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Application Note

**Streamlining Enterprise Network Management
With the Intuitive J-Web Graphical User Interface**

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Executive Summary

The J-Web device management application is a Web-based graphical user interface designed to facilitate the management of Juniper J-series, M-series, and T-series platforms. In marked contrast to management solutions based on the traditional command line interface (CLI), J-Web streamlines the administration process by using an intuitive interface that provides enhanced visibility into router configuration and management.

Well-suited for meeting configuration and management tasks, the J-Web application delivers an effective management solution for both enterprise and service provider environments. The breakthrough application includes a full toolset for managing and troubleshooting router operation, and provides a viable alternative to configuring the network through the command line interface. By shielding users from the complexities of the CLI, J-Web increases the efficiency of administrative personnel and reduces the chances of human error impacting network performance or service availability.

By utilizing the familiar browser-based interface, J-Web delivers a more user-friendly approach to the management of JUNOS routers. The powerful, yet simple-to-use tools are designed to enhance the productivity of IT administrators and network operators, and include configuration wizards to streamline both router deployment and ongoing management.

Figure 1. In addition to router deployment and administration, J-Web features powerful wizards that streamline advanced tasks such as the configuration and maintenance of firewall filtering policies.

Fast Deployments and Seamless Integration

In the complex central site environment of both service providers and enterprise network operators, the intuitive J-Web software delivers key benefits when integrating solutions from Juniper Networks into a multi-vendor environment. J-Web can be quickly integrated into existing network management or OSS (Operational Support System) applications, enabling users unfamiliar with the complexities of JUNOS to deploy Juniper hardware and software solutions more easily. In addition, J-Web provides seamless integration with third-party applications such as Micromuse Netcool Omnibus and HP OpenView, providing management support for devices created by Juniper Networks.

Deployment of new services is expedited, substantially reducing the time required for service turnup

Remote management enables senior personnel at the central site to verify and fine-tune the configuration of remote routers, providing consistency across the enterprise

Service changes and upgrades can be entered via J-Web's quick configuration wizards, minimizing the likelihood of operator error

New services can be rapidly deployed through use of configuration wizards that display changes to service parameters in real time

J-Web is bundled free with JUNOS on all J-Series, M7i, and M10i platforms, and is an optional licensed package for all other M-series and T-Series platforms

J-Web is tightly integrated with the JUNOS operating system, delivering full device management, configuration, and troubleshooting capabilities for J-series, M-series, and T-series routers. This robust device management application is designed to complement the existing suite of element and service management products from Juniper Networks by providing a GUI-based solution that is well-suited for both highly-trained and more moderately-skilled users alike.

Intuitive Management Solutions for Branch-Office Personnel

In today's distributed environments, branch office personnel have extensive demands placed upon them. IT staff with limited JUNOS experience may be charged with the complex responsibilities associated with deploying and configuring J-series, M-series, or T-series routers. The intuitive, graphical J-Web interface is ideal for this type of environment, enabling less-experienced personnel to perform complex configuration tasks without involvement with the CLI.

J-Web is designed to enable less-experienced administrators in branch-office and small-office environments to bring routers online quickly and easily
Reduces the likelihood of configuration errors by shielding users from the complexities of the CLI

Leverages the familiar Internet Explorer and Netscape Web browsers to access all features and functions of JUNOS

Integrated, powerful help menus are activated by simply pointing the mouse to specific objects onscreen

Protecting Against Unauthorized Access

When implementing a Web-based management solution, it is critical to implement procedures that will ensure network security. J-Web uses the robust JUNOS authentication system, as well as HTTPS encryption, to ensure that network management functions are protected against unauthorized access.

J-Web password authentication utilizes user names and passwords to authenticate users

Encrypted access uses HTTPS to provide secure access to the J-Web management interface

The JUNOS authorization model is used to deny or permit access to administrative commands

Firewall filters can be configured to restrict access to sensitive resources to

specific source addresses

J-Web browser access can be restricted to a specified management interface on the router

Increasing Efficiency and Control Through Wizard-based Configuration

The J-Web management interface streamlines the configuration and management process through the use of intuitive Quick Configuration wizards. Drop-down menus, radio buttons, and other elements of the graphical user interface simplify the configuration process. J-Web reduces the amount of time needed to manage routers, and increases the accuracy of less-experienced users who are not confident in using the CLI to enter complex configurations.

Creating a firewall filtering strategy increases security on several levels, and a wizard has been developed to address this need. The J-Web Firewall Filter Quick Configuration wizard enables network managers to implement new JUNOS firewall filtering policies, and also supports existing JUNOS firewall filters already configured on a router. Firewall filters can protect vulnerable router interfaces and the internal routing engine, reducing or eliminating vulnerabilities posed by distributed denial-of-service (DDoS) attacks. In addition, the router's management interface can be protected by limiting access to pre-authorized IP addresses.

As seen in Figure 1, the Firewall Filters Summary Page provides a clear view of all filters in an ordered list. Filter matches are arranged in a top-down format, and the order in which filters will be applied can be changed by moving them up and down the list. New filters can be added at any point in the hierarchy, and filters can be easily searched for specific matches and results paginated to restrict the possibility of configuration errors.

SHAPE * MERGEFORMAT

Figure 2. The J-Web interface delivers at-a-glance visibility of terms expressed within a firewall filter. Icons quickly telegraph the actions that the terms will perform, and extensive matches for each term are suppressed for enhanced clarity.

Defining filter terms and their associated actions is expedited by the intuitive, tab-based graphical user interface. Once defined, the filters can be assigned to either physical or logical interfaces. The operational status of each interface is clearly displayed, and the table-based format enables users to see the input and output filters that have been assigned to specific interfaces at a glance.

Summary

Developed in response to the increasing challenges of managing large, complex networks, the J-Web management solution is ideal for meeting future growth and capacity demands. By delivering an intuitive, browser-based interface, J-Web enables both expert and less-experienced users to effectively manage J-series, M-series, and T-series routing platforms.

J-Web sets a new standard for simplified provisioning and router management, meeting the challenges of serving an ever-expanding user base. The breakthrough application includes a full toolset for managing and troubleshooting router operation, and provides an ideal alternative to configuring the network via the command line interface. The J-Web application shields users from the complexities of the CLI, increasing the efficiency of administrative personnel and reducing the chances for downtime or reduced capacity caused by human error.