RELEASE NOTES

AOS Converged Access
AOS version R11.2.0
June 2, 2014

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Introduction

AOS version R11.2.0 is a major system release that adds new features and addresses customer issues that were uncovered in previous code releases.

This release is generally available code. Results obtained during internal testing have been evaluated and the code has been determined to be ready for general availability. Caveats discovered during testing but not addressed in this build are listed in *Errata on page 10*.

A list of new or updated documents for this release appears in *Documentation Updates on page 17*.

Configuration guides, white papers, data sheets, and other documentation can be found on ADTRAN's Support Forum, https://supportforums.adtran.com. The contents of these release notes will focus on the platforms listed below.

Supported Platforms

The following platforms are supported in AOS version R11.2.0. To confirm the Boot ROM version of the ADTRAN unit, Telnet or console to the unit and issue the **show version** command. In the command output, the Boot ROM version will be listed as **Boot ROM version XX.XX.XX**. If you require a Boot ROM upgrade, please contact ADTRAN Technical Support (support@adtran.com or 888-423-8726) for assistance.

Platform	Standard Feature Pack	Enhanced Feature Pack	SBC Feature Pack	Minimum Boot ROM
NetVanta 644		√		A5.01.B1
NetVanta 1335		√		15.01.00
NetVanta 3120		√		14.04.00
NetVanta 3130		√		14.04.00
NetVanta 3200/3205 (3rd Gen. only)	√	√		17.02.01.00
NetVanta 3305 (2nd Gen. only)	√	√		04.02.00
NetVanta 3430	√	√		13.03.SB
NetVanta 3430 (2nd Gen.)	√	√	√	17.05.01.00
NetVanta 3448	√	√	√	13.03.SB
NetVanta 3450	√	√		17.06.01.00
NetVanta 3458	√	√		17.06.01.00
NetVanta 4305 (2nd Gen. only)	√	√		08.01.00
NetVanta 4430	√	√	√	17.04.01.00
NetVanta 4660		√		R10.10.0
NetVanta 5305	√	√		11.03.00
NetVanta 6240		√	√	A5.01.00
NetVanta 6250		√	√	R10.9.0
NetVanta 6310/6330		√	√	A3.01.B2
NetVanta 6355		√	√	14.06.00
NetVanta 6360		√		R11.2.0
Total Access 900 Series (2nd Gen. only)		√		14.04.00
Total Access 900e Series (2nd Gen. only)		√	√	14.05.00.SA

Platform	Standard Feature Pack	Enhanced Feature Pack	SBC Feature Pack	Minimum Boot ROM
Total Access 900e Series (3rd Gen. only)		√	√	R10.9.0

System Notes

- Beginning with AOS version 17.09.01, the syntax of certain commands was modified from previous AOS versions by either removing or adding the **ip** keyword. In general, when the **ip** keyword appears in a command, it signifies that the command is only applicable to IPv4 functionality. As more features introduce IPv6 support, the **ipv6** keyword is added to signify the command is only applicable to IPv6 functionality. The **ip** keyword has been removed from several commands to signify that the command has both IPv4 and IPv6 functionality.

  Due to this syntax change, downgrading a unit configured in AOS version R11.2.0 to a previous AOS version, could cause service disruption because the new syntax might not be recognized by the previous version. Upgrading a unit from an older AOS version to AOS version R11.2.0 will cause no service disruption because both the old and the new syntaxes are accepted. For more information on specific commands, refer to the *AOS Command Reference Guide* available at https://supportforums.adtran.com.
- It is recommended that your browser's cache be cleared before viewing the GUI after an upgrade.
- MGCP is not supported on the NetVanta 6360.

Features and Enhancements

This section highlights the major features, commands, and behavioral changes for all Converged Access products running AOS version R11.2.0.

- Increased the maximum number of configurable probes from 10 to 20 on the following platforms: NetVanta 3430 (second generation), NetVanta 3448, NetVanta 3450, NetVanta 3458, NetVanta 4430, NetVanta 4660, NetVanta 6250, and Total Access 900e (third generation).
- Added the ability to embed named Tcl scripts in the unit's configuration as an alternative to using separate files on the file system.
- Added the ability for the DHCPv6 server to perform the DHCPv6 delegating router role, allowing the DHCPv6 server to delegate prefixes to requesting routers.
- Added support to probes and probe responders to run on non-default VRFs.
- Added rapid commit support to the DHCPv6 server.

This section highlights the Carrier Ethernet specific features, commands, and behavioral changes available in products running AOS version R11.2.0.

- Added support for E12 PCM31 (CCS) output to the T4 interface on the NetVanta 4660.
- Added support for network synchronization over VDSL to the NetVanta 4660.
- Added support for the NetVanta Quad VDSL2 Carrier Ethernet module.
- Added support for up to seven unique per-queue shapers on each interface. The per-queue shapers can be configured in addition to the per-interface shaper.
- Added MAC swap loopback support, which allows a user to perform Layer 2 loopback testing on Ethernet and EFM group interfaces.

- Added subtended host listener functionality, which allows management access information to be provisioned via link OAM.

Fixes

This section highlights major bug fixes for all products running AOS version R11.2.0.

- The Rx & Tx power values for SFP modules were incorrect in the ENTITY-SENSOR-MIB.
- If both **no enable password** and **aaa authentication enable default enable** were present in a configuration using AAA, a console user would be able to elevate to privilege level 7 by entering anything when prompted for the enable password. This issue only affected AOS versions R11.1.0 and R11.1.1.
- If a AAA authentication banner was configured, it would not display over SSH. Instead the login banner (if configured) would display.
- If the **absolute-path** on a HTTP request probe contained a ?, the ? was lost when the unit was rebooted.
- The NetVanta 4660 did not return a value for the HDSL2-SHDSL-LINE-MIB::hdsl2ShdslInvIssueNumber OID.
- If an SNMPv3 group name was configured that matched the name of an existing SNMP community, the SNMPv3 group would not be added to the configuration.
- Heartbeat support was disabled in OpenSSL in order to address security concerns related to CVE-2014-0160, also known as Heartbleed. Only AOS R11.1.0 and R11.1.1 were susceptible to this issue.
- In R10.9.0 and higher, if a **name error** response was received on an A or AAAA DNS query, the configured domain name was appended repeatedly, resulting in constant DNS queries.
- Issuing certain **privilege configterminal all** commands caused the AOS device to reboot.
- Using a packet capture with a size limit of 16 MB or greater would result in a reboot.
- On some Total Access 916e (third generation), Total Access 924e (third generation), and NetVanta 6250 units, errors may have been seen on the copper gigabit Ethernet interface.
- It was not possible to issue the **shutdown** or **no shutdown** commands for a track from within the weighted list configuration mode.
- NetVanta 4660, NetVanta 6250, and Total Access 900e (third generation) units would not honor route-maps when the firewall was enabled.
- If power was removed and then reapplied while an AOS device was regenerating an SSH key, the key may have been corrupted, causing the unit to reboot when a user tried to connect via SSH.
- If a flood of IGMP leave messages was received on a Layer 3 interface and the interface was configured for multicast routing, the ARP cache would be filled with multicast addresses.
- It was not possible to update the authentication parameters of a configured SNMP user without first removing the user.
- If the IPv4 firewall was enabled and a message in the TCP 3-way handshake contained a PSH or RST flag, the firewall association would not reach the established state and was cleared within 20 seconds.
- If 100 PPP NAKs were received during a single PPPoE session (for example, because of an authentication mismatch), any future NAK would cause the PPPoE session to be torn down immediately.
- If the TWAMP probe responder was enabled, IPv6 NTP packets were sent with an incorrect UDP checksum.

- If **ip proxy-arp** was enabled on an Ethernet interface and that interface was referenced with **ip unnumbered** on a separate interface, the AOS device would incorrectly respond to ARP requests causing IP address conflict errors on LAN devices.
- On the NetVanta 4660, PIM sparse would not establish a neighbor relationship with an adjacent PIM router because it was not properly processing the PIM Hello messages from the neighbor.
- If a subinterface that was administratively shut down due to an observed failed track, and the **no shutdown** command was issued on the subinterface, the subinterface would not come out of the admin down state. If **shutdown** followed by **no shutdown** was issued on the subinterface, it cleared the admin down condition, but the subinterface would still not come up. The subinterface had to be deleted and then readded to clear the condition.
- On the NetVanta 4660, **snmp trap link-status** could not be disabled on the system control EVC, system management EVC, Gigabit Ethernet, SHDSL, and EFM group interfaces.
- The **debug vrrpv3 packet** command did not display debug messages for all VRFs.
- If two CLI privilege level commands were configured with the **all** keyword, only the least specific of the two commands would take effect. For example, with the following configuration all **show ip** commands would inadvertently be set to level 7:

  privilege exec all level 7 show

  privilege exec all level 6 show ip
- Specifying a nonexistent track on the **no shutdown** command for an interface did not generate an error message.
- On the NetVanta 1335 and NetVanta 3200, removing a NIM sometimes did not result in the creation of an exception report.
- When TACACS+ accounting was enabled, it was possible for a long duration brute force SSH attack to cause the unit to run out of memory and reboot.
- If a **vap-reference** statement was configured on a dot11ap interface, that configuration would be lost when the unit was rebooted.
- If an SSH client that performs key re-exchange was being used, when a re-exchange was attempted the SSH session would become unresponsive.
- On the Total Access 900e (third generation), NetVanta 6250, and NetVanta 4660, the output of the **show process cpu** command may have incorrectly displayed the system load as higher than it actually was.
- SSH sessions to an AOS device that did not progress beyond the **authentication in progress** state could not be cleared without a reboot.
- Executing a Tcl script that issued the **show tech** command may have caused the AOS device to be unable to run another **show tech** command until the device was rebooted.
- On the NetVanta 4660, the ifTable reported the link speed on Gigabit Ethernet interface 0/1 as 1 Gbps when it was actually 10 Mbps or 100 Mbps.
- When AAA command authorization was enabled, issuing a show command with the realtime parameter did not display the statistics in real time.
- The IP Top Talkers Graphs in the GUI sometimes truncated IP addresses.
- When configured for **terminal length 0** certain **show** commands did not provide complete output.

This section highlights the Carrier Ethernet specific bug fixes in products running AOS version R11.2.0.

- When using SHDSL with network synchronization configured to recover timing from the SHDSL interfaces, frames would be dropped roughly every 120 seconds.
- Certain **clear** and BGP neighbor commands that referenced the system management or system control EVCs failed or caused a reboot.
- Changes to the configuration of a dynamic counter would not take effect until the dynamic counter was issued the **shutdown** command followed by **no shutdown**.
- When using Y.1731 linktrace commands, if the output was long enough to require console paging, the output was truncated at the first page break.
- The output of the **show ethernet oam status** command displayed the mode of the far end instead of the locally configured mode.
- When using Gigabit Ethernet ports 0/2 through 0/5 with fiber, if the network synchronization configuration was changed, the link would bounce.
- The Queue Actual Weight value in the output of the **show queue interface** command would improperly display 0 instead of the weight that was actually applied.
- **ping** and **traceroute** commands that referenced the system management or system control EVCs failed or caused a reboot.
- Some **set** parameters configured in QoS maps did not display in the **show qos map** command output.
- AOS could not discard 802.3 PAUSE frames when running a transparent Layer 2 service.
- The sorted linktrace Y.1731 application mode command did not properly sort the results by hop count.
- VRRP version 2 was not supported on EFM group interfaces.
- If a track that was applied to the ccm-enabled statement on a Y.1731 MEP was removed and then added back, the state of the track no longer had an effect on the transmission of CCMs.
- It was not possible to create an EVC map that began with a lowercase t, u, v, w, x, y, or z.
- When using 802.3ah Link OAM over SHDSL, if all SHDSL links went down or were shut down, OAM frames were queued and sent after the SHDSL links came back up.
- If an EFM group interface was shut down, traffic was still allowed to flow over the EFM group, and the status displayed Up in the output of show interface efm-group 1/1.
- IPv6 multicast traffic matched **match broadcast** instead of **match multicast** in an EVC map.
- The **show qos map interface efm-group** <*slot/port*> command was missing.
- When using SHDSL, weighted fair queuing would not function properly unless a shaper was applied to the EFM group.

This section highlights the Voice specific bug fixes in products running AOS version R11.2.0.

- When the volume of SIP to PRI calls was high, calls were sometimes routed to a completely full PRI, resulting in a SIP 486 Busy Here being sent to the server, instead of the call being routed to an available PRI.
- When using templated proxy users with the SIP proxy, received CANCEL messages from the SIP server would be interpreted as outbound messages, resulting in the offered Contact being updated improperly.
- On the Total Access 900e (third generation) and NetVanta 6250, the output caller ID levels were too high.

- When a CANCEL passed through the SIP proxy, if the CANCEL included a Reason header, the Reason header was lost when the message was proxied.
- If an incoming ISDN trunk call was routed to an outgoing user role ETSI ISDN trunk, the numbering plan and type of number (NPI/TON) of the incoming called and calling party numbers was not properly transferred to the outgoing numbers.
- In a failover scenario, spoofed SLA NOTIFY messages from the SIP proxy contained the AOS device's IP address in the Contact URI, which prevented the phones from re-subscribing to the SIP server once normal service was restored.
- When using a user role feature group D trunk, although DNIS digits were received and recognized, they were not properly interpreted as DNIS.
- It was not possible to configure **ip rtp udp** with a range that included UDP ports 63018 and 63019.
- When entering the command **sip proxy emergency-call-routing local**, the configuration would display **sip proxy emergency-call-routing proxy** instead. Negating the command **sip proxy emergency-call-routing proxy** would restore the default parameter for the command, which is **local**.
- When using the SIP proxy in transparent mode without NAT, responses from the server would trigger unexpected rollover events.
- The **dnis-digits** command was not available on Feature Group D RBS trunks.
- If the trunk through which a voice user registers was deleted from the configuration, that user would still be displayed in the output of **show sip trunk-registration**.
- When using the AOS packet capture feature, if VQM was not enabled, outbound RTP packets from the DSP were not captured reliably.
- When using the SIP proxy, 200 OK response retransmissions that were received greater than the configured value of **sip timer rollover** seconds after the initial 200 OK would fail.
- AOS would not properly handle a SIP UPDATE request when it was received on an outbound call that had not connected.
- The 50-call NetVanta 3448 SBC would only support 40 calls.
- In stateful mode, the SIP proxy would use the configured SIP proxy server instead of the URI from the previous Contact header when proxying ACK messages.
- If a route was removed while calls were in progress, a reboot may have occurred.
- When using the Enhanced ANI Substitution feature to add a Diversion header, two Diversion headers would be added.
- In a PSTN gateway application on the NetVanta 644, a call that was blind transferred out to the PSTN would have no audio.
- If an ISDN INFO message with a protocol error was received during dialing on an ISDN call which used overlap dialing, a reboot would occur.
- In rare cases, a DSP reboot would occur on the Total Access 900e (third generation) and the NetVanta 6250.
- When using an ISDN trunk, if the RELEASE_CMP for a previous call was received after the SETUP for a new call but before that new call connected, the new call would fail.
- On a SBC feature pack router or an IP business gateway that was configured to play ringback from .wav files, a reboot occurred when a local transfer mode SIP trunk was playing ringback on a pending referred call and that call was forwarded.

- If a call using a 3.1 kHz audio bearer capability was received on a PRI, the AOS unit would not wait for the calling party name to be sent in a FACILITY message after being instructed to do so in the SETUP message.
- When using media anchoring with the SBC feature pack, one-way audio may have occured on hairpinned calls when multiple 183 Session Progress responses were received.
- When outbound requests passed through the proxy, the transport parameter would be removed if UDP was the specified transport.
- When connected via the console port to an AOS IP business gateway that had an ISDN trunk configured, benign errors would be displayed to the console in some cases.
- When using non-standard SIP ports, the SIP proxy monitor failed to send OPTIONS messages to the configured servers.
- On a SIP-to-SIP call through the B2BUA, if received SDP specified annexb=no for a G.729 call and comfort noise (CN) was also a listed codec, the AOS device would specify annexb=yes in the SDP it sent.
- In some cases, transparent outbound requests through the SIP proxy were handled as outbound proxy requests.
- When using **ringback override 180**, it was possible to have one-way or no audio after an inbound call completed due to the AOS device resending stale SDP.
- If a call rang due to a SIP 180 response for longer than the value of **ip rtp session timeout** (45 seconds by default), there would be no talk path in the SIP to TDM direction when the call was answered.
- When the **voice codec-priority user** command was configured, calls to a ring-group would result in a less preferable CODEC being selected.
- Local 3-way conference calls against Metaswitch would fail if one of the calls in the conference was a hairpinned between two FXS users.

Errata

The following is a list of errata that still exist in all products running AOS version R11.2.0.

- In rare cases, a reboot may occur on the NetVanta 4660 and NetVanta 6360 when a VDSL module is present and traffic is flowing between two Gigabit Ethernet ports.
- In certain cases, the **show interface t1 0/1 performance-statistics Total-24-hour** command will not display the actual totals for the performance intervals. The correct values are displayed in the GUI.
- On the NetVanta 4660, the hdsl2ShdslEndpointCurrStatus OID in the HDSL2-SHDSL MIB always returns noDefect(0) instead of the correct bitmap.
- Speed and duplex settings are displayed on MEF Ethernet interfaces in **show running-config verbose** output, even though those options are neither valid nor configurable for that type of interface.
- LLDP is not transmitted out PPP interfaces on the NetVanta 4305 when using the Octal T1 NIM.
- The NetVanta 7100 and NetVanta 6355 platforms fail to reset QoS map statistics for applied QoS maps when the **clear counters** command is issued.
- In the VQM RTP Monitoring menu, the refresh button refreshes the displayed graphic, but it also duplicates information in the lower part of the menu. In addition, when the cursor hovers over a data point, multiple instances of the same data display.

- In the VQM RTP Monitoring menu, the Source IPs and Interfaces menus have invisible data points that appear and display data when the cursor hovers over them. The invisible data point information duplicates a visible data point and can usually be found hidden above the visible data point.
- On the NetVanta 3430, the setup wizard in the GUI may become unresponsive with a Please Wait message.
- The output of **show qos map interface <interface>** shows **ce-vlan-id** instead of **vlan-id** and **ce-vlan-pri** instead of **cos** on products other than the NetVanta 4660.
- On the NetVanta 6240, SNMP traps for warm start and cold start are reversed.
- On a NetVanta 4430, information for an inserted SFP does not display correctly.
- Ethernet interfaces in third generation Total Access 900e units are not visible in the Data > IP Interfaces GUI menu. These interfaces are visible and can be configured from the System > Physical Interfaces menu instead.
- Configuring a NetVanta 160's channel setting to **least-congested** may not properly adjust to the least congested channel available.
- The Total Access 900e (third generation) and NetVanta 6250 send a cold start SNMP trap on reload instead of a warm start trap.
- The **show interface dot11ap** <*number*> command may show an incorrect radio channel for a NetVanta 160.
- On the NetVanta 6250 and Total Access 900e Series (third generation), when running a large amount of traffic across a VPN tunnel with crypto FFE disabled, the unit will occasionally reboot citing a memory issue. Enabling the **ip crypto ffe** command prevents this reboot from occurring and is the desired setting when configuring VPN due to the performance increase of the FFE functionality.
- On very rare occasions, port T1 3/3 on an Octal T1 NIM can stop negotiating LCP when it is part of an MLPPP bundle. Rebooting the device will restore the interface.
- On a NetVanta 6310, if a SHDSL circuit with a detected bad splice retrains to a different line rate, the distance of the bad splice will display incorrectly.
- If the top level ATM interface on a SHDSL ATM NIM2 module is disabled and re-enabled, the ATM circuit will no longer be able to pass traffic. The ADTRAN unit must be rebooted to correct the problem.
- The T1 EFM counters do not increment as traffic passes through the device.
- With the SHDSL ATM NIM2, the NetVanta 6310 drops approximately 1 out of every 15K packets from the SHDSL to Ethernet direction.
- Performance throughput for 66 byte packets on the NetVanta 6355 4 T1/NAT test cases has decreased approximately 40 percent. All other packet sizes, including IMIX traffic, have acceptable throughput.
- Removing a USB modem from the USB NIM while active could cause the AOS device to reboot. Shutting down the demand interface being used by the modem prior to removing the modem will prevent this reboot.
- In redundant Ethernet mode, if the Ethernet interface is configured with subinterfaces, the NetVanta 644 will reboot when one of the Ethernet cables is removed.
- Copying a file larger than 20 MB from flash memory of an AOS device via HTTP can cause the AOS device to reboot.
- The GUI of a NetVanta device acting as a wireless access controller can not display the software currently running on a connected access point.

- An AOS device may print an event message in the CLI reporting a successful NetVanta 160 software upgrade, even if the upgrade has failed.
- The command **boot config flash** <*filename*> does not function properly on many AOS platforms.
- A host name entry in an ACL may fail to resolve to the correct IP address even though the router's host table reflects the correct IP address. Workaround: Use IP addresses instead of a host name when creating an ACL.
- Event messages indicating a firmware upgrade was attempted may appear in the AOS event log for NetVanta 160 APs that are not being upgraded.
- Having more than two entries in a Network Monitor ICMP probe test list displays **Tracked by: Nothing** in the **show probe** command output. This is only a display error; the probes still function correctly.
- In the GUI, VQM may display a loopback interface when no loopback interface is configured.
- The VNS verification process does not remove inconsistent A-type records from the host table after the configured number of attempts.
- Configuring over 1200 VNS entries on the NetVanta 3448 causes a SIP pre-parse error.
- If the **ethernet-cfm** command is configured on a MEF Ethernet interface, the output of the following CLI commands is not formatted properly:

    1. **show ethernet cfm association**
    2. **show ethernet cfm stack**
    3. **show ethernet cfm mep local**
    4. **show ethernet cfm mep local detail**

- Wi-Fi multimedia (WMM), configured with the command **qos-mode wmm,** does not function properly on NetVanta 150 Access Points.
- The **called-number** command on a demand interface does not function properly.
- When using XAUTH with a VPN client, an AOS device requests CHAP authentication from the client but does not send a CHAP challenge payload. This can cause issues with VPN clients that expect to receive this payload.
- WEP encryption does not function properly on NetVanta 160s.
- If a USB modem is physically disconnected from a USB WWAN NIM while active NIM is active, the demand interface being used by the modem will not automatically shut down. The demand interface should be disabled before removing the modem to prevent this issue.
- On the NetVanta 6310/6330, with FFE enabled, passing traffic from the Ethernet 0/1 interface out an Ethernet NIM2 can cause the Ethernet 0/1 interface to fail. The interface is recovered with a reboot. Disabling FFE on the Ethernet 0/1 interface prevents the issue.
- An SNMP walk of the NetVanta 6355 lists the physical address for the first interface index only.
- The current AOS implementation of DHCP message construction may result in Windows XP machines not adopting the DNS servers defined in the DHCP Offer. A workaround using a numbered IP/hex option will allow the message to be constructed in a manner that Windows XP will accept. Microsoft also offers a hotfix to resolve this Windows issue.
- The system clock may drift and lose synchronization with higher stratum devices when NTP is enabled. This issue only affects the NetVanta 3448, 3458, and 6240 products.

- The **vap-reference** command will not replicate VLAN IDs for an AP unless 802.1q encapsulation has been manually enabled on the AP expecting to receive the replicated configuration.
- Updating PRL values on a Sprint 3G CDMA NIM may not function properly.
- The parent map QoS statistics must be cleared in order to clear the child map statistics.
- A specific QoS map entry cannot be cleared without the entire map being cleared.
- In rare cases, when an IP PBX and IP phones are both passing through a NAT and the SIP proxy on an AOS device, some call flows can enter a one-way-audio state. Enabling the **ip rtp firewall-traversal enforce-symmetric-ip** command from the Global Configuration mode works around the issue.
- A large enough drift in the system clock can cause an error when the NTP server attempts to synchronize.
- On a NetVanta 1335, a switchport that is configured as a port channel cannot change the edge port mode and cannot be changed from a port channel to another configuration using the GUI.
- The **show interfaces** command output for multilink Frame Relay interfaces will display an incorrect available bandwidth value when a physical link residing in the bundle is down.
- When a QoS map is applied to a VLAN interface, the NetVanta 3448 and 3458 platforms fail to reset QoS map statistics after the **clear counters** command is issued. The **clear qos map** command will clear the statistics properly.
- The GUI does not produce an error when VLANs are selected for a particular VAP when encapsulation 802.1q is not enabled.
- The **show atm pvc** counters do not increment.
- The **show bridge** <*number*> command might not show any entries.
- Using SCEP, AOS devices can fail to enroll certificates to a Red Hat Certificate Authority.
- The input/output rate counters for a T1 interface are exaggerated for approximately 15 seconds after clearing them.
- The GUI statistics page for the SHDSL interface does not refresh when in 4-wire mode.
- The GUI shows invalid line rate options for a SHDSL interface in 2-wire mode.
- The GUI line rate options for a SHDSL interface do not match those of the CLI.
- Adding an IPv6-enabled PPP interface to a bridge group does not require the user to first remove the IPv6 address from the PPP interface.
- Configuring a port channel on a NetVanta 3448 can cause the STP topology to become unstable.
- Sierra Wireless USB305 3G modems are sometimes not recognized by the USB WWAN NIM.
- Changing the route metric value using **ipv6 address autoconfig default metric** <*value*> command does not change the administrative distance of the default route.
- The NetVanta 5305 can drop some traffic prioritized by class-based weighted fair queuing (CBWFQ) on a MLPPP interface when a stand-alone QoS map is applied.
- A NetVanta 5305 can stop passing traffic for brief intervals when negotiating frequent VPN tunnels using Diffie Hellman Group 5.
- The output queue statistics on an Ethernet interface can fail to display output queue drops when FIFO is enabled.
- Prioritized traffic can be dropped at a significant rate on PPP interfaces when using a parent QoS map (that references a child map with priority allocation), if the shaped rate is configured for more than 75 percent of the line rate.

- The CLI does not display the correct value for Required Bandwidth in the event message generated by applying a QoS map.
- The output from **show qos map interface ppp 1** displays incorrect values for the number of packets sent.
- The NetVanta 5305 can fail to generate an event message to confirm that a QoS map has been applied.
- EAP Identity responses from a wireless client that do not contain an Identity field can result in a malformed RADIUS packet created by the NetVanta 150.
- NetVanta 150s might not properly handle immediate Access-Accept responses to Access-Request messages.
- 3G connections using a NetVanta USB WWAN NIM and a Sierra Lightning modem can fail.
- The name of a deleted IPv4 ACL cannot be used to name a new IPv6 ACL.
- The cellular interface can trigger a core dump on a NetVanta 3448 when changing states.
- Proxy user templates cannot modify SDP IP addresses correctly in certain applications.
- Browsing to the Switchports menu from the Port Security menu on the NetVanta 1335 WiFi GUI results in a 503 Service Unavailable error.
- Connecting a Novatel U547 USB modem to the NetVanta USB WWAN NIM can cause the router to reboot.
- A startup configuration with greater than 2743 IPv6 prefixes on a VLAN interface causes the NetVanta 3448 to reboot.
- A Spanning Tree L2 broadcast storm lasting several hours can cause the NetVanta 1335 to reboot.
- The pass phrase for the Wireless Wizard does not persist across reboots.
- Removing and restoring cross-connects multiple times can cause the PC configuration thread depth to reach 100 percent.
- Rapidly removing and adding cross-connects using the CONSOLE port and SSH at the same time can result in a reboot.
- When a switchport on a NetVanta 3458 is configured for **port-security**, it does not receive BPDUs. If multiple connections between the NetVanta 3458 and another switch are made, a switching loop could occur because both ports will automatically enter a forwarding state even though the Spanning Tree protocol should cause one port to enter a blocking state.
- Using the command **debug ethernet cfm loopback request domain** <*domain name*> to filter Ethernet CFM loopback debugs may not display the debug output to the console. Removing the filter and using the **debug ethernet cfm loopback request** command will function properly.
- The output of the command **show ethernet cfm mep loca**l may display an incorrect maintenance association for a MEP ID if multiple maintenance associations are configured on the unit.
- The NetVanta 6240 should send warm_start SNMP traps when the unit is told to reboot by software. It should only send cold_start traps when the power is cycled. Instead, it is sending cold_start traps, even when reloaded by software.

The following is a list of Carrier Ethernet specific errata that exist in products running AOS version R11.2.0.

- The **efm-group** interface type option is missing from the **nat source list** <*acl name*> **interface** command.
- The **efm-group** interface type option is missing from the **tunnel source** command on tunnel interfaces.

- The **efm-group** interface type option is missing from the **show ip interface** command.
- The system management and system control EVCs will show an EVC Status of Running, even if all of the required attributes are not configured.
- The **clear counters** command does not clear the dynamic counters. Dynamic counters can be cleared using the **clear counters dynamic** command.
- On the NetVanta 4660, frame counts for broadcast and multicast traffic may not increment.
- On the NetVanta 4660, the following ifTable and ifXTable issues are present:

  ifTable:

  - ifSpeed is incorrectly reported for SHDSL interfaces when an interface is shut down. 5696000 is reported for the speed instead of 0.
  - ifSpeed is incorrectly reported for the system control EVC when the interface is shut down. 10000000 is reported for the speed instead of 0.
  - ifPhysAddress is not reported for the EFM group interface.
  - ifSpeed for EFM group subinterfaces is incorrectly reported when one or more SHDSL links that are a member of the group are down.

  ifXTable:

  - ifHighSpeed is incorrectly reported for SHDSL interfaces when an interface is down. 6 is reported instead of 0.
  - ifHighSpeed is incorrectly reported for the system control EVC when the interface is shut down. 10 is reported instead of 0.
  - ifHighSpeed for EFM group subinterfaces is incorrectly reported when one or more SHDSL links that are a member of the group are down.

The following is a list of Voice specific errata that exist in products running AOS version R11.2.0.

- The ERL tool is not functional on the NetVanta 6360.
- On the NetVanta 6360, if the onboard FXO port is configured to receive digits, a 500 ms delay is required after answering before receiving the first DTMF digit.
- If the second call leg of a transfer started by an FXS user receives an INVITE with Replaces, the transfer will not be completed upon hanging up the phone.
- Receiving an initial INVITE with both audio and T.38 SDP will result in the call being placed on hold.
- The detailed voice quality statistics for a call may not accurately reflect the adjustments made by the **modem-passthrough** command.
- On the Total Access 900e Series (third generation) and NetVanta 6250 Series, if the second CODEC listed in the MGCP Local Connection Options is not one of the CODECs defined in the CODEC list assigned to the MGCP endpoint, the unit will respond with 534 Transaction Failed response resulting in a failed call.
- On the NetVanta 6250 and Total Access 900e (third generation), the **timing-source internal** command is not present. The workaround is to configure **no timing-source t1** <*slot/port*>.
- The AOS SIP proxy may not properly return SIP messages to a client device on the correct UDP port if that device is using a UDP port other than 5060 for its signaling.

- FXS users that are members of a Metaswitch Business Group cannot transfer calls when the Music on Hold feature is enabled on the Business Group.
- SIP proxy failover may not function correctly when a SIP access class is applied to inbound SIP traffic.
- In AOS R10.4.0 and higher, modem-passthrough will fail to send a reINVITE to G.711 if the endpoint is configured with a codec-list that doesn't contain G.711.
- The command **ip mgcp qos dscp** <*value*> will not take effect until either **ip mgcp** is disabled and then re-enabled or the AOS device is reset.
- When the SIP server monitor clears the primary SIP server from a delayed state due to a failure of the secondary SIP server, there will be a 60-second delay until a SIP registration is attempted to the primary SIP server. This delay will not occur if the SIP server monitor is clearing the secondary SIP server from a delayed state due to a failure of the primary SIP server.
- On the Total Access 900e (third generation) and NetVanta 6250, SIP must be enabled in the running configuration whenever MGCP is used for voice.
- Invalid characters are allowed in a host name for the SIP server on a voice trunk.
- When G.729 Annex B is negotiated and VAD is enabled on the endpoint(s) involved in the call, the unit will generate comfort noise packets with payload type 13. This may cause issues with devices expecting comfort noise packets to have the same payload type as RTP (18). However, payload type 13 is specified in the SDP from the AOS device.
- If an ADTRAN unit is configured with single call appearance mode, forwarded calls on a PRI trunk will fail.
- Receiving a 183 after a 183 on hairpin calls when using media anchoring could result in no early media if the SDP in the second 183 differs from the first.
- Echo cancellation is not enabled on 3-way calls when using the local conferencing feature.
- On NetVanta 6240 Series units, V.21 messages will sound overly amplified when listening to the TX output of a T.38 DSP capture. This is a flaw of the capture utility and not representative of how the audio actually sounds.
- DSP captures on the NetVanta 6240 and the NetVanta 644 platforms consume large amounts of memory while in progress. The unit can become unstable if a DSP capture is active for an unusually long period of time.
- With the ADTRAN unit set for **voice flashhook mode transparent**, the conference originator must wait for the third-party to answer before executing the flashhook to initiate the conference.
- On the NetVanta 6240 Series, over an extended period of use, T.38 calls can cause DSP channels to cease producing a dial tone and have poor voice quality. Rebooting the unit will correct the problem.
- NetVanta 6240 only: While running 29 or more simultaneous calls using E&M Immediate, Wink, or Feature Group D, it is possible to get in a state where DTMF tone detection will not function on any outbound (DSX to SIP) call using DSP 0/1.15 or higher. While in this failed state, all calls will continue to function in either call direction on DSP 0/2, as well as all calls on DSP0/1 in the inbound direction. With a load of 28 or less calls, all calls will function reliably in both directions on both DSPs. No consistent work around has been identified at this time. A unit reboot will typically solve the problem.
- The NetVanta 6240 Series IP business gateways can reboot if 60 simultaneous calls are placed through the DSP.

- In either the voice trunk or voice user configuration modes where a CODEC list is configured, entering the command **no codec-list** <list name> <direction> will remove the <list name>, no matter which <direction> is configured.
- The Total Access 900e Series (second generation) cannot properly handle more than 40 simultaneous E&M RBS calls. More than 40 simultaneously active calls could result in no dial tone or no audio on the last 8 channels.
- Using the HEAD acoustics test suite, certain G.168 echo cancellation test cases fail on the NetVanta 6240 and NetVanta 644. These same tests pass on Total Access 900 Series units. There is no reason to believe this will affect a customer in the field.
- NetVanta 6310/6330 Series only: If a SIP trunk is attempting to register a large number of users and the registration fails, activating **debug sip trunk-registration** will cause the Telnet and console connection to become unresponsive. A reboot clears the condition.

Upgrade Instructions

Upgrading ADTRAN products to the latest version of AOS firmware is explained in detail in the configuration guide *Upgrading Firmware in AOS*, available at https://supportforums.adtran.com.

Documentation Updates

The following documents were updated or newly released for AOS version R11.2.0 or later specifically for the AOS products. These documents can be found on ADTRAN's Support Forum available at https://supportforums.adtran.com. You can select the hyperlink below to be immediately redirected to the document.

- *AOS Command Reference Guide*
- *Configuring Network Monitor in AOS*
- *Configuring Network Quality Monitoring in AOS*
- *Layer 2/Layer 3 Carrier Ethernet Service in AOS*
- *Configuring Ethernet OAM Using Y.1731*
- *Configuring Tcl Scripting in AOS*
- *Configuring DHCPv6 in AOS*
- *Configuring IPv6 in AOS*
- *Configuring Network Synchronization in AOS*
- *Configuring MAC Swap Loopback*

