



RELEASE NOTES

AOS Converged Access
AOS version R11.8.0
September 1, 2015

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Introduction

AOS version R11.8.0 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 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 R11.8.0. 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 R11.8.0 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 R11.8.0 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 R11.8.0.

- Added support for software licensing in AOS to allow for more flexible addition of features to both new and existing hardware platforms.

Fixes

This section highlights major bug fixes for all products running AOS version R11.8.0.

- Quotation marks around an SNMP view name that contained spaces were not preserved in the running and startup configurations.
- When pasting text into the CLI, commands that followed an empty line were corrupted.
- When using the packet capture feature, up to double the memory specified in the **max-memory-usage** command was used.
- In rare cases, a reboot occurred when using TACACS+.
- Errors were displayed when the **no shutdown** command in EVC configurations was restored while booting a NetVanta 6310 or 6330.
- A received ARP request with a sender IP address of 0.0.0.0 (defined as an ARP Probe in RFC 5227) resulted in an ARP cache entry that would not be removed. This entry will no longer get created.

- The **match destination mac address** and **match ethertype** commands were present on EVC maps on the NetVanta 6310/6330 Series, even though those commands are not supported on those products.

This section highlights the Carrier Ethernet specific bug fixes in products running AOS version R11.8.0.

- If a jumbo frame was received on a Layer 3 subinterface, traffic stopped flowing on that physical interface until the unit was rebooted.
- In rare cases, removing Y.1731 MEGs and the associated EVCs resulted in a reboot.

This section highlights the Voice specific bug fixes in products running AOS version R11.8.0.

- If power was lost when using the SIP proxy, the key for each proxy user was not restored properly, potentially resulting in call failures.
- Removing and then immediately re-adding a voice user while the FXS port was off hook resulted in a reboot.
- In rare cases when using both the SIP proxy and the B2BUA, a reboot occurred.
- If a new in-dialog SIP request needed to be sent and the transport listed in the Request-URI was not one that was currently enabled, the request was not sent. This scenario was seen when using loose routing, and the next hop from the route set used a different transport than the one specified in the Request-URI.
- When using SIP TLS, if a SIP server sent the entire certificate chain while the TLS connection was being set up, the connection would be established even if the server's certificate was not signed by a configured trusted CA.
- If the configured value of **max-number-calls** on a SIP trunk was reached, any additional INVITEs would not receive a response if the Request-URI of the INVITE was an FQDN that matched the domain configured on the SIP trunk, and either that domain could not be resolved via DNS or the domain resolved to an IP address that was not local to the unit.
- If the calling party information for a call egressing a trunk was flagged as anonymous, ANI substitutions would have no effect. The **caller-id-override privacy-outbound match-substitute** command was added to allow ANI substitutions in this scenario.
- When in SIP proxy survivability, if a call was placed between a FXS port and a SIP proxy user that was using SIP over TCP, the unit would not send a BYE to the SIP proxy user when the call was disconnected by the FXS port.
- If an INVITE with Replaces was received while the call was still connecting, a reboot occurred.
- When connected to a Taqua call agent, if a MGCP user dialed *72 for call forwarding and then heard stutter dial tone, the DTMF digits for the phone number were not collected after the stutter dial tone was played.
- When duplicate users were registered through the SIP proxy, an outbound call from one of the duplicate users would be treated as an inbound call.
- If multiple ISDN interfaces were in the same ISDN group, the busy out monitor would only busy out the first interface instead of all interfaces in the ISDN group.
- Only the user, host, and port were preserved from the Contact URI in a 200 OK response to the conferencing URI INVITE request and sent in the subsequent Refer-To header in the REFERs sent to finalize the network conference.
- In rare cases, when near simultaneous inbound calls were received from SIP and ISDN trunks and the call on the ISDN side backed off, a reboot occurred.

Errata

The following is a list of errata that still exist in all products running AOS version R11.8.0.

- 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.

- With the SHDSL ATM NIM2, the NetVanta 6310 and 6330 drop approximately 1 out of every 15K packets from the SHDSL to Ethernet direction.
- 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 VNS verification process does not remove inconsistent A-type records from the host table after the configured number of attempts.
- 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**
- 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.
- 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 can result in Windows XP machines not adopting the DNS servers defined within 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 NetVanta 3G NIM may not function properly.

- In rare cases, when an IP PBX and IP phones are both passing through NAT and the SIP proxy on an AOS device, some call flows can enter a one-way audio state. **Workaround:** Enable the **ip rtp firewall-traversal enforce-symmetric-ip** command from the Global Configuration mode.
- 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.
- The **show atm pvc** counters do not increment.
- 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.
- 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 NetVanta 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.
- If the **bandwidth remaining percent** command is used in a QoS map, the CLI does not display the correct value for Required Bandwidth in the event message generated by applying a QoS map.
- 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.
- 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.
- Browsing to the Switchports menu from the Port Security menu on the NetVanta 1335 WiFi GUI results in a 503 Service Unavailable error.
- 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.

- 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 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 R11.8.0.

- 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.
- When using a SHDSL module, frame counts for broadcast and multicast traffic may not increment on the parent EFM group interface. The subinterface counters do properly increment.

The following is a list of Voice specific errata that exist in products running AOS version R11.8.0.

- Upon reboot from a power loss, SIP proxy user database entries may be expired prematurely. This issue only affects R10.9.8, R11.4.4, R11.7.0, and R11.8.0.
- For products that support user role E&M wink trunks, trunk appearances are not released properly if the T1 interface associated with the E&M trunk goes down during an active call. A reboot is required to resolve the issue.
- 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.
- Invalid characters are allowed in a host name for the SIP server on a voice trunk.
- 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.
- 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 can 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.
- 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.
- 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.
- 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 R11.8.0 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](#)*