



# THE KEY

to Linux Management



# CHAPTER 1

## LIFECYCLE MANAGEMENT 101

---

THIS CHAPTER INCLUDES:

- The importance of process
  - What is lifecycle management
  - Red Hat® Network Satellite—your mission control
- 

### PROCESS: LOVE IT OR HATE IT (LEARN TO LOVE IT)

Engineers, programmers, and system administrators have a love-hate relationship with process. They love knowing exactly how something should be done and that every step can be tracked. Almost anyone can follow a well-designed and detailed process. However, they hate the limited freedom that seems to accompany that process—preferring do-it-yourself approaches and immediate quick fixes. The freedom of a blank page can be fun and exciting, but process is what keeps you from getting those 3 a.m. phone calls telling you that something is seriously wrong.



When any organization moves beyond a single, simple Linux server, it quickly becomes clear that they need some sort of process to help decide how each server should be provisioned, configured, and updated. More than a few have followed the tried-and-true method of handing a system administrator a printout and telling him, “Go and build this. See you in a couple of days.”

Does that really sound like a good idea—especially when you’re talking about more than a handful of servers? It gets worse when you start thinking about hundreds of physical servers and THOUSANDS of virtual ones.

**Seriously. You need a process. You need procedures.  
You need lifecycle management.**

## WHAT IS LIFECYCLE MANAGEMENT?



Lifecycle management is a process and toolset that is designed to provide a systematic and repeatable method for managing each stage of a system from conception through production. A fully realized lifecycle management plan includes:

|  |
|--|
| System design requirements and standards                         |
| System and software license and subscription management          |
| Provision standards and approaches                               |
| Testing and quality assurance procedures and standards           |
| Production implementation steps                                  |
| Usage/demand monitoring and methods for reallocation of services |
| Access control and security                                      |
| Compliance and auditing plans and approaches                     |
| Update and patch management                                      |
| System monitoring and alert methods                              |
| Decommissioning and repositioning plans                          |



The key to operating an enterprise environment using a lifecycle management approach is this: a clear set of procedures and a toolset to execute it. A plan without the tools cannot be implemented, while tools without a plan will provide unpredictable results.

A successful lifecycle management approach is the combination of a thorough and workable set of procedures combined with the right toolset.

## USE RED HAT NETWORK SATELLITE TO MAKE LIFECYCLE MANAGEMENT WORK FOR YOU



So, now you've got the plan, how do you put that plan into action? If you're using Red Hat Enterprise Linux®, the answer is easy: Red Hat Network (RHN) Satellite.

RHN Satellite can become the **mission control** for your systems throughout the lifecycle of your project. Using its web-based interface,

you can easily provision hundreds of servers in a matter of minutes, keeping them error-free, up-to-date, patched, and fully compliant—all while tracking every action performed. You can group them into channels, control access, and monitor everything. Jobs that ordinarily take days for teams of system administrators to complete can now be managed by one administrator in just minutes.

What would you do with all of that free time? Just think of all those human resources that are now unchained from the drudgery of updating and babysitting systems. You could build new custom applications that your users have been begging for. You could rewrite that ancient, but critical system that you've been nursing along. Or you could expand, scale up, and go big.

There's a lot to love about process—process and lifecycle management can open up real freedom, especially if you use RHN Satellite to make it all happen.



#### **TELL ME MORE**

Want to learn more? There are loads of materials including whitepapers, case studies, and detailed information—all conveniently organized on our web site. Just visit [redhat.com/rhn](http://redhat.com/rhn) and get with the program.

# CHAPTER 2

## PITFALLS OF A DO-IT-YOURSELF (DIY) MANAGEMENT SOLUTION

---

THIS CHAPTER INCLUDES:

- Open source, freedom, and your enterprise systems
  - What are the pitfalls of DIY?
  - Red Hat Network Satellite: The cure for DIY
- 

### **OPEN SOURCE, FREEDOM, AND YOUR ENTERPRISE SYSTEMS**

For engineers, one of the most exciting things about Linux is the complete freedom to change anything. A single system administrator, with enough time and access to the Internet, should be able to build, fix, or change absolutely everything. Working with Linux systems is a little like being a settler in the Wild West: Just roll up your sleeves and dig in. So why not do it yourself?

Well, guess what, cowboy? Time is the one thing that you don't have in unlimited quantities.

Doing it yourself is a terrific way to learn and explore. Many Linux administrators and developers start out by building their own systems at home and are continually experimenting. That's terrific, but when you carry that into an enterprise environment, even a small one, you begin to discover that it's not like the Wild West. It's more like a jungle filled with a tangle of vines, bottomless pits, and nasty surprises.



A DIY approach is a good way to learn; but to build and manage a system to run your business, you need process, automation, and the right tools. You need the opposite of DIY.

## WHAT ARE THE PITFALLS OF DIY?



Build a system over time, with a succession of do-it-yourselfers, and what do you typically find? Let's listen in on a few typical IT questions and find out:

WHAT DOES THIS SCRIPT DO?

I DON'T KNOW, BUT DON'T MESS WITH IT.

WHERE DOES THIS PROGRAM CALL GO?

OH, WE HAVEN'T HAD THAT IN AGES.  
NOWHERE I GUESS.

HOW LONG WILL IT TAKE TO BUILD  
ANOTHER SERVER?

THREE DAYS, MAYBE FIVE,  
IF NOTHING ELSE GOES WRONG.

IF STEVE GETS HIT BY A BUS,  
HOW DO WE UPDATE THIS SERVER?

LET'S JUST HOPE THAT NEVER HAPPENS.

Not only do DIY systems get those quick fixes that pop up unexpectedly, but it can also result in a problem known in technical terms as a "big ball of mud." A big ball of mud can also contain mounds of spaghetti code, which is just as unpleasant as it sounds. These systems are full of undocumented scripts, patches, and systems that are virtually impossible to scale up or audit.



The key to understanding what you need to successfully run your organization's systems is recognizing the limitations of your existing DIY system. DIY systems are difficult to maintain, and you can't just throw bodies at this problem. If you have a DIY system, it's hard to train someone new on how it works because a lot of solutions are created on the fly. And big issues, like compliance audits, can be enormously painful, time-consuming, and ultimately a budget-breaking expense.

While tales of the Wild West might sound like fun, what most organizations really need and want is calm, predictable, and reliable results—every time and without drama.

### **RED HAT NETWORK SATELLITE: THE CURE FOR DIY**



Process, procedure, and lifecycle management may sound like a loss of freedom to the devoted do-it-yourselfer, but the truth is clear: This is the only way to break free from the drudgery of maintaining a DIY system. Red Hat Network (RHN) Satellite addresses each pitfall of the DIY approach and sets organizations on a path of sane, relaxed management.

With DIY, you have chaos that can barely be contained. However, RHN Satellite holds down the fort for you.

| <b>DIY</b>  | <b>RHN SATELLITE</b>   |
|---|--|
| <ul style="list-style-type: none"><li>• Creating and testing new systems takes days or longer and with unknown errors.</li></ul>                                | <ul style="list-style-type: none"><li>• Provision new systems in minutes—100% error free.</li></ul>                                    |
| <ul style="list-style-type: none"><li>• Scaling can be slow and is always difficult.</li></ul>  | <ul style="list-style-type: none"><li>• Add hundreds of new, perfectly configured servers in minutes with just a few clicks.</li></ul> |
| <ul style="list-style-type: none"><li>• Systems are maintained by spaghetti code, duct tape, or administrator Jedi mind tricks (or just brute force).</li></ul> | <ul style="list-style-type: none"><li>• Easy-to-use web interface to control everything with a few clicks.</li></ul>                   |

| DIY   | RHN SATELLITE   |
|---|---|
| <ul style="list-style-type: none"> <li>• Scripts, code, and operations are all maintained through “oral tradition.” Nothing is written down.</li> </ul> | <ul style="list-style-type: none"> <li>• Fully documented practice and procedures.</li> </ul>     |
| <ul style="list-style-type: none"> <li>• It is very difficult to hire and train new personnel.</li> </ul>   | <ul style="list-style-type: none"> <li>• Professional training available from Red Hat.</li> </ul> |
| <ul style="list-style-type: none"> <li>• Who can you call when something has gone wrong?</li> </ul>   | <ul style="list-style-type: none"> <li>• 24X7 support from Red Hat engineers.</li> </ul>          |

Many DIY systems start as an attempt to fully customize an environment for a specific enterprise. That’s a great goal, but maintaining and growing a DIY system is typically very difficult. Unless every element is approached with careful planning, full documentation, and continual maintenance with upgrades, it’s virtually impossible to keep it from morphing over time into that big ball of mud that your staff will then work day and night to prevent.

Perhaps the biggest surprise: When you eliminate the big ball of mud, your system administrators have more freedom to do the things they really love, like building those new applications that can help your organization become more productive, grow, and prosper. RHN Satellite is the ideal tool to transform your Red Hat Enterprise Linux environment into something that’s easy to manage, grow, and scale—without a single speck of mud.



### TELL ME MORE

Want to learn more? There are loads of materials including whitepapers, case studies, and detailed information—all conveniently organized on our web site. Just visit [redhat.com/rhn](http://redhat.com/rhn) and get with the program.



# CHAPTER 3

## MANAGING LINUX IN A VIRTUAL OR CLOUD ENVIRONMENT

---

THIS CHAPTER INCLUDES:

- Hey, you, get off my cloud
  - What exactly is “the cloud?”
  - Head in the clouds, feet on the ground, and using Red Hat Network Satellite to manage it all
- 

### HEY, YOU, GET OFF MY CLOUD

You know something is happening when even consumers start dropping computing terminology into daily conversation. Everybody seems to be talking about it. Cloud computing is the latest, greatest thing. And who knows? Running systems in the cloud may be just the thing to help control costs and offer up unlimited processing power to small and large enterprises alike.

Back in the day, you had your datacenter—an enormous open space with raised floors, bright lights, and the drone of air conditioning. Even the biggest enterprises could get by pretty easily—churning through batch jobs overnight, processing orders, invoicing, and payroll—all on the big machines sitting in their own datacenters. Life was good (although those platter drives were pretty heavy). Now, multinational corporations operate out of what sometimes looks like an apartment—one rack of blade servers may represent all of the hardware they directly own. You call that a datacenter?

There are no more simple batch jobs to process overnight: The demand for services continues to skyrocket, and employees have more computing power on their desktops or in their pockets than those giant datacenters of thirty years ago ever did. Even your customers are making increasing demands on your systems—surfing your site for information, buying things from you, and using those new services you

rolled out. Some organizations, maybe yours, have to build systems around a single peak season or event during the year, such as tax time, holiday shopping, or the Super Bowl—creating systems specific to that peak demand.

So when you hear talk of the cloud, it sounds interesting. Scary, maybe, but interesting.



### **WHAT EXACTLY IS “THE CLOUD?”**

Cloud computing is the “next generation” of virtual systems. It not only abstracts the hardware layer, but also adds an automation layer. Suddenly you no longer care where your systems physically reside. But there’s more to it than just that. Let’s break down the range of possibilities:

#### **PHYSICAL HARDWARE**

This is a generic term for the actual physical computer that you can touch—the actual server.

#### **VIRTUAL MACHINE**

This is an “abstracted” computer. One physical hardware server can run multiple virtual machines. Virtual machines can be set up and operated just like a physical server and typically are. Virtual machines are often treated just like their physical counterparts, rarely changing.

#### **PRIVATE CLOUDS**

These are banks of virtual machines that your enterprise owns and operates, all waiting to be provisioned and used, but only as needs dictate. All of these are housed safely inside your enterprise firewall.

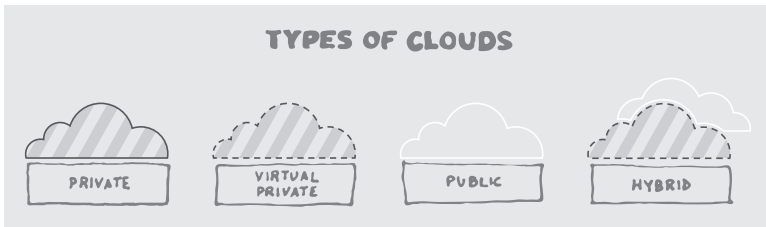
For example, you might have 12 physical machines and 120 virtual servers, but you use only 30 of these virtual servers at any given moment. The other 90 are available to be used as needed. Across the day and week, these servers can be used for a number of different services and can change from hour to hour, sometimes as often as two or three times an hour, depending on demand. Private clouds add an automation layer to virtualization, so that you no longer care or know exactly which one machine your system is running on.

## PUBLIC CLOUDS

These are even larger banks of potential servers that sit outside your firewall and are not owned or operated by your enterprise. They're available, for a price, to meet demand beyond what you can handle on your own systems. If you're concerned about privacy and security, this sounds scary (and your concerns are justified).

## HYBRID CLOUDS

These are a combination of the private and public clouds, but also include the extension of your private network and management tools into the systems beyond your firewall. This may sound less intimidating, but how exactly do you do that?



Cloud computing isn't so difficult to understand. But managing systems running in it might be—especially if you're struggling to keep your current, non-cloudy physical systems running smoothly.



The key to creating and managing Red Hat Enterprise Linux systems, running either virtually or in a cloud, is this: You need a clear plan and a toolset that doesn't care if you're managing a rack of blade servers or thousands of virtual servers. You need a tool that will allow you to deploy systems and services in minutes, not days, and then remove them from service and deploy others minutes later. Or better yet, make it all happen automatically and unattended.

## **HEAD IN THE CLOUDS, FEET ON THE GROUND, AND USING RED HAT NETWORK SATELLITE TO MANAGE IT ALL**



Unfortunately, there's no way to manage a dynamically changing cloud environment manually. You don't have days to build and test servers—you need them NOW. Red Hat Network (RHN) Satellite allows you to swiftly deploy new Red Hat Enterprise Linux systems anywhere. That means on a computer sitting right next to you, on one of the many virtual servers on your rack of blades, or somewhere within your private cloud. And here's the payoff: RHN Satellite can provision that new server in minutes and have it in full production and 100 percent error-free. Using RHN Satellite you can deploy even hundreds of new servers in that same few minutes, anywhere, inside your network or in the cloud.

The cloud isn't your problem. The problem is having the right servers at the right time. RHN Satellite is the way you can deploy your Red Hat Enterprise Linux servers easily, quickly, and 100 percent right every time.

When the demand peak passes, you can take those servers you no longer need out of production and put completely different systems in their place, based upon what's currently needed. Using RHN Satellite's web-based interface, these systems can be monitored, updated, maintained, and removed from service easily. Alternately, systems can be deployed and removed in a completely unattended, automated fashion.

But provisioning is just one small piece of the puzzle. Red Hat Enterprise Linux systems running in the cloud need the same care and feeding as those running in a traditional datacenter. They still need to be updated, configured, and meet any necessary audit and compliance standards. RHN Satellite makes sure that all of your Red Hat Enterprise Linux systems are updated, patched, and fully compliant—no matter where they are running.

There are a lot of things to manage in the cloud, and RHN Satellite handles all of them:

- Sprawl
- Churn
- Patch and update management
- Rapid deployment requirements
- Subscription management



The benefits of implementing a private cloud for an enterprise Linux infrastructure are significant; however, you can't get to these benefits without the use of a systems management tool and approach.

RHN Satellite provides those tools with a simple interface that allows system administrators to design, build, and maintain a private cloud for the enterprise with relative ease. RHN Satellite gives organizations the ability to eliminate the issues of clutter and churn in a highly virtual environment and provides a clear toolset with which to rapidly provision, update, monitor, and manage systems within a private cloud. It's the tool to keep you grounded while your systems become fully cloud-based.

RHN Satellite can be implemented on bare metal to provision all enterprise systems or can be implemented within a virtual machine and used to provision only virtual guests. It can manage a combination of physical, virtual, and cloud-based systems both within the enterprise environment as well as extended into an external cloud via a virtual private network. For users of Red Hat Enterprise Linux, RHN Satellite is the clear choice for building and operating Red Hat Enterprise Linux systems in a private cloud.



#### **TELL ME MORE**

Want to learn more? There are loads of materials including whitepapers, case studies, and detailed information—all conveniently organized on our web site. Just visit [redhat.com/rhn](http://redhat.com/rhn) and get with the program.

# CHAPTER 4

## OVERCOMING THE COMPLEXITIES OF A LINUX SYSTEM

---

THIS CHAPTER INCLUDES:

- Nobody said this would be easy, but you've got to be kidding me
  - Exactly how complex?
  - Complex systems services easily managed with Red Hat Network Satellite
- 

### **NOBODY SAID THIS WOULD BE EASY, BUT YOU'VE GOT TO BE KIDDING ME**

How did things get this complex? You start with a nice, clean Linux install and now look at it. Wasn't converting to open source software and having the freedom of Linux supposed to make things easier?

But who said building and managing an enterprise data infrastructure was easy?



Many IT organizations are caught between two conflicting demands: provide more and more services, which are infinitely faster, and reduce costs. How is that even possible? If you want more services, that'll cost more money, right? What about the cloud? Here's a hint: Moving to the cloud is not free. And far too many IT organizations have their hands full merely maintaining what they have. You know, that mass of spaghetti code that just barely gets by as it is.

And what would you do if upper management sent word today that they need you to scale up your systems by a factor of five by the end of the month? Could you do it?

## EXACTLY HOW COMPLEX?



Here's a simple test to find out how complex your systems are. Pick a server, any server. How long would it take for you to build another one, just like it, and put it into production? And before you start that, is that server completely up-to-date with patches and errata? Is it fully compliant with all of the standards required? Could it pass an external audit? Could you build, say, ten more of them? How long would that take?

And that was just for one randomly selected server. Now let's look at your entire infrastructure—can you point to any given server and state, with full assurance, that it's 100 percent up-to-date and fully compliant? How do you know that? What services are running on which physical or virtual servers?

As for that scaling thing—let's say that the CIO sends word that you have to prepare for a seasonal demand peak, and they are sending you three new system administrators, fresh out of school. How long will it take you to train them so they can actually help? Or do you just tell them to stay out of the way because it's easier to just do it yourself?

Now let's make things interesting: Pick your most senior technician, whom you depend on the most, to keep your systems running smoothly. Let's pretend that this key person just won the lottery. Of course, you'll never see that person again or be able to reach him on the beach in Tahiti. Everything still okay?

## COMPLEX SYSTEMS SERVICES EASILY MANAGED WITH RED HAT NETWORK SATELLITE



Believe it or not, it doesn't have to be that complex. You can reduce costs and dramatically scale up your offerings. You just can't do it manually.

Red Hat Network (RHN) Satellite can help you deal with all of those complex scenarios. Need to scale up? No problem. Just have them tell you how many servers and where to put them. Ten minutes later, you'll have those servers in production. Want a hundred more? Just another 10 minutes. That key person who won the lottery? Send sun block—you'll be fine. And those three new system administrators? You'll have them trained and productive in a few days, managing their own group of servers. **How is that possible?**



The key features of RHN Satellite provide the basis for a greatly simplified management process:

### 1. PROVISIONING BY TEMPLATE

At the heart of RHN Satellite is the ability to fully provision a new server, from OS to applications and data, in a matter of minutes. From manually building and testing a new server in a hit-and-miss fashion to complete and error-free spin-up, this change can have dramatic effects on an organization's systems. Enterprises that have had difficulty managing a handful of systems can now create, literally, hundreds of perfectly configured systems in minutes, and a single administrator can easily manage them. A server only has to be built, configured, and tested once, and then used as a template to make as many identical servers as necessary.

### 2. SECURITY AND COMPLIANCE MANAGEMENT

For many organizations, a great deal of administrator time is spent researching new patches and updates, looking for new fixes, and then determining if they are required and what impact they may have. Using RHN Satellite, an administrator can review a simple web-based view once a day and know every patch and update that applies to the enterprise's systems. From there, it's easy to decide which patches to apply and when. The update process becomes virtually automatic.

### 3. VIRTUALIZATION MANAGEMENT AND DYNAMIC PROVISIONING

As an organization responds to the additional demands of growth and requests for services, virtualization becomes an increasingly important approach. RHN Satellite can be used to assist in not only provisioning virtual servers, but can also be used to build a response to changing demands. Build your own private cloud or move into the public cloud easily.



RHN Satellite can be configured to automatically provision systems in response to specified requirements, timing, or system states. For example, an administrator can specify a web server load level at which to trigger the provisioning of additional web servers. Within minutes, a single new virtual server (or even hundreds) can be online. When the peak demand is over, those systems can be automatically re-provisioned for use of other services. This can allow an organization to respond to changing demands without a costly overbuilding of its physical infrastructure.



#### **TELL ME MORE**

Want to learn more? There are loads of materials including whitepapers, case studies, and detailed information—all conveniently organized on our web site. Just visit [redhat.com/rhn](http://redhat.com/rhn) and get with the program.

# CHAPTER 5

## 8 TIPS FOR INTEGRATING MANAGEMENT INTO YOUR ENTERPRISE

---

THIS CHAPTER INCLUDES:

- Manage the entire Linux environment, not just individual servers
  - Be flexible and responsive to the constantly changing needs of the organization
  - Prepare to rapidly scale up or down
  - Be paranoid about security and compliance
  - Approach management solutions with an eye on cost controls
  - Eliminate key personnel dependencies
  - Future-proof your environment
  - Use a single tool to manage everything
- 

### **IT'S TIME TO RAISE YOUR GAME A NOTCH. EIGHT NOTCHES, ACTUALLY.**



Managing an enterprise environment is complex—there's no getting around that. But that doesn't mean it has to be difficult or costly.

A convenient, predictable approach to managing a Linux environment isn't just possible—it's necessary for your IT organization to meet the increasing demands of your enterprise.

Here are eight tips we've learned from our customers that will help you unlock the potential of your Linux systems:



#### **MANAGE THE ENTIRE LINUX ENVIRONMENT, NOT JUST INDIVIDUAL SERVERS**

An enterprise environment is more than just a bunch of servers, although that's the way some IT departments think of it. System administrators are responsible for individual servers, where each administrator handles a handful of systems. How well things work can vary from one system administrator to another, server to server. That's a real limit to growth.

When an organization decides to manage the environment as a single, functional whole, the picture changes dramatically. Security threats, updates, and compliance issues are dealt with for the entire system rather than server by server. And the environment can be managed to react to changing demand, not in a matter of days or weeks, but hour to hour.

2

#### BE FLEXIBLE AND RESPONSIVE TO THE CONSTANTLY CHANGING NEEDS OF THE ORGANIZATION

Your internal and external users need and want change during the day, week, and time of year. A few years ago, you would have designed your entire system around these peaks. Now, you can build to appropriately meet the needs of your organization.

The secret is to be able to rapidly provision what you need, when you need it. One thing to note: You can't manually add and remove servers fast enough to meet this changing demand.

3

#### PREPARE TO RAPIDLY SCALE UP OR DOWN

Changing services and provisioning is one thing, but the new economic realities can also mean that you might have to change not just the composition of your systems, but your entire system to scale up or down when faced with mergers, acquisitions, or changing business models. You no longer have months to react—the time frame is yesterday.

You can accomplish this if you can treat hundreds or thousands of systems in the same way you would treat a single server. You will need to group them together and be able to provision as many as you need—or remove the ones that are no longer needed, either re-provisioning them or removing them from service entirely.

4

#### BE PARANOID ABOUT SECURITY AND COMPLIANCE

The threats to your systems are real. Identity theft, credit card fraud, healthcare regulations, and even industrial espionage are not just the IT versions of the boogey man—they're real, and they can be career- and business-ending events. Getting security and compliance right the first time is all about avoiding career limiting moves.

The only possibility of relief is to know that ALL of your systems are properly updated, patched, and compliant. But how do you know that, and how do you keep up? Centralized patch management and audit capabilities aren't just nice to have—they're one of your new top line requirements.

5

## APPROACH MANAGEMENT SOLUTIONS WITH AN EYE ON COST CONTROLS

The purse is no longer bottomless: Everything in the enterprise is now subject to cost scrutiny. Even when IT is asked to do more, much more, you know you won't be given a blank check to get it done. In fact, you may be asked to do more with less.

You can't do anything extra with less money if you have to add new human resources to deal with your growing and complex systems. However, you can control costs if you can manage your systems centrally and uniformly. The key is to change the value of the variable in this simple equation:



1 System administrator to **X** servers.

If your current systems are represented by **X = 24**,  
what would your cost savings be if you could  
change that to **X = 100**? Or **300**? Or **1,000**?

Amazing. You're suddenly doing more with less, and loving it.

6

## ELIMINATE KEY PERSONNEL DEPENDENCIES

The first thing that any system analyst or consultant looks for in any situation is this: Where are the failure points? For IT organizations, that point is frequently the same thing as its greatest strength—its best, most skilled, and experienced people.

And it's not just the person—it's the lack of documentation, procedures, or anything else that could help to train new staff or make replacing a key individual less stressful. Eliminating key personnel dependencies means building systems that aren't dependent on key people who may leave the organization or assume new responsibilities.



## FUTURE-PROOF YOUR ENVIRONMENT

Who knows what the future brings? There's one thing that's certain about the future of your IT environment: It will need to change. The technologies will change. The user demands will change, the services they require will change, and the rate that those changes are expected will continue to accelerate.

You can future-proof your systems by basing all systems on models and templates—all of which can be revised, updated, or replaced quickly and easily. When the future arrives, build and test a new server, then provision hundreds more in minutes. Future shock becomes a thing of the past.



## USE A SINGLE TOOL TO MANAGE EVERYTHING

The real key is to use a single tool to manage everything. Ideally, this will be a single tool that addresses all of the system management issues for your Red Hat Enterprise Linux systems. The typical do-it-yourself (DIY) approach may solve a single problem, but it can rarely address every system management need. And few DIY solutions are maintained over time.



If you're serious about putting these eight tips to work for you, there is a single, simple answer: Red Hat Network (RHN) Satellite. RHN Satellite can provide your IT organization with a single, easy-to-use interface that you can use to manage all of your Red Hat Enterprise Linux systems easily and efficiently. Using the fully documented web-based GUI, your system administrators can manage hundreds or thousands of servers where they only managed a handful before. Systems can be provisioned in just minutes, completely up-to-date and error free. And concerns over security and compliance can be quieted, if not completely eliminated.



## TELL ME MORE

Want to learn more? There are loads of materials including whitepapers, case studies, and detailed information—all conveniently organized on our web site. Just visit [redhat.com/rhn](http://redhat.com/rhn) and get with the program.

# CHAPTER 6

## BEST-OF-BREED MANAGEMENT SOLUTION: RED HAT NETWORK SATELLITE

---

THIS CHAPTER INCLUDES:

- You have the keys. Now what?
  - How do you know what's "best-of-breed?"
  - Need proof? RHN Satellite users speak up
- 

### YOU HAVE THE KEYS. NOW WHAT?

Over the last few chapters we've reviewed the issues that many IT organizations face:

- Covering the benefits of lifecycle management
- Mapping out the pitfalls of do-it-yourself (DIY) solutions
- Surveying the possibilities and opportunities of virtualization and cloud computing environments
- Laying out the approaches that can help an organization overcome complexities—even presenting eight tips for integrating systems management into your enterprise systems



It may sound like a lot to handle, but Red Hat Network (RHN) Satellite is uniquely designed to meet the needs of organizations running Red Hat Enterprise Linux. It's more than just a handy tool—it's the best solution available for managing Red Hat Enterprise Linux. Period.

### HOW DO YOU KNOW WHAT'S "BEST-OF-BREED?"



It's easy to make hyperbolic marketing claims. Anyone can shout out extraordinary features or capabilities. But the difference is that RHN Satellite can deliver.

Let's review the facts:

- RHN Satellite is designed, built, and maintained by Red Hat. It was designed to manage Red Hat Enterprise Linux by the same team that designs, builds, and maintains Red Hat Enterprise Linux.

- RHN Satellite is backed by 24x7 Red Hat support.
- Red Hat provides full training and documentation for RHN Satellite. Train your existing staff or new hires and spin them up to productive resources in days—saving your organization hundreds of unproductive “figure it out yourself” hours.
- RHN Satellite includes extensive API support, meaning you can connect to other systems and take advantage of RHN Satellite’s features to meet the needs of your organization. RHN Satellite can be integrated with other management frameworks, and when customization is needed, the power and flexibility of RHN Satellite is there, the way you want it.
- Red Hat offers both professional services and training for RHN Satellite. If you need to hire a new RHN Satellite administrator, all that you need to do to get him up to speed is send him to a Red Hat training course.



Given a dedicated staff and enough time and money, you might be able to build your own DIY solution to manage your Red Hat Enterprise Linux systems. However, RHN Satellite is ready today and builds upon Red Hat’s continuing expertise in managing Linux systems. As technology and need continue to evolve, RHN Satellite will be fully up-to-date and supported, which DIY systems never seem to manage.

### **NEED PROOF? RHN SATELLITE USERS SPEAK UP**

The best evidence that RHN Satellite can work for you may come directly from your peers—people who are improving their organizations using this powerful toolset. Here are just a few testimonials:

DANIEL KINON

*Senior Systems Administrator for Choice Hotels*

Dan estimated that before using RHN Satellite, he spent over 360 hours or 45 working days every year patching and updating the Choice Hotels Red Hat Enterprise Linux systems. After implementing RHN Satellite, that was reduced to a total of 24 hours—just three working days spread out over the entire year. “Implementing Red Hat Network Satellite was a great experience. I’m able to delegate to my new administrator, and I’m working much fewer hours.”

JACK VELAZQUEZ

*Senior Systems Engineer for the  
Open Systems Team at Florida Hospital*

“Our Red Hat Enterprise Linux systems have been very resilient and have survived the most catastrophic conditions with great stability. We’ve never had a problem with our Red Hat Enterprise Linux servers—it’s really a self-sufficient datacenter,” said Velazquez.

“Red Hat Network Satellite makes system management easy, enabling us to deploy new applications and security patches to all servers at once.”

There are plenty more who will sing RHN Satellite’s praises, but the best evidence will come from your own eyes. Isn’t it time for you to try out this best-of-breed solution for yourself?



#### **TELL ME MORE**

Want to learn more? There are loads of materials including whitepapers, case studies, and detailed information—all conveniently organized on our web site. Just visit [redhat.com/rhn](http://redhat.com/rhn) and get with the program.



© 2011 Red Hat, Inc. Red Hat® The Shadowman® Logo, JBoss® and Fedora® are registered trademarks of Red Hat, Inc. in the United States and other countries. Product names, logos, brands, and other trademarks featured or referred to are the property of their respective trademark holders.