RELEASE NOTES

AOS version R10.3.0
July 6, 2012

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Introduction

AOS version R10.3.0 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 6*.

A list of new or updated documents for this release appears in *Documentation Updates on page 12*.

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 R10.3.0. 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 1234/1234P (2nd Gen. only)	√			XB.01.02
NetVanta 1238/1238P (2nd Gen. only)	√			XB.01.02
NetVanta 1534	√			17.06.03.00
NetVanta 1534 (2nd Gen.)	√			17.08.01.00
NetVanta 1534P (2nd Gen.)	√			17.09.01.00
NetVanta 1544/1544F	√			17.06.03.00
NetVanta 1544 (2nd Gen.)	√			17.08.01.00
NetVanta 1544P (2nd Gen.)	√			17.09.01.00
NetVanta 1638	√			18.02.01.SC
NetVanta 1638P	√			18.02.01.SC
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

Platform	Standard Feature Pack	Enhanced Feature Pack	SBC Feature Pack	Minimum Boot ROM
NetVanta 4305 (2nd Gen. only)	√	√		08.01.00
NetVanta 4430	√	√		17.04.01.00
NetVanta 5305	√	√		11.03.00
NetVanta 6240		√	√	A5.01.00
NetVanta 6310		√	√	A3.01.B2
NetVanta 6330		√	√	A3.01.B2
NetVanta 6355		√	√	A2.06.B1
Total Access 900 Series (2nd Gen. only)		√		14.04.00
Total Access 900e Series (2nd Gen. only)		√	√	14.05.00.SA

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 R10.3.0 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 R10.3.0 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.

R10.1.0 resolved a BGP implementation issue that slightly changed its behavior. Prior to R10.1.0, a static default route could be redistributed to BGP peers when the command **redistribute static** was configured. As of R10.1.0, a default static route will not be redistributed without being explicitly configured with a **network 0.0.0.0 0.0.0.0** statement.

Features and Enhancements

This section highlights the major features, commands, and behavioral changes for all Converged Access products running AOS version R10.3.0.

• Added support for Telnet on a nondefault VRF.

• Added support for a TFTP client configured in a nondefault VRF.

• Added support for IPv6 management of second generation NetVanta 1230 Series switches.

• Added support for commands that allow the user to modify the queue depth for priority queues on Gigabit Ethernet interfaces. Larger queue depths provide a mechanism to handle larger small-packet bursts on Gigabit Ethernet interfaces that are marked as priority traffic.

• An SNMP trap can now be sent in the event of a DNS look-up failure.

• The DNS host table will now persist across a reboot.

• Added support on the NetVanta 1638 for an SFP XIM that supports 1 Gbps and 2.5 Gbps SFP modules.

- The DNS proxy source interface feature will allow the user to configure the source address on an outbound DNS Request. The user will be able to specify an interface from which to take the source address. The interface from which the request leaves and the interface from which the request takes its source address must be on the same VRF. Both IPv4 and IPv6 are supported.

- Added IPv6 support for NTP.

This section highlights the voice specific features, commands, and behavioral changes available in IPBG and Gateway products running AOS version R10.3.0.

- Added support for TCP/UDP interworking for SIP.

- The unit's serial number, configured host name, and a custom text string can now be included in the SIP User-Agent header. Also, it is now possible to prevent the firmware version from being included. These can be configured both globally and at the trunk level.

- Added support for automatically configuring local emergency number dial plan entries based on the configured voice system-country.

Fixes

This section highlights major bug fixes for all products running AOS version R10.3.0.

- Some SFP **show** commands did not show complete information for some SFPs.

- The AOS Packet Capture feature could eventually cause a reboot or lockup condition.

This section highlights the voice specific bug fixes in products running AOS version R10.3.0, unless otherwise noted.

- If the **no rtp delay-mode** command was entered inside an MGCP endpoint, the ADTRAN unit would reboot.

- Under heavy ISDN call load, the ADTRAN unit could reboot.

- A reboot was required to change the message waiting option for an analog user to lamp only.

Errata

The following is a list of errata that still exist in all products running AOS version R10.3.0.

- The system clock may drift and lose synchronization with higher stratum devices when NTP is enabled. This issue only effects the NetVanta 3448, 3458, and 6240 products.

- The help text for the Global Configuration mode command **sntp server** incorrectly implies that it disables the local SNTP server, whereas the command only modifies the local SNTP client.

- NetVanta units will not respond with a correct ICMP message when a UDP traceroute is directed at the NetVanta unit.

- The Cable Diagnostics troubleshooting menu in the GUI cannot be refreshed manually.

- The SIP proxy will not forward a Register message if the Contact field contains only an * (asterisk).

- Updating PRL values on a Sprint 3G NIM might not function properly.

- Removing the **traffic-shape rate** command from an interface can result in two bandwidth configurations on the interface.

- The parent map QoS statistics must be cleared in order to clear the child map statistics.

- An error message indicating conflicting tunnel MTUs is displayed even if the negotiated MTUs are the same.

- Output from **show interface [eth** *<slot/port>* **| gigabit-switchport** *<slot/port>***]** command will display incorrect information about the queuing implementation of the interface when 802.1q encapsulation is applied.

- In rare cases, when an IP PBX and IP phones are both passing through a NAT and the SIP proxy on a AOS device, some call flows can enter a one-way-audio state. Enabling the command **ip rtp firewall-traversal enforce-symmetric-ip** 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.

- Removing an NTP server configuration does not properly remove that server from the NTP associations table.

- QoS maps with names longer than eight characters might not display properly in the GUI.

- The CLI context help implies the ability to apply an inbound QoS map on a Frame Relay interface. This is misleading since inbound QoS maps are only applicable to Ethernet interfaces.

- 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 DHCP Server GUI displays **Could not eval: 503: server error** between the DHCP server setting table and the DHCP leases table.

- The VLAN ID for an access point cannot be changed using the GUI.

- The **show atm pvc** counters do not increment.

- The **show bridge** *<number>* command might not show any entries.

- The T1 EFM counters do not increment as traffic passes through the device.

- When using the command **debug ethernet cfm loopback request domain** *<domain name>* to filter Ethernet CFM loopback debugs, the debug output may not display on the console. Removing the filter and using the **debug ethernet cfm loopback request** command functions properly.

- The output of the command **show ethernet cfm mep local** may show an incorrect maintenance association for a MEPID if multiple maintenance associations are configured on the unit.

- On a NetVanta 1534, if an interface is configured as a port mirror destination (**monitor session 1 destination int gig ***), then port authentication will no longer be configurable on that port, even after removal of the **port mirror** command from the configuration.

- A VLAN interface for a VLAN that is not accessed by other switchports will not be advertised by GVRP.

- The NetVanta 1638 fails to count output discards when throttling down the transmission of traffic (as a result of receiving pause frames).

- 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 over 1200 VNS entries on the NetVanta 3448 causes a SIP Pre-Parse error.

- The VNS verification process does not remove inconsistent A-type records from the host table after the configured number of attempts.

- A-type host table entries (associated to a manually configured **voip name-service host**) are classified as sticky when an AOS router first boots up with VNS verification enabled.

- Configuring a port channel on a NetVanta 3448 can cause the STP topology to become unstable.

- The output of the **show host** command does not display the entire FQDN.

- Issuing the **clear host *** command can remove permanent SRV-type DNS entries from the host table.

- Switch platforms count input discards on the ingress interface when receiving 802.3X pause frames.

- 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.

- The DNS server can take action on received DNS responses that are not associated with an open request, posing a DoS attack vulnerability.

- The QoS menu of the GUI displays available bandwidth for a PPP interface that is in a Link Down state.

- The output queue statistics on an Ethernet interface can fail to display output queue drops when FIFO is enabled.

- The AOS CLI could remove existing child QoS maps from a parent QoS map's configuration when attempting to remove an alternate, nonexistent child QoS map from the parent QoS map prompt.

- 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 int ppp 1** displays incorrect values for the number of packets sent.

- The **max-reserved-bandwidth** command is removed from an Ethernet interface when changing the encapsulation to 802.1q.

- The NetVanta 5305 can fail to generate an event message to confirm that a QoS map has been applied.

- HDLC keepalives cannot be disabled from the CLI.

- Port mirroring on a NetVanta 1544 switch might not mirror traffic in both directions.

- Port T1 3/3 on a NetVanta 4305 can fail intermittently when attached to an MLPPP bundle. Rebooting the device will restore the interface.

- A Spanning Tree L2 broadcast storm lasting several hours can cause the NetVanta 1335 to reboot.

- The NetVanta 3120/3130 frequently fails to answer incoming calls on the DBU interface when the modem interface is configured for dial-in mode.

- The L3 Switch Header Error and Discard counters on the NetVanta 1544P (second generation) do not increment.

- 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 SCEP, AOS devices could fail to enroll certificates to a Red Hat Certificate Authority.

- Sierra Wireless USB305 3G modems are sometimes not recognized by the USB WWAN NIM.

- A NetVanta 5305 can stop passing traffic for brief intervals when negotiating frequent VPN tunnels using Diffie Hellman Group 5.

- 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 150 might not properly handle immediate Access-Accept responses to Access-Request messages.

- In some instances, an SFP port on a NetVanta 1544 will not function with RAD MiRiCi-E3T3 SFPs.

- 3G connections using a NetVanta USB WWAN NIM and a Sierra Lightning modem can fail.

- 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 some applications.

- Browsing to the Switchports menu from the Port Security menu on the NetVanta 1335 Wi-Fi 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.

The following is a list of voice specific errata that exist in products running AOS version R10.3.0, unless otherwise noted.

- In rare cases, with SIP proxy enabled, it is possible that the ADTRAN unit will reboot if a shared line extension is parked and then retrieved a significant number of times (~50) within a short interval (~1 minute) using enhanced call park in Metaswitch.

- If an IPBG is configured with Australia as the country code, there will be a five second delay in the ring cadence between the first and second ring.

- AOS does not properly handle two Diversion headers that are appended with a comma.

- If the route to the primary SIP server is invalid or points to null 0, the SIP server rollover does not function properly.

- If the MWI lamp is lit on a user configured for NEON MWI, the FXS port tied to that user locks up if the FXS user goes on hook while in the battery disconnect state (due to the far end hanging up first).

- Due to recent changes in the ISDN configuration subsystem, the ADTRAN unit will return a superfluous error while connecting an ISDN group to an ISDN trunk. This error will be returned even when the configuration succeeds. The error is purely cosmetic, and the configuration will persist despite the error.

- Received SIP UPDATE messages may be rejected with a 503 Service Unavailable response. The proper response is a 200 OK with SDP.

- When using a Total Access 900e or a NetVanta 6300 Series device as a gateway for a NetVanta UC Server, it is possible that outbound T.38 fax calls from the UC server will fail.

- The CLI does not prevent users from configuring invalid SIP to PRI cause-code mappings.

- On the Total Access 900e platform, when 44 PRI calls (PRI to SIP direction only) and any number of analog calls (any direction) are active, the 44th PRI call will not connect approximately 80 percent of the time. Call flows of 44 PRI only calls and 44 SIP to PRI with analog calls function properly.

- Stutter dial tone for message-waiting indicator in MGCP gives only three stutters instead of the ten defined in RFC 3660.

- On a second generation Total Access 900e with two PRI configurations, there will be no audio path on the 48th and subsequent calls.

- Output of the **show voice quality-stats** command may display a larger average delay than the maximum value.

- The Total Access 900e Series 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.

- When using media anchoring, calls that are placed between SIP and FXS voice users on the same unit will have one-way audio if the call is placed through a SIP trunk.

- The **Remote** section of the **show media-gateway session** output displays SIP description for all calls, including MGCP calls.

- The **max-number-calls** command on a SIP voice trunk does not function properly when set to a value of 23.

- 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**

- During G.711 A-law SIP to ETSI PRI calls, low voice quality scores are experienced on the outbound audio stream towards the SIP network. This issue is not seen on the ETSI PRI endpoints or with G.711 u-law and G.729 CODECs. A person listening to the audio on the SIP side will hear audio just below G.729 quality.

- In certain cases, the output of the **show sip proxy user extended** command will display dates that do not exist, such as Feb. 31.

- Performance throughput for 66 byte packets on the NetVanta 6355 4T1/NAT test cases has decreased approximately 40 percent. All other packet sizes, including IMIX traffic, have acceptable throughput.

- When the command **p-assert-diversion** is used to add the P-Asserted-Identity header to the REFER request on a Two B-Channel Transfer, the header might not be added.

- 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.

- 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.

- DSP captures on the NetVanta 6240 and 644 platforms consume large amounts of memory while in progress. The unit could become unstable if a DSP capture is active for an unusually long period of time.

- The NetVanta 6240 Series IPBGs could reboot if 60 simultaneous calls are placed through the DSP.

- 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.

- Using the HEAD acoustics test suite, some 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 would affect a customer in the field.

- 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.

- If the configuration includes a secondary IP address, executing an SNMP walk results in a failure at the ipAdEntAddr OID with error OID not increasing. If the secondary IP address is removed, the walk completes successfully.

- If a SIP trunk is trying 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. This occurs on the NetVanta 6310/6330 Series platforms only. A reboot clears the condition.

- Out of Order packets can appear as a negative value in the **show voice quality-stats** command output.

- 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.

- In some scenarios, upon receipt of a reINVITE, the **sess-id** and **sess-version** in the origin field of the SDP answer could change.

- If an unsupported packetization period is presented to the ADTRAN unit in an SDP answer, no indication that the presented pt i me is not supported by the ADTRAN unit will be sent to the remote user agent. This will result in no talk path.

- Under certain conditions, inbound RTP streams for voice calls terminated by the ADTRAN unit cannot be exported to an external NetFlow collector.

- With multiple PRIs in the same ISDN group, bringing one PRI down will cause calls that should use the other PRI to fail. A workaround is to use two ISDN groups that only contain one PRI each.

- The NetVanta 6310 drops approximately 1 out of every 15K packets from the SHDSL to Ethernet direction with the SHDSL ATM NIM2.

- 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.

- Outbound proxy mode for the SIP proxy does not function properly when the phones are configured to use TCP.

- PRI to ground start trunk calls do not function on the Total Access 900e when the PRI is on T1 0/3 and the ground start trunk is on FXO 0/1. The PRI will go out of service when this type of call is attempted on these ports. These calls function on the Total Access 900e if the PRI is on T1 0/4 or if the ground start trunk is on any FXO port other than 0/1.

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 R10.3.0 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 Voice International Configuration Guide*

- *Configuring Remote Phones with an AOS SIP Gateway*

- *Configuring Simple Remote Phones for the NetVanta 7000 Series*

- *Configuring SIP Trunking Gateway for Use with NetVanta ECS*

- *Configuring the NetVanta 7000 Series Personal Phone Manager*

- *Configuring User Accounts on the NetVanta 7000 Series*

- *NetVanta Dual SFP+ XIM Quick Start Guide*

- *NetVanta Dual SFP XIM Quick Start Guide*

- *NetVanta Dual Stacking XIM Quick Start Guide*

- *NetVanta 1544 Series Gigabit Ethernet Switch Quick Start Guide*

- *NetVanta 1600 Series Gigabit Ethernet Switch Hardware Installation Guide*

- *NetVanta 1534 Series Gigabit Ethernet Switch Quick Start Guide*

- *NetVanta 1230 Series Fast Ethernet Switch Quick Start Guide (2nd gen)*