



# RED HAT NETWORK SATELLITE

MANAGEMENT AND AUTOMATION OF YOUR RED HAT® ENTERPRISE LINUX® ENVIRONMENT

## WHAT IS IT?

Red Hat Network (RHN) Satellite server is an easy-to-use, advanced systems management platform for your Linux infrastructure. It is built on open standards and uses a web-based graphical interface. Its services are provided through add-on modules that allow you to enhance management capabilities for Enterprise Linux on virtualized or bare-metal deployments.

## WHAT DOES IT DO?

RHN Satellite server provide simple tools to efficiently manage the life cycle of systems on your network This includes provisioning new systems, managing their updates and configuration changes, monitoring system performance, and eventually re-deploying the systems for a new purpose. Administration and management of your systems can be distributed based upon your organizational requirements.

## WHY SHOULD I CARE?

Your business benefits from increased productivity, reduced system life cycle costs, greater administration consistency, and enhanced security. RHN Satellite lowers deployment, configuration, and management costs. Your security posture is improved through a single centralized management tool, secure connection policies for remote administration, standardized machine configurations, and digitally signed content.

## Overview

RHN Satellite is a systems management platform that makes Linux easier to deploy, scale, and manage. It provides lower total cost of ownership (TCO) through complete lifecycle management.

Increase the number of systems in your environment without adding additional administration resources. RHN Satellite – in conjunction with its management, provisioning, and monitoring modules – allows you to scale your IT personnel as you grow.

RHN Satellite creates a more consistent Enterprise Linux environment with standardized machine configurations. With RHN Satellite, you can instantly see the status of your systems and know if any are missing important patches or configuration changes. Not only does this improve security, but you can also easily measure and report on the patch level of systems in your company.

## MANAGEMENT DISPLAY

The screenshot displays the Red Hat Network Satellite web interface. At the top, there's a navigation bar with 'Your RHN' and various system management tabs like 'Systems', 'Errors', 'Channels', 'Compliance', 'Security', 'Hosts', 'Monitoring', and 'Log'. Below this, a 'Your RHN' dashboard shows a search bar and a list of system categories with counts. A table titled 'Most Active Systems' lists several systems with their respective counts and status indicators.

System Name	Count	Status	Details
Server #1	44	OK	View All Details
Server #2	35	OK	View All Details
Web Server #1	19	OK	View All Details
Web Server #2	12	OK	View All Details
FTP Server #1	28	OK	View All Details

Red Hat Network Satellite increases your ability to deploy machines, update content, and securely manage your environment. Satellite's flexible and scalable architecture means that you can grow along with your organization.

Use Satellite to:

- Group your systems – manage thousands as easily as one with the Management module
- Deploy systems in minutes to bare metal or as virtual guests using the Provisioning module
- Maintain optimal performance and tune machine performance through the Monitoring module
- Manage, provision, and monitor virtual instances from a central console
- Securely partition and distribute your administrative workload using multi-organization support

## MODULES

### Management module

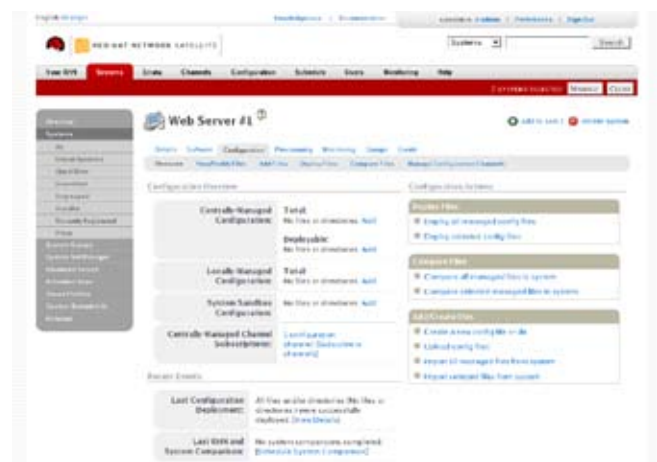
With the system grouping feature, you can scale your deployment without increasing administrative overhead.

- Systems grouping: Manage a group of systems as easily as you would manage a single system.
- Systems permissions: Group your systems according to your needs and then assign permissions to different administrators. Permissions can also be based on roles.
- Multi-organization support: Create and manage multiple organizations with one physical Satellite. Set fine-grained control and access to systems, channels, users, and more.

- Virtual guests: Starting, stopping, and pausing VM's remotely
- Scheduled actions: Schedule an errata update for a system or group, taking advantage of scheduled down-time for maintenance across your network.
- System search: Search by packages, errata, or systems specifications. Advanced search offers even more granularity.
- Package profile comparison tools: Compare two systems, or build a package profile of your own to compare against. Results let you see the differences on both machines.
- Multi-platform management: Use Red Hat Network Satellite to manage your legacy Solaris™ systems, giving you a single management tool for your migration to Linux. (Requires Satellite).

Note: The Management module is required for all Satellite installations

### MANAGEMENT CONFIGURATION DISPLAY





## Provisioning module

Manage the complete life cycle of your Linux infrastructure. Deploy, configure, manage, update, and then re-deploy your Linux systems, all from a single GUI console with all the necessary enterprise functionality and controls. Use Provisioning to create a responsive infrastructure, where you can quickly re-deploy resources as needed.

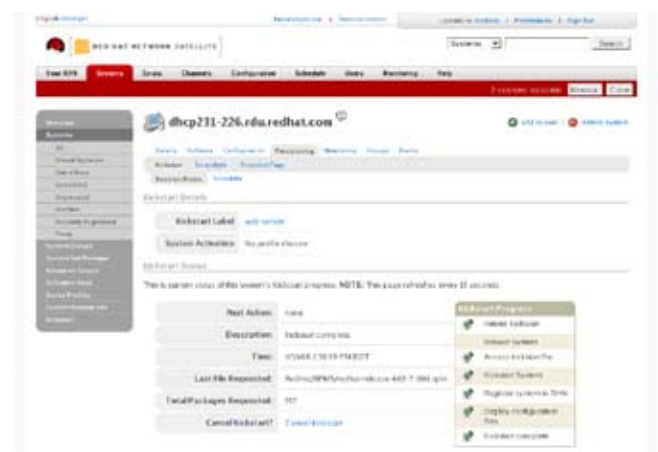
- Bare metal provisioning: Automatically provision a new system using Kickstart. Deploy the OS, packages, and activation keys (groups, channels, policies, and permissions) of your choice, all without ever touching the machine.
- Virtual guest provisioning: Creation and Kickstart of para-virtualized guests.
- Existing state provisioning: Provision a system to take on the state of an existing system or a predefined installation with a simple point and click.
- Multi-state rollback (includes snapshot-based recovery): Records the state of all of your systems every time an action is applied to them, serving as a repository for state information. Multi-state rollback allows your system to return to a previous state or configuration instantly.
- Configuration management: Easily manage configuration files for groups of systems. Combine with Kickstart for complete provisioning.

- RPM-based application provisioning: More than just OS provisioning, Red Hat Network Satellite allows application-based provisioning for all RPM-based applications—completely integrated with the rest of Red Hat Network Satellite.
- Kickstart configuration writer: Write Kickstart configuration scripts with our tool, or have Red Hat Network Satellite create a script based on an existing system.

Enhanced features include bare metal PXE boot provisioning, integrated network install tree, and configuration management profiles.

Note: The Provisioning module requires the Management module.

## KICKSTART PROVISION DISPLAY



## Monitoring module

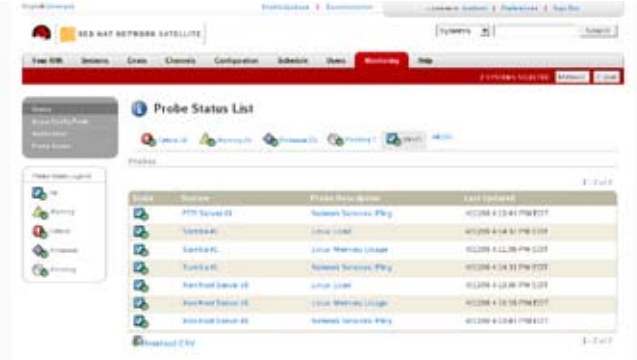
Keep track of your systems and applications from the Red Hat Network Satellite console. View reports that let you take action before performance becomes an issue.

- System probes: Dozens of checks can be run against each system. These checks can monitor memory, disk usage, and network services.
- Application probes: Checks can be set up to monitor the performance of popular applications from Oracle®, MySQL®, BEA®, or Apache (just to name a few).
- Custom probes: Easily create custom checks that track valuable information about your applications.
- Virtual guests: Real-time monitoring of memory, disk space, and CPU utilization.
- Probe suites: Create groups of probes for fast deployment and improved consistency.
- Notification: Alerts resulting from systems entering WARNING and CRITICAL states can be sent to email or pager addresses. Each alert notification can be sent to a different address.
- Central status: The results of all probes are summarized in a single status page, with the systems affected broken down by state.
- Reporting: By selecting a probe and identifying the desired metric and a range of time, you can generate graphs and event logs that depict precisely how the check has performed.

Note: The Monitoring module requires the Management module.

All Red Hat Enterprise Linux users receive access to Red Hat Network as a part of their core subscription. With this complimentary access, you can download certified content updates for one system. RHN Satellite takes Enterprise Linux management to the next level by extending Red Hat Network to your premises. Install RHN Satellite on a server and add the Satellite modules that you need. Add an RHN Proxy server to increase content distribution capabilities. Choose the best deployment architecture for your organization and increase scalability, maximize control, and minimize network bandwidth usage.

### CROSS-SATELLITE MONITORING DATA



The screenshot shows the Red Hat Network Satellite Monitoring console. The main content area displays a 'Probe Status List' table with the following data:

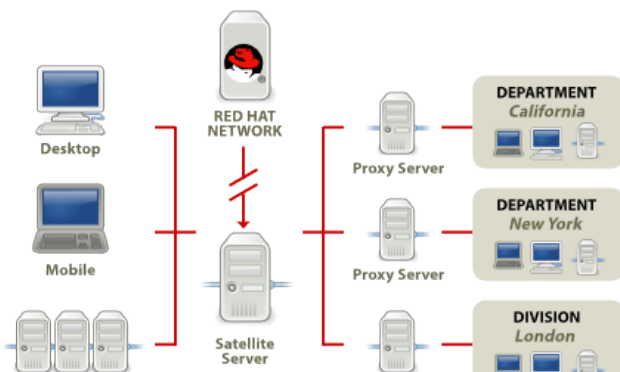
System	Probe Name	Probe Description	Last Update
192.168.1.10	MySQL Service	MySQL Service - Ping	11/20/04 4:13:41 PM EST
192.168.1.11	MySQL Service	MySQL Service - Ping	11/20/04 4:13:41 PM EST
192.168.1.12	MySQL Service	MySQL Service - Ping	11/20/04 4:13:41 PM EST
192.168.1.13	MySQL Service	MySQL Service - Ping	11/20/04 4:13:41 PM EST
192.168.1.14	MySQL Service	MySQL Service - Ping	11/20/04 4:13:41 PM EST
192.168.1.15	MySQL Service	MySQL Service - Ping	11/20/04 4:13:41 PM EST
192.168.1.16	MySQL Service	MySQL Service - Ping	11/20/04 4:13:41 PM EST
192.168.1.17	MySQL Service	MySQL Service - Ping	11/20/04 4:13:41 PM EST
192.168.1.18	MySQL Service	MySQL Service - Ping	11/20/04 4:13:41 PM EST
192.168.1.19	MySQL Service	MySQL Service - Ping	11/20/04 4:13:41 PM EST
192.168.1.20	MySQL Service	MySQL Service - Ping	11/20/04 4:13:41 PM EST



## ARCHITECTURES

RHN Satellite server- Get the full functionality of Red Hat Network on-premises.

### CROSS-SATELLITE MONITORING DATA



Take control of your systems management solution with Satellite server. All Red Hat Network functionality is stored locally on your network, with managed systems connecting to the Satellite Server rather than downloading packages across the Internet. Only the Satellite server connects with Red Hat to download updates and synchronize content. This model even allows you to take your systems management solution entirely off the Internet if desired.

- Local database repository: All information about your systems, policies, and profiles is stored locally on your infrastructure.
- Complete off-network capability: Red Hat can provide packages over the Internet or via physical media for complete network security.

- Custom Channels: Create custom channels for distribution of either OS or third-party RPM-based applications and content.
- Advanced API access layer: Create scripts to automate tasks or integrate Red Hat Network Satellite with other IT applications or systems management tools.
- Channel and errata cloning and management tools: Easily create, clone, or customize channels and errata. Useful for staged environments.
- Push to client: Administrators can send packages and updates to their systems immediately, rather than wait for the system to check in.
- Bare metal PXE boot provisioning: Kickstart systems in tandem with PXE boot images.\*
- Integrated network install tree: Store all default boot images, network install trees, and packages for Red Hat Enterprise Linux.\*
- Configuration management profiles: Store configuration management profiles in an integrated directory for easier deployment.\*

Requires Provisioning Module entitlements

Installation time: one day.

Installation through Red Hat Professional Services is also available for Satellite server.

**RHN Proxy server:** Cache content locally to reduce download times, lower bandwidth use, and scale globally.

Proxy servers can be added to your Hosted or Satellite environment to scale content distribution across many servers and multiple locations. Individual systems connect through a local Red Hat Network Proxy to communicate with your Satellite or the central RHN servers (in the Hosted model).

The Proxy aggregates all necessary data and performs selected tasks locally. Content is cached locally at the Proxy for faster downloads, easier distribution, and lower bandwidth requirements.

Installation time: half day.

**RHN Hosted model:** Basic content update with your standard Red Hat Enterprise Linux subscription and the basic architecture for Red Hat Network. Each of your individual systems connects to Red Hat Network via the Internet and exchanges packages and information with the central Red Hat Network servers. Includes the following features:

- Simple user interface: Intuitive web interface consolidates your systems management activities.
- Hosted database repository: Information about your systems, policies, and profiles is stored and hosted by the Red Hat Network database.

Installation time: minutes (occurs during OS installation).



## SUPPORTED PLATFORMS AND SYSTEM REQUIREMENTS

HARDWARE	ARCHITECTURE	OPERATING SYSTEM
Intel / AMD	i386 and x86_64	Red Hat Enterprise Linux 4
Red Hat Enterprise Linux 5 supported hardware	Red Hat Enterprise Linux 5 Hypervisor	Red Hat Enterprise Linux 4 as virtual guest

**Satellite requirement:** (embedded database)

Pentium IV processor, 2.4 Ghz, 512K cache

Pentium IV processor, 2.4 Ghz dual processor, 512K cache recommended

### Disk space and storage:

3 GB storage for base installation of Red Hat Enterprise Linux AS

6 GB storage per channel in /var/satellite directory

12 GB storage for database repository in /rhnsat partition

Separate partition for storing backups

**Memory:** 2 GB (minimum), 4 GB (recommended)

## SUPPORTED MANAGED NODES

OPERATING SYSTEM	VERSION
Red Hat	Enterprise Linux 2.1, 3, 4, and 5 on Intel/AMD, PowerPC, X and Z Series
Sun	Solaris 8, 9, and 10 Sparc (sun4u & sun4m)*
Sun	Solaris 9, 10 Intel (i86pc)

\* Note: Solaris sun4v client hardware support is planned for the next Satellite release.



**FOR MORE INFORMATION ABOUT RED HAT NETWORK**

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