ADTRAN Operating System

R13.6.0.HA Release Notes

Release Notes

6AOS1360HA-40A
January 2020

To the Holder of this Document

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1. Introduction

AOS version R13.6.0.HA is a hotfix release that 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 8.

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 focus on the platforms listed in "Supported Platforms" on page 4. Additional information specific to AOS is outlined in "System Notes" on page 12.

2. Supported Platforms

Table 1 lists the platforms that are supported in AOS version R13.6.0.HA. 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.

Table 1. Supported Platforms

Platform	Standard Feature Pack	Enhanced Feature Pack	SBC Feature Pack	Minimum Boot ROM
NetVanta 1234/1234P/1238/1238P (2nd and 3rd Gen.)	✓			XB.01.02
NetVanta 1531/1531P	✓			R11.1.0
NetVanta 1544/1544F	✓			17.06.04.00
NetVanta 1544 (2nd Gen.)	✓			17.08.01.00
NetVanta 1544P (2nd Gen.)	✓			17.09.01.00
NetVanta 1550	✓			BVS1.0
NetVanta 1638/1638P	✓			18.02.01.SC
NetVanta 3140	✓	✓	✓	R11.5.0
NetVanta 3200/3205 (3rd Gen.)	✓	✓		17.02.01.00
NetVanta 3305 (2nd Gen.)	✓	✓		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.)	✓	✓		08.01.00
NetVanta 4430	✓	✓	✓	17.04.01.00

Table 1. Supported Platforms (Continued)

Platform	Standard Feature Pack	Enhanced Feature Pack	SBC Feature Pack	Minimum Boot ROM
NetVanta 4660		✓	✓	R10.10.0.B5
NetVanta 5660		✓	✓	R11.4.1.B2
NetVanta 6250		✓	✓	R10.9.0
NetVanta 6310/6330		✓	✓	A3.01.B2
NetVanta 6360		✓	✓	R11.2.0
Total Access 900 Series (2nd Gen.)		✓		14.04.00
Total Access 900e Series (2nd Gen.)		✓	✓	14.05.00.SA
Total Access 900e Series (3rd Gen.)		✓	✓	R10.9.0

3. Features and Enhancements

General Features in R13.6.0

This section highlights the major features, commands, and behavioral changes for all products running AOS version R13.6.0.

- Increased the precision of the SFP power statistics in SNMP to four decimal points.
- Added the **ipv6 duplicate-address remove-route** global configuration command to remove routes of connected networks for which a duplicate IPv6 address has been detected.

Carrier Ethernet Features in R13.6.0

This section highlights the major Carrier Ethernet related features, commands, and behavioral changes for all products running AOS version R13.6.0.

- Added logic to prioritize the buffering of ingress frames according to the following logic:

  Ingress frame buffering:

  - If the buffer is < 12 kB full, accept all packets
  - If the buffer is > 12 kB and < 20 kB full, accept only packets with PCP > 0
  - If the buffer is > 20 kB full and < 32 kB full, accept only packets with PCP > 4
  - If the buffer is 32 kB full, drop all packets

  Ingress frame buffer reads:

  Region 1: Buffer is < 16 kB full
  Region 2: Buffer is > 16 kB and < 24 kB full
  Region 3: Buffer is > 24 kB full

  - If any port buffer is in Region 3, only read from ports in Region 3, else
  - If any port buffer is in Region 2, only read from ports in Region 2, else
  - Read from any port with any packets

  As part of this functionality, the **rx buffer overflow drops** counter was added to Gigabit Ethernet interfaces.

  Additionally, the ability to give the NNI interface priority over UNI interfaces was added. This functionality is enabled with the **ethernet nni** *<interface>* global configuration command. It can also be enabled by issuing the **connect men-port** *<interface>* command on the system-management-evc.

- Added the **ethernet y1731 enable down-mep md-level-check-filter** global configuration command to allow Y.1731 frames received on a UNI port to be discarded if the MD level of the Y.1731 frame is less than or equal to the MEG level of the down MEP configured on the device.

Voice Features in R13.6.0

This section highlights the major voice related features, commands, and behavioral changes for products running AOS version R13.6.0.

- Added support for RFC 5009 on TDM to SIP calls.
- Implemented the ringback generation policy described in RFC 3960 Section 3.2 for TDM to SIP calls. AOS will now generate ringback locally on TDM to SIP calls if early media RTP is not received after receiving a preview of the SDP answer in a 18x provisional response.

4. Fixes

General Bug Fixes in R13.6.0.HA

This section highlights major bug fixes for all products running AOS version R13.6.0.HA.

- Fixed an issue in which **show running-config** took a long time to execute when up to 75 tracks were present in the configuration.

Carrier Ethernet Specific Bug Fixes in R13.6.0.HA

This section highlights Carrier Ethernet specific bug fixes in AOS version R13.6.0.HA.

- Fixed an issue in which the **no men-pri** command on EVC maps did not apply properly.
- Fixed an issue in which the **ethernet y1731 enable down-mep md-level-check-filter** configuration command did not persist in the configuration.
- Fixed an issue in which a *Resource Conflict* error was presented when an EVPL service was configured with Y.1731 CCMs enabled.
- Fixed an issue in which one too many Y.1731 single-ended loss measurement PDUs were sent during each 15 minute measurement interval.

General Bug Fixes in R13.6.0

This section highlights major bug fixes for all products running AOS version R13.6.0.

- Fixed an issue in which the privilege level supplied by a RADIUS server was not applied when the username was long.
- Fixed an issue in which the current SNR Margin, Loop Attenuation, and Line Rate values in **show interface shdsl** were not cleared when the interface went down or was administratively disabled. Additionally, the non-functioning **clear counters shdsl** *<slot/port>* command was fixed.
- Updated the **Last Updated** date and the **Changelog** in the **adAosUnit MIB**.
- Fixed an issue in which the **Last clearing of counters** time in the output of **show media-gateway** and **show media-gateway channel** was incorrect upon boot.
- Fixed an issue in which the duplex state may have been reported incorrectly for 1 Gbps links on the NetVanta 4660, 5660, and 6360.
- Fixed an issue in which issuing the **show event-history** command delayed sending VRRP advertisements if a larger than default event-history size was configured.
- Fixed an issue in which Gigabit Ethernet interfaces on the NetVanta 3140 may have bounced when connected to a device that supports 802.3az Energy-Efficient Ethernet.

Carrier Ethernet Specific Bug Fixes in R13.6.0

This section highlights Carrier Ethernet specific bug fixes in AOS version R13.6.0.

- Fixed an issue in which the **EVC.Name** header of the Y.1731 performance data export file contained a trailing space.

- Fixed an issue in which traffic on the system management EVC was placed in the wrong queue if the QoS CoS map was configured after configuring the **men-pri** on the system management EVC.

- Fixed an issue in which the reported value for the **ifHighSpeed** OID for EFM group interfaces was incorrectly calculated from the rounded speeds of the member links instead of the exact speeds.

- Fixed an issue in which Layer 1 errors occurred on SHDSL circuits containing an Elcon repeater.

Voice Specific Bug Fixes in R13.6.0

This section highlights voice specific bug fixes in AOS version R13.6.0.

- Fixed an issue on T1 CAS trunks in which calls following a fax call may have failed due to an uncleared handling flag after the fax call ended, if modem-passthrough was enabled.

- Fixed an issue in which a reboot occurred if a reINVITE was received immediately after disconnecting a call from a local conference.

- Fixed an issue in which resuming the original call in a consultative hold fails if a BYE was received for the second call while the second call was being reINVITEd to hold.

- Fixed an issue in which outbound audio was lost if a reINVITE with no-op SDP was received and **srtp reduced-rekeying** was configured.

- Fixed an issue in which a SIP INFO request with a Content-Type of application/broadsoft was queued and not processed until after another INFO request was received if the first request was received while a reINVITE was being processed on that dialog.

- Fixed an issue in which the distinctive ring cadence for the dst_ring_4 Nortel Alert-Info mapping was incorrect. Also, added support for the splash_ring and dst_ring_9 Nortel distinctive rings.

5. Errata

General Errata

The following is a list of errata that still exist in all products running AOS version R13.6.0.HA.

- Daylight savings time rules for the Canberra, Australia (GMT+10) time zone are incorrect.

- Router advertisements for delegated prefixes assigned to a interface do not use the valid lifetime specified in the received IA_PD Prefix option. **Workaround**: Configure **ipv6 nd prefix named-prefix** *<prefix name> <prefix sub-bits>* for each delegated prefix assigned to the interface.

- Making any changes in the GUI for an Ethernet interface configured for DHCP causes the DHCP client to perform a DHCP release/renew on that interface when the changes are applied.

- 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**

- The Netvanta 3140 with Novatel USB 551L will dribble a small amount of lost frames with packets smaller than 512 bytes. The loss occurs in the modem. This issue is to document that the Novatel USB 551L modem will drop a small percentage (<1%) of packets. We also found these same drops occur when the 551L is connected to a laptop.

- Assigning the IP address 192.168.190.1 to a NetVanta 160 from an AOS controller prevents it from pulling a full configuration from the AOS controller.

- 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.

- 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 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 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.

- 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.

- 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.

Carrier Ethernet Specific Errata

The following is a list of Carrier Ethernet specific errata that exist in products running AOS version R13.6.0.HA.

- The Invalid CE VLAN ID counter does not function on the GigabitEthernet 0/1 interface on the NetVanta 4660, 5660, and 6360 because GigabitEthernet 0/1 is not intended for use as a UNI interface on these platforms.

- The **efm-group** interface type option is missing from the **tunnel source** command on Tunnel interfaces.

Voice Specific Errata

The following is a list of voice specific errata that exist in products running AOS version R13.6.0.HA.

- After a **voip name-service host** entry is removed from the configuration, the associated record(s) in the host table are not allowed to age out. **Workaround**: Remove **domain-lookup database local** from the configuration, if present, and reboot.

- If a reINVITE with no-op SDP is received and **srtp reduced-rekeying** is configured, inbound audio may be lost and **Inbound SRTP decapsulation failure 0x00000004** may be displayed repeatedly on the console .

- If a voice trunk is removed while calls are active, a reboot may occur.

- Enabling the SIP stack on a device allocates numerous resources. If this resource allocation fails, the device will reboot. Multiple sockets must be available and local SIP ports, typically UDP and TCP 5060, must be available as well, otherwise the resource allocation will fail and the device will reboot.

- When using the SIP proxy with media anchoring, VQM reports incorrect information for LocalURI, RemoteURI, and LocalCaller if a reINVITE that modifies the SDP is received from the called party during a call.

- 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.

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

- 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 does not 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.

- 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.

- 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.

- 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.

Switch Specific Errata

The following is a list of switch specific errata that exist in products running AOS version R13.6.0.HA.

- On a NetVanta 1544F, a switchport interface with a connected SFP interconnect cable cannot be shut down properly.

- The idle process on a NetVanta 1638, visible with the command **show processes cpu**, is named **procnto-600-,** rather than **Idle**, like other AOS platforms.

- Certain NetVanta PoE switches require the command **power inline 2-point** be configured on applicable switchports in order to power Polycom VVX phones with three attached color expansion modules.

- In an ActivChassis configuration utilizing port channels that are distributed among individual line cards, if more than 1 Gbps is sent across the port channel the ActivChassis will sometimes discard some traffic.

- Traffic destined for devices that match static ARP entries in a Layer 3 switch will experience extra latency if a static MAC entry is not present for the same device.

- ICMP responses from a VLAN interface on the NetVanta 1531 may be periodically latent. ICMP routed or switched through the unit is not affected.

- Creating a hardware ACL with the same name as a previously created and deleted IP ACL will result in the creation of an IP ACL with an implicit permit.

- Removing port channels from the configuration while an ActivChassis is under a heavy load could cause the ActivChassis to reboot.

- On NetVanta 1638 units in ActivChassis mode, spanning tree will reconverge at non-rapid spanning tree rates (about 30 seconds) if there are spanning tree topology changes in the network.

- If an ActivChassis line card has NetVanta APs physically attached, and the line card is removed and added back to the ActivChassis stack, the NetVanta APs will not properly indicate the AC that controls them. Bouncing the switchport on the line card or rebooting the ActivChassis master will resolve this issue.

- Certain OIDs in the Bridge-MIB may not return a value on AOS switches.

- Port mirroring on a NetVanta 123x (second and third generation) 1534, and 1544 cannot send transmit mirrored frames without a VLAN tag.

6. 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 R13.6.0.HA 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 R13.6.0.HA 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.

- As of R11.8.0, a valid SBC call capacity license is required for SIP B2BUA functionality on the following products:
    - NetVanta 6250
    - NetVanta 6360
    - Total Access 900e (third generation)

7. 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.

8. Warranty and Contact Information

Warranty

Warranty information can be found online at: www.adtran.com/warranty.

Contact Information

For all customer support inquiries, please contact ADTRAN Customer Care:

Contact	Support	Contact Information
Customer Care	From within the U.S.	1.888.4ADTRAN (1.888.423.8726)
	From outside the U.S.	+ 1.256.963.8716
	Technical Support:	www.adtran.com/support
	■ Web:	
	Training:	training@adtran.com
	■ Email:	www.adtran.com/training
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