



AOS 16.01.00 Release Notes

Release Notes

Release Date: August 17, 2007

Notes Revision: 8/24/2007

Introduction

NetVanta and Total Access 900 Series products support application image updates via the ADTRAN OS Web GUI, TFTP, X-Modem, and FTP. A detailed [firmware upgrade guide](#) is available on our website for step-by-step instructions. Prior to upgrading firmware, please ensure that your unit meets the minimum Boot ROM requirements, listed under "Supported Platforms."

Supported Platforms

	<u>Standard Feature Pack</u>	<u>Enhanced Feature Pack</u>	<u>Minimum Boot ROM***</u>
NetVanta 340	9200422-2A1601.biz	9950422-2A1601.biz	10.01.00
NetVanta 344 Annex A (2 nd Gen)*	9200426-2A1601.biz	9950426-2A1601.biz	
NetVanta 344 Annex B (2 nd Gen)*	9200423-2A1601.biz	9950423-2A1601.biz	
NetVanta 1335	N/A	9950515-2A1601.biz	
NetVanta 1524ST	N/A	9950560-2A1601.biz	
NetVanta 3120	N/A	9700600-2A1601.biz	14.04.00
NetVanta 3130	N/A	9700610-2A1601.biz	14.04.00
NetVanta 3305	9200880-2A1601.biz	9950880-2A1601.biz	04.02.00
NetVanta 3430	9200820-2A1601.biz	9950820-2A1601.biz	
NetVanta 3448	9200821-2A1601.biz	9950821-2A1601.biz	
NetVanta 4305	9200890-2A1601.biz	9950890-2A1601.biz	08.01.00
NetVanta 5305	9200990-1A1601.biz	9950990-1A1601.biz	11.03.00

* Part numbers of 2nd generation NetVanta 344 routers end with 'E1'. 1st generation NetVanta 344 routers (part numbers ending 'L1') cannot run this version of AOS.

** Part numbers of 2nd generation NetVanta 3200/3205 routers begin with '1202'. 1st generation NetVanta 3200/3205 routers (part numbers beginning '1200') cannot run this version of AOS.

*** To confirm the version of Boot ROM, telnet or console to the unit and issue the **show version** command. 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.

New Features

Overview

Virtual Router Redundancy Protocol (VRRP)

The Virtual Router Redundancy Protocol (VRRP) is a standard protocol that allows load sharing and provides seamless redundancy to networked end-host devices. The result is a fault tolerant, easily managed system where the responsibility for availability is managed exclusively by the routers.

Supported Platforms NetVanta 3100 Series, NetVanta 3400 Series, NetVanta 4305, and NetVanta 1335

Multi-VRF

VPN Routing and Forwarding (VRF) allows a single physical router to be logically partitioned into multiple virtual router instances. Each router instance has its own route table and IP address. Traffic being forwarded on one router instance is prevented from carrying over into another router instance. Each router instance is independent which

	allows IP address overlap or use of the same IP addresses between the router instances without conflicting. Supported Platforms NetVanta 1335, NetVanta 3305, NetVanta 3400 Series, NetVanta 4305, NetVanta 5305
TCL Scripting	The TCL language may be used for generating scripts that help automate tasks such as network configuration and network connectivity tests. These scripts can access AOS commands and can be entirely automated or allow for multiple configurations within a single script by requiring user input. Scripts can be run manually or can be run based on the pass or fail condition of a track. Supported Platforms All Routers and Switches supporting AOS 16.1
Integrated Traffic Monitoring	Integrated Traffic Monitoring (ITM) is a method of tracking traffic flow patterns across interfaces on a network. ITM can monitor traffic flows over both ingress (incoming) and egress (outgoing) interfaces. The traffic flow data is collected and sent via User Datagram Protocol (UDP) to an external data collector, which analyzes the traffic flow patterns. Supported Platforms All Routers and Switches supporting AOS 16.1
Top Websites Reporting	The AOS URL filtering feature now includes the ability for top websites reporting. This function produces reports of the most frequently requested websites in 15-minute increments, allowing system administrators to view the Internet habits of employees and make decisions about how to upgrade URL filter lists. Supported Platforms NetVanta 1335, NetVanta 3305, NetVanta 3400 Series, NetVanta 4305, and NetVanta 5305

Enhancements	Overview
Quality of Service Enhancements	QoS Maps may be applied to 802.1q Ethernet sub-interfaces. Class Based Weighted Fair Queues, Priority Queues and Low Latency Queues can be used to provide Layer 3 Quality of Service on individual sub-interfaces. Prior to AOS 16.1 QoS could not be implemented on 802.1q Ethernet sub-interfaces. Supported Platforms All Routers supporting AOS 16.1
URL Filtering Enhancements	A wildcard character may now be used with URL Filtering for greater ease in configuring a filter. The '*' functions as a wildcard for URL filters in AOS. For example 'ip urlfilter exclusive-domain permit *.adtran.com' will allow access to kb.adtran.com as well as support.adtran.com. In addition to domain names this can also be applied to an IP address. For example if an administrator wanted to block all HTTP requests to the 192.168.1.0 /24 network, the following filter could be configured 'ip urlfilter exclusive-domain deny 192.168.1.*'. Supported Platforms NetVanta 1335, NetVanta 3305, NetVanta 3400 Series, NetVanta 4305, and NetVanta 5305
Firewall Enhancements	When defining a NAT entry in a policy class there is now an option to bypass all ALGs for that entry. This can be invoked by using the following command 'nat source list <ACL Name> interface <interface> address <post-nat-address> overload no-alg'. Traffic matching this entry is still processed in a stateful manner (attack checks are performed and protocol state is monitored). Supported Platforms All Routers supporting AOS 16.1
File Transfer Enhancements	A HTTP/HTTPS client is available for file transfers. This allows a user to transfer a file

	<p>directly from a HTTP or HTTPS server to the device. The syntax for this command is 'copy http <source URL> <destination>'.</p> <p>Supported Platforms All Routers and Switches supporting AOS 16.1</p>
Web Interface Enhancements	<p>A troubleshooting page is available under the Utilities tab on the Web Interface. This allows for basic diagnostic of the device from the Web Interface.</p> <p>Supported Platforms All Routers and Switches supporting AOS 16.1</p>
CLI Enhancements	<p>The command 'interface range switchport <slot/start port - end port>' is available in the NetVanta 3100 Series. This allows an administrator to configure a range of ports with similar configuration. Previously each port had to be configured individually. This command is similar to 'interface ethernet <slot/start port - end port>' but applies to switchports instead of ethernet interfaces.</p> <p>Supported Platforms Netvanta 3100 Series</p>
PBR Debug Filters	<p>A filter may now be applied to the policy based routing debug. This will allow a user to receive only desired debug output instead of all debug output. The filter uses an access list to define what information will be displayed and is applied as follows 'debug ip policy <ACL Name>'.</p> <p>Supported Platforms NetVanta 1335, NetVanta 3305, NetVanta 3400 Series, NetVanta 4305, and NetVanta 5305 (Requires Enhanced Feature Pack)</p>
SNTP Server Source Interface	<p>A source interface for SNTP traffic generated by the NetVanta may now be specified. This allows for the NetVanta to act as an SNTP server for devices across a VPN tunnel. This can be specified using the command 'ip sntp server source-interface <interface> <slot/port>'.</p> <p>Supported Platforms All Routers and Switches supporting AOS 16.1</p>
3400 Series Web Configuration Wizard	<p>A configuration wizard has been added to the web interface of the NetVanta 3400 series products. This allows for greater ease in configuring the product.</p> <p>Supported Platforms NetVanta 3400 Series</p>

Errata

These are issues that were discovered during internal testing, but were unresolved at the time of release.

System and Drivers

- **Removing a compact flash card while a file transfer is in progress will cause the unit to reboot**
 - **Description:** If a compact flash card is removed from a unit while a file is being copied to or from that card, the unit will reboot. Please exercise great caution when removing a compact flash card as this could also cause data on the compact flash card to become corrupt.
 - **Workaround:** No known workaround.
- **Netvanta 5305 reboot with two DS3s and Multi-Link Frame Relay**
 - **Description:** The NetVanta 5305 may reboot if it has high volumes of traffic running over multiple DS3s with Multi-Link Frame Relay configured.
 - **Workaround:** No known workaround.

Network Interfaces and Quality of Service

- **NetVanta 4305: Addition of a ninth ATM sub-interface on a NetVanta 5305 will cause a reboot**
 - Description: When adding ATM sub-interfaces to a 4305, after the ninth sub-interface is added the unit may reboot. This will occur only when using network interface module that supports ATM, which include ADSL, G.SHDSL, or SHDSL NIMs. Up to eight sub-interfaces can be added without encountering a problem.
 - Workaround: No known workaround.
- **NetVanta 5305: PPP or MLPPP interface may drop packets with over 24 RTP streams of traffic per T1**
 - Description: PPP or MLPPP may drop packets when more than 24 RTP streams per T1 are active. The problem only affects the NetVanta 5305 with Octal T1 Module. This does not affect routers with T1, Dual T1, or T1+DSX NIMs, nor does it affect the NetVanta 4305 with Octal T1 Module.
 - Workaround: No known workaround
- **ADSL NIM upgrade causes unit to reboot**
 - Description: A reboot will occur when trying to upgrade the ADSL NIM firmware on a 4305 with the ADSL NIM option card installed.
 - Workaround: No known workaround
- **Removing VLAN interface may cause unit to reboot**
 - Description: If two VLAN interfaces are created and the second created interface is then removed with the 'no interface vlan <vlan-id>' command the unit will reboot. The reboot will not occur if the first VLAN interface is removed.
 - Workaround: No known workaround

Services and Viewers

- **Cannot add an exclude site in Top Websites**
 - Description: When adding domains to be excluded for top websites reporting, it is not possible to add a domain using the web interface unless one has already been specified. The CLI can add excluded domains even if one is not already specified.
 - Workaround: Enter the first exclude domain with the CLI and then exclude domains can be entered using the web interface.
- **Cannot Flow Data Over VPN Tunnel with Security Association Lifetime Set to Maximum**
 - Description: With the Security Association Lifetime Set to the maximum value in kBytes, the 3120 will not allow data to be transmitted over a VPN tunnel.
 - Workaround: No known workaround
- **SNMPv3 Get Without Community Name Causes Reboot**
 - Description: A reboot will occur when an SNMPv3 Get is performed and no community name has been defined on the NetVanta. This only occurs if SNMP has been enabled on the NetVanta.
 - Workaround: No known workaround

Resolved Issues

These are issues that have been resolved since the previous AOS release (15.02.00)

Services and Viewers

- HTTP probes are not successful.
- The Bridging Setup Wizard does not properly configure bridging.
- Firewall Setup Wizard does not allow access to "Basic System Information" page if "Separate Firewall Device" option is selected.
- The DNS Proxy does not handle DNS Requests of type AAAA.
- When a logging message is sent via e-mail outbound traffic is disrupted until a response is received.

- A reboot may occur if an MLFR interface is created and the MLFR information is polled via SNMP.
- SNMP view blocks may not be applied properly with multiple '*s'.
- Context help for dot11ap is mis-aligned.
- Creating an SNTP server with the web interface on a unit that is not an SNTP client will result in error messages on boot up.
- QoS statistics are not cleared when a user attempts to clear them from the web interface.
- The CLI doesn't support the command 'show run interface bvi'.
- LLDP cannot be disabled from an Ethernet port with 802.1q sub-interfaces.
- Result of the 'show cflash' command is difficult to read.
- A preshared key longer than 40 characters entered through the web interface for 802.1q WPA authentication is truncated to 40 characters.
- It is not possible to set a percentage of bandwidth on a QoS map in the web interface.
- The output of 'show processes cpu' is not formatted correctly.
- When a reboot is issued from the web interface, if the unit comes back up and the user hits refresh on the webpage it will reboot the unit again.

Routing, Switching and Bridging

- Traffic may be mirrored on interface gig 0/1 of a NetVanta 1524 when port mirroring is disabled.
- MTU calculation for a bridged PPP interface does not take into consideration VLAN tag.
- When issuing the command 'show ip interfaces brief' a shutdown loopback interface shows "UP/UP".

Network Interfaces and Quality of Service

- Units with ADSL interfaces with QoS applied may reboot if the ATM PVC becomes inactive and OAM AIS cells are received.
- Removing an association access list from a dot11ap interface with the command 'no association access-list <name>' results in an error.
- Unable to debug T1 or E1 interfaces.
- ADSL2+ trains up at a low rate to a Hauwei MA5100 DSLAM.

Firewall and VPN

- The SIP ALG does not support short header notation for SIP Messages. Sessions using the short header format will fail.
- Ambiguous error condition occurs when a duplicate IKE attribute is added.
- On the web interface of the NetVanta 3400 Series, GRE Tunnels are referred to as "Tunnels".

System and Drivers

- Units may lock up or reboot if a network interface changes state while performing an X-Modem transfer.
- When AWCP is enabled/disabled from one Ethernet sub-interface, the change is applied to all ethernet sub-interfaces.



AOS 16.02.00 Release Notes

Release Notes

Release Date: September 27, 2007

Notes Revision: 10/09/2007

New Hardware	Description
G.SHDSL NIM	Supports 2-wire and 4-wire G.SHDSL, with speeds up to 4.608 Mbps. <i>Supported Platforms</i> NetVanta 3305, NetVanta 4305, NetVanta 3400 Series, and NetVanta 1335. Note: Support for the NetVanta 3200 and NetVanta 3205 was added in AOS 15.1.

Enhancements	Overview
SNMP Enhancements	Added SNMP support for BRIDGE-MIB dot1dBasePortIfIndex (OID 1.3.6.1.2.1.17.1.4.1.2). <i>Supported Platforms</i> All routers and switches supporting AOS 16.2
	Added SNMP support for ipNetToMedia in the IP-MIB. <i>Supported Platforms</i> All routers and switches supporting AOS 16.2

Errata

These are issues that were discovered during internal testing or in the field, but were unresolved at the time of release.

- **Configuring Access Control Lists may cause a reboot**
 - Description: When configuring an access control list, if certain optional configurations such as VRF instance are omitted, the unit may reboot after the command is entered, or when the command is parsed upon boot up.
 - Workaround: No known workaround.
- **DNS Proxy does not use all configured name servers**
 - Description: When the NetVanta is used as a DNS Proxy with more than two configured name servers, only two name servers will be tried for each request. This will only be observed if requests to both name servers fail.
 - Workaround: No known workaround.
- **NAT Traversal can not be used with aggressive mode VPNs with certain clients**
 - Description: If a NATD payload is received before the HASH payload in the third message of aggressive mode, the tunnel will fail to setup.
 - Workaround: No known workaround.
- **Access lists with DNS hostnames may show as 'not resolved'**
 - Description: If an access list references a domain name, the command 'show access-lists' will show whether that domain name has been resolved or not. This message will often times show in error that the domain name has not been resolved, when it in fact has.
 - Workaround: No known workaround.

- **Web errors on the NetVanta 1524**
 - Description: There is not an option to configure the default gateway of a NetVanta 1524 using the web interface. Clicking on the Physical Interfaces link returns the message “The Page Can Not Be Displayed”.
 - Workaround: These options can be configured from the command line interface.
- **NetVanta 1335 has the option for ethernet interfaces**
 - Description: The NetVanta 1335 has the option for interfaces of type ethernet when using the command ‘interface <interface type. <slot/port>’. The NetVanta 1335 does not support ethernet interfaces, but instead uses switchports.
 - Workaround: No known workaround.
- **Error when entering an access list with the web interface**
 - Description: If an access list with a name that is numerical is entered using the web interface a 503 server error will be returned.
 - Workaround: It is not valid to enter numerical names for access lists, use a name that does not contain numerical characters.
- **SNTP EHLO messages are not compliant with RFC 2821**
 - Description: The RFC states that extended hello (EHLO) messages must use a fully qualified domain name or an IP address in brackets. When an IP address is sent it is not enclosed in brackets.
 - Workaround: No known workaround.
- **Web interface does not show the correct authentication state for ports**
 - Description: When using port-auth and having ports in a force-authorized state, the authentication status in the web interface shows as “Unauthorized”.
 - Workaround: No known workaround.
- **The source interface for Radius packets can not be specified**
 - Description: The source interface for Radius packets is configurable with the command ‘ip radius source-interface <interface> <slot/port>’. This command is still available but does not change the interface from which Radius packets are sourced.
 - Workaround: No known workaround.

Resolved Issues

These are issues that have been resolved since the previous AOS release (16.01.00)

- Connected routes with a 31-bit subnet mask are not redistributed into BGP.
- Cannot retrieve the IP address of a GRE tunnel interface with SNMP.
- The source interface for SNMP packets cannot be an HDLC interface.
- When a VPN tunnel is terminated, mode config does not remove the route to the virtual IP address.
- A reboot occurs when trying to repeatedly log into a unit using XAUTH.
- Switches running Spanning Tree Protocol may reboot.
- Secondary IP addresses are not reported via SNMP.
- Multilink Frame Relay interface statistics are not available via SNMP.
- An ATM sub-interface may not be specified as the source interface for SNMP traffic.
- Large Traffic Monitoring packets can cause a reboot.
- Removing a VLAN interface and then modifying a QoS map that was applied to that VLAN interface will cause a reboot.
- Unable to change QoS map bandwidth or priority setting while applied to a VLAN interface
- Issuing the command 'show crypto ipsec sa' with hundreds of IKE tunnels causes a reboot.
- IP addresses reported via SNMP may be incorrect.
- If a link is lost while an SSH session is active, the session does not timeout and cannot be terminated.
- Cannot set the speed of a switchport on a NetVanta 1524 to 1000Mbps with the Web Interface.

- If the SIP ALG is in use and a call is placed on hold, then retrieved, one way audio will result if a Reinvite is received for that call.
- NAT source ports are not preserved when a 183 Session Progress is processed by the SIP ALG, resulting in one-way audio during an attended transfer.
- If a local policy route map is applied globally, VPN packets will be sourced from the secondary IP address on an interface if such an address exists.
- When the NetVanta is used as a DNS Proxy with more than two configured name servers, only two name servers will be tried.
- Once the command "logging forwarding receiver-ip" is configured, it cannot be removed.
- A MAC ACL list that is applied to a Wireless Access Point interface cannot be removed using the web interface.
- VLAN interfaces are not reported by the SNMP Bridge-MIB.
- Modifying OSPF max-paths value and repopulating a route can cause a reboot.
- A reboot occurs if a VRF that is associated with a loopback interface is removed and then a "show running-config" is issued.
- If two VLAN interfaces are created and the second created interface is then removed with the 'no interface vlan <vlan-id>' command the unit will reboot.
- If an SNMP V3 walk is performed and the community name is not set, the device will reboot.
- A reboot may occur if a file transfer is in progress and a CLI session times out.
- Devices running OSPF may reboot during re-convergence.
- DNS servers learned through DHCP are not removed if the DHCP server changes which DNS servers it offers.



AOS 16.03.00 Release Notes

Release Notes

Release Date: November 7, 2007

Notes Revision: 11/8/2007

Errata

These are issues that were discovered during internal testing or in the field, but were unresolved at the time of release.

- **NetVanta 1335 has the option for ethernet interfaces**
 - Description: The NetVanta 1335 has the option for interfaces of type ethernet when using the command 'interface <interface type. <slot/port>'. The NetVanta 1335 does not support ethernet interfaces, but instead uses switchports.
 - Workaround: No known workaround.
- **Error when entering an access list with the web interface**
 - Description: If an access list with a name that is numerical is entered using the web interface a 503 server error will be returned.
 - Workaround: It is not valid to enter numerical names for access lists, use a name that does not contain numerical characters.
- **SNTP EHLO messages are not compliant with RFC 2821**
 - Description: The RFC states that extended hello (EHLO) messages must use a fully qualified domain name or an IP address in brackets. When an IP address is sent it is not enclosed in brackets.
 - Workaround: No known workaround.
- **Web interface does not show the correct authentication state for ports**
 - Description: When using port-auth and having ports in a force-authorized state, the authentication status in the web interface shows as "Unauthorized".
 - Workaround: No known workaround.

Resolved Issues

These are issues that have been resolved since the previous AOS release (16.02.00)

- Selecting the Physical Interfaces page of the web interface will display "Page Can Not Be Displayed".
- A default gateway cannot be entered on a NetVanta 1524.
- When an ethernet link on a NetVanta 3430 is auto-negotiated and then switched to 100Mbps/full-duplex, throughput may degrade, but no errors will appear on the interface.
- An access control list entry that ends with a hostname (example 'permit any hostname www.adtran.com') will cause the NetVanta to reboot when entered.
- SNMP Link Down Traps do not include the instance portion of the OID resulting in inconclusive reporting of alarms by some SNMP agents.
- When sending an SMTP message to an E-mail server that requests authentication but does not require it, an endless loop can be entered into with the console displaying the message "OPERATING_SYSTEM.SMTP No username/password - attempting to send email anyway."
- When removing a Demand Routing Resource Pool Member using the web interface, a 503 server error is returned.
- If an access list references a domain name, the command 'show access-lists' will show whether that domain name has been resolved or not. This message will often times show in error that the domain name has not been resolved, when it in fact has.
- The source interface for Radius packets does not change the interface from which Radius packets are sourced.
- When using Nat Traversal with an aggressive mode VPN, if a NATD payload is received before the HASH payload in the third message of aggressive mode, the tunnel will fail to setup.



AOS 16.04.00 Release Notes

Release Notes

Release Date: December 3, 2007

Notes Revision: 12/5/2007

Resolved Issues

These are issues that have been resolved since the previous AOS release (16.03.00)

- DHCP cannot be relayed through an IPSEC tunnel.
- SNMP Traps are not sent out, but SNMP gets work fine.
- CLI Help string indicates T1 w/ DSX NIM can support discontinuous DS0s, when in fact it cannot.
- Multiple links for the Access Controller Portion of GUI in a NetVanta 3430 return incomplete pages or 503 server errors
- TACACS+ Session maintained whenever console is logged out.
- Connected routes with a 31-bit or 32-bit subnet mask are not redistributed into BGP.



AOS 16.05.00 Release Notes

Release Notes

Release Date: February 27, 2008

Notes Revision: 3/03/2008

Resolved Issues

These are issues that have been resolved since the previous AOS release (16.04.00)

When using TACACS+ and logging into the GUI, if the password field is left blank, the GUI stops responding

TACAS+ session maintained whenever console is logged out

SSH Executive Authorization not sent in TACACS+

Dial Interfaces Resource Pool and Connect Sequence tables only display one entry apiece when more than one is configured

Ethernet not responding in Frame Relay Unnumbered Config when the 'ip unnumbered' command was issued before configuring the DLCI value

Not returning NUcastPkts from PPP interface via SNMP

T1 and Dual T1 NIMs experience false loop ups

HDLC Interface statistics not retrieved with SNMP Walk

ADSL daughtercard reboots after receiving OAM packets that are corrupted

When the router is acting as a DNS client and receives a response code 2(Server Failure) from a non authoritative server, the router does not append the domain name and query again

When upgrading firmware a flash read/write timing error failure occurs thereby failing the firmware upgrade

Demand interface dial string does not honor all ASCII characters

Frame Relay Fragmentation not accepting Begin and End bit of a Frame Relay header when the frame length is less than the MTU

'IP flow' uses source as outbound interface in addition to source IP

Loopback address as the source of the 'ip flow' command is not applied