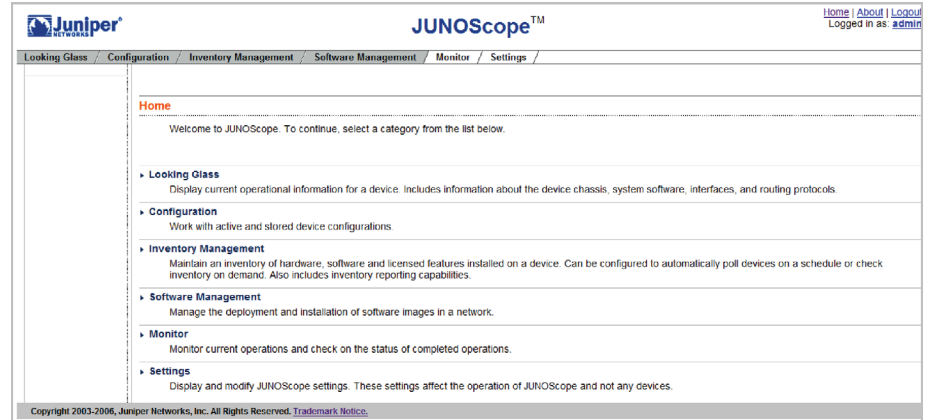


# JUNOS™

## JUNOScope IP Service Manager

As service providers and enterprises evolve to meet the demands of their customer base, one key to success is the enhancement of operational efficiencies through the use of intuitive, easy-to-use applications and tools. The JUNOScope IP Service Manager provides monitoring, configuration, inventory and software management applications to join the advanced features of the Juniper Networks product portfolio to the higher layers within the operations structure and enables operators to unleash the benefits of the feature-rich Juniper Networks JUNOS software.

### Product Description



JUNOScope is a management framework that consists of tools for managing IP services for the J-, M-, MX- and T-series routing platforms. The integrated, “out-of-the-box” tools can be deployed without any added development or customization. The set of tools provides support for multiple functions such as configuration management, inventory management and JUNOS software management. Four pre-packaged tools are available with JUNOScope: Looking Glass, Configuration Manager, Inventory Management System, and Software Management and Administration. These tools provide a network operator with access to all the day-to-day tasks required to maintain a network of routers immediately upon installation of JUNOScope.

### Architecture and Key Components

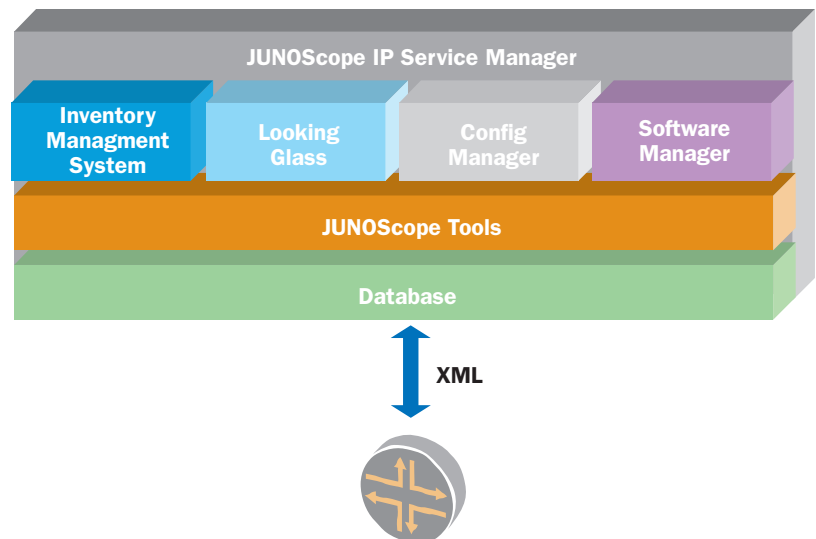


Figure 1: JUNOScope Architectural Framework



## Configuration Manager

Configuration Manager allows the user to access the carrier-class configuration file management capabilities of the J-, M-, MX- and T-series routing platforms. The user is able to archive configuration files based on time of day and/or predefined groups that contain multiple routers. Differences in various versions of the configuration files can be easily pinpointed through the intuitive Graphical User Interface (GUI) by using the powerful “compare archives” function.

Configuration Manager also includes a Web-based configuration editor that facilitates the commissioning and provisioning of the Juniper Networks routing platforms. The configuration editor allows the user to set and change all JUNOS Command Line Interface (CLI) parameters with the use of a GUI.

The Configuration Editor helps to reduce operator error in the network by abstracting the commands required to provision the router. In this way, network operators can roll out new services on the Juniper platforms much more quickly and efficiently.

Configuration compare of revision 1.95 to revision 1.69 on 'aaron'

Legend:  
Removed from 1.69  
changed lines  
Added in 1.95

Version 1.69, 26 Jan 2007 06:45:06 -0000	Version 1.95, 31 May 2007 05:45:02 -0000
Line 1 ## Last commit: 2007-01-25 15:04:13 PST by regress version "8.410 [builder]"; system { host-name aaron;	Line 1 ## Last commit: 2007-05-30 12:20:44 PDT by regress version "8.410 [builder]"; system { host-name aaron;
Line 20 192.168.5.68; } radius-server { 192.168.64.10 secret "\$9\$eQaKX-Y2aJGjN-b2goD"; 192.168.4.240 secret "\$9\$TQ/t1lcSrKAt0IRheK8X7"; 192.168.170.241 secret "\$9\$c17SvLdVY24J8L7Vb"; } login { user regress {	Line 20 192.168.5.68; } radius-server { 192.168.64.10 secret "\$9\$32i87ws4cJUX7dsYgGL"; 192.168.4.240 secret "\$9\$TQ/t1lcSrKAt0IRheK8X7"; 192.168.170.241 secret "\$9\$JYZHmzF/9Au.m5F36"; } login { user regress {
Line 46 } xnm-clear-text; } syslog { user { any emergency; } host nebula { any notice; interactive-commands any; } } file messages { any warning; authorization info; archive world-readable;	Line 46 } xnm-clear-text; } syslog { } file messages { any info;

Figure 4: Compare Archived Configuration Results in Configuration Manager

## Inventory Management System

Inventory Management System (IMS) generates inventory reports containing details of the available hardware components for the J-, M-, MX- and T-series routers. IMS scans hardware components in real time or as part of an existing scheduled operation. IMS obtains detailed hardware information from the router such as number of power supplies, chassis, fans, backplanes, midplanes and types of installed PICs. In addition, IMS records events each time a configuration change is made by a JUNOScope user such as creating, updating or deleting an item. IMS creates predefined or custom reports about the hardware and these reports can be used to detail the total network inventory, display summaries by model or reveal where items are installed in the network. Reports are saved in the JUNOScope database and can be viewed by Web-based users in HTML format. Reports can also be exported to higher-layer inventory applications in Adobe Acrobat PDF and Microsoft Excel formats.

Reports

Inventory

Specify Parameters

Software Inventory \* = required field

Device =

Model =

Routing Engine =

JUNOS Version =

Package Name =

Package Comment =

Created =

Last Scanned =

Reports

Inventory

Report Result [\\* Start New Report](#)

Software Inventory

Showing Records 1 to 8 of 8

Device	Model	Routing Engine	JUNOS Version	Package Name	Package Comment	Created	Last Scanned
mcnally	Mx960	re1	8.4R1.6	route	JUNOS Routing Software Suite [8.4R1.6]	Wed Apr 04 22:45:05 PDT 2007	Sun Aug 05 22:45:14 PDT 2007
mcnally	Mx960	re1	8.4R1.6	jpfe-common	JUNOS Packet Forwarding Engine Support (MT Common) [8.4R1.6]	Wed Apr 04 22:45:05 PDT 2007	Sun Aug 05 22:45:14 PDT 2007
mcnally	Mx960	re1	8.4R1.6	jpfe	JUNOS Packet Forwarding Engine Support (X960) [8.4R1.6]	Wed Apr 04 22:45:05 PDT 2007	Sun Aug 05 22:45:14 PDT 2007
mcnally	Mx960	re1	8.4R1.6	kernel	JUNOS Kernel Software Suite [8.4R1.6]	Wed Apr 04 22:45:05 PDT 2007	Sun Aug 05 22:45:14 PDT 2007
mcnally	Mx960	re1	8.4R1.6	jdocs	JUNOS Online Documentation [8.4R1.6]	Wed Apr 04 22:45:05 PDT 2007	Sun Aug 05 22:45:14 PDT 2007
mcnally	Mx960	re1	8.4R1.6	jcrypto	JUNOS Crypto Software Suite [8.4R1.6]	Wed Apr 04 22:45:05 PDT 2007	Sun Aug 05 22:45:14 PDT 2007
mcnally	Mx960	re1	8.4R1.6	jbase	JUNOS Base OS Software Suite [8.4R1.6]	Wed Apr 04 22:45:05 PDT 2007	Sun Aug 05 22:45:14 PDT 2007
mcnally	Mx960	re1	8.4R1.6	junos	JUNOS Base OS boot [8.4R1.6]	Wed Apr 04 22:45:05 PDT 2007	Sun Aug 05 22:45:14 PDT 2007

Figure 5: Inventory Management System — Find which routers are running JUNOS 8.4R1.6 on their redundant RE

## Software Manager

Software Manager enables users to effectively control the deployment and installation of JUNOS software images (bundles, packages, patches) to multiple devices from one central place. It greatly reduces errors and downtime by performing one of the most critical operational changes that occur in a network.

Working in concert with other existing features, such as IMS and Configuration Manager, JUNOScope provides a suite of comprehensive Web-based tools for operation and administration of JUNOS devices.

Software Management				
Images				
Page 1 of 1 Displaying 10 images of 10 total				
Name	Version	Type	Actions	
jbase-8.0R1-signed.tgz	8.0R1	jbase	<a href="#">Delete</a>	<a href="#">Download</a> <a href="#">Install</a>
jbundle-7.6R2.6-domestic-signed.tgz	7.6R2.6	jbundle	<a href="#">Delete</a>	<a href="#">Download</a> <a href="#">Install</a>
jbundle-8.0R1-domestic-signed.tgz	8.0R1	jbundle	<a href="#">Delete</a>	<a href="#">Download</a> <a href="#">Install</a>
jcrypto-8.0R1-signed.tgz	8.0R1	jcrypto	<a href="#">Delete</a>	<a href="#">Download</a> <a href="#">Install</a>
jdocs-8.0R1-signed.tgz	8.0R1	jdocs	<a href="#">Delete</a>	<a href="#">Download</a> <a href="#">Install</a>
jinstall-7.6R2.6-domestic-signed.tgz	7.6R2.6	jinstall	<a href="#">Delete</a>	<a href="#">Download</a> <a href="#">Install</a>
jinstall-8.0R1-domestic-signed.tgz	8.0R1	jinstall	<a href="#">Delete</a>	<a href="#">Download</a> <a href="#">Install</a>
kernel-8.0R1-signed.tgz	8.0R1	kernel	<a href="#">Delete</a>	<a href="#">Download</a> <a href="#">Install</a>
route-8.0R1-signed.tgz	8.0R1	route	<a href="#">Delete</a>	<a href="#">Download</a> <a href="#">Install</a>
junos-jseries-8.0R1-tar.tgz	8.0R1	junos-jseries	<a href="#">Delete</a>	<a href="#">Download</a> <a href="#">Install</a>

Figure 6: Network-Wide JUNOS Image Download and Installation in Software Manager

## Administration

Administration of JUNOScope is accomplished with the administration tool that allows a network operator to configure users; assign access control privileges; and manage devices, groups and work schedules. JUNOScope is tightly synchronized with the JUNOS operating system and provides a viable and economic alternative to ad hoc tools that use the CLI directly.

## Features and Benefits

### Features

#### Graphical User interface

- Provides Web-based interface
- Supports Netscape and Internet Explorer Web browsers

#### Looking Glass

- Provides monitoring and display of router functions:
  - Operational status
  - Chassis and interface statistics
  - Routing protocol statistics
  - System information

#### Configuration Manager

- Supports configuration file management
- Archive: On-demand or scheduled
- Archive by pre-defined groups
- Restore archive, Display/compare
- Configuration audit and compliance management
- JUNOS automation script management
- Read/write configuration editor

#### Inventory Management System

- Provides detailed hardware and software inventory reports
- Enables life-cycle inventory change event management
- Offers report file formats including HTML, PDF and Excel

#### Software Manager

- Enables effective control of JUNOS software deployment
- Supports centralized network-wide installation of software packages and patches

#### System/Security Administration

- Provides SSL/HTTPS support
- Offers password and RADIUS authentication
- Supports user groups, user access control, authentication policy
- Allows time of day schedules
- Enables audit logging
- Supports Common Criteria EAL 3 certification (JUNOScope 8.2R2)

## Product Options

JNSCP-BASE-SW Base software license (required)

### Feature License Available

JNSCP-SOL-LKG Looking Glass

JNSCP-SOL-CFG Configuration Manager

JNSCP-SOL-IMS Inventory Manager System

JNSCP-SOL-SWM Software Manager

### Node Capacity License Available

JNSCP-J-1 License to manage one J-series router

JNSCP-J-10 License to manage up to 10 J-series routers

JNSCP-J-100 License to manage up to 100 J-series routers

JNSCP-J-1000 License to manage up to 1000 J-series routers

JNSCP-MS-1 License to manage one small M-series router (M7i, M10i, M20, M120)

JNSCP-MS-10 License to manage up to 10 small M-series routers

JNSCP-MS-100 License to manage up to 100 small M-series routers

JNSCP-ML-1 License to manage one large M-series router (M40e, M320, MX480, MX960)

JNSCP-ML-10 License to manage up to 10 large M-series routers

JNSCP-ML-100 License to manage up to 100 large M-series routers

JNSCP-T-1 License to manage one T-series router

JNSCP-T-10 License to manage up to 10 T-series routers

JNSCP-T-100 License to manage up to 100 T-series routers

JNSCP-TX-1 License to manage one TX node

JNSCP-TX-10 License to manage up to 10 TX nodes

## Specifications

### Operating System

- Solaris 8 and above
- Red Hat Enterprise Linux ES versions 3 and 4

### Minimum Workstation Recommendation

- Single 1.3 GHz UltraSPARC IIIi, 1.3 GHz or equivalent (Solaris)
- Single 2.8 GHz Pentium 4 or equivalent (Linux)

### Benefits

- Easy to use, intuitive
- Supports multiple platforms
- Does not require expensive training to understand and use the GUI
- Minimizes operational expenses
- Allows “out-of-the-box” use without additional customization
- Facilitates network engineering by providing visibility into critical routing information
- Streamlines troubleshooting procedures with in-depth summaries on router statistics and performance
- Takes full advantage of the powerful configuration file options on the J-, M-, MX- and T-series products
- Enables network-wide configuration backups from one GUI
- Enhances reliability and dependability
- Simplifies provisioning with an easy-to-use GUI
- Minimizes training time for network operators
- Allows valuable inventory information to be used to track network assets throughout their life cycle in the network
- Enables IMS reports to be easily exported to a variety of higher-layer, third-party inventory applications for further processing
- Provides centralized management of router security
- Helps accelerate router deployment and minimize time -to-service rollout through support for multiple concurrent users

### Minimum Memory Requirements

- 1 GB RAM
- 1 GB available disk space

For further details, refer to the technical documentation for JUNOScope at <http://www.juniper.net/techpubs/>.

## Ordering Information

To purchase JUNOScope, please contact your Juniper Networks sales representative at 1-866-298-6428 or authorized reseller.

JUNOScope licenses are based upon the number of devices in the network as well as the number of tools (Configuration Manager, Looking Glass, Inventory Management System or Software Manager) purchased.

## About Juniper Networks

Juniper Networks, Inc. is the leader in high-performance networking. Juniper offers a high-performance network infrastructure that creates a responsive and trusted environment

for accelerating the deployment of services and applications over a single network. This fuels high-performance businesses. Additional information can be found at [www.juniper.net](http://www.juniper.net).



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