Red Hat Satellite 6.10

Quick Start Guide

Installing, configuring, and provisioning physical and virtual hosts from Red Hat
Satellite Servers.

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Abstract

The Red Hat Satellite Quick Start Guide is designed to help you quickly install and configure Red Hat Satellite Server, as well as provision physical and virtual hosts. This guide is aimed primarily at Satellite administrators with sound networking knowledge and skills.

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CHAPTER 1. SHOULD YOU USE THIS GUIDE?

The Quick Start Guide enables you to install and configure your Satellite Server based on a set of assumptions about your environment. This includes setting up the required topology and providing all of the configuration information needed to provision hosts on your network.

You should use this guide if the following assumptions apply to your environment:

- You are performing a fresh installation of Red Hat Satellite.

- You will have a single Satellite Server deployment.

- You can connect to the Red Hat Content Network to obtain packages and receive updates.

- You have an existing external DNS server that you want to connect to Satellite Server.

- Your environment does not use DHCP, or uses external DHCP services.

- You have an existing host that you want to register to Satellite to use for patching.

- You want to use PXE-less discovery to provision hosts.

- You use a kickstart-based deployment.

- Your deployment uses simple Content Views.

- You are using IPv4.

Some of the tasks in this guide use example information. You should ensure that you use values that are specific to your environment.

If your environment does not fit with these assumptions, you can use the following resources to assist you with installing Satellite Server:

- Installing Satellite Server from a Connected Network

- Installing Satellite Server from a Disconnected Network

- 10 Steps to Build an SOE: How Red Hat Satellite 6 Supports Setting Up a Standard Operating Environment

- Red Hat Satellite 6.10 Provisioning Guide

CHAPTER 2. INSTALLING SATELLITE SERVER

2.1. PREPARING FOR SATELLITE SERVER INSTALLATION

Ensure that you meet all the prerequisites before installing Satellite Server.

Prerequisites

- You must create a Red Hat Enterprise Linux 7 host before you can install and configure Satellite Server. Red Hat Enterprise Linux version 7.5 or later is supported. For more information about installing Red Hat Enterprise Linux 7, see the Red Hat Enterprise Linux 7 Installation Guide .

- Ensure that your environment meets the requirements for installation, including meeting storage requirements, and ensuring that network ports and firewalls are open and configured. For more information, see the Preparing your Environment for Installation in *Installing Satellite Server from a Connected Network.*

2.2. REGISTERING TO RED HAT SUBSCRIPTION MANAGEMENT

Registering the host to Red Hat Subscription Management enables the host to subscribe to and consume content for any subscriptions available to the user. This includes content such as Red Hat Enterprise Linux, Red Hat Software Collections (RHSCL), and Red Hat Satellite.

Procedure

- Register your system with the Red Hat Content Delivery Network, entering your Customer Portal user name and password when prompted:

  ```
  # subscription-manager register
  ```

  The command displays output similar to the following:

  ```
  # subscription-manager register
  Username: user_name
  Password:
  The system has been registered with ID: 541084ff2-44cab-4eb1-9fa1-7683431bcf9a
  ```

2.3. ATTACHING THE SATELLITE INFRASTRUCTURE SUBSCRIPTION

NOTE

Skip this section if you enabled the Simple Content Access (SCA) in the Red Hat Customer Portal.

After you have registered Satellite Server, you must identify your subscription Pool ID and attach an available subscription. The Red Hat Satellite Infrastructure subscription provides access to the Red Hat Satellite, Red Hat Enterprise Linux, and Red Hat Software Collections (RHSCL) content. This is the only subscription required.

Red Hat Satellite Infrastructure is included with all subscriptions that include Satellite, formerly known as Smart Management. For more information, see Satellite Infrastructure Subscriptions MCT3718 MCT3719 in the *Red Hat Knowledgebase.*

Subscriptions are classified as available if they are not already attached to a system. If you are unable to find an available Satellite subscription, see the Red Hat Knowledgebase solution How do I figure out which subscriptions have been consumed by clients registered under Red Hat Subscription Manager? to run a script to see if your subscription is being consumed by another system.

Procedure

1. Identify the Pool ID of the Satellite Infrastructure subscription:

   ```
   # subscription-manager list --all --available --matches 'Red Hat Satellite Infrastructure Subscription'
   ```

   The command displays output similar to the following:

   ```
   Subscription Name:   Red Hat Satellite Infrastructure Subscription
   Provides:            Red Hat Satellite
                        Red Hat Software Collections (for RHEL Server)
                        Red Hat CodeReady Linux Builder for x86_64
                        Red Hat Ansible Engine
                        Red Hat Enterprise Linux Load Balancer (for RHEL Server)
                        Red Hat
                        Red Hat Software Collections (for RHEL Server)
                        Red Hat Enterprise Linux Server
                        Red Hat Satellite Capsule
                        Red Hat Enterprise Linux for x86_64
                        Red Hat Enterprise Linux High Availability for x86_64
                        Red Hat Satellite
                        Red Hat Satellite 5 Managed DB
                        Red Hat Satellite 6
                        Red Hat Discovery
   SKU:              MCT3719
   Contract:         11878983
   Pool ID:          8a85f99968b92c3701694ee998cf03b8
   Provides Management: No
   Available:        1
   Suggested:        1
   Service Level:    Premium
   Service Type:     L1-L3
   Subscription Type:   Standard
   Ends:             03/04/2020
   System Type:      Physical
   ```

2. Make a note of the subscription Pool ID. Your subscription Pool ID is different from the example provided.

3. Attach the Satellite Infrastructure subscription to the base operating system that your Satellite Server is running on:

   ```
   # subscription-manager attach --pool=pool_id
   ```

   The command displays output similar to the following:

   ```
   Successfully attached a subscription for: Red Hat Satellite Infrastructure Subscription
   ```

4. Optional: Verify that the Satellite Infrastructure subscription is attached:

```
# subscription-manager list --consumed
```

2.4. CONFIGURING REPOSITORIES

Use this procedure to enable the repositories that are required to install Satellite Server. Choose from the available list which operating system and version you are installing on:

- Red Hat Enterprise Linux 7

2.4.1. Red Hat Enterprise Linux 7

1. Disable all repositories:

```
# subscription-manager repos --disable "*"
```

2. Enable the following repositories:

```
# subscription-manager repos --enable=rhel-7-server-rpms \
--enable=rhel-7-server-satellite-6.10-rpms \
--enable=rhel-7-server-satellite-maintenance-6-rpms \
--enable=rhel-server-rhscl-7-rpms \
--enable=rhel-7-server-ansible-2.9-rpms
```

> **NOTE**
>
> If you are installing Satellite Server as a virtual machine hosted on Red Hat Virtualization, you must also enable the **Red Hat Common** repository, and install Red Hat Virtualization guest agents and drivers. For more information, see Installing the Guest Agents and Drivers on Red Hat Enterprise Linux in the *Virtual Machine Management Guide* for more information.

2.5. INSTALLING SATELLITE SERVER

1. Update all packages:

```
# yum update
```

2. Install the Satellite Server package:

```
# yum install satellite
```

3. Install Satellite Server and perform the initial configuration:

```
# satellite-installer --scenario satellite \
--foreman-initial-admin-username admin \
--foreman-initial-admin-password redhat \
--foreman-proxy-tftp true \
--enable-foreman-plugin-discovery
```

2.6. IMPORTING A SUBSCRIPTION MANIFEST INTO SATELLITE SERVER

Use the following procedure to import a Subscription Manifest into Satellite Server.

Prerequisites

- You must have a Subscription Manifest file exported from the Customer Portal. For more information, see Using Manifests in the *Using Red Hat Subscription Management* guide.

Procedure

1. In the Satellite web UI, ensure the context is set to the organization you want to use.

2. Navigate to **Content** > **Subscriptions** and click **Manage Manifest**.

3. In the Manage Manifest window, click **Browse**.

4. Navigate to the location that contains the Subscription Manifest file, then click **Open**. If the Manage Manifest window does not close automatically, click **Close** to return to the Subscriptions window.

CLI procedure

1. Copy the Subscription Manifest file from your client to Satellite Server:

   ```
   $ scp ~/manifest_file.zip root@satellite.example.com:~/.
   ```

2. Log in to Satellite Server as the **root** user and import the Subscription Manifest file:

   ```
   # hammer subscription upload \
   --file ~/manifest_file.zip \
   --organization "organization_name"
   ```

CHAPTER 3. ASSOCIATING OBJECTS WITH THE DEFAULT ORGANIZATION AND LOCATION

3.1. CREATING A NEW DOMAIN

Use this procedure to create a new domain.

For Web UI Users

1. Navigate to **Infrastructure** > **Domains** and click **Create Domain**.

2. In the **DNS Domain** field, enter the full DNS domain name.

3. In the **Fullname** field, enter the plain text name of the domain.

4. Click the **Parameters** tab.

5. Click **Add Parameter** and fill in the **Name** and **Value** fields.

6. Click the **Locations** tab, and add the location where the domain resides.

7. Click the **Organizations** tab, and add the organization that the domain belongs to.

8. Click **Submit** to save the changes.

3.2. ASSOCIATING THE DOMAIN WITH THE DEFAULT ORGANIZATION

Associating the Domain with the Default Organization Using the Web UI

1. On the Main Menu, click **Infrastructure → Domains**.

2. Select the domain in the **Description** column.

3. On the **Locations** tab, click **Default_Location** to add it to the Selected items list.

4. On the **Organizations** tab, click Default_Organization to add it to the Selected items list.

5. Click **Submit**.

3.3. CONFIGURING THE SUBNET

Configuring the Subnet Using the Web UI

1. On the Main Menu, click **Infrastructure → Subnets**.

2. Click **New Subnet** and enter the information specific to your environment.

   a. If you use DHCP, enter the following information:

      - Name: Provisioning_Net

      - Network address: 172.17.13.0

      - Network mask: 255.255.255.0

- Gateway Address: 172.17.13.1

- Primary DNS Server: 172.17.13.2

- Secondary DNS Server: Leave blank

- IPAM: None

- Start of IP Range: 172.17.13.100

- End of IP Range: 172.17.13.150

- VLAN ID: Leave blank

- Boot Mode: DHCP

b. If you use static IP addresses, enter the following information:

- Name: Provisioning_Net

- Network address: 172.17.13.0

- Network mask: 255.255.255.0

- Gateway Address: 172.17.13.1

- Primary DNS Server: 172.17.13.2

- Secondary DNS Server: Leave blank

- IPAM: None

- Start of IP Range: 172.17.13.100

- End of IP Range: 172.17.13.150

- VLAN ID: Leave blank

- Boot Mode: Static

3. Click **Submit**.

4. Click **Provisioning_Net** to edit the subnet.

5. On the **Domains** tab, select example.org.

6. On the **Capsules** tab, change the TFTP and Discovery Proxy capsule to reflect the host name of the Satellite Server.

7. On the **Locations** tab, select Default_Location under **All items** to associate the domain with the default location.

8. On the **Organizations** tab, select Default_Organization under **All items** to associate the domain with the default organization.

CHAPTER 4. IMPORTING SUBSCRIPTIONS AND SYNCHRONIZING CONTENT

4.1. ENABLING RED HAT REPOSITORIES

You must enable the required Red Hat repositories to support provisioning a Red Hat Enterprise Linux host.

> **NOTE**
>
> For a list of repositories required to install Red Hat Satellite 6.10, see Content Delivery Network Repositories in the *Release Notes*.

Select the appropriate release for your environment. You can use the examples in this topic to enable the following repositories:

- **Red Hat Enterprise Linux Server (Kickstart)**.
  Enable this repository to kickstart a host.

- **Red Hat Enterprise Linux Server (RPMs)**.
  Enable this repository for ongoing content and errata.

- **Red Hat Enterprise Linux Server - Satellite Tools 6.10 (RPMs)**
  Enable this repository to support software, such as Puppet, katello-host-tools, and katello-agent.

Enabling Red Hat Enterprise Linux 7 Server Repositories Using the Web UI

1. In the Satellite web UI, navigate to **Content** > **Red Hat Repositories**.

2. Use the Search field to enter the following repository name: **Red Hat Enterprise Linux 7 Server (RPMs)**.

3. In the Available Repositories pane, click on **Red Hat Enterprise Linux 7 Server (RPMs)** to expand the repository set.

4. For the **x86_64 7.5** entry, click the **Enable** icon to enable the repository.

5. Use the Search field to enter the following repository name: **Red Hat Satellite Tools 6.10 (for RHEL 7 Server) (RPMs)**.

6. In the Available Repositories pane, click on **Red Hat Satellite Tools 6.10 (for RHEL 7 Server) (RPMs)** to expand the repository set.

7. For the **x86_64** entry, click the **Enable** icon to enable the repository.

8. Use the Search field to enter the following repository name: **Red Hat Enterprise Linux Server 7 (Kickstart)**.

9. In the Available Repositories pane, click on **Red Hat Enterprise Linux 7 Server (Kickstart)** to expand the repository set.

10. For the **x86_64 7.5** entry, click the **Enable** icon to enable the repository.

4.2. CREATING A CUSTOM PRODUCT

You can enable a repository with custom packages, but you must first manually create a Product for the repository.

Creating Custom Products Using the Web UI

1. Click **Content → Products** and then click **Create Product**.

2. Enter a name for your custom Product.

3. Click **Save**.

4. After the screen refreshes, click **Create Repository**.

5. Leave the **URL** field blank.

6. Click **Save**.

4.3. SYNCHRONIZING CONTENT

You can synchronize repositories from the Red Hat Content Delivery Network to your Satellite, which also applies to synchronizing custom repositories (such as Yum) that contain a repository URL.

Synchronizing Content Using Red Hat Enterprise Linux 7 Server Using the Web UI

1. Click **Content → Sync Status** to display the list of available Products.

2. Navigate to **Red Hat Enterprise Linux Server→ 7Server → x86_64**.

3. Select the following Products:

   - Red Hat Enterprise Linux 7 Server RPMs x86_64 6Server.

   - Red Hat Enterprise Linux 7 Server – Satellite Tools 6.10 RPMs x86_64.

4. Navigate to **Red Hat Enterprise Linux Server→ 7.5 → x86_64** and select **Red Hat Enterprise Linux 7 Server Kickstart x86_64 7.5**.

5. Click **Synchronize Now**.
   The synchronization could take several hours, depending on available bandwidth.

CHAPTER 5. MANAGING AND PROMOTING CONTENT

5.1. CREATING APPLICATION LIFE CYCLE ENVIRONMENTS

An application life cycle environment represents a step, or stage, in a promotion path through the software development life cycle (SDLC).

1. Click **Content → Life Cycle Environments** to open the **Life Cycle Environment Paths** page.

2. Click **Create Environment Path** to display the **New Environment** page.
   The library is the origin of all content that you can use in your environments.

3. Enter a name in the **Name** Field.
   The label is automatically populated with the same name, but you can change it to suit your needs. You can also add a description of your environment.

4. Click **Save**.

5.2. CREATING SIMPLE CONTENT VIEWS

A Content View is a managed selection of content, which contains one or more repositories (yum) with optional filtering. These filters can be either inclusive or exclusive, and tailor a host view of content for life cycle management. You can use Content Views to customize content that is made available to client hosts.

Creating Content Views Using the Web UI

1. Click **Content → Content Views** and then click **Create New View**.

2. Type RHEL7 x86_64 in the **Name** field.
   The label is automatically populated.

3. Clear the **Composite View?** check box and click **Save**.

5.3. ADDING RED HAT ENTERPRISE LINUX REPOSITORIES

You can add Red Hat Enterprise Linux repositories to a Content View. Optionally, you can use the procedure described in this topic to add Red Hat repositories, custom repositories, or both to a Content View.

In the following example, all content is included in the published Content View. Optionally, you can create filters to control whether content is included or excluded from the published Content View.

Adding Repositories Using Web UI

1. Navigate to **Content** > **Content Views**, and then select the Content View you want to edit.

2. In the **Content View** pane, click the **Yum Content** tab, and then select **Repositories**.

3. In the **Add** tab, select the following repositories from the **Repository Selection** list:

   - Red Hat Enterprise Linux 7 Server Kickstart x86_64 7.5

   - Red Hat Enterprise Linux 7 Server RPMs x86_64 7Server

- Red Hat Satellite Tools 6.10 for RHEL 7 Server RPMs x86_64

4. Click **Add Repositories**.
   To see the list of repositories added to your Content View, click the **List/Remove** tab.

5.4. PUBLISHING A CONTENT VIEW

After you have created Content Views, you can publish them to the Library.

Publishing a Content View Using the Web UI

1. Click **Content → Content Views**.

2. Click the name of the Content View that you want to publish.

3. Click **Publish New Version** to display the **Publish New Version** page.
   This specifies the version and allows you to enter a comment to reflect any changes made to the Content View.

4. Click **Save** to publish the Content View to the library.
   You can monitor the publication progress on the screen that appears.

5. When the publishing process is complete, click **Promote**.
   The list of available promotion paths (Library → Dev → QA) displays.

6. Select the check box for the Dev environment, and then click **Promote Version**.

5.5. CREATING AND EDITING ACTIVATION KEYS

After you have successfully published a Content View, you need to create an Activation Key to associate with a Host Group.

Creating and Editing an Activation Key Using the Web UI

1. On the main menu, click **Content → Activation Keys → Create Activation Key**.

2. In the Name field, enter a name.

3. If applicable, clear the **Unlimited Hosts** check box. It is selected by default.
   You can use this field to control how many times a given activation key is used. For example, if you associate the key with a subscription that has a limited quantity, you can set the limit on the activation key to eliminate exceeding that quantity.

4. Select the check box for your environment.

5. In the **Content View** drop-down list, select the RHEL 7 x86_64 Content View, and then click **Save**.

6. On the **Activation Keys** page, click the **Subscriptions** tab, then click the **Add** tab to display the list of available subscriptions.

7. From the list of available subscriptions, select the subscriptions you want to add.

8. Click **Add Selected**.

If you do not plan to use Satellite Server to patch your systems, continue to Creating Provisioning Templates.

CHAPTER 6. PATCHING YOUR SYSTEMS

To patch your systems through Satellite Server, you need to register your systems first, and then choose to install Katello agent or use remote execution. Remote execution is enabled by default. This chapter covers both methods. Choose the option that suits your environment

Note that the Katello agent is deprecated and will be removed in a future Satellite version. Migrate your workloads to use the remote execution feature to update clients remotely. For more information, see Host Management Without Goferd and Katello Agent in the *Managing Hosts Guide*.

6.1. REGISTERING EXISTING HOSTS

This section explains how to register Red Hat Enterprise Linux Hosts and Atomic Hosts.

6.1.1. Registering an Existing Red Hat Enterprise Linux Host

1. On the host, clear any old data to ensure updated data is uploaded correctly.

   ```
   # subscription-manager clean
   ```

2. Install the katello-ca-consumer-latest RPM.

   ```
   # rpm -Uvh http://satellite.example.com/pub/katello-ca-consumer-latest.noarch.rpm
   ```

   This installs the proper certificates which allow communication between the client and the Satellite Server.

3. Register the host.

   ```
   # subscription-manager register --org="Default_Organization" \
   --activationkey=ak-Reg_To_Dev_EL7
   ```

6.1.2. Registering an Atomic Host

The following procedure explains how to register an Atomic Host with Subscription Manager.

1. Retrieve **katello-rhsm-consumer** from the Satellite Server:

   ```
   [root@atomic_client ~]# wget http://satellite.example.com/pub/katello-rhsm-consumer
   ```

2. Change the mode of **katello-rhsm-consumer** in order to make it executable:

   ```
   [root@atomic_client ~]# chmod +x katello-rhsm-consumer
   ```

3. Run **katello-rhsm-consumer**:

   ```
   [root@atomic_client ~]# ./katello-rhsm-consumer
   ```

4. Register with Red Hat Subscription Manager:

   ```
   [root@atomic_client ~]# subscription-manager register
   ```

NOTE

Because Atomic is functionally an appliance, we do not recommend that you try to install **katello-agent** on it.

6.2. PATCHING YOUR SYSTEM USING KATELLO AGENT

6.2.1. Installing Katello Agent

Note that the Katello agent is deprecated and will be removed in a future Satellite version. Migrate your workloads to use the remote execution feature to update clients remotely. For more information, see Host Management Without Goferd and Katello Agent in the *Managing Hosts Guide*.

On the content host, install the **katello-agent** RPM package.

```
# yum install katello-agent
```

The goferd service must be running so that the Red Hat Satellite Server or Capsule Server can provide information about errata that are applicable for content hosts.

Ensure **goferd** is running:

- On Red Hat Enterprise Linux 6, run the following command:

    ```
    # service goferd start
    ```

- On Red Hat Enterprise Linux 7, run the following command:

    ```
    # systemctl start goferd
    ```

6.2.2. Applying Errata to Content Hosts

Applying Errata to Content Hosts Using the Web UI

1. Go to **Hosts → Content Hosts** and click on **auth01.example.com**.

2. Select the **Errata** tab to view the list of errata applicable to the content host.

3. From the list, select an errata.

4. Click **Apply Selected**.

5. A confirmation message appears. Click **Apply**.

6. Verify that the errata has been applied to the client.

    ```
    [root@client ~]# yum list-sec
    ```

6.3. PATCHING YOUR SYSTEM USING REMOTE EXECUTION

6.3.1. Enabling Remote Execution on a Host

During Satellite Server installation, an internal Capsule Server is automatically installed along with a public SSH key. The internal Capsule Server loads the SSH key from **/usr/share/foreman-proxy/.ssh/id_rsa_foreman_proxy**. You can enable remote execution by distributing the public SSH key to a host.

On the Satellite Server, distribute the key to the host.

```
# ssh-copy-id -i ~foreman-proxy/.ssh/id_rsa_foreman_proxy.pub root@auth01.example.com
```

6.3.2. Installing Errata on Your Host

Satellite provides default job templates for executing remote jobs, one of which is for installing errata.

1. Go to **Hosts → All hosts** and click the check box next to the host's name.

2. Click **Select Action** and select **Schedule Remote Job** from the drop-down menu.

3. In the **Job category** drop-down menu, select **Katello**.

4. In the **Job template** drop-down menu, select **Install Errata-Katello SSH Default**

5. In the **errata** field, enter the errata ID.

6. Select **Execute now** and click **Submit**.

CHAPTER 7. FINALIZING THE PROVISIONING CONFIGURATION

7.1. CREATING CUSTOM PROVISIONING TEMPLATES

You can set up a provisioning template that you can use to provision multiple hosts, each having the same configuration.

Creating a Provisioning Template Using the Web UI

1. On the main menu, click **Hosts → Provisioning Templates**.

2. In the **Name** column, select **Kickstart Default iPXE** or **PXELinux** in the list of provisioning templates.
   This displays the configuration tabs where you can customize the template.

3. On the **Association** tab, select the appropriate operating system and click **Submit**.

4. In the **Name** column, select the appropriate provisioning template.
   If you use PXE-less discovery, you should select the **Discover Red Hat kexec**provisioning template.

5. On the **Association** tab, select the appropriate operating system and click **Submit**.

6. On the main menu, click **Hosts → Operating Systems** and select the appropriate operating system.
   This displays the configuration tabs where you can customize the operating system.

7. On the **Partition Table** tab, select **Kickstart Default**.

8. On the **Installation Media** tab, ensure Default_Organization/Library/Red_Hat_6_Server_Kickstart_x86_64_6Server is visible and selected.

9. On the **Templates** tab, select **Kickstart Default** from the provision drop-down list.

10. Select **Discovery Red Hat kexec**from the kexec drop-down list and click **Submit**.

Creating a Provisioning Template Using Hammer CLI

1. Create a provisioning template.

   ```
   $ hammer template create --name template_name --file path_to_template_file
   ```

   If you use PXE-less discovery, you should use the kexec template type.

2. Add the operating system.

   ```
   $ hammer template add-operatingsystem id
   ```

7.2. CREATING HOST GROUPS

You can create and configure a host group, which enables you to provision multiple hosts without the

need to specify the same properties for each host. You can associate an activation key with a host group, which allows the provisioned host to be registered to the Satellite Server and associated with the selected life cycle environment, Content View, subscriptions, and so on.

Creating Host Groups Using the Web UI

1. On the main menu, click **Configure → Host Groups**, and then click **New Host Group**.

2. On the **Host Group** tab, input the following values:

   - Name: RHEL6Server-x86_64

   - Lifecycle Environment: Default_Organization/DEV

   - Content View: RHEL_6_x86_64

   - Content Source: The FQDN of your Capsule (in this case the Satellite Server)

   - Puppet CA: The FQDN of your Satellite

   - Puppet Master: The FQDN of your Satellite

3. On the **Puppet Classes** tab, select the **motd puppet** module from the list of available classes.

4. On the **Network** tab, select the following values:

   - Domain: example.org

   - Subnet: Provisioning_Net

   - Realm: For the purposes of this example, leave this field blank. If you have configured realm management, for example IPA, select the appropriate realm here.

5. On the **Operating System** tab, select the following values:

   - Architecture: x86_64

   - Operating system: RHEL Server 6.5

   - Media: Default_Organization/Library Red Hat Server 6.5 x86_64. In this example, this is automatically populated. If this field is not automatically populated, it means the Organization and Location associations are not correctly configured.

   - Partition table: Kickstart default

   - Root password: changeme

6. On the **Locations** tab, select **Default_location**.

7. On the **Organizations** tab, select **Default_Organization**.

8. On the **Activation Keys** tab, select the appropriate key.

9. Click **Submit**.

CHAPTER 8. PROVISIONING HOSTS USING A PXE-LESS DISCOVERY IMAGE

Satellite provides two main approaches to provisioning hosts, PXE booting and boot disk provisioning. Boot disk provisioning, or PXE-less booting, provides host provisioning when PXE services are not available. This guide covers PXE-less host provisioning.

You can use the Discovery image ISO to boot either bare metal hardware or virtual systems and attach them to the Satellite Server. Both DHCP and static IP networking are supported. The Discovery Plug-ins are installed by default and are a part of the subscribed repository.

1. Verify that your Satellite Server has a compatible version of the discovery plug-ins.

   - Discovery plug-in - tfm-rubygem-foreman_discovery-5.0.0.4-1 or later

   - Discovery image - foreman-discovery-image-3.4.4-5 or later

   - Smart proxy plug-in - tfm-rubygem-smart_proxy_discovery-1.0.3-2 or later
     If you need to upgrade the plug-ins, you must reboot.

2. For physical systems, transfer the ISO image onto a USB stick or CDROM/DVD. For virtual systems, attach the ISO image to a virtual CD-ROM.

3. Boot the ISO image on your system.
   A text-based user interface appears.

4. Select either **Manual network setup** or **Discover with DHCP**, depending on your environment.

5. If the host has multiple NICs, choose the primary network interface and click **Select**.

6. If applicable, enter your network credentials and click **Next**.

7. Enter the full Satellite Server URL and select the **Server** connection type. Click **Next**.

8. Enter custom facts to trigger auto-provisioning rules and click **Confirm**.
   The host is discovered and sends a "discovery_kexec" fact to Satellite Server that prevents a reboot during provisioning.

9. In the web UI, go to **Hosts → Discovered Hosts** to view the host.

10. Click **Provision**, enter the information for your host and click **Submit**.