

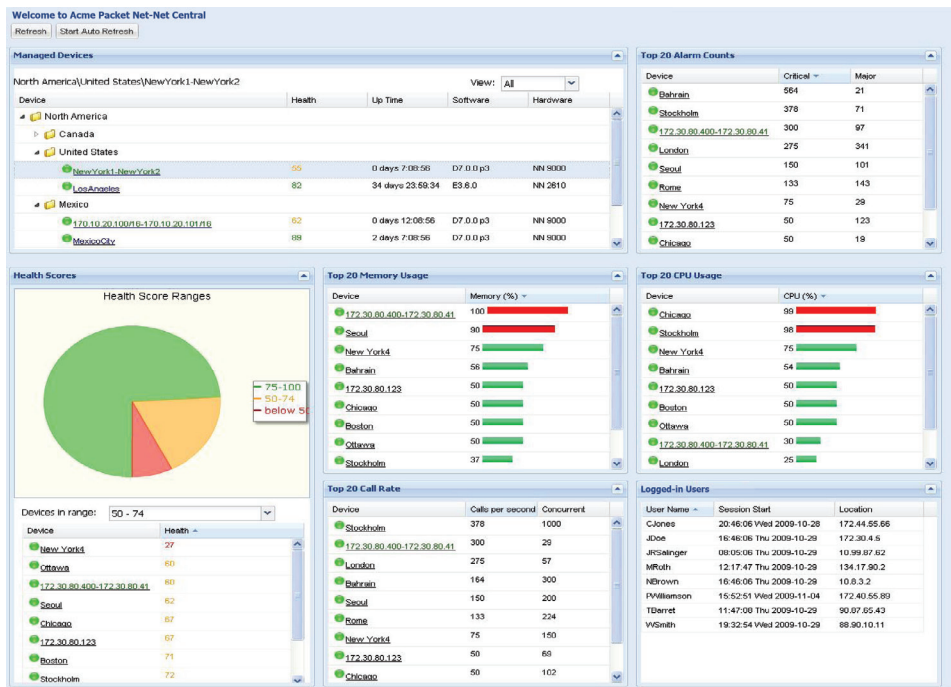
Net-Net Central

data sheet

Overview

Net-Net Central[®] is a next-generation management platform designed to meet the demanding requirements of the largest service provider and enterprise network operation centers. It features a modular framework for managing Acme Packet's entire Net-Net family of products. Net-Net Central's flexible, high-availability architecture scales to manage very large networks and provides an extensible framework for hosting solution-specific management applications as well as value-added application add-ons. Its clustering technology enhances management performance and availability in the most demanding service and business-critical environments.

Through convenient, easy to read dashboard and configuration views, Net-Net Central facilitates flow-through provisioning, capacity planning and comprehensive performance and fault-monitoring with "at-a-glance" status indicators that simplify real-time, network-wide management. It also integrates with OSS/BSS ecosystems via standard interfaces to deliver advanced service fulfillment, service assurance and billing solutions.



Net-Net Central dashboard summary screen

Architecture

Net-Net Central utilizes a modular, multi-tiered architecture that improves upon previous-generation element management systems to deliver unprecedented scale and high availability and a flexible user interface that makes Net-Net Central adaptable to a wide variety of service provider and enterprise network operations center (NOC) environments. Leveraging powerful system services and applications as well as integrated element management and other applications, Net-Net Central manages a wide variety of Acme Packet products and session delivery solutions.

Acme Packet edge

- High-availability, high-performance management architecture
- Modular, extensible system framework
- Open, flexible interfaces and client views

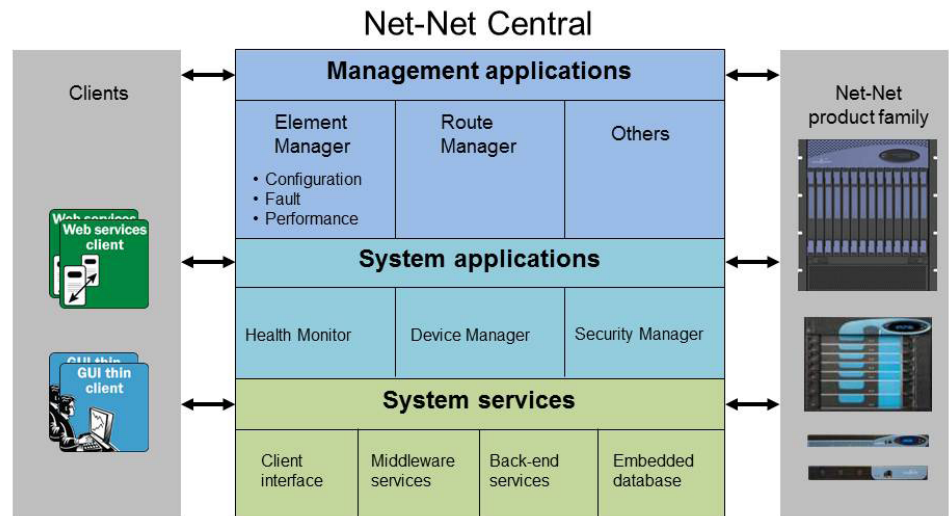
Benefits

- Simplicity – Centralized management for all Acme Packet products
- Scale – Manages small to very large deployments
- Availability – Multiple capabilities for preventing management system outages
- Extensibility – Management application add-ons
- Flexibility – Multiple client views and integration with "third-party OSS/BSS applications

Key functions and features

- Configuration, fault, performance and security management
- "At-a-glance" dashboard summary
- Flexible device configuration views
- Server clustering
- Load balancing of user sessions across multiple servers
- Seamless load redistribution upon individual server failure
- Open, standards-based interfaces

Net-Net Central's architecture consists of the base system plus management applications that are installed and configured to manage specific Acme Packet products, configurations or solutions. The base system includes device and security management as well as real-time health monitoring of Net-Net Central server clusters. Management applications include the Net-Net Central Element Manager, which provides configuration, fault and performance management for Acme Packet network elements, and Route Manager, the route provisioning and management tool for Net-Net session routing proxies and session border controllers. Additional management applications designed to manage specific Acme Packet solutions can be integrated, making Net-Net Central a highly versatile platform for managing a wide variety of service provider and enterprise services and applications.



Through standard interfaces that communicate with external elements such as browser-based management clients, other Net-Net Central servers, Acme Packet network elements and third-party OSS/BSS and management systems, Net-Net Central operates seamlessly with the management systems and practices used in today's service provider and enterprise data and operations centers. It also uses standard formats such as Cascading Style Sheets (CSS) and XML Schema Documents (XSD) for presentation and data management.

Net-Net Central utilizes a browser-based thin client, providing a flexible GUI that simplifies management operations. A web services client also resides on each Net-Net Central server, enabling northbound OSS/BSS application integration for flow-through provisioning and network-wide management. The Net-Net Central presentation model features cascading style sheets that deliver multiple configuration and dashboard views, making Net-Net Central adaptable to individual and organizational user preferences.

Net-Net Central base system

Net-Net Central's base system includes its underlying system services plus a set of base system applications, including Net-Net Central Health Monitor, Device Manager and Security Manager. These applications perform essential administrative functions for individual and clustered Net-Net Central servers as well as the devices and users managed through the Net-Net Central system.

Health Monitor

Net-Net Central's Health Monitor provides heartbeat indicators and statistics related to Net-Net Central server status and disk utilization for servers configured as members of a Net-Net Central server cluster. Health Monitor functions/features include:

- Status information and statistics related to members of a Net-Net Central server cluster
- Alarm generation upon servers entering or exiting a Net-Net Central server cluster
- Maintenance and reporting of disk usage statistics for servers that are members of a Net-Net Central server cluster

Device Manager

Device Manager applies basic administration of individual Acme Packet devices or device groups to simplify the management of small to very large networks of Acme Packet products. Device groups can be organized hierarchically according to the needs of the organization. Device Manager functions/features include:

- Addition, deletion and modification of devices to Net-Net Central
- Display of summary and detailed information on individual devices and device groups
- User permissions based on operation and device group privileges

Security Manager

Net-Net Central's Security Manager enables the definition and control of access rights for both individual users and user groups and an audit log for all changes. Security settings are configurable for users/user groups as well as groups of devices. Security Manager functions/features include:

- Access control lists define permitted user and user group access rights
 - Per element management function - configuration, fault, performance
 - System operations and information
 - Based on function and device group/instance
- User and user group support
 - Users assignable to groups with pre-defined permissions
 - Override to group permissions to grant/deny permissions for individual user
 - Unique user name/passwords for each individual user for authentication
- Audit log of all activities performed by individual user, including user name, date/time, operation performed and success/failure
- Inactivity timer for client connections
- Configurable password rules

Net-Net Central management applications

Net-Net Central supports a flexible range of management applications that provide operations personnel with the essentials for managing small to very large networks of Acme Packet products across a wide range of session delivery solutions. Starting with Net-Net Central's Element Manager, a powerful configuration, monitoring, and statistical collection tool, and extending to Route Manager, our route provisioning application for session routing proxies and session border controllers, Net-Net Central leverages a highly modular framework that supports additional management applications that can be integrated into Net-Net Central over time as additional Acme Packet products and solutions are deployed.

Element Manager

Net-Net Central's Element Manager is used for configuration, monitoring and statistical collection for Acme Packet network elements. Element Manager supports all Acme Packets products and hardware platforms and is a standard management application within the Net-Net Central framework. Element Manager is comprised of Configuration Manager, Fault Manager and Performance Manager, all of which are accessed through Net-Net Central's GUI.

Configuration Manager

Net-Net Central's Configuration Manager enables element configuration, provisioning and software management for multiple networks. Configuration Manager functions/features include:

- Configuration via GUI thin client interface or Web Services Client API to OSS provisioning applications
- Multiple configuration/presentation views – default, ACLI and list
- Hierarchical view of Acme Packet network elements and their physical and logical components (physical interface, virtual interface, realm, signaling service, session agents, etc.)
- Device inventory information and configuration parameter details
- Multiple concurrent users supported with local configuration views for each user
- Complete device control via commands - save, activate, save and activate, reboot, etc.
- Tool tip displays Acme Packet CLI parameter name by 'mousing over' configuration parameter description
- On-line, context-sensitive help

Fault Manager

Through the Fault Manager application, Net-Net Central enables real-time monitoring of operational status by collecting and displaying alarms and fault-related statistics. Fault Manager functions/features include:

- Event delivery via SNMP traps
- Visual display of alarms on main GUI screen
- Alarms color-coded by severity level
- User configurable trap severity mapping
- Configurable alarm severities
- Alarm and event filtering and management
- Alarm acknowledgement, clearing, deletion and save to a file
- E-mail notifications based on event severity level

Performance Manager

Net-Net Central's Performance Manager enables the collection and real-time monitoring of Acme Packet performance statistics. Performance Manager functions/features include:

- Real-time, on-demand collection and display of performance statistics, exportable to CSV formatted file
- Statistics available for systems/HA nodes, physical interfaces, network interfaces, realms, session agents
- Comprehensive performance metrics
 - Signaling – session rate and quantity, registrations, acceptance/rejection, etc.
 - Media – packets and bandwidth
 - Network – frames, packets and bandwidth
 - System resources – CPU & memory utilization, health score
- Configurable, performance-related threshold crossing alerts

Route Manager

Net-Route Manager is a Net-Net Central management application used in session routing applications for service provider interconnect and peering services. It consolidates and automates the management and distribution of up to two million routes per Acme Packet session border controller (SBC) or session routing proxy (SRP). Utilizing Net-Net Central's intuitive, browser-based graphical user interface (GUI), Route Manager leverages the Net-Net Central framework to automatically provision and distribute routing information to all or specific subsets of SBCs and SRPs in the network.

In addition to built-in route provisioning, Route Manager can import routes from deployed Acme Packet systems or from external servers, and it utilizes powerful global search and display capabilities to additionally simplify route modification and creation. To enhance troubleshooting and maintenance, the Route Manager application maintains a history of route changes and system updates and provides rollback capability.

Route Manager is a component of Acme Packet Open Session Routing (OSR) architecture, which features the Net-Net Session Router (SR) or Net-Net Session Director (SD). Both products utilize centralized routing information kept in an on-board routing database and/or obtained externally via best-of-breed routing database products and services from OSR ecosystem members.

Route Manager functions/features include:

- Creation and modification of onboard routing databases for Acme Packet SBCs and SRPs
- Global search and display for route creation and modification
- Automatic distribution of routing information to all or specific subsets of SBCs and SRPs
- Route importation from external databases (CSV file format) or deployed systems
- Enhanced troubleshooting via edit/search/replace, rollback and audit log capabilities

System requirements

Server

Minimum hardware requirements

- CPU – 4-core 2.1 GHz processor or better
- RAM – 12 GB
- Hard disk – 195 GB minimum, 300 GB recommended

Operating system support

- Red Hat Enterprise Linux v5.5 (64-bit)
- Red Hat Fedora 13 (64-bit)
- Solaris 10, x64/x86 (64-bit)

VMware support

- Red Hat Fedora 13 guest (64-bit)
- Same Linux minimum hardware requirements as above

Client

- Thin client – web browser with Adobe Flash
- Internet Explorer version 7.0 or higher
- Mozilla Firefox version 3.0 or higher



100 Crosby Drive
Bedford, MA 01730 USA

t +1.781.328.4400
f +1.781.425.5077
www.acmepacket.com

© 2011 Acme Packet, Inc. All rights reserved. Acme Packet, Session-Aware Networking, Net-Net and related marks are trademarks of Acme Packet. All other brand names are trademarks or registered trademarks of their respective companies.

The content in this document is for informational purposes only and is subject to change by Acme Packet without notice. While reasonable efforts have been made in the preparation of this publication to assure its accuracy, Acme Packet assumes no liability resulting from technical or editorial errors or omissions, or for any damages resulting from the use of this information. Unless specifically included in a written agreement with Acme Packet, Acme Packet has no obligation to develop or deliver any future release or upgrade or any feature, enhancement or function.

06/20/11