

Adtran

Adtran Operating System

R14.1.0 Release Notes

Release Notes

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To the Holder of this Document

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Table of Contents

1. Introduction	4
2. Supported Platforms	4
3. Features and Enhancements	5
Voice Features in R14.1.0	5
4. Fixes	5
General Bug Fixes in 14.1.0	5
Voice Specific Bug Fixes in 14.1.0	6
Switch Specific Bug Fixes in 14.1.0	6
5. Errata	6
General Errata	6
Carrier Ethernet Specific Errata	8
Voice Specific Errata	9
Switch Specific Errata	10
6. System Notes	11
7. Upgrade Instructions	11
8. Warranty and Contact Information	11

1. Introduction

AOS version R14.1.0 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.

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 in “[System Notes](#)” on page 11. Additional information specific to AOS is outlined in “[System Notes](#)” on page 11.

2. Supported Platforms

[Table 1](#) lists the platforms that are supported in AOS version R14.1.0. 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.

Table 1. Supported Platforms

Platform	Standard Feature Pack	Enhanced Feature Pack	SBC Feature Pack	Minimum Boot ROM
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 3148	✓	✓	✓	R11.3.0.B3
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 4148	✓	✓	✓	R11.3.0.B3
NetVanta 4305 (2nd Gen.)	✓	✓		08.01.00
NetVanta 4430	✓	✓	✓	17.04.01.00
NetVanta 4660		✓	✓	R10.10.0.B5

Table 1. Supported Platforms (Continued)

Platform	Standard Feature Pack	Enhanced Feature Pack	SBC Feature Pack	Minimum Boot ROM
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 900 Series (3rd Gen.)		✓		R13.7.0.B1
Total Access 900e Series (3rd Gen.)		✓	✓	R10.9.0

3. Features and Enhancements

Voice Features in R14.1.0

This section highlights the major features, commands, and behavioral changes for all products running AOS version R14.1.0.

- AD-214488 Added support for using a different From tag in each SIP registration refresh when using triggered registration.

4. Fixes

General Bug Fixes in 14.1.0

This section highlights major bug fixes for all products running AOS version R14.1.0.

- AOS-43264 Fixed an issue in which some QoS map entries were omitted in the adGenAOSQoSMapSeqNum and adGenAOSQoSMapEntrySetName OIDs depending on the order in which the QoS maps were configured.
- AOS-43261 Fixed an issue in which the help text for the **http secure-ciphersuite** command listed ciphers that have been removed from AOS.
- AOS-43234 Fixed an issue in which adding a TLS certificate chain longer than 4,096 characters resulted in a cyclic reboot after saving the configuration and rebooting.
- AOS-43228 Fixed an issue in which a reboot may have occurred when using TACACS+.
- AOS-43184 Fixed an issue in which AOS continued to send IPv6 Router Solicitations after MAX_RTR_SOLICITATIONS in violation of RFC 4861 section 6.3.7 if an IPv6 Router Advertisement had not been received.
- AOS-43155 Added QoS map counters to the adGenAosQoS MIB that were present in the CLI but missing from the MIB.
- AOS-43074 Fixed an issue in which IPv6 Neighbor and Router Solicitations were sent 40 seconds after an interface came up even if an IPv6 Router Advertisement had been received. This violated RFC 4861.

- AOS-42989 Fixed an issue in which the **ssh-server mac hmac-sha1** command did not persist through a reboot after saving the configuration.

Voice Specific Bug Fixes in 14.1.0

This section highlights voice specific bug fixes in AOS version R14.1.0.

- AOS-43236 Fixed an issue introduced in R13.10.2 in which adding more than three TLS certificates in a CA profile rendered the CA profile non-operable.
- AOS-43230 Fixed an issue in which a reboot occurred in rare cases while processing Caller ID on SIP calls.
- AOS-43227 Fixed an issue in which SIP server monitor ignored the Request-URI and To host grammar and always populated the Request-URI and To hosts with the resolved IP address.
- AOS-43226 Fixed an issue in which SIP triggered registration did not handle initial registrations properly.
- AOS-43204 Fixed an issue in which the **rtcp-mux** attribute was advertised in SDP for TDM to SIP calls when RTCP was disabled.
- AOS-43125 Fixed an issue in which a local 3-way conference was not established properly if a remote SIP UA replied to a reINVITE initiating a conference with a SDP answer containing hold SDP.
- AOS-42991 Fixed an issue in which the remote host listed for the RTCP session in the output of **show rtp media sessions** may be listed incorrectly when using RTCP multiplexing on only one side of a SIP to SIP call.

Switch Specific Bug Fixes in 14.1.0

This section highlights switch specific bug fixes in AOS version R14.1.0.

- AOS-43150 Fixed an issue on the NetVanta 1550 in which a reboot could occur if the RSTP packet pool was depleted.

5. Errata

General Errata

The following is a list of errata that still exist in all products running AOS version R14.1.0.

- AOS-43222 An SNMP walk may be unable to return some input or output QoS policies assigned to interfaces if multiple interfaces have both input and output QoS policies assigned.
- AOS-42891 On the NetVanta 3148 and 4148, the output of **show power inline** lists 12 gigabit-switchports instead of 8.
- AOS-42633 A reboot may occur when running line rate traffic on the NetVanta 3148 and 4148 through an interface that has an access-policy assigned that contains discard entries.
- AOS-42583 On the Total Access 900 Third Generation, a remote payload loopback initiated from the DSX interface (**t1 0/2**) does not function properly.
- AOS-42582 On the Total Access 900 Third Generation, the Network (**t1 0/1**) and DSX (**t1 0/2**) interfaces transmit B8ZS coded signals when configured for AMI coding.
- AOS-42208 The sequence number in the TCP RST generated by the firewall when clearing a policy-session entry does not comply with RFC 793. This issue occurs when clearing a policy-session entry manually via the CLI and during failover if **ip firewall fast-nat-failover** and/or **ip firewall fast-allow-failover** are configured.

- AOS-41261 Router advertisements for delegated prefixes assigned to an 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.
- AOS-39470 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.
- AOS-37915 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**
- AOS-37542 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.
- AOS-36297 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.
- AOS-30561 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.
- AOS-25916 In some command sets, the **exit** command is not visible even though it still functions properly.
- AOS-20612 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.
- AOS-19531 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.
- AOS-19492 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.
- AOS-18479 On the NetVanta 3430, the setup wizard in the GUI can freeze with a **Please Wait** message.
- AOS-14421 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.
- AOS-12266 On a NetVanta 4430, information for an inserted SFP does not display correctly.
- AOS-10823 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.
- AOS-8519 The Total Access 900e (third generation) and NetVanta 6250 send a cold start SNMP trap on reload instead of a warm start trap.
- AOS-5741 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.
- AOS-5584 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.

- AOS-5580 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.
- AOS-5577 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.
- AOS-5552 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.
- AOS-1780 Event messages indicating a firmware upgrade was attempted may appear in the AOS event log for NetVanta 160 APs that are not being upgraded.
- AOS-1653 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.
- AOS-1124 VQM may show a loopback interface in the GUI when a loopback interface is not configured.
- IN-25468 The **called-number** command on a demand interface does not function properly.
- IN-24433 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.
- IN-23571 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.
- IN-22458 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.
- IN-18952 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.
- IN-18180 Updating PRL values on a Sprint NetVanta 3G NIM may not function properly.
- IN-11385 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.
- IN-11377 NetVanta 150s may not properly handle immediate Access-Accept responses to Access-Request messages.
- IN-10479 The name of a deleted IPv4 ACL cannot be used to name a new IPv6 ACL.
- IN-1020 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.
- IA-13463 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.

Carrier Ethernet Specific Errata

The following is a list of Carrier Ethernet specific errata that exist in products running AOS version R14.1.0.

- AOS-41517 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.

- AOS-22021 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 R14.1.0.

- AOS-43180 When using SIP TLS in client-server mode with the firewall enabled, if the firewall removes the policy session for an idle established inbound SIP TLS connection, the SIP TLS session won't get cleared by the SIP stack. Over time this can result in all 24 available SIP TLS connections being consumed, preventing the unit from initiating or accepting new SIP TLS connections until it is rebooted.
- AOS-41155 If a voice trunk is removed while calls are active, a reboot may occur.
- AOS-37978 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.
- AOS-31081 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.
- AOS-28378 The **clear sip tls session** command does not function.
- AOS-24657 Issuing the command **clear voice call active** with active MGCP calls may result in a reboot.
- AOS-22835 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.
- AOS-22597 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.
- AOS-22547 The ERL tool is not functional on the NetVanta 6360.
- AOS-21735 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.
- AOS-20871 Receiving an initial INVITE with both audio and T.38 SDP will result in the call being placed on hold.
- AOS-10594 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.
- AOS-10216 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.
- AOS-7738 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.
- AOS-6995 On the Total Access 900e (third generation) and NetVanta 6250, SIP must be enabled in the running configuration whenever MGCP is used for voice.
- AOS-1136 If an Adtran unit is configured with single call appearance mode, forwarded calls on a PRI trunk will fail.
- AOS-1120 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.
- AOS-1115 Echo cancellation is not enabled on three-way calls when using the local conferencing feature.

- AOS-1036 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.
- IA-14499 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.
- IA-8850 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 R14.1.0.

- AOS-42714 PoE+ devices that require negotiation via LLDP MDI TLV will not be powered by NetVanta 1638P switches configured in ActivChassis mode.
- AOS-37729 On a NetVanta 1544F, a switchport interface with a connected SFP interconnect cable cannot be shut down properly.
- AOS-36527 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.
- AOS-34418 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.
- AOS-33501 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.
- AOS-30060 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.
- AOS-23963 ICMP responses from a VLAN interface on the NetVanta 1531 may be periodically latent. ICMP routed or switched through the unit is not affected.
- AOS-10087 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.
- AOS-5028 Removing port channels from the configuration while an ActivChassis is under a heavy load could cause the ActivChassis to reboot.
- IN-24699 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.
- IN-24493 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.
- IN-21067 Certain OIDs in the Bridge-MIB may not return a value on AOS switches.
- IN-9618 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 R14.1.0 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 R14.1.0 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://supportcommunity.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://supportcommunity.adtran.com>.

8. Warranty and Contact Information

Warranty information can be found online by visiting www.adtran.com/warranty-terms.

To contact Adtran, choose one of the following methods:

Department	Contact Information	
Customer Care	From within the U.S.:	(888) 4ADTRAN ((888)-423-8726)
	From outside the U.S.:	+1 (256) 963-8716
Technical Support	Support Community:	www.supportcommunity.adtran.com
	Product Support:	www.adtran.com/support
Training	Email:	training@adtran.com
	ADTRAN University:	www.adtran.com/training
Sales	For pricing and availability:	1 (800) 827-0807