

TECHNOLOGY BRIEF: SATELLITE 5 TO 6 TRANSITION

An overview of transitioning to Red Hat Satellite 6

TECHNOLOGY BRIEF

INTRODUCTION

RED HAT SATELLITE 6 – A COMPLETE UPDATE AND MODERNIZATION

Since 2002, Red Hat® Satellite has grown from an ambitious on-premise update service into the popular, robust systems management product it is today. Red Hat continues to lead open source technologies with the introduction of Red Hat Satellite 6.

But Red Hat Satellite 6 is more than an update. Version 6 is a leap forward from its predecessor (version 5) and employs the most advanced technologies available today. This leap in technology and design reaffirms Red Hat Satellite as the premier manager of your workloads for the next generation of computing platforms – embracing modern models of bare-metal, virtual, and cloud-based management.

Because Red Hat Satellite 6 is a complete technology update to the Red Hat Satellite family, refreshing your Red Hat Satellite deployment from version 5 to 6 is a transition, not a traditional upgrade.

Supported versions of Red Hat Satellite for transition: Tooling has been developed to automate many mundane aspects of transition, and that tooling only supports transitioning from Red Hat Satellite 5.6 and newer. For the best experience, upgrade to the latest version of Satellite 5, then transition to the latest version of Satellite 6.

STRATEGIC APPROACHES

There are two strategic approaches to consider when transitioning from Red Hat Satellite version 5 to 6: (1) A more passive approach that largely leaves existing workloads alone, and (2) a more active approach that aims to migrate existing workloads rapidly to the new technology. Both involve standing up the newer architecture alongside your current architecture.

APPROACH 1: PASSIVE TRANSITION

Legacy (existing) workloads remain with Red Hat Satellite 5. New workloads are managed by Satellite 6.

This strategic approach may be appropriate if your Red Hat Satellite deployment is complex and has significant integration with other applications (via APIs or other processes). A passive transition gives administrators the most flexibility to rethink their infrastructure with the least possibility of disruption of services.

The more passive approach makes these assumptions about you and your environment:

1. I want to treat Red Hat Satellite 6 as a new technology platform that I approach like any other new technology, and I want to slowly integrate it into our environments with newer workloads.
2. My Red Hat Satellite 5 infrastructure manages the breadth of our systems from development to production and will continue to manage those workloads until they rotate out of their life cycles.

With this scenario, Red Hat Satellite 5 continues to manage existing workloads until they are retired. However, Red Hat Satellite 5 data models may still be transitioned to Red Hat Satellite 6 if desired. Red Hat Satellite 6 is deployed to manage new workloads and projects only.

APPROACH 2: ACTIVE TRANSITION

Move workloads to Red Hat Satellite 6.

This strategic approach strives to decommission Red Hat Satellite 5 after transitioning data models and re-registering existing systems to Red Hat Satellite 6. All new workloads and projects are targeted for management by Red Hat Satellite 6.

An active transition process makes these assumptions about you and your environment:

1. Red Hat Satellite 6 is an upgrade to our existing Red Hat Satellite 5 deployment.
2. I want to move my existing workloads to Red Hat Satellite 6 as rapidly as possible.

An active transition allows data models to remain somewhat similar and familiar with all workloads appropriately migrated to Red Hat Satellite 6. Red Hat Satellite 5 is then freed to be transitioned into an archived state and shut down.

TIME TO EVALUATE, RE-EVALUATE, AND EXECUTE

The process described below assumes an active transition strategy, where each transition step involves a duplication of data, object models, and architectural expression. For this process, Red Hat gives our customers a significant breadth of time (one solid year of management infrastructure duplication) so administrators can investigate and become comfortable with the tooling, and to transfer data to update both the tools and how systems are managed.

With this breadth of time, and with no increase in subscription cost for Red Hat Satellite for the duration, administrators can make a determination if some, most, or all systems can move to the new platform in that one-year period.

THE HIGH-LEVEL PROCESS

The process is conceptually simple:

1. Stand-up the new architecture.
2. Duplicate version 5 objects and constructs to version 6.
3. Migrate systems to the new platform.
4. Decommission and archive the Red Hat Satellite 5 architecture (tooling available).

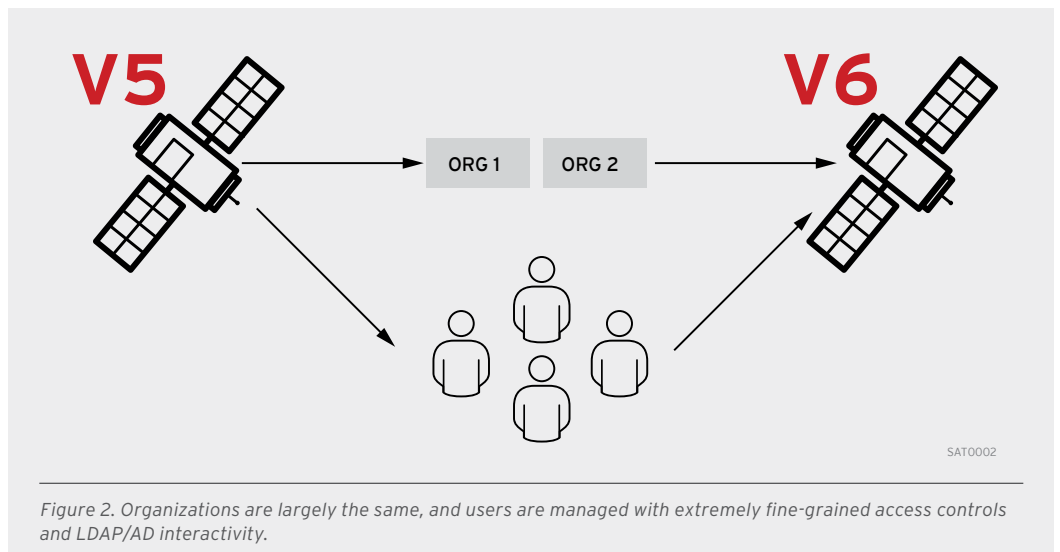
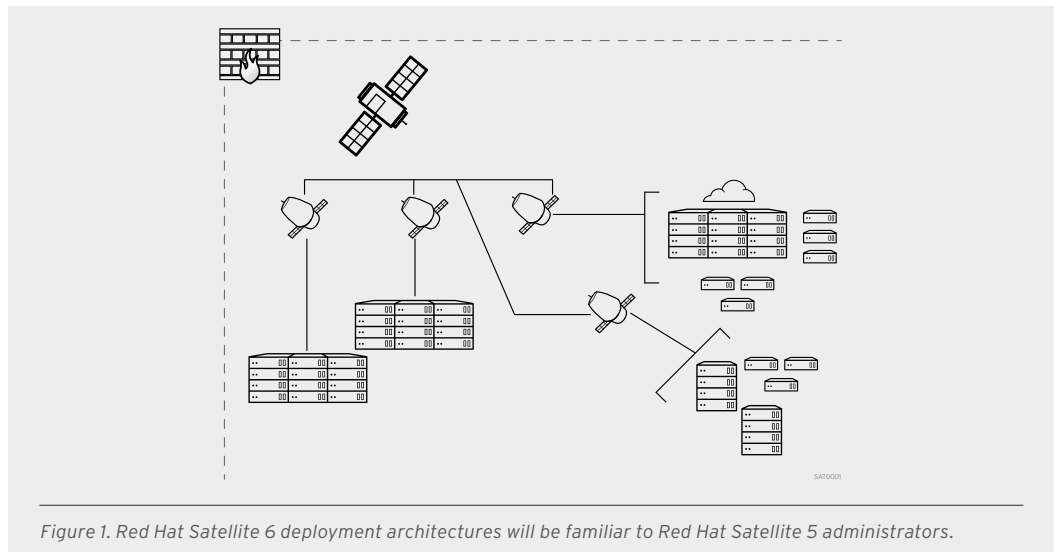
DEPLOYMENT ARCHITECTURES

Many customers deploy multiple Red Hat Satellite Servers and Red Hat Satellite Proxy Servers. Red Hat Satellite 6 – and the Red Hat Satellite Proxy 5 analog called Red Hat Satellite Capsule Server – conceptually follow the same deployment model of a primary management server (Satellite Server) while using federation devices (Capsule Servers) to scale out. Capsule Servers provide additional services and features well beyond the capabilities of Red Hat Satellite Proxy Server.

Recommended practices for deployment architectures are included with the transition documents. See “Documents, tools, and assistance” below.

Need help? If you have questions, our Technical Sales teams or Consulting Services can help you model your new environment.

The transition process described here assumes an IT team will be duplicating all data and all systems to the new platform. Again, not all data needs to transfer (some administration teams will view this as an opportunity to rethink how systems are managed), nor do all systems need to migrate to the new platform immediately. Most critical data can be transferred with automated tooling so you can quickly begin your evaluation.



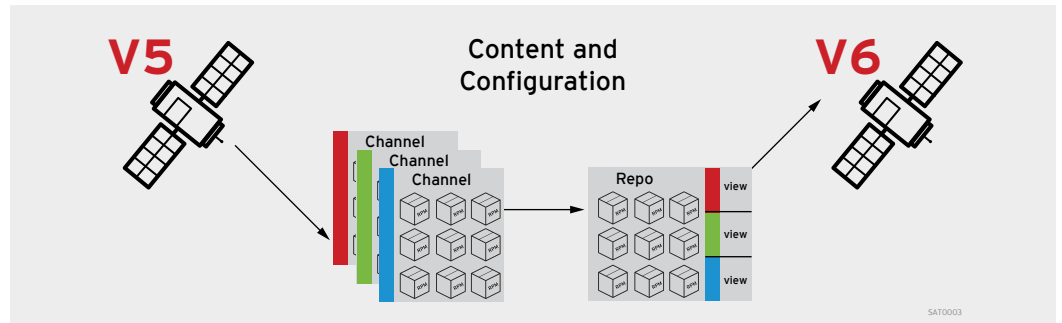


Figure 3. Instead of channel clones, one builds “spins” of products and repositories based on filters called “content views.” Unlike Red Hat Satellite 5, this model is the same for configuration repositories as well.

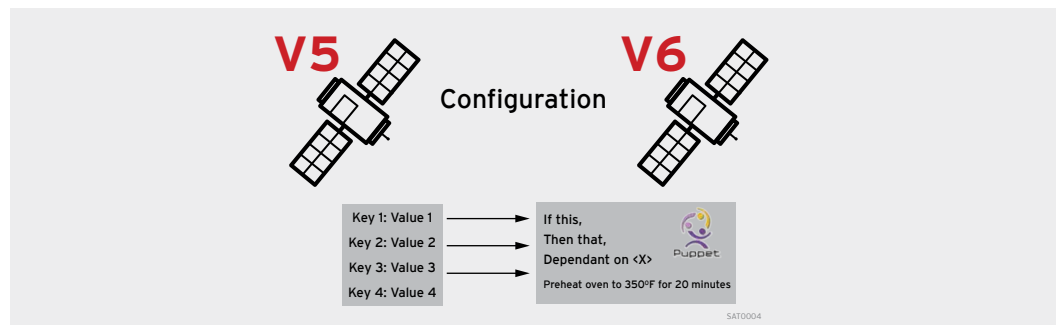


Figure 4. Configuration is delivered via Puppet, a more recipe-based mechanism, rather than Red Hat Satellite 5 semi-static key-value / macro-replacement templates.

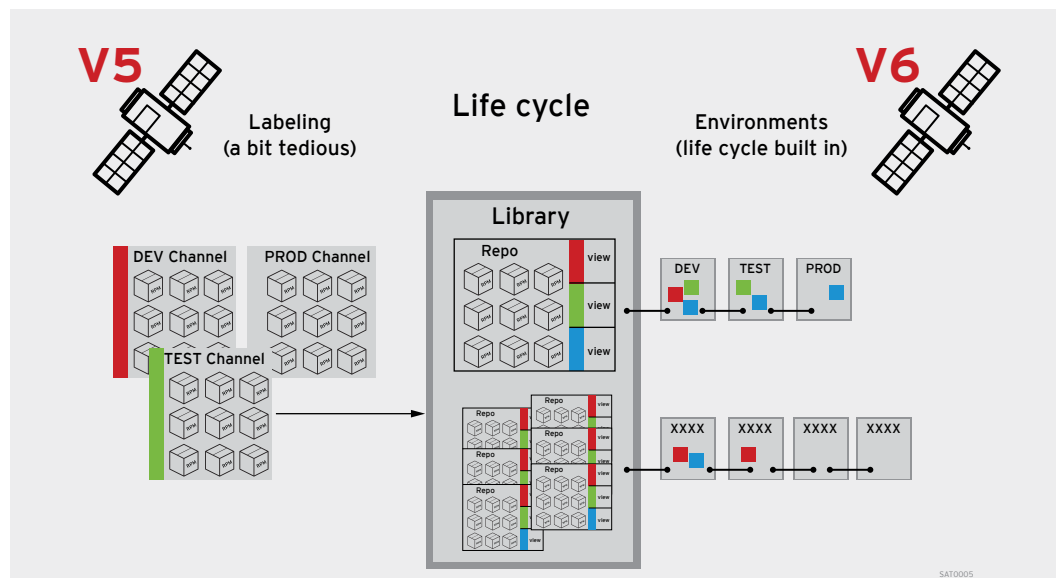


Figure 5. You no longer need to manually label and track life cycle environments. In Red Hat Satellite 6, they are first order objects called “environments.”

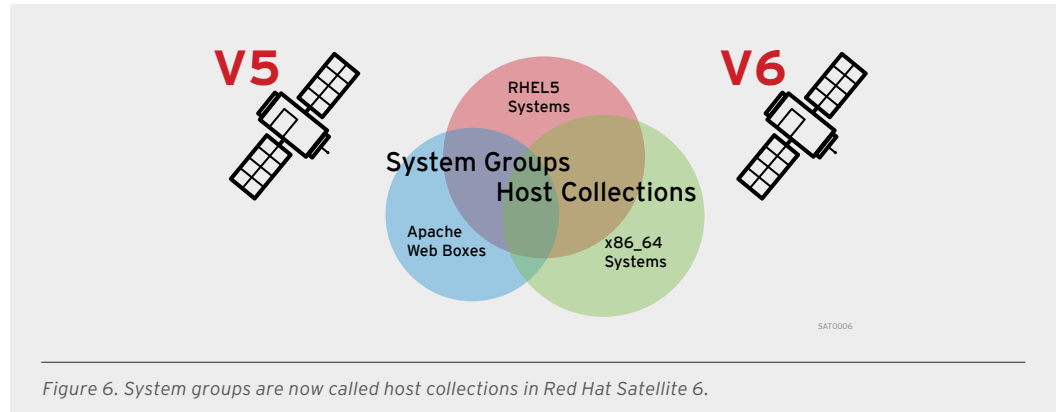


Figure 6. System groups are now called host collections in Red Hat Satellite 6.

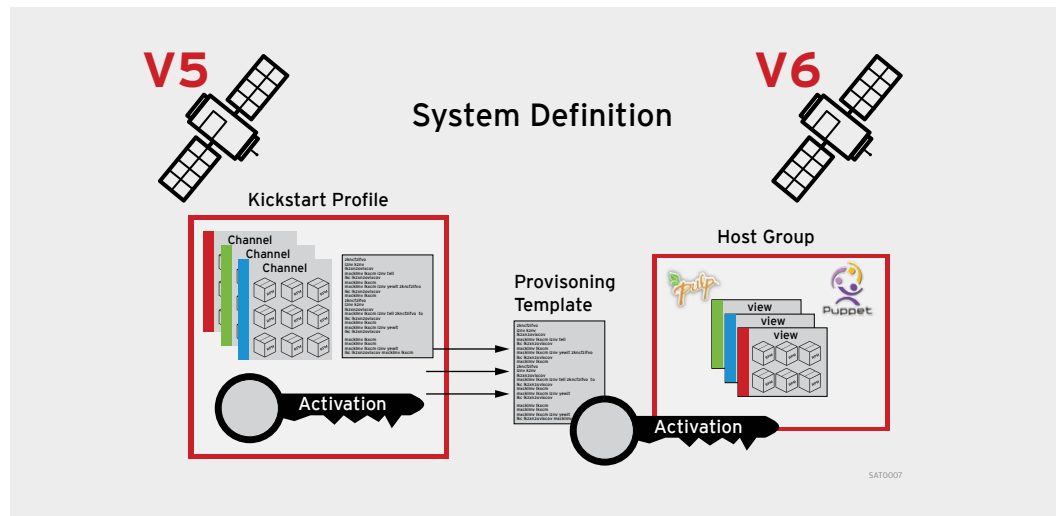


Figure 7. Activation keys are conceptually similar for Red Hat Satellite versions 5 and 6. Version 6 modularizes system definitions. For example, activation keys are associated with “host group” definitions that are then applied to minimalistic provisioning templates (often referred to as kickstart templates).

TRANSITIONING CONTENT, CONFIGURATION, AND DATA MODELS

Red Hat Satellite 6 completely modernizes content, configuration, and host definitions. Here are the highlights of the changes that are most analogous to the Red Hat Satellite 5 data and model:

TOOLING

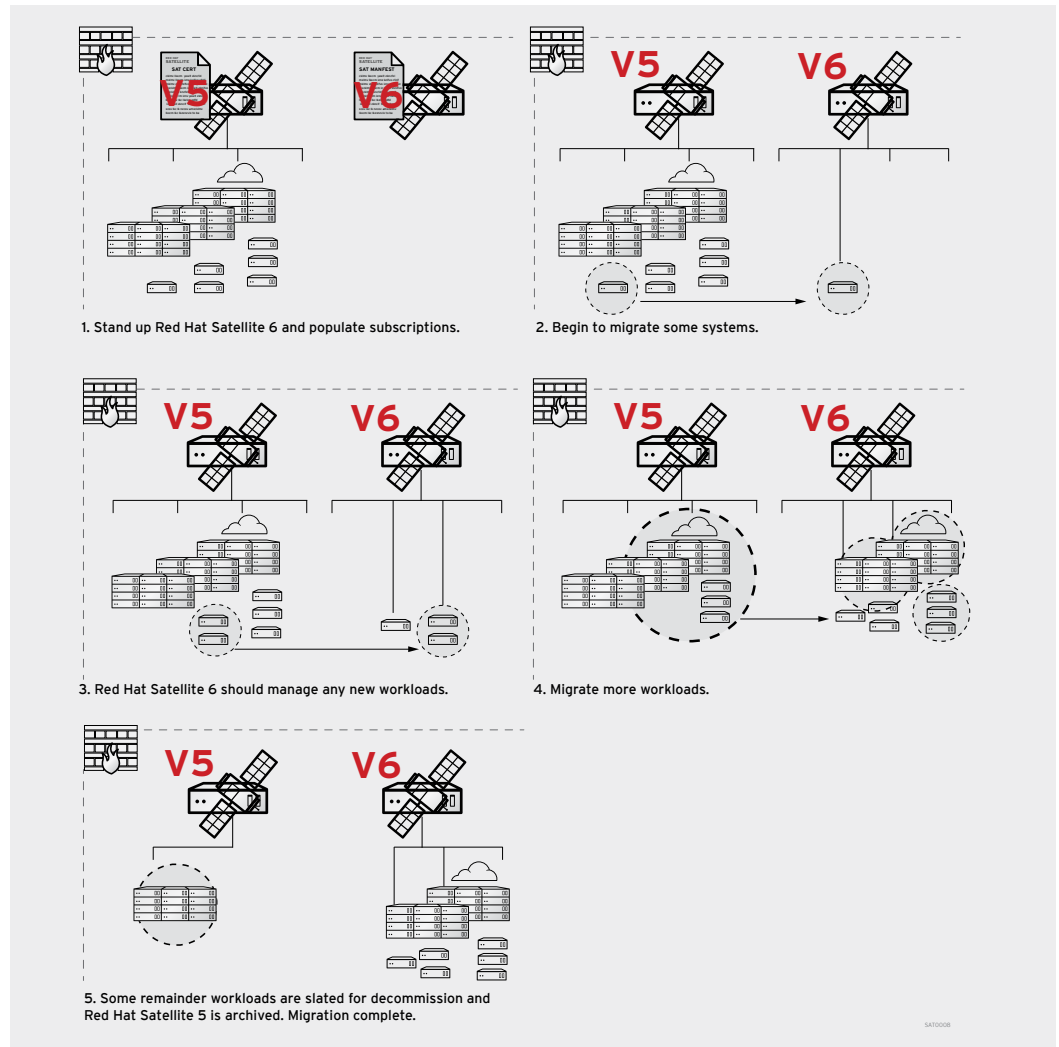
Some transition processes can be mundane, long running, and repetitive. Red Hat offers tools that assist and streamline some processes with a simple, but powerful, command-line utility for use by an administrator with root access to both Red Hat Satellite 5 and Red Hat Satellite 6.

TRANSITIONING SUBSCRIPTIONS AND MIGRATING SYSTEMS

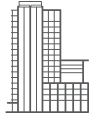
Moving systems from one version to another is a straightforward process. It can be done with one or two systems at a time, or with a large group of systems at once. The overall, automated process consists of:

1. Populating subscriptions on Red Hat Satellite 6.
2. Migrating the registration of those systems to Red Hat Satellite 6
 - (a) Re-registering those systems to Red Hat Satellite 6.
 - (b) Unregistering systems from Red Hat Satellite 5.

3. Depopulating those subscriptions from Satellite 5.



Remember: Tooling is available to assist with duplication of data from Red Hat Satellite and to automate the process of migrating systems from one platform to the other.



ABOUT RED HAT

Red Hat is the world's leading provider of open source solutions, using a community-powered approach to provide reliable and high-performing cloud, virtualization, storage, Linux, and middleware technologies. Red Hat also offers award-winning support, training, and consulting services.

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A gradual migration example illustration:

DOCUMENTS AND TOOLS

Red Hat provides the following resources to facilitate the transition process:

DOCUMENTATION

- Transition process: A "how-to" as well as a getting started guide for API translation, as well as Red Hat Satellite 5 archival instruction.
- Recommended practices for both Red Hat Satellite 5 and Red Hat Satellite 6 standard operating environments.

TOOLING

- Scripted tooling is available to assist with tedious aspects of transitioning models from version 5 to 6.

SUBSCRIPTIONS

- Temporary subscriptions are available that allow Red Hat Satellite 5 and Red Hat Satellite 6 to run concurrently during transition. Contact your Red Hat account representative for further information and look for details at the Red Hat Customer Portal.

For additional information, visit the Red Hat Customer Portal to review general information, transitioning information, and FAQs about Red Hat Satellite Server, Red Hat Satellite Proxy Server, and Red Hat Satellite Capsule Server.

NEED HELP?

Experts are here to help – from analysis and advice, all the way through to implementation. Contact your account representative for an overview of the process that is more specific to your situation and consider leveraging our expert consulting services to ease the transition.