ADTRAN The Network Access Company

Release Notes
NetVanta 7100

AOS Release A1.01.00
February 25, 2008

Contents

Purpose

AOS Release A1.01.00 provides several new features and enhancements. This release also addresses several field issues.

Release A1.01.00 is Generally Available code, meaning that it has been subjected to both Design Verification and Product Qualification testing. Results obtained during this 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 as Errata in Appendix A.

A listing of available documents for this release appears in Appendix B. Configuration guides, white papers, data sheets, and other documentation may be found in ADTRAN's Knowledgebase, http://kb.adtran.com.

Important Notices

Web Configuration Support for ADTRAN IP 706 and IP 712 Phones

AOS A1.01.00 adds the ability to configure the IP 706/712 phones from the IP Phone Configs page in the web interface. For more information on the IP 700 Series phones, please visit the Product page (http://www.adtran.com/phones) and Support page (http://www.adtran.com/support). The latest firmware version (1.3.3) for the IP 700 Series phones is available on the Support page. Note that these pages require an IPT Partner login.

Before using the IP Phone Configs GUI or User Accounts GUI to create phone configs for the ADTRAN IP 700 Series phones, the default dial plans need to be checked to make sure that they in a format compatible for the IP 700 Series phones. Go to IP Phone Configs->Default Settings and verify that all entries ending in a "T" have a period before the "T". If any of these entries are missing the period before the "T", modify that dial string to include the period before the "T".

After verifying and, if necessary, modifying the dial strings, a dial string needs to be added for the intercom functionality. Under Extension Dial Strings, add "**xxxx" or "**xxx", depending on whether you are using four or three digit dialing, respectively.

Required Polycom Phone Firmware

For AOS Versions 15.06.00.SA and above, it is necessary that you upgrade your phone firmware to Polycom SIP version 2.1.2 for proper operation with the NetVanta 7100.

Use the following links to access the latest Phone Firmware.

- **Polycom application version 2.1.2 and bootrom version 3.2.3 -** http://kb.adtran.com/PolycomFirmware212/Version2.1.2.zip
    - **This zip file contains: sip.ld, sip.cfg, and bootrom.ld**
    - **All files are necessary to upgrade the phones**

Contact ADTRAN Post Sales Technical Support if you are unable to download this file.

Note that when upgrading phone firmware you will need to place the "sip.ld", "sip.cfg", and "bootrom.ld" files in the default FTP Filesystem location. This would be either the root of FLASH, or the Polycom folder on CFLASH. Also, "sip.cfg" needs to be present on FLASH.

Before you plug in phones…

To address a few issues found with Polycom config files and the 7100s that shipped with AOS 14.02.00, please enter the following commands.

Note that if you have any other new installations where the equipment shipped to you had AOS 14.x installed and not AOS 15.x or above, please use these commands during your staging process. All units shipped with AOS 15 and above will have these issues resolved.

> *Also Note that Step 3 should be performed after uploading the new version of sip.cfg to the Polycom folder.*

1. "copy cflash Polycom/polycomboot.cfg flash polycomboot.cfg"
2. "copy cflash Polycom/000000000000-directory.xml flash 000000000000-directory.xml"
3. "copy cflash Polycom/sip.cfg flash sip.cfg"

Connecting and Booting Phones

Beginning with AOS 15.06.00.SA, the NetVanta 7100 caches the phone firmware and configuration files in RAM during the first 30 minutes after boot-up. This is done to speed the boot process for the phones especially when they are being upgraded. In order to take full advantage of this new feature, be sure to have all phones connected to the NetVanta 7100 at the time of boot-up.

For systems that have additional PoE Switches such as the NetVanta 1224 PoE, you can follow this procedure to boot the phones connected there and still take advantage of the firmware and config caching.

1. Disconnect or shut down the port feeding the additional PoE switch.
2. Boot all phones directly connected to the NetVanta 7100.
3. Reconnect or "no shut" the port feeding the additional PoE switch.
4. Issue the command "sip check-sync firmware-upgrade" at the command prompt on the NetVanta 7100. There may be a short delay after entering this command (see below for details).

The "sip check-sync firmware-upgrade" command will re-cache the firmware files for an additional 15 minutes. This re-cache may take up to a minute to complete. This command will also issue a SIP Check-sync to each of the phones on the system which will tell the phones to check for a new version of firmware or config files. The phones on the additional PoE switch should see a new version of the firmware files and reboot to download them.

Summary of New Features

This section highlights the major features, commands and behavioral changes for AOS A1.01.00.

System Modes

- Allows a user to define different configuration parameters based on the current mode.
- 7 System Modes (Default, Night, Lunch, Weekend, Custom1, Custom2, and Custom3) can be configured with one Override option.
- The System Mode can be configured to change on a schedule at a specific transition time, can be manually switched by the user without a schedule, or can be put into Override mode which stays in affect until it is turned off (toggles on and off).
- System Modes can be enabled by schedule, web interface, or SPRE code.
- System Modes can be monitored by a BLF key in a Status Group (IP 601, IP 706, IP 712 phones).
- Configurations that support System Modes are: User Class of Service, Trunk Account Number, and Call Coverage
- This feature and its configuration options are further detailed in *Configuring System Modes in the NetVanta 7100* (http://kb.adtran.com/article.asp?article=2313&p=2).
- For further information, the commands for System Mode are contained within the *AOS A1.01 Command Reference Guide* (13MB file; http://kb.adtran.com/article.asp?article=2219&p=2).

Shared Line Appearances Enhancements

- Support for attended and unattended transfer from a Shared Line Account (in addition to blind transfer).
- Support for User-based permissions. For example, Class of Service can now be applied to a line to restrict call privileges based on the extension placing the call.
- For further information, reference *Configuring Shared Line Accounts on the NetVanta 7100*, (http://kb.adtran.com/article.asp?article=2132&p=2) for additional information.

Web Configuration Support for the IP 706/712 Phones

- Support for web interface configuration of ADTRAN's new IP Phones: IP 706 and IP 712.
- For more information on the IP 700 Series phones, please visit the Product page (http://www.adtran.com/phones) and Support page (http://www.adtran.com/support). Note that these pages require an IPT Partner login.

Voicemail enhancements for the NetVanta 7100

- Forwarded VM messages can have a header message recorded for the intended recipient (distribution lists not currently supported).
- Mailboxes for other Users and Ring Groups can now be monitored by using BLF keys in a Status Group.

Full 24 channel RBS/PRI support in the NetVanta 7100

- Support for 24 (23 for PRI) channels on a T1 RBS or PRI trunk
- The 24 channel simultaneous operation is only supported on the RoHS-compliant version of the NetVanta 7100 (part number 1200796E1)
- The previous version of the NetVanta 7100 (part number 1200796L1) will continue to provide support for 16 channels.
- A field upgrade or trade-in program to upgrade to the newer version is not planned.

ADTRAN Wireless Control Protocol (AWCP) Support

- Added support for AWCP to the NetVanta 7100
- For further information, reference the **AOS Wireless Configuration Guide** (http://kb.adtran.com/article.asp?article=2078&p=2).

Loopback Account Support

- Diagnostic account that loops back the RTP audio when a call is connected.
- Includes the ability to Initiate SIP calls via the Command Line Interface (CLI).
- Provides an easy method to verify proper operation and configuration during installation.
- Can be used with in conjunction with Voice Quality Monitoring (VQM) to troubleshoot network issues.
- This diagnostic account is only supported via the CLI.

Portal Lists Support

- Allows users to be created with restricted access modes.
- Does not enable privilege levels.
- Simply allows a user to access the router using only the specified services or lines.
- For example, a user may be restricted to only FTP access.

Top Talker (Integrated Traffic Monitoring) Support

- For further information, reference the **Integrated Traffic Monitoring Configuration Guide** (http://kb.adtran.com/article.asp?article=2157&p=2)

Top Websites Reporting Support

- For further information, reference the **URL Filtering/Top Websites Reporting Configuration Guide** (http://kb.adtran.com/article.asp?article=2158&p=2).

VQM (Voice Quality Monitoring) Support

- Voice Quality Monitoring (VQM) allows real time passive voice over IP (VoIP) quality measurements to be taken on all Realtime Transport Protocol (RTP) voice streams transmitted through an AOS device.
- VQM provides statistics and measurements vital for determining the quality of voice calls and the source of voice quality problems.
- VQM statistics can be sorted by call, interface, source IP address, RTP flows, and by date and time.
- For further information, reference the **Voice Quality Monitoring Configuration Guide** (http://kb.adtran.com/article.asp?article=2262&p=2)

VRF Enhancements

- VPN Routing and Forwarding allows a single router to be partitioned into two or more virtual routers.
- Traffic from one virtual router can't be forwarded to another virtual router.
- Virtual routers are independent and allow for IP address overlap without conflict.
- For further information, reference the **Multi-VRF Configuration Guide** (http://kb.adtran.com/article.asp?article=2156&p=2)

Summary of Enhancements

This section highlights the enhancements for AOS A1.01.00.

Added all necessary default phone config files to AOS image

Enhancement Details
- Included all necessary default phone config files and bitmaps to the AOS image. If a file is missing from a necessary location, when the AOS boots, it will extract that file to the proper location.

Ring Group voicemail status

Enhancement Details
- The command "show voice mail <extension number>" is now expanded to include Ring Group/Operator Group mailboxes.

Expanded configuration commands with "interface range" for FXO interfaces

Enhancement Details
- Previously, the config command "interface range 0/x-y" would allow for configuration of impedance, alias, and description. Also available now are tx-gain and rx-gain.

Summary of Bug Fixes

This section highlights major bug fixes in AOS version A1.01.00.

Call Transfers from a Polycom phone can fail with SIP over TCP

Issue Detail (41936)
- When a Polycom phone is configured to use TCP, it is possible that placing an inbound ring group call on hold will fail. In addition, a transfer will fail. The user must wait for the far end user to terminate the call.

Corrective Action
- Corrected an issue where TCP connections were being closed unexpectedly.

Voicemail account busy

Issue Detail
- System may respond with "Your mailbox is busy" when attempting to check voicemail.

Corrective Action
- If a call is disconnected before connecting with voicemail, the mailbox will now be properly returned to an idle state instead of being stuck in the busy state.

Can't set Call Coverage to toll-free number via CLI

Issue Detail
- Call Coverage cannot be set to an external toll-free number from the command line interface (CLI). Configuring Call Coverage from the web interface works properly.

Corrective Action
- Allow for configuration of Call Coverage to a toll-free number in the CLI and web interface.

Can't enable DID in RBS Trunk Account via the web interface

Issue Detail
- Direct Inward Dialing (DID) cannot be enabled and DID digits set for RBS Trunk Accounts via the web interface. CLI works properly.

Corrective Action
- Corrected the web interface operation to allow this configuration.

Can't sort IP Phone Configs web page by Associated Accounts or Registered IP

Issue Detail
- The config files on the IP Phone Configs page can be sorted by clicking the column titles (MAC Address, Associated Accounts, Registered IP, and Phone Model). All but the Associated Accounts and Registered IP sorts would work correctly.

Corrective Action
- Corrected the web interface operation to allow sorting by any column title.

Can't set Call Coverage to Voicemail for SLA in web interface

Issue Detail
- In the Command Line Interface (CLI), you can set the Call Coverage for a Shared Line Account (SLA) to go to a specific user's Voicemail. This is not an option for the SLA in the web interface. If you set this option in the CLI, the web interface does not reflect the change.

Corrective Action
- Added coverage to Voicemail as an option on the web interface.

Blind transfer from trunk to an external numbers fails

Issue Detail
- If a call received from a Trunk Account is blind transferred to an external number, the transfer will fail.

Corrective Action
- Corrected improper handling of numbers with a pre-pended '9' when performing blind transfers out a trunk.

No associated phone config for new User Account

Issue Detail
- When creating a new User Account, the IP Phone Config for the user may not be associated with the phone config in the GUI. The phone will boot and operate correctly, but in the web interface it appears that it has no associated IP Phone Config and that the phone is not registered.
- Viewing the phone config in the web interface and clicking the Apply button will correct the problem.

Corrective Action
- Corrected User Account to Phone Config association.

Global config DID entries do not restore on reboot

Issue Detail
- DID entries configured using the global voice command "voice did NXX-NXX-XXXX extension XXXX" do not persist after a reboot.

Corrective Action
- Order of config processing (startup-config before dynvoice-config) interfered with DID config validation. Allowed for global DID entries to be processed before dynvoice-config is loaded.

Unable to change impedance with certain Country-Codecs

Issue Detail
- With the Country-Codec set for Canada or Puerto Rico, the impedance values cannot be changed.

Corrective Action
- Added supported values for Canada and Puerto Rico.

Message Waiting Indication (MWI) not working for secondary extensions

Issue Detail
- MWI would work for the primary extension on a phone, but not on the secondary extension.

Corrective Action
- The MWI configuration values for Polycom phones were removed from defaultpolycom.cfg and placed in adtran-sip.cfg. The web interface was modified to correct existing configurations.

SIP Phone Call Appearances may become stuck.

Issue Detail
- Over a long period of time, SIP user call appearances can become unusable.

Corrective Action
- Improved clearing of User Account call appearances.

Ring/Operator Group voicemail email notification schedule missing.

Issue Detail
- A schedule is not required for email notification for a Ring or Operator Group.

Corrective Action
- Removed options for schedule in CLI and web interface.

Loss of system configuration

Issue Detail
- System configuration can be lost if a reboot occurs while writing the configuration.

Corrective Action
- Modified operation so that the config files aren't removed while the configuration is being generated. So, if generation of the config causes the box to reboot it will still come up after reboot with the last saved config.

Upgrade Instructions

Several steps need to be taken to assure a valid upgrade. First, save your existing configuration via the Configuration page in the web interface under Utilities (remember to include voice settings). You may also save the configuration to a TFTP server. The commands to execute the TFTP copy are:

Router# copy start tftp

Router# copy dynvoice tftp

You will be prompted for file names and the server address in the process.

To Download AOS A1.01.00

Note that you will have to login and have registered a NetVanta 7100 serial number in order to download firmware.

1. Go to http://www.adtran.com and login using your IPT Partner login.
2. If your landing page is the ADTRAN Advantage Partner Zone, click Software/Firmware Downloads and choose NetVanta Products, then NetVanta 7100.
3. If you do not have a landing page configured, click on Support and choose NetVanta Products / NetVanta 7100.
4. Select Firmware Updates.

AOS Upgrade Instructions
1. Upload the AOS Image to CFLASH via the Firmware page in the web interface or via FTP.
2. From the web interface, choose the new image as the Primary Firmware and click Apply.
3. From the Command Line Interface in Global Configuration Mode, enter "boot system cflash NV7100A-A1-01-00-E.biz X Y verify" where "X" is the location of the backup firmware image and "Y" is the name of that firmware image. The "verify" keyword tells the system to check the AOS image to make sure it was uploaded properly before applying it.
4. After the AOS image is applied, then click Reboot unit or enter "reload" and select "y" to save and to reload.

AOS Bootcode Details
When upgrading to AOS A1.01.00, an upgrade to the Bootcode is not required.

Appendix A – Errata for A1.01.00

The following is a list of errata that still exists in A1.01.00.

Polycom Phones may reboot.

Issue Detail
- Phones may intermittently lose Power over Ethernet and reboot.

Errata Justification
- Not every system experiences the loss of PoE.
- To address specific cases where this is happening, there is a solution that greatly reduces the occurrence of this issue is included in AOS 15.06.00.SA. Contact ADTRAN Technical Support for assistance in enabling this solution.

Delay in phone FTP process

Issue Detail
- When many phones are booting and upgrading from the NetVanta 7100, some phones may not be able to download their configuration files and may require a reboot to complete.

Errata Justification
- Issuing the "sip check-sync firmware-upgrade" command can improve performance if the issue occurs more than 30 minutes after initial boot of the NetVanta 7100. See ***Important Notices*** (on Page 3) for further information.

Parking a call via BLF key may result in a fast busy signal

Issue Detail
- If a call is parked via a BLF key as a 2nd call is ringing the same extension, the park will complete but a fast busy signal may be heard for 2-3 seconds as the call is being parked.

Errata Justification
- Polycom SIP version 2.2.2 resolves this issue and is being tested for approval with the NetVanta 7100.

Calls into Voicemail or Auto Attendant incorrectly record Lost Packets

Issue Detail
- The output of "show voice quality-stats" reports many lost packets on calls to Voicemail or Auto Attendant.

Errata Justification
- These statistics are inaccurate for Voicemail and Auto Attendant due to the fact that no RTP packets are sent during the silences between prompts. They do not reflect actual voice quality issues.

Default FTP Filesystem change

Issue Detail
- When the FTP server is disabled, the default filesystem for the FTP server is changed to FLASH instead of the default of CFLASH.

Errata Justification
- The default filesystem can be changed back with the in the CLI with the "ip ftp server default-filesystem" command or in the web GUI under IP Phone Configs/Boot Settings.

Cannot detect dialtone

Issue Detail
- On some analog phone lines provided by Analog Telephone Adapters (ATAs), the FXO interface cannot detect dialtone.

Errata Justification
- In the configuration of the analog Trunk Account, Blind Dial can be enabled as a workaround.

Add Configs in Batch feature uses 501 Model

Issue Detail
- All configurations built by using the "Add Configs in Batch" option under IP Phone Configs use the IP 501 phone model type.

Errata Justification
- New User Account phone configuration and Manual addition of phone configs work properly. A resolution will be added in a future version of AOS.

Incorrect subscription to Missed Call Summary

Issue Detail
- If you have an existing phone config with an Shared Line Account (SLA) and you change the SLA to an extension, the phone will attempt to subscribe to a Missed Call Summary every minute which is rejected with a 404 Not Found.

Errata Justification
- This does not affect phone operation. The phone configuration can be deleted and rebuilt or edited manually to resolve the issue. Also, this configuration change is not common.

Can't see Audio Prompts Description field in Internet Explorer 6

Issue Detail
- The Audio Prompts Description field is empty in IE6 when the page initially loads. If you click on a prompt, you can see the Description is there. If you change the Description or add one, when you save the new info the Audio Prompts page will refresh and show the Description for the new one as well as all of the others.

Errata Justification
- The information is stored correctly and is viewable by clicking on the prompt. Also, works properly in IE7 and Firefox 2.x.

Appendix B – Related Documents

For configuration guides, installation guides, white papers and more, visit ADTRAN's knowledge base at http://kb.adtran.com.

AOS A1.01 Command Line Reference Guide (13MB file) –
http://kb.adtran.com/article.asp?article=2219&p=2

Configuring System Modes in the NetVanta 7100 -
(http://kb.adtran.com/article.asp?article=2313&p=2)

Voice Quality Monitoring Config Guide -
http://kb.adtran.com/article.asp?article=2262&p=2

[Video]Understanding Voice Quality Monitoring in AOS -
http://kb.adtran.com/article.asp?article=2296&p=2

NetVanta 7100 Administrator's Guide (Updated) -
http://kb.adtran.com/article.asp?article=2292&p=2

Shared Line Accounts over Analog Trunks Config Guide (Updated) -
http://kb.adtran.com/article.asp?article=2132&p=2

NetVanta 7000 Series Hardware Installation Guide (Updated) -
http://kb.adtran.com/article.asp?article=1634&p=2

Performing NetVanta 7100 Backup via FTP -
http://kb.adtran.com/article.asp?article=2283&p=2

Integrated Traffic Monitoring Config Guide (Top Talkers Support) -
http://kb.adtran.com/article.asp?article=2157&p=2

Multi-VRF Config Guide –
http://kb.adtran.com/article.asp?article=2156&p=2

URL Filtering/Top Websites Reporting Config Guide -
http://kb.adtran.com/article.asp?article=2158&p=2

AOS Wireless Config Guide –
http://kb.adtran.com/article.asp?article=2078&p=2