and for 48x1G it is a grouping of 24 ports. For MLT links on the same 10G card, they should span different "slices", or groups of eight ports, i.e. 1-8, 9-16, 17-24. For MLT links on the same 1G card, they should span different "slices", or groups of 24 ports, i.e. 1-24, 25-48.

You may have to wait up to 30 seconds between subsequent "show pluggables" commands to give time for pluggable information to be refreshed.

New external flash devices come with a FAT16 format. While this appears to work correctly when inserted into a 9080CP card, there is an incompatibility issue when there are more than 169 log files created. The incompatibility will cause the logging mechanism to stop writing any new log files. To correct this issue you need to reformat any new flash device after it has been inserted into the 9080CP with the "dos-format" ACLI command as explained in the document: "CP Module Compact Flash Replacement".

VSP 9000 Power Supply LEDs are in a non-deterministic state when the CP Power Supply indicator is lit RED indicating fault. There will be log messages indicating the Power Supply fault event but the PS LEDs may be RED, GREEN or OFF.

IPFIX is not supported on ISIS interfaces. Log messages such as the following will start filling up the log files:

IO3 [10/25/13 13:58:50.722] 0x0001c68d 00000000 GlobalRouter HW ERROR getSlotIdFromLpid: LPID (2868) is not associated with a slot!

IO3 [10/25/13 14:02:30.791] 0x000005e0 00000000 GlobalRouter SW ERROR Invalid LPID: 2904 for getPimPortFromLpid conversion!!!

The best practice for installing or bringing up a new chassis:

1) Insert one CP module in slot 1, power up the chassis.
2) When the system is up and running, then insert the second CP module in slot 2
3) Image sync will run automatically between the two CP modules. This will align the same software release onto both CP modules.
4) Proceed to add the SF modules one at a time, starting with SF1 or SF4. Once the SFs are up and running.
5) Proceed with adding the IO modules one at a time.

12. Documentation Corrections

For other known issues, please refer to the product release notes and technical documentation available from the Avaya Technical Support web site at: http://www.avaya.com/support .