

Nakina Multi-Vendor Security Management

Secure Your Network Operations

How Service Providers can improve
the Security of their Network Operations



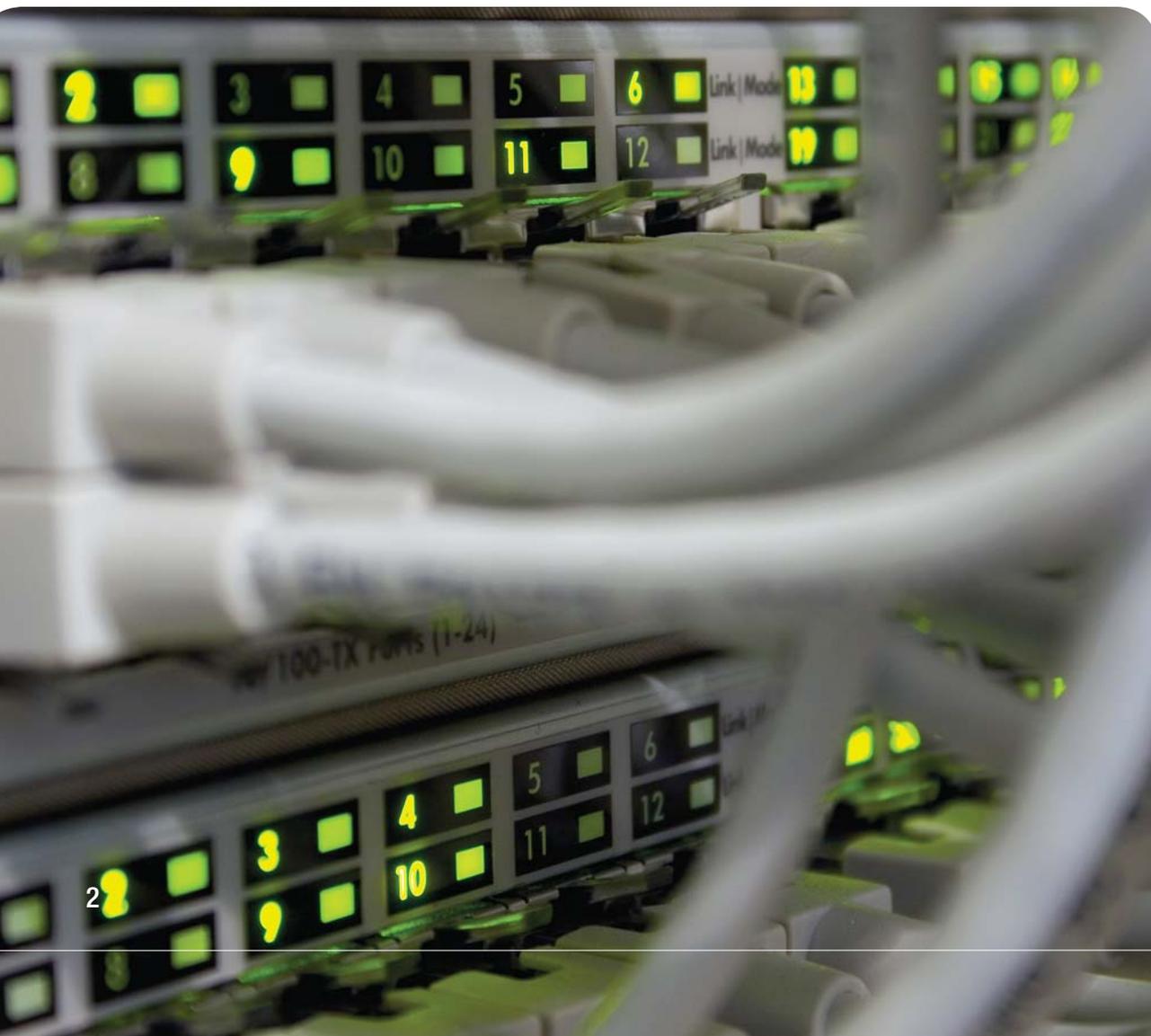
Nakina
Systems

The logo for Nakina Systems features a stylized blue wave graphic above the company name. The word "Nakina" is in a bold, sans-serif font, and "Systems" is in a smaller, lighter font below it.

Security Challenges in Network Operations

Service providers today face mounting challenges in securing their multi-vendor networks. Multiple user accounts on thousands of network elements (NEs) and devices are accessed by hundreds if not thousands of network operators daily. User IDs and passwords are usually shared across the network, making it difficult to authenticate and track user activity. NE equipment limitations and security feature idiosyncracies make it difficult to implement strong network-wide security policies like periodic password aging.

Security administrators are left to feel overwhelmed by the responsibility of securing access to NEs while ensuring they do not impede progress in daily network operations.



Make it easier for your network operators to do what they should be doing – and harder to do what they shouldn't.

Automated, Centralized, Standardized Security

Now there's a better way of securing the network. Nakina's Security Management solution allows security administrators to implement a single user interface to securely control all access to NE in the network, whether it is access for back office systems or network operations personnel. Security policies are effortlessly enforced network-wide while reducing the operating cost, time, and effort required to do so.

The Nakina Multi-Vendor Security Management solution offers the ability to:

- **Substantially reduce the effort and cost of administering security credentials** for thousands of users across large networks (from a few hundred up to 100,000 NEs)
- **Centralize, consolidate and standardize security practices** on a single Security Administration GUI for the entire network
- **Overcome inconsistencies in the way a security feature is implemented** by different vendors by overlaying security features onto all NEs and devices in the network
- **Enforce robust and consistent security policies with automated, network-wide security measures** like password aging, minimum alphanumeric character requirements, etc.
- **Customize security privileges for each network operator** to reduce a network's vulnerability to inadvertent human error or oversight in issuing commands to a device or NE
- **Define and assign precise roles** to a user or group of users that determine the applications, commands, and NEs that can be accessed by the user(s)
- **Integrate with existing corporate authentication and HR systems** such as LDAP/HR Systems, RADIUS Servers, etc.

OPEX Reductions Mean Rapid Payback

Industry experts estimate that network operators spend between \$30 and \$50 in operating costs for every password change made in their networks. It is not unusual for annual security administration costs to amount to many millions of dollars per year when proper security measures are correctly enforced.

Nakina's solution improves security robustness network-wide while offering an average payback period on investment of 6 to 12 months.

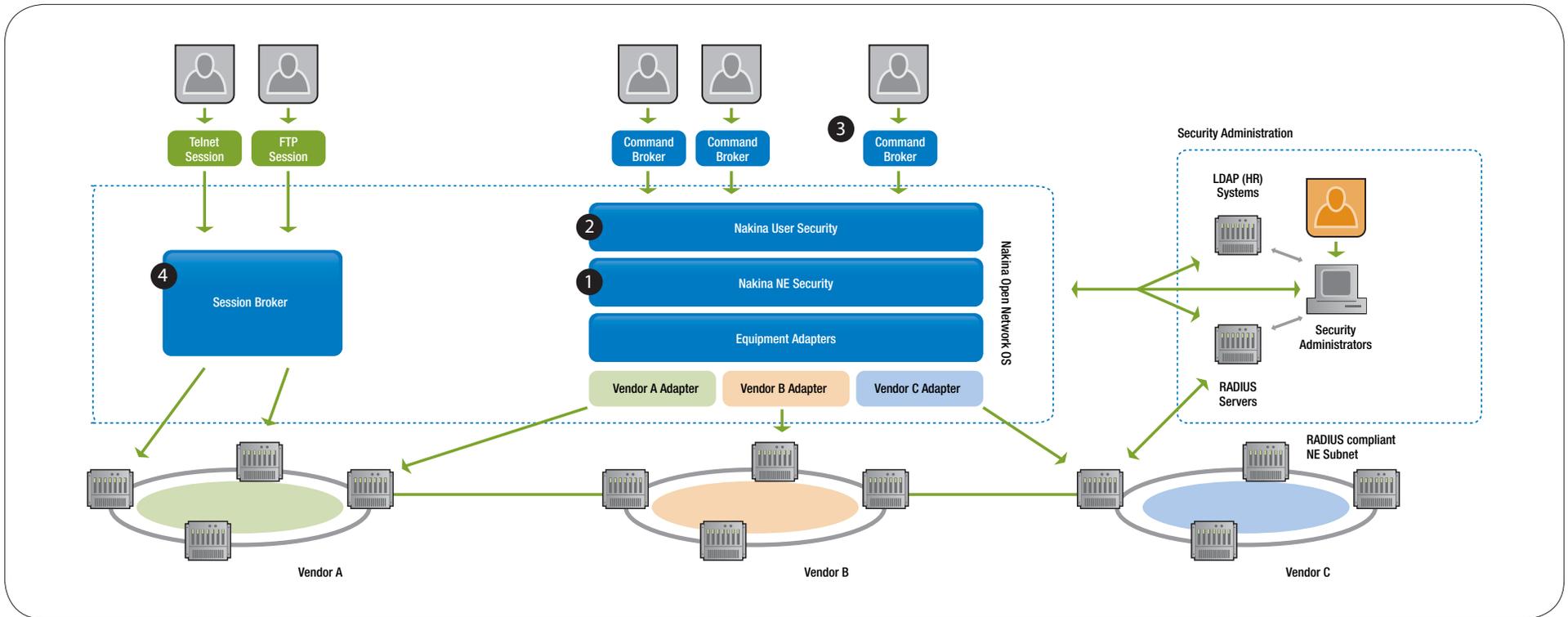


Meeting the Challenge of Emerging Standards

Nakina's solution is a carrier grade, scalable solution that achieves ANSI / ATIS T1.276-2003 and ITU-T M3016 / X.805 compliance.

- In the U.S., a recently released President's National Security Telecommunications Advisory Committee report is the result of a U.S. Government-led initiative requiring all major service providers to take measures to ensure the protection of their networks, with the resulting specification, ANSI / ATIS T1.276-2003, requiring rigorous and stringent security policies.
- Nakina's solution also supports all aspects of the ITU-T M3016 and X.805 recommendations for a framework handling security threats within the context of the TMN functional architecture, described in ITU Recommendation M3010.

The Nakina Security Management Solution



1 Nakina NE Security™

Nakina NE Security enables centralized management and automation of NE account access authorizations. Nakina NE Security is strictly for use by Security Administrators, shielding user account passwords from day-to-day network operations staff.

2 User Security on Nakina Open Network OS™

Nakina Open Network OS is the business tier that provides each network operator with his or her own unique user ID and password, eliminating shared passwords. It requires each user to log into the Nakina Open Network OS with his or her own unique account credentials before getting access to any given applications, commands, or NEs. An added benefit - this is all achieved without exposing NE account credentials to the user, and all user activity is filtered and logged in the process for future reference.

3 Nakina Command Broker™

Nakina Command Broker is a rich graphical user interface that operators use to issue authorized commands to NEs they have access to. Security administrators can customize each user's privileges by specifying the precise set of commands he or she is authorized to use.

4 Nakina Session Broker™

A standalone application that allows security administrators to filter all Telnet, FTP, etc., sessions to NEs network-wide and regardless of vendor, by requiring network operations personnel and automated systems to log in through a security proxy server that in turn authorizes the user's privileges and establishes the session on the user's behalf.

A Carrier-Class, Flexible, Scalable Architecture

The Nakina Security Management application is engineered to grow with the service provider's network over time. Inherent in the architecture is the capacity to:

- **Securely control access and command privileges for all network operators** (from a few hundred up to several thousand users)
- **Securely control privileges on tens of thousands of NEs** (from a few hundred up to 100,000) in a multi-vendor network
- **Quickly and simply accommodate new NE types being introduced by vendors** in the future, immediately leveraging all of Nakina's security features in next generation networks

Nakina Network OS™ is the foundation upon which the Security Management solution is built. The key to Nakina Network OS™ is that it provides a layer of abstraction between network applications and the various NEs they must interact with. The layered software architecture allows service providers to use Nakina, in-house development teams, or third party application developers to create additional security and management software features that “plug-in” to Nakina Network OS™, simply and cost-effectively.

Disaster Recovery Solutions for Added Peace of Mind

In addition to the core portfolio of security applications, Nakina offers disaster recovery applications that can help get a network up-and-running in significantly shorter times than is currently the case, complementing the security features described to provide additional peace of mind. Disaster recovery applications include:

- **Nakina Network Audit & Software Delivery™**, for software load management and the ability to upgrade thousands of NEs in the network with new security features in very little time (eliminating any critical vulnerabilities)
- **Nakina Backup and Restore™** for automated backups of all NE software and the ability to revert to backup software images across the network in times of crisis





Ease-of-Integration with Existing Security Systems

Nakina's solution is designed to integrate simply with third party software systems that provide further security enhancements. These include (but are not limited to):

- **RADIUS Servers** for robust and secure user authentication technology, integrating a best-in-class, strong authentication technology into the overall solution.
- **LDAP/HR Database systems** for integration with back office human resource systems, adding the ability to map employee statuses and role assignments to security privileges.

Secure.

About Nakina Systems

Nakina Systems provides one platform to discover, manage and secure multi-vendor networks for network operators worldwide. Using Nakina's software, service providers can reduce their operating expenses and introduce new services more quickly into their networks. They can bolster access security and eliminate headaches caused by shared passwords on their network by using centralized security and password administration. Operators eliminate the chaos of "swivel chair management" by consolidating their view of a network's topology, faults, and activity logs. They substantially improve their productivity and competitiveness with the automation of software upgrades, system-wide backup and restore procedures, and equipment configuration. And it's all with one system. Only from Nakina.



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