n-Command

Network Productivity Software Suite

Product Features

- Cost-effective, configuration, inventory, and firmware management platform for ADTRAN NetVanta and Total Access products
- Secure network communications using SSH and Secure Copy
- Streamlines network operation, administration, and management
- Intuitive, user-friendly interface reduces add-on costs and training time
- Scalable platform fits any size network
- Modular design supports add-on modules for enhanced features and growth
- Manage individual user accounts and access privileges
- Backup and restore configuration files
- Restore previous configurations based on time or specific events
- Make configurations changes globally throughout the network
- Inventory network devices and manage software revision per device type
- TELNET, SSH or securely web-browse to individual devices in two simple mouse clicks
- Simplify firmware management and facilitate network-wide updates
- Manage Access Control Lists and facilitate global changes quickly and easily

ADTRAN's n-Command™ is a suite of network productivity tools for NetVanta® and Total Access®-based networks. The system aids IT administrators in daily network operation and configuration allowing them to quickly adapt to networking changes, make better use of limited resources, and save time and money. n-Command offers the ability to discover devices, push mass configuration changes, backup and restore device configurations, upgrade firmware to groups of devices, globally manage Access Control Lists (ACLs), and generate inventory reports for asset management.

Navigational Interface

ADTRAN has designed n-Command to be intuitive, yet feature rich and cost effective. The Windows Explorer-like interface reduces the learning curve and eliminates training time. This flexible design enables the network administrator to create a "folder-tree" structure for conveniently organizing devices by type, location, or logical subnet to make finding specific devices quick and easy. Devices can easily be moved between folders and sub-folders as the network topology changes or grows in size.

Discover Devices

n-Command makes network discovery easy. Users can discover ADTRAN Operating System (AOS)-based and other network devices by an IP address, an address range, an entire subnet or by using a host file. n-Command provides a visual up/down status of each discovered device and enables a user to launch telnet, SSH, or browser access with a few simple mouse clicks.
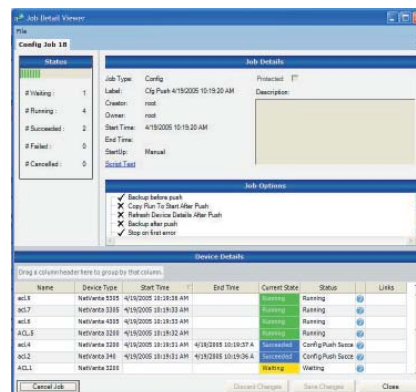

Backup Configurations

To aid in configuration management, n-Command enables the user to backup configuration files from all supported NetVanta and Total Access devices and save them on the host server. This can be performed manually on a single device or scheduled on a recurring basis for an entire group. n-Command can be configured to send an e-mail summary of the completed job that lists how many devices were successfully backed up, how many failed, and even how many had running configurations different from start up configurations.
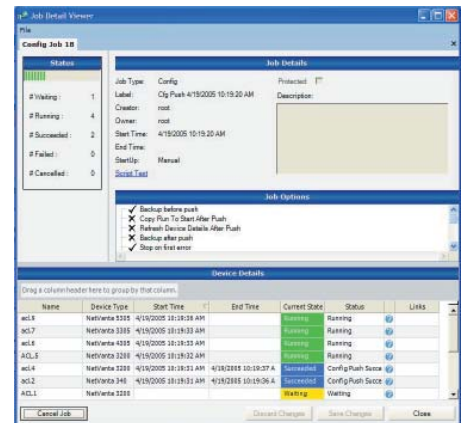
Push Configuration Changes

n-Command allows the IT manager to make global configuration changes to their network by pushing a Command Line Script to selected NetVanta or Total Access 900 devices. These scripts can be created, edited and saved using the built-in Script Editor. In addition, the Script Editor offers a powerful "CLI Syntax Checker" that verifies your command line usage, validates the use of correct syntax, and notifies you of the correct syntax options. Think of this as a "CLI Spell Checker"! n-Command comes pre-installed with a few sample scripts for user convenience (i.e.: Reload Device and Enable SNMP). The ability to edit command line scripts, verify their syntax, and to make global configuration changes, all without launching another application, allows a single IT administrator to effectively manage a large network.

ADTRAN®

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Quickly Restore Previous Configurations

Changing configurations on a large scale, or simply maintaining a database of configuration files, would not be complete without the ability to undo a change or restore a device's previous configuration. Saved configuration files can be pushed to selected devices to quickly restore them to a previous configuration state. Restoring a previous configuration can be done manually on a single device or on groups of devices by selecting a designated time or event. Restoring configurations by event is very powerful and enables the user to quickly undo a mass configuration change. n-Command™ enables the user to edit configuration files and to push an external configuration file directly to a selected device.

Configuration File Browser

The Configuration File Browser, makes locating specific configuration files quick and easy. The user can browse configuration files either on the local hard drive or within n-Command's backup file database. This browser can even open the running or startup configuration directly from an active device. Once the file is selected, it opens in the Configuration File Viewer. The file viewer automatically highlights and groups different sections within a CLI configuration file making it easy to find the appropriate section. Clicking a section will show the ACLs referenced by that section in a separate window. This eliminates the burden of scrolling back and forth over hundreds of lines of code to find references and specific ACLs.

Maintaining Firmware Revisions

The Firmware Manager greatly simplifies the management of NetVanta® and Total Access® hardware platforms and their respective firmware releases. Prior to attempting an upgrade, the Firmware Manager will verify the selected devices have sufficient memory and will also check for any possible boot-code or hardware revision conflicts. With the initial screening process complete, the Firmware Manager can push a single firmware version to a single device or easily facilitate a network-wide upgrade. As part of the upgrade process, the user can schedule a date and time when n-Command will actually push the firmware and when the devices will reboot. This helps eliminate unnecessary network downtime, prevents using excess bandwidth during production hours and enables administrators to upgrade the network without wasting hours of overtime performing manual upgrades.

Once completed, n-Command provides a job detail report that gives a complete breakdown of the upgrade's success and includes log information so that failures can be quickly tracked down and resolved. An e-mail summary of the completed job can be sent to provide administrators advanced notification of when the job completes. This is another time saving feature that frees administrators from constantly monitoring the upgrade process.
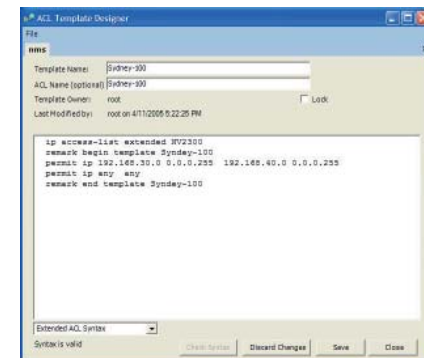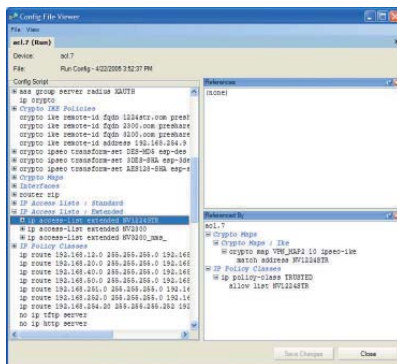
ACL Management (Add-on Module)

n-Command's Access Control List (ACL) manager, is available as an add-on module. This option module streamlines the management of ACLs used for packet selection by Static Filters, Firewalls, and QoS polices by allowing users to quickly and efficiently make ACL changes to large groups of NetVanta or Total Access 900 devices. n-Command accomplishes this by using templates marked in each device, which contain entries common to multiple units. Using the ACL Manager the IT manager can create, edit, delete, or insert common ACL statements and push to the corresponding templates on the selected devices. Modified ACLs can be saved for future use and can also be checked for syntax errors using the "Syntax Checker". In the event that a unit being modified looses connectivity with n-Command, a failsafe reload option provides an additional safety measure by rebooting the unit to the previous "safe" configuration.

Total Access 600 and 850 Support (Add-on Module)

Support for the Total Access 600 and 850 series products is available as an add-on module to n-Command. This module enables the user to discover Total Access 600 and 850 series products by using an IAD host file. Once discovered, n-Command can be used to backup and restore configuration files, upgrade firmware, and quickly create asset reports. (Note: The Total Access 900 series products are AOS devices and are supported with the base version of n-Command.)

Asset Management

To aid in asset management, n-Command offers a flexible inventory report that displays information like firmware type, device description, IP Address, serial number, and next scheduled backup. For even greater flexibility, this information can be exported to Microsoft Excel for easy data manipulation to create standardized reports, or charts. n-Command keeps a detailed log of all actions performed on every device managed by the system. n-Command logs these actions together with important information about the event such as job type, user, start time, and current state (Did the event succeed or fail?). These logs include convenient links to provide more detail or quick access to communication logs or the configuration backup files.

Enterprise Edition CD

n-Command is a modular product that enables the user to customize the system to fit their needs and budget. The Enterprise Edition CD, comes with a 100-device license, a 5-client license, one-year software maintenance, and the ability to enable add-on modules for enhanced functionality, like the ACL Manager or support for the Total Access 600/850 series products. For networks with more than 100 devices, additional 250 and 500-node incremental licenses are available.

Product Specifications
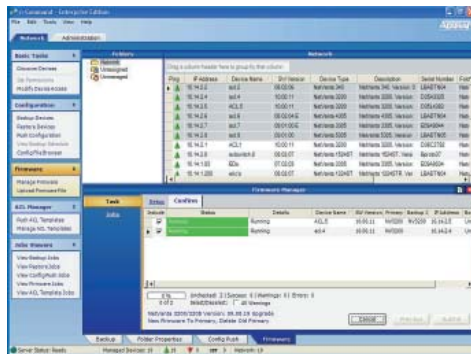
Security and System Access
- Password protected user access
- Supports multiple users and permissions
- Root: Create root, admin or user profiles and full access to all devices and systems
- Admin: Create admin or user profiles and full access to all devices and systems
- User: May have two permission types: Unit manage or View only

Device Access
- Supports multiple device login/password options, enable passwords, and SNMP community strings
- Communicate with devices using SSH, Secure Copy or TELNET
- Right click device to quickly launch HTTP, HTTPS, TELNET, or SSH access
- Visible up/down ping notification

Device Discovery
- Discover by DNS lookup or by IP address, range, subnet or host file
- NetVanta Devices can be identified regardless if SNMP is enabled (After identification, SNMP must be enabled to allow full management)

Backup Device Configuration Files
- Backup configurations manually or set a recurring schedule
- Saves networking resources by only transferring files that have changed (i.e. Checksum does not match)
- Send e-mail summary upon completion

Firmware Manager
- Manage firmware updates to large groups of NetVanta and Total Access devices
- Verifies sufficient memory
- Prevents boot code/hardware revision conflicts
- Supports a delayed file transfer and reboot schedule
- Send e-mail summary upon completion

ACL Manager
- Enterprise Edition add-on module
- Manage ACLs for large groups of NetVanta and TA 900 devices easily and efficiently
- Create, edit, delete, and inserts ACL templates
- Verifies ACL syntax
- Failsafe reboot safety measure

Push Configuration Changes
- Push configuration changes to large groups of devices
- Simple step-by-step wizard
- Make use of preloaded script files like: Firmware Push and SNMP Enable
- Create, save, edit and rename script files
- Verify script with Syntax Check
- Backup current configuration before and after configuration change
- Stop on first error and reload failsafe safety measures
- Detailed log enables visible verification of Configuration Change Status
- Send e-mail summary upon completion

n-Command

Product Specifications *(continued)*

Restore Configurations
- Restore previously backed up configuration manually, by time or by event
- Quickly undo a mass configuration change
- Also enables a user to select and push a configuration file from their local HD (external to the n-Command backup system)

Asset and Inventory Management
- Maintain up to date asset and inventory information like device type, device count, firmware revision and serial numbers
- Flexibly sort or group information to create an Inventory Report
- Print or export inventory reports to Microsoft® Excel

Device Logs
- Track events and changes to devices by user and job type
- View event summary or select detailed view
- Quickly view backup files and session logs associated with a particular event

Supported Devices
- NetVanta® 300 Series
- NetVanta® 1000 Series
- NetVanta® 2000 Series
- NetVanta® 3000 Series
- NetVanta® 4000 Series
- NetVanta® 5000 Series
- NetVanta® 7000 Series *
- Total Access® 900 Series
- Total Access® 650 and 850 Series **

* Support starting with n-Command™ version 3.3

** Support only with the addition of the TA 600/850 add-on module (1950852L1). Supports discovery using an IAD host file, Firmware Management, Configuration Backup and Restore, and Asset Management.

System Recommendations

Client/Server System Recommendations

Network Size	0 – 500 Devices	500 – 1,000 Devices	Greater than 1,000 Devices
Hardware	Intel® Pentium® or compatible PC	Intel Pentium or compatible Server Class Machine	Intel Pentium or compatible Server Class Machine
Processor	1 Ghz or faster	2 Ghz or faster	3 Ghz or faster
Operating System	Microsoft Windows® 2000, XP, or 2003	Microsoft Windows 2000, XP, or 2003	Microsoft Windows 2000, XP, or 2003
Memory	512 MB of RAM or greater	1 GB of RAM or greater	1 GB of RAM or greater
Available Hard Disk Space	300 MB	300 MB	300 MB
Monitor Size	19" (17" minimum)	19" (17" minimum)	19" (17" minimum)
Display Resolutions	1024 x 768 pixels	1024 x 768 pixels	1024 x 768 pixels
Other	CD-ROM Drive	CD-ROM Drive	CD-ROM Drive

Ordering Information

Equipment	Part #
n-Command	
n-Command Enterprise Edition CD*	1950843L1
500-node Incremental License	1950844L1
250-node Incremental License	1950844L2
2-Client Incremental License	1950845L1
ACL Manager Module	1950850L1
Total Access 600/850 Module	1950852L1

* Comes with support for 100-Nodes, 5-Clients, and one year of software maintenance included.