



RELEASE NOTES

AOS Converged Access

AOS version R11.9.0

October 9, 2015

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Introduction

AOS version R11.9.0 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 7](#).

A list of new or updated documents for this release appears in [Documentation Updates on page 11](#).

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 R11.9.0. 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 3140	√	√		R11.5.0
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.B5
NetVanta 5305	√	√		11.03.00
NetVanta 5660		√		R11.4.1.B2
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

Platform	Standard Feature Pack	Enhanced Feature Pack	SBC Feature Pack	Minimum Boot ROM
NetVanta 6410			√	R11.3.0
Total Access 900 Series (2nd Gen. only)		√		14.04.00
Total Access 900e Series (2nd Gen. only)		√	√	14.05.00.SA
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 R11.9.0 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 R11.9.0 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](https://supportforums.adtran.com) 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 R11.9.0.

- Added the ability to apply a one-rate, two-color policer to ingress and egress traffic on GRE tunnel interfaces.
- Added support for USB LTE modems on the NetVanta 3140. Currently the Verizon Novatel USB 551L modem is supported.
- Added IPsec profiles to simplify the configuration of GRE over IPsec, especially in DMVPN applications.
- Enhanced the NHRP client to support spoke-to-spoke DMVPN communication.
- Added the ability to establish multipoint GRE tunnels and to communicate directly between other spokes in a Virtual Private Network bypassing routing through hub. The unit uses NHRP to register itself (a spoke) to a designated hub, and the hub keeps track of all spokes in the network. Dynamically tunneled end points are resolved through the NHRP protocol.

This section highlights the Voice specific features, commands, and behavioral changes available in products running AOS version R11.9.0.

- Added the ability for the SIP proxy monitor to function when the SIP proxy is being used in transparent mode. When this functionality is enabled, the SIP proxy will not spoof registration responses as long as a monitored server is up.

- Added the ability to use the SIP server's IP address as the Layer 3 source address when sending SIP messages to devices behind the SIP proxy that are using it in transparent mode.

Fixes

This section highlights major bug fixes for all products running AOS version R11.9.0.

- SNMP over IPv6 failed if the egress interface did not have a global IPv6 address.
- Beginning with R11.7.0, the default channel settings for the 5 GHz radio on NetVanta 160 APs did not allow the use of all available channels.
- Upgrading to R11.7.0 or R11.8.0 caused NetVanta 150 APs to lose their static RF channel assignments.
- If NetVanta 160 APs using the 802.11bgn radios were configured with the **least-congested** RF channel setting, upgrading them to R11.7.0 or R11.8.0 would statically set their RF channel to a non-recommended value.
- The Discovered Time value listed in the output of the **show dot11 access-point detail** command improperly increased with the system clock.
- In rare cases, configuring certain AOS devices to email exception reports caused the device to reboot when it attempted to email an exception report to a SMTP server that supported STARTTLS.
- In some cases, pasting in a configuration via the console port while a unit was under heavy load corrupted the pasted configuration.
- On the NetVanta 3140, clicking the ProCare link in the GUI resulted in a 404 Not Found response.

This section highlights the Carrier Ethernet specific bug fixes in products running AOS version R11.9.0.

- If a unit attempted to send a frame larger than 2000 bytes out an EFM group interface, a reboot occurred.
- When using a SHDSL module, frame counts for broadcast and multicast traffic did not increment on the parent EFM group interface.

This section highlights the Voice specific bug fixes in products running AOS version R11.9.0.

- If the remote voice gateway changed the SSRC in an RTP stream received by the ADTRAN unit, and then changed back to a previously used SSRC, VQM did not create a new stream for the reused SSRC which resulted in incorrect statistics.
- When using the SIP proxy with media anchoring enabled, if multiple provisional responses with SDP were received where the port changed, media anchoring sessions were not updated properly resulting in the loss of the talk path between the phone and the network.
- Upon reboot from a power loss, SIP proxy user database entries may have been expired prematurely. This issue only affected R10.9.8, R11.4.4, R11.7.0, and R11.8.0.
- After an ISDN interface was disabled by busy-out monitor and a Layer 2 disconnect was sent to the connected equipment, the unit would resume sending SABMEs as if it were trying to reestablish the link.
- In a scenario in which every DSP channel was in use and an emergency call was attempted, the emergency call would fail.
- For products that support user role E&M wink trunks, trunk appearances were not released properly if the T1 interface associated with the E&M trunk went down during an active call.

- If a device behind the SIP proxy attempted a new server for a request while the SIP proxy was being used in transparent mode, the SIP proxy would improperly send a 100 Trying response to the device.
- When exporting SIP packet captures to n-Command MSP, an erroneous HTTP timeout error message displayed even though the export was successful.

Errata

The following is a list of errata that still exist in all products running AOS version R11.9.0.

- A few legacy cellular interface commands were incorrectly removed when USB LTE support was added. The removed commands include:

snmp trap cellular

snmp trap link-status

snmp trap threshold-ecio

snmp trap threshold-rssi

- When using the Novatel USB 551L modem with a NetVanta 3140, a small number of lost frames will occur with packets smaller than 512 bytes. The loss occurs in the modem and not the NetVanta 3140.
- Assigning the IP address 192.168.190.1 to a NetVanta 160 AP from an AOS controller prevents the AP from pulling a full configuration from the controller.
- On the NetVanta 6410, HTTP file transfers to the unit's flash memory can be up to 10 times slower than TFTP.
- If a track is configured to monitor the line protocol of an interface configured for 802.1q, the track will never go into a passing state even the interface is up. This issue does not affect the NetVanta 4660, 5660, or 6360. **Workaround:** Track the line protocol of the subinterface.
- In some command sets, the **exit** command is not visible even though it still functions properly.
- On the NetVanta 5305, VPN performance for 64 and 256 byte packets decreased moderately compared to R11.2.0.
- Speed and duplex settings are displayed with on MEF Ethernet interfaces in **show running-config verbose** command output, even though those options are not valid and cannot be configured for that type of interface.
- 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 can freeze 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.
- The Total Access 900e (third generation) and NetVanta 6250 send a cold start SNMP trap on reload instead of a warm start trap.
- 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 the NetVanta 6310 or 6330, if a SHDSL circuit with a detected bad splice retrains to a different line rate, the distance of the bad splice will display incorrectly.
- On the NetVanta 6310 or 6330, 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.
- When using a T1/E1 EFM NIM2 in the NetVanta 6310 or 6330, the EFM counters do not increment as traffic passes through the device.
- 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.
- 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 will display **Tracked by: Nothing** in the **show probe** command output. This is merely a display error; the probes still function correctly.
- Accessing the GUI via HTTPS may be slow.
- VQM may show a loopback interface in the GUI when a loopback interface is not configured.
- 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.
- 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.
- 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 NetVanta 3G NIM may not function properly.
- 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 the NetVanta 150 creating a malformed RADIUS packet.
- NetVanta 150s may not properly handle immediate Access-Accept responses to Access-Request messages.
- The name of a deleted IPv4 ACL cannot be used to name a new IPv6 ACL.
- 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.
- The output of the command **show ethernet cfm mep local** 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 R11.9.0.

- On the NetVanta 6360, in rare cases a reboot may be seen when a VDSL Carrier Ethernet module is installed.
- The **efm-group** interface type option is missing from the **tunnel source** command on tunnel interfaces.

The following is a list of Voice specific errata that exist in products running AOS version R11.9.0.

When **ringback override 180** or **ringback override 183** are configured on a SIP trunk, modem passthrough will not function properly on calls involving that trunk.

TLS negotiation will fail when using ECDSA ciphers for SIP TLS.

Removing a voice trunk while calls are active may result in the unit rebooting.

Issuing the command **clear voice call active** with active MGCP calls may result in a reboot.

If **sip tls** is configured while **sip** is disabled, **no sip tls** must be issued before **sip** can be enabled, otherwise the following error will be displayed: %Error: Failed to modify SIP Access-class with new VRF.

If a CA profile is removed while SIP TLS calls using that profile are active, BYE messages will not be sent for any of the active calls.

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.

Call waiting caller ID does not function properly on the NetVanta 6240.

Receiving an initial INVITE with both audio and T.38 SDP will result in the call being placed on hold.

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.

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.

On the Total Access 900e (third generation) and NetVanta 6250, if the remote voice gateway changes the SSRC in an RTP stream received by the AOS unit, and the sequence numbers are not contiguous, VQM and the output of the **show voice quality-stats** command will log lost packets for the number of packets between the last sequence number of the first stream and the first sequence number of the new stream. The output of **show voice quality-stats** <ID> will also not reflect that the SSRC value changed on the call.

If an ADTRAN unit is configured with single call appearance mode, forwarded calls on a PRI trunk will fail.

When using media anchoring, receiving a 183 Session Progress after a previous 183 on hairpinned calls can result in no early media if the SDP in the second 183 differs from the first.

Echo cancellation is not enabled on three-way calls when using the local conferencing feature.

On NetVanta 644 and 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 does not represent how the audio actually sounds.

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.

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.

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.

On the NetVanta 6310/6330 Series, 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. 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 R11.9.0 or later. 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*
- *Quality of Service in AOS*
- *SIP Proxy in AOS*
- *DMVPN in AOS*