

A Customer's Perspective on Making Enterprise Linux Deployable, Scalable and Manageable



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Agenda

- Management Challenges facing IT Organizations
- Red Hat Satellite Overview
- Salt River Project Satellite Implementation
 - Overview
 - Key Features That Brought Value
 - Lessons Learned
- Question and Answer



Polling Question

What is the biggest Linux management challenge that you face?

- Too many systems
- Too many tools
- Not enough time
- Everything is just fine

Are you facing these challenges?

- Manually managing (obtain, track, organize and apply) systems updates on a system by system basis?
- Managing custom content updates?
- Rolling back configuration problems based on any changes that were made?
- Tracking configuration changes made to systems for auditing purposes?
- Excessive downtime caused by manual configurations that are excessively error prone and lengthy?
- Efficiently provision and re-provision virtual and bare-metal systems?
- Unnecessary downtime caused by lack of visibility into system performance?

Bottom line

- The time and cost to manually manage the Linux environment grows exponentially as the number of Linux deployments increases
- How can you reduce management costs, unnecessary downtime and better leverage your Linux environment?

Polling Question

How do you manage your Linux Environment?

- Use a combination of Open Source tools like yum and cobbler with scripts
- Red Hat Network Hosted
- Other Third-party management tools
- Don't Manage/Don't Know

What is Red Hat Satellite?

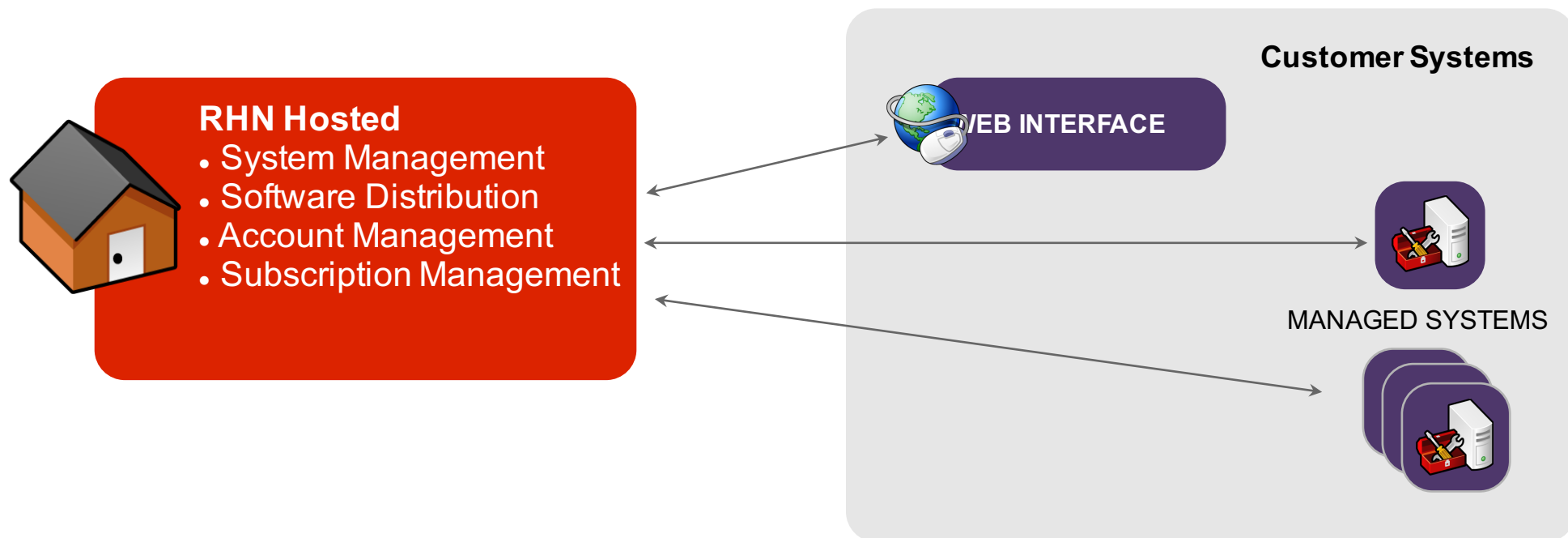
A system management platform designed to provide complete lifecycle management of the operating system and applications.

•A single solution for lifecycle management of compute resources

- Installing and provisioning new systems
- Updating systems
- Managing configuration files
- Monitoring performance
- Redeploying for a new purpose

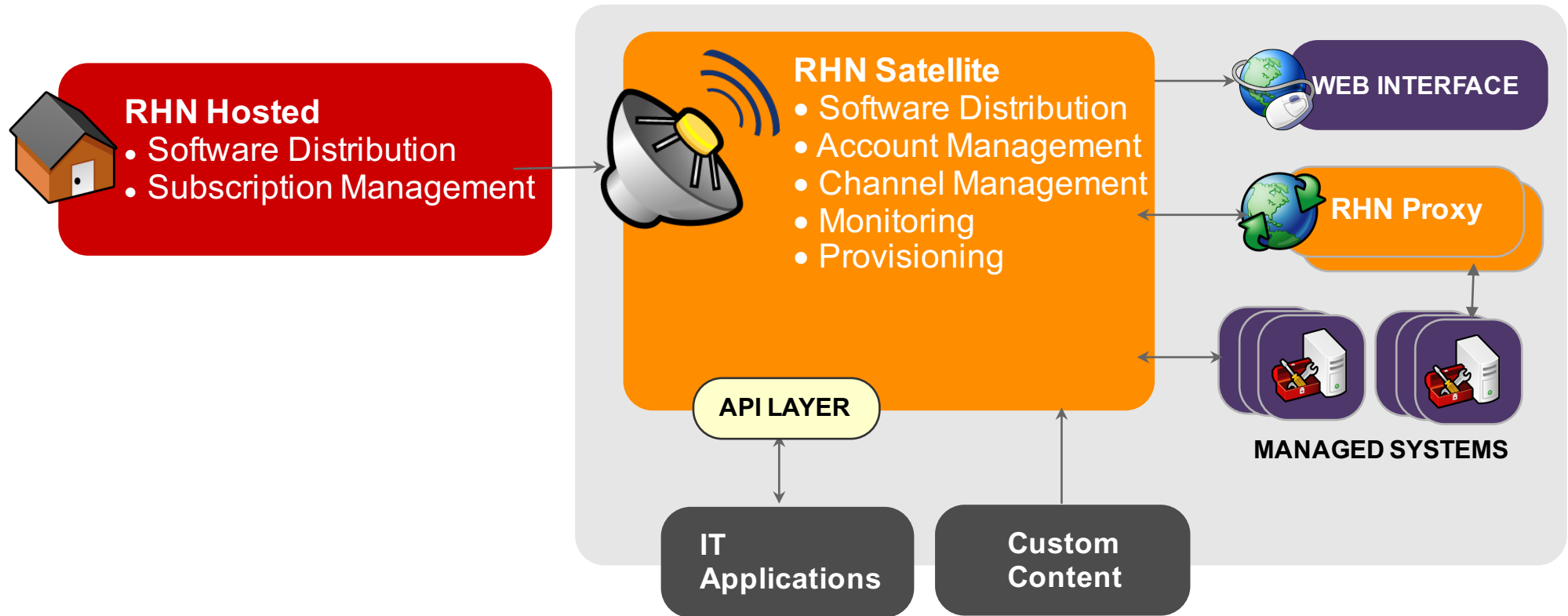


Red Hat Network Hosted



- Quick setup is designed for rapid and efficient management for small deployments
- All system information, profiles, and packages are stored in Red Hat's servers
- Each managed system connects across the Internet for all managed actions

Red Hat Satellite



- Enterprise management solution – enhanced control
- Synchronizes content with RHN Hosted, another Satellite, or physical media
- Custom content distribution



Satellite Interface

English (change)
Knowledgebase | Documentation
LOGGED IN: redhat | Preferences | Sign Out

RED HAT NETWORK SATELLITE

Systems

Search

Your RHN
Systems
Errata
Channels
Configuration
Schedule
Users
Monitoring
Satellite Tools
Help

2 SYSTEMS SELECTED
MANAGE
CLEAR

Your RHN
Your Account
Your Preferences
Locale Preferences
Subscription Management

Your RHN

Tasks

- Search for: Packages | Systems
- Manage Entitlements and Subscriptions: My Organization | Satellite-Wide
- Register Systems
- Manage Activation Keys
- Manage Kickstarts
- Manage Configuration Files
- Monitor Systems
- Manage Satellite Organizations
- Configure Satellite

Inactive Systems

No inactive systems.

All of your systems are actively checking into RHN at this time. You can view a list of all of your systems at [Systems > All](#).

Your RHN Legend

- OK
- Critical
- Warning
- Unknown
- Locked
- Kickstarting
- Pending Actions
- Failed Actions
- Completed Actions
- Monitoring Status
- Security
- Bug Fix
- Enhancement

Most Critical Systems

System Name	All Updates	Health	Security Errata	Bugfix Errata	Enhancement Errata
db1.ejacobs.com	28		16	10	2
bootserver.ejacobs.com	1		0	0	1

1 - 2 of 2 most critical systems displayed

[View All Critical Systems](#)

Critical Probes

System(s)

No critical probes.

Key Benefits of Satellite:

- **Lower administration costs by increasing SA productivity via automation**
 - Increase number of systems in environment without adding administrators
 - Time savings let administrators focus on higher value activities.
 - Allow junior level system administrators perform tasks of senior level administrators, without fear of mistakes or excessive hand holding
- **Reduced system life cycle costs**
 - Lowers deployment, configuration, and management costs
 - Standardized machine configurations mean lower administration costs
 - Satellite is the piece needed to make Linux deployable, scalable, manageable, consistent

Polling Question

- Q: Are you running Linux on the mainframe or do you intend to?
- Answers:
 - Yes
 - No

Salt River Project (SRP)



- One of Arizona's largest utilities providers, Salt River Project (SRP) has delivered low-cost, reliable power and water to Arizona customers for over 100 years. SRP includes two entities: the Salt River Project Agricultural Improvement and Power District, a political subdivision of the state of Arizona, and the Salt River Valley Water Users' Association, a private corporation.
- The District provides electricity to more than 935,000 retail customers in the greater Phoenix metropolitan area. It operates or participates in 11 major power plants and numerous other generating stations, including thermal, nuclear, natural gas, and hydroelectric sources.
- The mission of SRP is to deliver ever-improving contributions to the people it serves through the provision of low-cost, reliable water and power, and community programs, to ensure the vitality of the Salt River Valley.



Salt River Project

FAST FACTS

- **Industry:** Utilities, Government
- **Geography:** Arizona
- **Challenge:** Searched for a replacement for proprietary UNIX software which could provide greater flexibility, manageability, and utilization opportunities
- **Migration Path:** HP-UX to Red Hat Enterprise Linux
- **Software:** Red Hat Enterprise Linux, Red Hat Network Satellite
- **Hardware:** IBM System z Mainframe and HP ProLiant Blades
- **Benefits:** Experienced cost savings, boosted performance, stable and reliable management, consolidation, and valuable technical support after migrating to Red Hat Enterprise Linux on IBM System z and HP ProLiant Blades

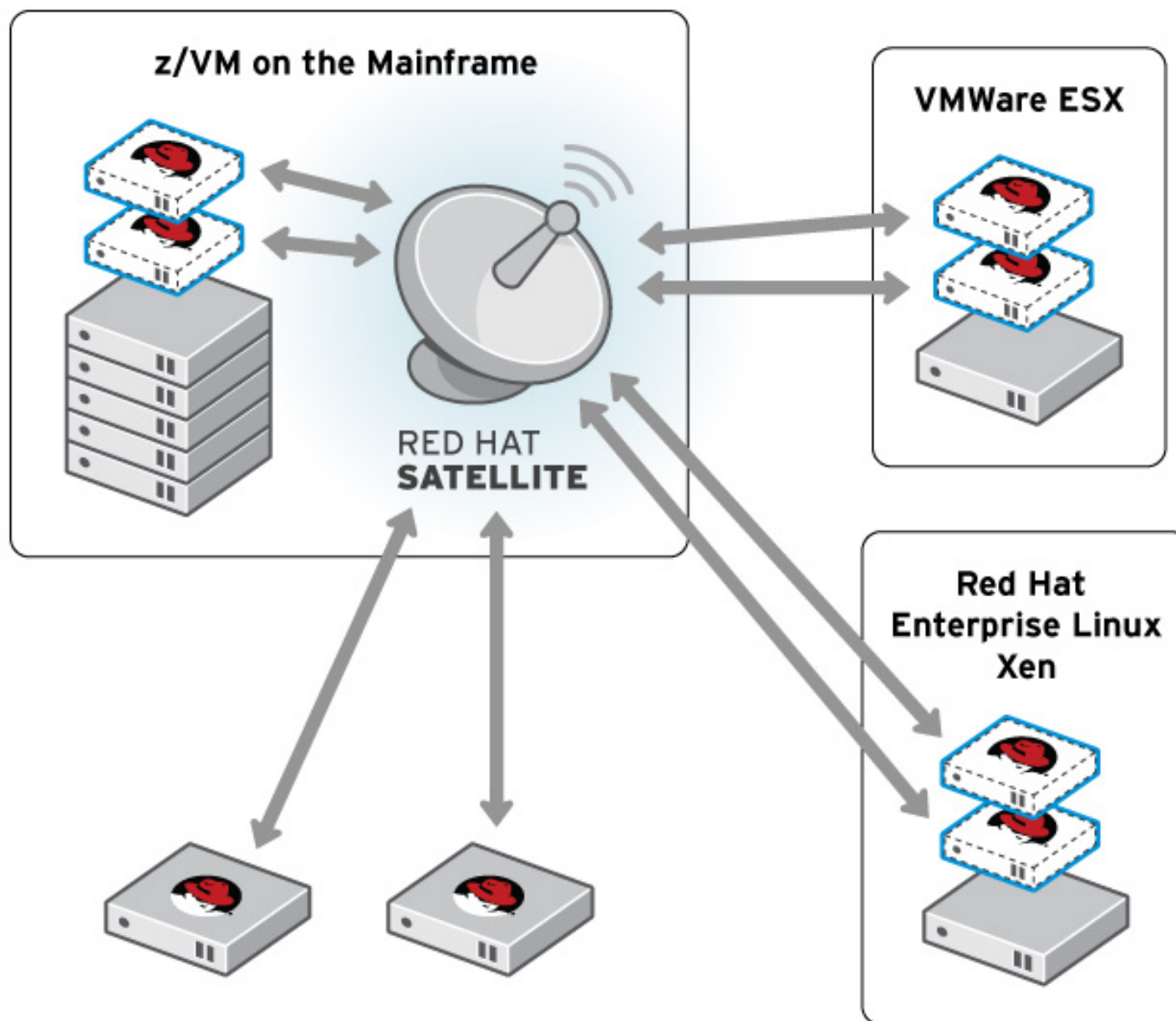
The Problem

- RHEL/Linux started small in use but grew (sound familiar?)
- SRP had been testing Linux in-house for approximately three years, but didn't have any Linux solutions in production environments.
- In 2006, SRP upgraded its System z Mainframe.
 - Prompted an accelerated investigation into running Linux on the IFL.
- Our HP RISC hardware was nearing EOL.
 - A project was already in place evaluating staying on UNIX or transitioning to Linux.
- Server sprawl in our Windows environment was a serious problem - we had to offer a better solution with Linux or UNIX.

What Happened?

- Selected Red Hat Enterprise Linux, to use in both the mainframe and distributed environments.
- To manage nearly 50 servers, we chose Red Hat Network Satellite.
- Satellite is fully supported by Red Hat on the mainframe. This is where we run it and we're very happy with the performance.
- Our use of Satellite has grown with us and has saved us time by making our admins more efficient.
- RHN Satellite pays off very quickly as your environment grows.

Salt River Project Environment







Key Features That Brought Value

-- Remote Commands, 'Real Time' Agent

- Remote commands can be executed on machines configured to allow it.
- Central management, tasks can be done quickly on many machines all at once.
- With the OSAD service installed on a system, events happen right away; the system picks up the event and runs it on demand.

Key Features That Brought Value

-- Inventory

- Satellite keeps detailed information on systems
 - Mac addresses, hardware details, etc.
 - User specified information (location, notes, etc).
 - API available to access (or write) this info.
 - Fully searchable, can select machines to manage based on searches of system information.
 - Much faster than HP iLO for querying hardware info.
- Satellite keeps track of packages on systems
 - Allows us to do searches for specific packages to see if they're installed on a system or group of systems.
 - Package synchronization between systems. Critical for clusters.

Key Features That Brought Value

-- Support

- 24/7 Premium Support standard with RHN Satellite
- Training Courses available
- Professional Services available
- Web support is convenient but use phone support for time-sensitive, critical issues.
 - Phone support connects you to an RHCE.

Results After Deploying Satellite

- A kickstart & management environment that is simple, reliable, and verifiable.
 - New systems deployed over twice as fast.
 - Deploying system changes (files, rpms) 3-5x faster (minutes).
- Greater system uptime and availability due to fewer human errors.
- Leverages the benefits of running on the mainframe.
- A single administrator can make a change on hundreds of machines in minutes, and know the results immediately.
- Automatic logging of changes allows administrators to quickly and easily discover changes previously made by other administrators to a given system.

Summary

- **Deploy new systems faster and easier**
 - Satellite Provisioning makes it much easier to roll out new systems.
- **Manage more systems**
 - Satellite is built to handle thousands of managed systems.
 - Satellite uses an intuitive web GUI that makes it easy to work with groups of systems.
- **Reduce errors**
 - Centralized configuration file management reduces the opportunity for errors or inconsistencies.
 - Less human errors = greater system uptime.
- ***Next Step - Evaluate Satellite***
 - *Contact your Red Hat Account Executive to evaluate Satellite in your Environment.*

Questions

