



RELEASE NOTES

NetVanta Internetworking Products

AOS version 18.02.01

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Introduction

AOS version 18.02.01 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 Knowledge Base, <http://kb.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 18.02.01. 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	Minimum Boot ROM
NetVanta 1534	√		17.06.03.00
NetVanta 1534 (2nd Gen.)	√		17.08.01.00
NetVanta 1534P (2nd Gen.)	√		17.09.01.00
NetVanta 1544/1544F	√		17.06.03.00
NetVanta 1544 (2nd Gen.)	√		17.08.01.00
NetVanta 1544P (2nd Gen.)	√		17.09.01.00
NetVanta 1638	√		18.02.01.00
NetVanta 1638P	√		18.02.01.00
NetVanta 1335		√	15.01.00
NetVanta 3120		√	14.04.00
NetVanta 3130		√	14.04.00
NetVanta 3200/3205 (3rd Gen. only)	√	√	17.02.01.00
NetVanta 3305 (2nd Gen. only)	√	√	04.02.00
NetVanta 3430	√	√	13.03.SB
NetVanta 3430 (2nd Gen.)	√	√	17.05.01.00
NetVanta 3448	√	√	13.03.SB
NetVanta 3450	√	√	17.06.01.00
NetVanta 3458	√	√	17.06.01.00
NetVanta 4305 (2nd Gen. only)	√	√	08.01.00
NetVanta 4430	√	√	17.04.01.00
NetVanta 5305	√	√	11.03.00

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 18.02.01 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 18.02.01 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](#) (ADTRAN's Knowledge Base article 2219) available at <http://kb.adtran.com>.

Features and Enhancements

This section highlights the major features, commands, and behavioral changes for AOS version 18.02.01.

- Added a VoIP Name Service Caching feature that allows phones configured with a SIP server in FQDN format to re-register with an IPBG or router during a network outage. This is used in combination with the SIP Transparent Proxy. Without this capability, a phone might not resolve a SIP or registrar server and be unable to place calls during an outage.
- Added support for RSA certificates with a key length of 2048 bits.
- Added USB support for NetVanta 1638 and 1638P platforms. This feature allows storage of firmware and configuration files on external USB devices.
- Added support for configurable IPv6 policy time-outs.
- Added support for IPv6 access-classes.
- Added DHCP Relay functionality for IPv6 capable devices.
- Added IPv6 Multilink Frame Relay support.
- Added IPv6 Frame Relay support.
- Added IPv6 Rapid Route support.
- Added IPv6 SNMP agent support.
- Increased cipher strength for HTTPS/SSL for PCI compliance testing.
- Added the ability to disable either all *weak* ciphers or control each cipher individually. This is used in PCI compliance applications.
- Added IEEE 802.3X full duplex flow control. This allows a station on a point-to-point link to send a special PAUSE frame to signal the other end of the connection to pause transmission for the amount of time specified in the frame. This functionality is often needed when operating in a Storage Area Network environment when transferring massive amounts of data.

- Added the ability to enable the concurrent usage of DHCP server and DHCP relay functionality on any interface, allowing multiple applications to concurrently access DHCP functionality. For example, the DHCP server functionality could be used to assign IP addresses on a data VLAN and DHCP relay functionality could be used to forward DHCP requests on a voice VLAN to a phone server concurrently. This feature is configurable from the ingress interface configuration mode with the command **ip dhcp relay destination** *<ip address>* command.
- Added the ability to configure up to eight QoS classes. Prior to the 18.02.01 release, the products supported only four QoS traffic classes per interface.

Fixes

This section highlights major bug fixes in AOS version 18.02.01.

- If the native VLAN on an 802.1Q trunk was deleted from the **Physical Interfaces** page of the GUI, the native VLAN would not be removed, but another VLAN would be deleted instead.
- With traffic-shaping enabled on an Ethernet interface, a router booted for more than seven weeks could begin to drop packets in the outbound queue of an interface, contributing to voice quality issues. In addition, the seven week timer would cause console and Telnet management traffic to be sluggish.
- With more than 80 routes in an OSPF database, an SNMP walk of the OSPF MIB tree would fail.
- When using the SIP proxy in stateful mode, the Record-Route header for the AOS device was added as the topmost entry instead of the bottommost entry, which would cause routing issues for the device behind the SIP proxy.
- In some instances, an ICMP probe would not return to a passed state after it failed.
- SSH and HTTP/HTTPS connections would not populate the Remote-Address field of the TACACS+ authentication request. This resulted in the field always populating with 0.0.0.0. Telnet connections were not affected.
- L3 switching table could get into a state where a valid ARP entry would not be inserted.
- The ARP table and L3 switching table could choose different MAC addresses to install when an IP conflict existed in the network.
- Gigabit interfaces could not be added to a Network Monitoring track list.
- An ATM PVCs VPI/VCI could not be set in the GUI.
- Aggregator ASN would not properly advertise as a four-byte ASN by BGP.
- When a NetVanta unit was configured to terminate AH tunnels and if the peer-to-peer negotiation passed through an intermediate NAT, the NetVanta unit would prevent the VPN tunnels from being generated properly.
- The AOS firewall could not create a source NAT for a Gigabit Ethernet subinterface with a four-digit ID number.
- The SIP proxy would populate the Contact header in an outbound INVITE with the IP address of the private interface as opposed to the IP address of the public interface.

- When PPP was configured to negotiate an IP address with a nondefault administrative distance and if a previous default route had already been negotiated with a default administrative distance, the route with the default administrative distance would not be removed when PPP was reconfigured or bounced.
- Reverse Route Injection would not insert the correct next-hop IP address when configured in a load-sharing scenario.
- Some Frame Relay subinterfaces would improperly indicate an average utilization of 0 percent.
- The **Telnet to Unit** link in the GUI would not populate the correct IP address if the unit was being accessed through a NAT destination policy on a third-party device.
- When using SIP proxy user templates, the SIP proxy would not recognize an INVITE as an outbound request and could improperly route it back to the configured template user.
- The **URL Filtering > Top Website** menu in the GUI did not display whether the last visit for a website occurred in AM or PM.
- In some instances, setting a DHCP lease time of more than 9,867 days would prevent the ADTRAN unit from correctly storing the binding.
- The **show interface** command displayed the incorrect ADSL training mode for some DSLAMs. This was only a display error.
- In some instances, modification or removal of crypto client configuration pools would fail.
- Class of service weighted round robin weights were not honored properly.
- Auto-link would send an incorrect checksum to n-Command MSP, which caused a false **Unsaved Configuration** Management Alert in the n-Command MSP server.
- High CPU load would cause interface statistics to report incorrectly.
- The AOS mail-client and a TCL script could not be triggered from the same track.
- A configuration file transfer to the startup configuration using XMODEM failed to initiate.

Errata

The following is a list of errata that still exist in AOS version 18.02.01.

- In a failover scenario, if a proxy user template matches the dialed number on an outbound INVITE, the call is routed back to the device specified in the proxy user template instead of being allowed to route via the B2BUA (in the case of IP business gateways) or sending an error response (in the case of routers).
- When using the SIP proxy in stateful mode, if the SIP server is defined as an FQDN in the configuration, the resolved IP address of the FQDN is used as the From/To/Request-URI host instead of the FQDN itself.
- Using SCEP, NetVanta routers could fail to enroll certificates to a Red Hat Certificate Authority.
- On a NetVanta 1534, if an interface is configured as a port mirror destination (**monitor session 1 destination int gig ***) then port authentication will no longer be configurable on that port, even when the port mirror command is removed from the configuration.

- With the Extended Length flag set in the AS_Path Path Attribute, BGP updates will not propagate the correct IP next-hop in the BGP RIB.
- Bursty levels of traffic can cause drops on a NetVanta 3130 ADSL interface when using low upload rates.
- If a unit is booted with a startup configuration in which GVRP is disabled globally and on each interface (the default configuration), and GVRP is enabled on a switchport before GVRP is enabled globally, then the interface will not send GVRP BPDUs. If the link goes down for any reason and comes back up, then GVRP will begin to function.
- A VLAN interface for a VLAN that does not have other switchports accessing it will not be advertised by GVRP.
- The Contact header in a proxied SIP registration continually uses UDP port 5060, even when configured for a different UDP port.
- DoS protection against ICMPv6 ping packets with a payload greater than a specified value (DoS ID: 42) will also drop ICMPv4 packets.
- Multilink PPP interfaces with more than two T1 interfaces cannot be properly deleted using the GUI.
- The AAA Authentication Banner cannot be set on any AOS product.
- The NetVanta 1638 fails to count output discards when throttling down the transmission of traffic (as a result of receiving pause frames).
- Applying configuration changes in the **RTP Monitoring Settings** section of the GUI results in an **Unknown Error**.
- Enabling **debug ip packet** while configured to match all IP traffic, can result in a reboot.
- The Input/Output Rate counters for a T1 interface are exaggerated for approximately 15 seconds after clearing them.
- The nondefault T1 coding setting (AMI) does not persist in the NetVanta 3430's startup configuration after a reboot.
- If **ip sip proxy local-gateway <ip address>** is configured and the SIP proxy is being used in transparent mode, if the route to the softswitch becomes unavailable, the call will fail instead of being routed to the configured local SIP gateway.
- DNS host table entries on the NetVanta 3448 do not show up in the GUI.
- The GUI statistics page for the SHDSL interface does not refresh when in 4-wire mode.
- The CLI does not allow the user to set the DS0 speed to 56K for an E1 NIM.
- The Network Monitor Wizard for the NetVanta 1638 is missing an image of the unit.
- Configuring the PPPoE client on a VLAN interface via the GUI results in an HTTP 503 error.
- 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.
- Applying PPPoE configuration changes to an AOS router via the GUI causes an HTTP 503 error.
- Configuration changes on an ATM subinterface that causes the subinterface to go down can trigger a reboot on the AOS router.

- If an OSPF hello timer on an interface is modified from the default value, the new timer will not be used until the interface is disabled and reenabled.
- TACACS+ authentication does not work when logging into an AOS device via the console.
- Adding an IPv6-enabled PPP interface to a bridge group does not require the user to first remove the IPv6 address from the PPP interface.
- Adding/removing an Ethernet interface from a bridge group results in an overlapping error when attempting to reapply the previously used IPv6 address to the same interface.
- Sending a configuration job with only a single 200+ character string and no carriage returns from n-Command MSP can cause the receiving device to reboot.
- In some instances, NTP source specification does not work.
- The Security Audit creates a file with an incorrect timestamp.
- Test patterns cannot be generated consistently on E1 NIM cards.
- Reordering IKE attributes in the GUI can result in them being deleted and can also delete the IKE attributes of other configured IKE policies.
- If the command **no switchport port-security mac-address sticky** is issued on an interface, the interface will no longer allow communication until the command **no port-security** is issued on that interface.
- The NetVanta 3448 freezes and consequently reboots when an **ipv6 policy-timeout** command is removed while an associated policy session is still active.
- Clearing a sticky MAC address from an interface with the **no switchport port-security mac-address sticky** command erases sticky MAC addresses from all interfaces.
- AWCP incorrectly shows up as a configurable option under switchports and is not functional.
- The SIP debug filter configuration menu in the GUI allows invalid, nonfunctional debug filters to be configured.
- The LLDP interface setup table on the NetVanta 3448 shows an entry for an interface called DataCall in the CLI and GUI.
- Configuring over 1200 VNS entries on the NetVanta 3448 causes a SIP Pre-Parse error.
- The VNS verification process does not remove inconsistent A-type records from the host table after the configured number of attempts.
- A-type host table entries (associated to a manually configured VoIP Name Service Host) are classified as sticky when an AOS router first boots up with VNS verification enabled.
- Configuring a port channel on a NetVanta 3448 can cause the STP topology to become unstable.
- The NetVanta 3448 does not learn MAC addresses on half-duplex links.
- The output of the **show host** command does not display the entire FQDN.
- Issuing the **clear host *** command can remove permanent SRV-type DNS entries from the host table.
- IPv6 traffic destined to **0::** is forwarded to the default gateway instead of being dropped.
- The output of the **show interface <slot/port>** command claims flow control is enabled even when the interface is operating at half-duplex.

- Switch platforms count input discards on the ingress interface when receiving 802.3X pause frames.
- The NetVanta 3458 and NetVanta 3448 only support 2956 MAC address table entries.
- Sierra Wireless USB305 3G modems are sometimes not recognized by the USB WWAN NIM.
- n-Command MSP is unable to upgrade a NetVanta 1638 running 18.02.XX code.
- Changing the route metric value using **ipv6 address autoconfig default metric *** command does not change the administrative distance of the default route.
- QoS cannot be invoked on a demand interface.
- The switchports on a NetVanta 1335 can enter a stalled state, preventing the output queue from emptying and resulting in a loss of communication.
- The QoS map statistics for an interface can display slightly incorrect counter values.
- The NetVanta 5305 can drop some traffic prioritized by class-based weighted fair queuing (CBWFQ) on a multilink PPP interface when a stand-alone QoS map is applied.
- The DNS server can take action on received DNS responses that are not associated with an open request. This can pose a possible DoS attack vulnerability.
- Telnet can attempt exec authorization when not configured to do so and succeed.
- The **show ipv6 route <address>** command accepts invalid input and returns the default route.
- On a NetVanta 3120, port statistics are not shown in the GUI on the **Public Interface** menu.
- The NetVanta 3430 (second generation) can drop a small number of prioritized packets over long periods of time.
- A QoS map might not transition to active if the map required more bandwidth than was originally available on that interface when the map was assigned.
- HTTP interface can lockup intermittently.
- The **QoS** menu of the GUI displays available bandwidth for a PPP interface that is in a Link Down state.
- After specifying a non-Ethernet hardware type in a DHCP server pool, the hardware address is not added to the running configuration.
- 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.
- The AOS CLI could remove existing child QoS maps from a parent QoS map's configuration when attempting to remove an alternate, nonexistent child QoS map from the parent QoS map prompt.
- Prioritized traffic can be dropped at a significant rate on PPP interfaces when using a parent QoS map (that references a child map with priority allocation) if the shaped rate is configured for more than 75 percent of the line rate.
- The CLI does not display the correct value for Required Bandwidth in the event message generated by applying a QoS map.
- Removing a QoS map from an MLPPP interface on a NetVanta 5305 could cause the router to reboot.

- The command **fair queue 0** is added to an interface configuration after a QoS parent map is applied.
- The output from **show qos map int ppp 1** displays incorrect values for the number of packets sent.
- The maximum reserved bandwidth is removed from an Ethernet interface when changing the encapsulation to 802.1Q.
- The NetVanta 5305 can fail to generate an event message to confirm that a QoS map has been applied.
- EAP Identity Responses from a wireless client without an Identity field contained within them can result in a malformed RADIUS packet created by the NetVanta 150.
- HDLC keepalives cannot be disabled from the CLI.
- NetVanta 5305 can generate a bogus fan processor failure event message.
- NetVanta 150 might not properly handle immediate Access-Accept responses to Access-Request messages.
- The IPv6CP protocol state can occur even when IPv6 is disabled on a PPP interface.
- A reboot can occur when a TCP packet is received that is larger than the negotiated maximum segment size (MSS) for that session.
- Frames can be dropped for a brief period while an ARP entry is updated.
- GRE tunnel interface statistics do not display properly in the GUI's GRE tunnel configuration menu.
- 3G connections using a WWAN NIM and a Sierra Lightning modem can fail.
- The cellular interface can trigger a core dump on a NetVanta 3448 when changing states.
- Selecting the link for a Gigabit Ethernet switchport on the second generation NetVanta 1500 Series, while on the **Flow Control** menu of the GUI, causes the user to be redirected to the VLAN application tab.
- In the GUI of a NetVanta 3120, the IP address of the public interface cannot be assigned if a default gateway address is not also assigned that resides in the same subnet as that IP address.
- Port mirroring on a NetVanta 1544 switch might not mirror traffic in both directions.
- A Gigabit Ethernet switchport can become suspended from port channel after sustained runtime.
- Proxy user templates cannot modify SDP IP address correctly in some applications.
- SNMP polling attempts fail when using community strings with special characters, such as @.
- Connecting a Novatel U547 USB modem to the NetVanta USB NIM can cause the router to reboot.
- Port T1 3/3 on a NetVanta 4305 can fail intermittently when attached to an MLPPP bundle. Rebooting the device will restore the interface.
- In some cases, the T1 interface statistics will log **Degraded Minutes** although there are no other physical errors logged for that T1.
- The ADSL NIM cannot be trained properly when using Annex M.
- On a NetVanta 1500 Series, when configured for MAC-based port authentication, the switch will not initiate an EAP-Request when it sees the link go up.

Upgrade Instructions

Upgrading ADTRAN products to the latest version of AOS firmware is explained in detail in the configuration guide [Upgrading Firmware in AOS](#) (ADTRAN's Knowledge Base article 1630), available at <http://kb.adtran.com>.

Documentation Updates

The following documents were updated or newly released for AOS version 18.02.01 specifically for the NetVanta Internetworking products. These documents can be found on ADTRAN's Knowledge Base available at <http://kb.adtran.com>. Search either by title or article number (shown in parenthesis following the document title).

- AOS Command Reference Guide (60000CRG0-35C, article 2219)
- NetVanta 120 Watt AC Power Supply Quick Start Guide (61700460F1-13A, article 3438)
- NetVanta 500 Watt PoE Power Supply Quick Start Guide (61700462F1-13A, article 3439)
- NetVanta 640 Series Hardware Installation Guide (61700144G1-34A, article 3436)
- NetVanta 640 Series Quick Start Guide (61700144G1-13A, article 3437)
- NetVanta 1230 Series (2nd gen) Hardware Installation Guide (61702594G1-34A, article 3450)
- NetVanta 1230 Series (2nd gen) Quick Start Guide (61702594G1-13A, article 3448)
- NetVanta 1335 Hardware Installation Guide (61700515E2-34C, article 3105)
- NetVanta 1335 Quick Start Guide (61700515E2-13D, article 2333)
- NetVanta 1500 Series (2nd Gen) Hardware Installation Guide (61702590G1-34C, article 3405)
- NetVanta 1534 Series Quick Start Guide (61700590G1-13D, article 2520)
- NetVanta 1544 Series Quick Start Guide (61700544G1-13E, article 3069)
- NetVanta 1600 Series Gigabit Ethernet Switch Hardware Installation Guide (61700568F1-34A, article 3442)
- NetVanta 1638 Series Gigabit Ethernet Switch Quick Start Guide (61700568F1-13A, article 3441)
- NetVanta 4000 Series Hardware Installation Guide (61200890E2-34N, article 2337)
- NetVanta 4430 Quick Start Guide (61700630E1-13B, article 3011)
- NetVanta 6240 Series Hardware Installation Guide (61700202G1-34A, article 3434)
- NetVanta 6240 Series Quick Start Guide (61700202G1-13A, article 3435)
- NetVanta Dual Stacking XIM Quick Start Guide (61700470F1-13A, article 3440)
- NetVanta Dual T1/FT1 NIM Quick Start Guide (61202872L1-13C, article 3430)
- NetVanta Ethernet NIM2 Quick Start Guide (61700107G1-13A, article 3447)
- NetVanta Safety and Regulatory Information (61200500E1-48C, article 3444)
- NetVanta Series CompactFlash Quick Start Guide (61200816E1-13C, article 3443)
- Upgrading AOS Firmware (61200990L1-29.1D, article 1630)
- USB WWAN NIM and the Cellular Interface (61700801G1-29.2E, article 3394)
- Using IPv6 in AOS (6AOSCG0016-29B, article 3505)