



Red Hat Satellite 6.5-beta

API Guide

A guide to using the Red Hat Satellite Representational State Transfer (REST) API

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Abstract

The Red Hat Satellite 6.4 Representational State Transfer (REST) API guide explains the concepts behind a REST API and provides example usage for various types of requests. This provides a basis for administrators and developers to write custom scripts and integrate Red Hat Satellite with third-party applications.

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CHAPTER 1. INTRODUCTION

Red Hat Satellite provides a Representational State Transfer (REST) API. The API provides software developers and system administrators with control over their Red Hat Satellite environment outside of the standard web interface. The REST API is useful for developers and administrators who aim to integrate the functionality of Red Hat Satellite with custom scripts or external applications that access the API over HTTP.

1.1. OVERVIEW OF THE RED HAT SATELLITE API

The benefits of using the REST API are:

- Broad client support — any programming language, framework, or system with support for HTTP protocol can use the API.
- Self-descriptive — client applications require minimal knowledge of the Red Hat Satellite infrastructure because a user discovers many details at runtime.
- Resource-based model — the resource-based REST model provides a natural way to manage a virtualization platform.

You can use the REST API to perform the following tasks:

- Integrate with enterprise IT systems.
- Integrate with third-party applications.
- Perform automated maintenance or error checking tasks.
- Automate repetitive tasks with scripts.

1.2. SATELLITE API COMPARED TO HAMMER CLI TOOL

For many tasks, you can use both Hammer and Satellite API. You can use Hammer as a human-friendly interface to Satellite API. For example, to test responses to API calls before applying them in a script, use the `--debug` option to inspect API calls that Hammer issues: **hammer --debug organization list**.

In the background, each Hammer command first establishes a binding to the API, then sends a request. This can have performance implications when executing a large number of Hammer commands in sequence. In contrast, a script communicating directly with the API. Therefore, you must manually update scripts that use API, while Hammer automatically reflects changes in the API. For more information, see the [Hammer CLI Guide](#).

CHAPTER 2. API REFERENCE

The full API reference is available on your Satellite Server at <https://satellite6.example.com/apidoc/v2.html>. Be aware that even though versions 1 and 2 of the Satellite 6 API are available, Red Hat only supports version 2.

2.1. UNDERSTANDING THE API SYNTAX

The built-in API reference shows the API route, or path, preceded by an HTTP verb:

```
HTTP_VERB API_ROUTE
```

To work with the API, construct a command using the **curl** command syntax and the API route from the reference document:

```
$ curl --request HTTP_VERB \
  --insecure \
  --user sat_username:sat_password \
  --data @file.json \
  --header "Accept:application/json,version=2" \
  --header"Content-Type:application/json" \
  API_ROUTE \
  | python -m json.tool
```

- 1 To use **curl** for the API call, specify an HTTP verb with the **--request** option. For example, **--request POST**.
- 2 Add the **--insecure** option to skip SSL peer certificate verification check.
- 3 Provide user credentials with the **--user** option.
- 4 For **POST** and **PUT** requests, use the **--data** option to past JSON formatted data. For more information, see [Section 4.1.1, “Passing JSON Data to the API Request”](#).
- 5 6 When passing the JSON data with the **--data** option, you must specify the following headers with the **--header** option. For more information, see [Section 4.1.1, “Passing JSON Data to the API Request”](#).
- 7 Use the API route in the following format: **https://satellite6.example.com/katello/api/activation_keys**. In Satellite 6, version 2 of the API is the default. Therefore it is not necessary to use **v2** in the URL for API calls.
- 8 Pipe the output through the Python **json.tool** module to make the results section easier to read.

2.1.1. Using the GET HTTP Verb

Use the GET HTTP verb to get data from the API about an existing entry or resource.

Example

This example requests the amount of Satellite hosts:

Example request:

```
$ curl --request GET --insecure --user sat_username:sat_password \
https://satellite6.example.com/api/hosts | python -m json.tool
```

Example response:

```
{
  "total": 2,
  "subtotal": 2,
  "page": 1,
  "per_page": 20,
  "search": null,
  "sort": {
    "by": null,
    "order": null
  },
  "results":
  output truncated
```

The response from the API indicates that there are two results in total, this is the first page of the results, and the maximum results per page is set to 20. For more information, see [Section 2.2, “Understanding the JSON Response Format”](#).

2.1.2. Using the POST HTTP Verb

Use the POST HTTP verb to submit data to the API to create an entry or resource. You must submit the data in JSON format. For more information, see [Section 4.1.1, “Passing JSON Data to the API Request”](#).

Example

This example creates an activation key.

1. Create a test file, for example, **activation-key.json**, with the following content:

```
{"organization_id":1, "name":"TestKey", "description":"Just for testing"}
```

2. Create an activation key by applying the data in the **activation-key.json** file:

Example request:

```
$ curl --header "Accept:application/json,version=2" \
--header "Content-Type:application/json" --request POST \
--user sat_username:sat_password --insecure \
--data @activation-key.json \
https://satellite6.example.com/katello/api/activation_keys \
| python -m json.tool
```

Example response:

```
{
  "id": 2,
  "name": "TestKey",
  "description": "Just for testing",
```

```

    "unlimited_hosts": true,
    "auto_attach": true,
    "content_view_id": null,
    "environment_id": null,
    "usage_count": 0,
    "user_id": 3,
    "max_hosts": null,
    "release_version": null,
    "service_level": null,
    "content_overrides": [
    ],
    "organization": {
      "name": "Default Organization",
      "label": "Default_Organization",
      "id": 1
    },
    "created_at": "2017-02-16 12:37:47 UTC",
    "updated_at": "2017-02-16 12:37:48 UTC",
    "content_view": null,
    "environment": null,
    "products": null,
    "host_collections": [
    ],
    "permissions": {
      "view_activation_keys": true,
      "edit_activation_keys": true,
      "destroy_activation_keys": true
    }
  }
}

```

3. Verify that the new activation key is present. In the Satellite web UI, navigate to **Content** > **Activation keys** to view your activation keys.

2.1.3. Using the PUT HTTP Verb

Use the PUT HTTP verb to change an existing value or append to an existing resource. You must submit the data in JSON format. For more information, see [Section 4.1.1, “Passing JSON Data to the API Request”](#).

Example

This example updates the **TestKey** activation key created in the previous example.

1. Edit the **activation-key.json** file created previously as follows:

```

{"organization_id":1, "name":"TestKey", "description":"Just for
testing","max_hosts":"10" }

```

2. Apply the changes in the JSON file:
Example request:

```

$ curl --header "Accept:application/json,version=2" \
--header "Content-Type:application/json" --request PUT \

```

```
--user sat_username:sat_password --insecure \
--data @activation-key.json \
https://satellite6.example.com/katello/api/activation_keys/2 \
| python -m json.tool
```

Example response:

```
{
  "id": 2,
  "name": "TestKey",
  "description": "Just for testing",
  "unlimited_hosts": false,
  "auto_attach": true,
  "content_view_id": null,
  "environment_id": null,
  "usage_count": 0,
  "user_id": 3,
  "max_hosts": 10,
  "release_version": null,
  "service_level": null,
  "content_overrides": [

  ],
  "organization": {
    "name": "Default Organization",
    "label": "Default_Organization",
    "id": 1
  },
  "created_at": "2017-02-16 12:37:47 UTC",
  "updated_at": "2017-02-16 12:46:17 UTC",
  "content_view": null,
  "environment": null,
  "products": null,
  "host_collections": [

  ],
  "permissions": {
    "view_activation_keys": true,
    "edit_activation_keys": true,
    "destroy_activation_keys": true
  }
}
```

3. In the Satellite web UI, verify the changes by navigating to **Content > Activation keys**.

2.1.4. Using the DELETE HTTP Verb

To delete a resource, use the DELETE verb with an API route that includes the ID of the resource you want to delete.

Example

This example deletes the **TestKey** activation key which ID is 2:

Example request:

■

```
$ curl --header "Accept:application/json,version=2" \
--header "Content-Type:application/json" --request DELETE \
--user sat_username:sat_password --insecure \
https://satellite6.example.com/katello/api/activation_keys/2 \
| python -m json.tool
```

Example response:

```
output omitted
  "started_at": "2017-02-16 12:58:17 UTC",
  "ended_at": "2017-02-16 12:58:18 UTC",
  "state": "stopped",
  "result": "success",
  "progress": 1.0,
  "input": {
    "activation_key": {
      "id": 2,
      "name": "TestKey"
    }
  }
output truncated
```

2.1.5. Relating API Error Messages to the API Reference

The API uses a RAILS format to indicate an error:

```
Nested_Resource.Attribute_Name
```

This translates to the following format used in the API reference:

```
Resource[Nested_Resource_attributes][Attribute_Name_id]
```

2.2. UNDERSTANDING THE JSON RESPONSE FORMAT

Calls to the API return results in JSON format. The API call returns the result for a single-option response or for responses collections.

JSON Response Format for Single Objects

You can use single-object JSON responses to work with a single object. API requests to a single object require the object's unique identifier **:id**.

This is an example of the format for a single-object request for the Satellite domain which ID is 23:

Example request:

```
$ curl --request GET --insecure --user sat_username:sat_password \
https://satellite6.example.com/api/domains/23 | python -m json.tool
```

Example response:

```
{
  "id": 23,
  "name": "qa.lab.example.com",
  "fullname": "QA",
```

```

    "dns_id": 10,
    "created_at": "2013-08-13T09:02:31Z",
    "updated_at": "2013-08-13T09:02:31Z"
  }

```

JSON Response Format for Collections

Collections are a list of objects such as hosts and domains. The format for a collection JSON response consists of a metadata fields section and a results section.

This is an example of the format for a collection request for a list of Satellite domains:

Example request:

```

$ curl --request GET --insecure --user sat_username:sat_password \
https://satellite6.example.com/api/domains | python -m json.tool

```

Example response:

```

{
  "total": 3,
  "subtotal": 3,
  "page": 1,
  "per_page": 20,
  "search": null,
  "sort": {
    "by": null,
    "order": null
  },
  "results": [
    {
      "id": 23,
      "name": "qa.lab.example.com",
      "fullname": "QA",
      "dns_id": 10,
      "created_at": "2013-08-13T09:02:31Z",
      "updated_at": "2013-08-13T09:02:31Z"
    },
    {
      "id": 25,
      "name": "sat.lab.example.com",
      "fullname": "SATLAB",
      "dns_id": 8,
      "created_at": "2013-08-13T08:32:48Z",
      "updated_at": "2013-08-14T07:04:03Z"
    },
    {
      "id": 32,
      "name": "hr.lab.example.com",
      "fullname": "HR",
      "dns_id": 8,
      "created_at": "2013-08-16T08:32:48Z",
      "updated_at": "2013-08-16T07:04:03Z"
    }
  ]
}

```

-

The response metadata fields

API response uses the following metadata fields:

- **total** — The total number of objects without any search parameters.
- **subtotal** — The number of objects returned with the given search parameters. If there is no search, then subtotal is equal to total.
- **page** — The page number.
- **per_page** — The maximum number of objects returned per page.
- **limit** — The specified number of objects to return in a collection response.
- **offset** — The number of objects skipped before returning a collection.
- **search** — The search string based on **scoped_scoped** syntax.
- **sort**
 - **by** — Specifies by what field the API sorts the collection.
 - **order** — The sort order, either ASC for ascending or DESC for descending.
- **results** — The collection of objects.

CHAPTER 3. AUTHENTICATING API CALLS

Interaction with the Satellite API requires SSL authentication with Satellite Server CA certificate and authentication with valid Satellite user credentials. This chapter outlines the authenticating methods you can use.

3.1. SSL AUTHENTICATION OVERVIEW

Red Hat Satellite uses HTTPS, which provides a degree of encryption and identity verification when communicating with a Red Hat Satellite Server. Satellite 6.5-beta does not support non-SSL communications.

Each Red Hat Satellite Server uses a self-signed certificate. This certificate acts as both the server certificate to verify the encryption key and the certificate authority (CA) to trust the identity of Satellite Server.

3.1.1. Configuring SSL Authentication

Use the following procedure to configure an SSL authentication for the API requests to Satellite Server.

Procedure

1. Obtain a certificate from the Satellite Server with which you want to communicate using one of the following options:

- If you execute the command from a remote server, obtain a certificate using SSH:

```
$ scp root@satellite6.example.com:/var/www/html/pub/katello-server-ca.crt ./
```

- If you execute the command directly on the Satellite Server, copy the certificate to the current directory:

```
$ cp /var/www/html/pub/katello-server-ca.crt ./
```

2. Use the API request with the `--cacert katello-server-ca.crt` option to verify the identity of the Satellite Server:

```
$ curl --request GET \
  --user sat_username:sat_password \
  --header "Accept:application/json" \
  --cacert katello-server-ca.crt \
  https://satellite6.example.com/katello/api/organizations \
  | python -m json.tool
```

3. Create a Network Security Services (NSS) database to store the `katello-server-ca.crt` certificate:

```
$ certutil -N -d sql:$HOME/.pki/nssdb
```

4. Permanently include the certificate in the NSS database:

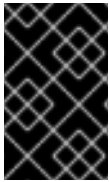
```
$ certutil -d sql:$HOME/.pki/nssdb -A -t TC -n "Red Hat Satellite" \
-i katello-server-ca.crt
```

5. Verify that the certificate is present in the NSS database by entering the API request without the `--cacert` option:

```
$ curl --request GET \
--user sat_username:sat_password \
https://satellite6.example.com/api/v2/hosts
```

3.2. HTTP AUTHENTICATION OVERVIEW

All requests to the Satellite API require a valid Satellite user name and password. The API uses HTTP Basic Authentication to encode these credentials and add to the **Authorization** header. For more information about Basic Authentication, see [RFC 2617 HTTP Authentication: Basic and Digest Access Authentication](#). If a request does not include an appropriate **Authorization** header, the API returns a **401 Authorization Required** error



IMPORTANT

Basic authentication involves potentially sensitive information, for example, it sends passwords as plain text. The REST API requires HTTPS for transport level encryption of plain text requests.

Some base64 libraries break encoded credentials into multiple lines and terminate each line with a newline character. This invalidates the header and causes a faulty request. The Authorization header requires that the encoded credentials be on a single line within the header.

3.3. OAUTH AUTHENTICATION OVERVIEW

As an alternative to basic authentication, you can use limited OAuth 1.0 authentication. This is sometimes referred to as 1-legged OAuth in version 1.0a of the protocol.

To view OAuth settings, in the Satellite web UI, navigate to **Administer > Settings > Authentication**. The **OAuth consumer key** is the token to be used by all OAuth clients.

Satellite stores OAuth settings in the `/etc/foreman/settings.yaml` file. Use the **satellite-installer** script to configure these settings, because Satellite overwrites any manual changes to this file when upgrading.

3.3.1. Configuring OAuth

To change the OAuth settings, enter the **satellite-installer** with the required options. Enter the following command to list all the OAuth related installer options:

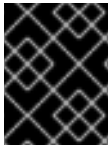
```
# satellite-installer --full-help | grep oauth
```

Enabling OAuth mapping

By default, Satellite authorizes all OAuth API requests as the built-in anonymous API administrator account. Therefore, API responses include all Satellite data. However, you can also specify the Foreman user that makes the request and restrict access to data to that user.

To enable OAuth user mapping, enter the following command:

```
# satellite-installer --foreman-oauth-map-users true
```



IMPORTANT

Satellite does not sign the header in an OAuth request. Anyone with a valid consumer key can impersonate any Foreman user.

3.3.2. OAuth Request Format

Use an OAuth client library to construct all OAuth parameters. Every OAuth API request requires the **FOREMAN-USER** header with the login of an existing Foreman user and the **Authorization** header in the following format:

```
--header 'FOREMAN-USER: sat_username' \  
--header 'Authorization: OAuth  
oauth_version="1.0",oauth_consumer_key="secretkey",oauth_signature_method=  
"hmac-  
sha1",oauth_timestamp=1321473112,oauth_signature=I18hR8/ogj/XVu0qMPB9qNjSy  
6E='
```

Example

This example lists architectures using OAuth for authentication. The request uses a *sat_username* username in the **FOREMAN-USER** header. With the **--foreman-oauth-map-users** set to **true**, the response includes only architectures that the user has access to view. The signature reflects every parameter, HTTP method, and URI change.

Example request:

```
$ curl 'https://satellite6.example.com/api/architectures' \  
--header 'Content-Type: application/json' \  
--header 'Accept: application/json,version=2' \  
--header 'FOREMAN-USER: sat_username' \  
--header 'Authorization: OAuth  
oauth_version="1.0",oauth_consumer_key="secretkey",oauth_signature_method=  
"hmac-  
sha1",oauth_timestamp=1321473112,oauth_signature=I18hR8/ogj/XVu0qMPB9qNjSy  
6E='
```

CHAPTER 4. API REQUESTS IN DIFFERENT LANGUAGES

This chapter outlines sending API requests to Red Hat Satellite with `curl`, Ruby, and Python and provides examples.

4.1. API REQUESTS WITH CURL

This section outlines how to use `curl` with the Satellite API to perform various tasks.

Red Hat Satellite requires the use of HTTPS, and by default a certificate for host identification. If you have not added the Satellite Server certificate as described in [Section 3.1, “SSL Authentication Overview”](#), then you can use the `--insecure` option to bypass certificate checks.

For user authentication, you can use the `--user` option to provide Satellite user credentials in the form `--user username:password` or, if you do not include the password, the command prompts you to enter it. To reduce security risks, do not include the password as part of the command, because it then becomes part of your shell history. Examples in this section include the password only for the sake of simplicity.

Be aware that if you use the `--silent` option, `curl` does not display a progress meter or any error messages.

Examples in this chapter use the Python `json.tool` module to format the output.

4.1.1. Passing JSON Data to the API Request

You can pass data to Satellite Server with the API request. The data must be in JSON format. When specifying JSON data with the `--data` option, you must set the following HTTP headers with the `--header` option:

```
--header "Accept:application/json,version=2" \  
--header "Content-Type:application/json"
```

Use one of the following options to include data with the `--data` option:

1. The quoted JSON formatted data enclosed in curly braces `{}`. For example:

```
--data {"organization_id":1, "name":"TestKey", "description":"Just  
for testing"}
```

2. The unquoted JSON formatted data enclosed in a file and specified by the `@` sign and the filename. For example:

```
--data @_file_.json
```

Using external files for JSON formatted data has the following advantages:

- You can use your favorite text editor.
- You can use syntax checker to find and avoid mistakes.
- You can use tools to check the validity of JSON data or to reformat it.

Validating a JSON file

Use the `json_verify` tool to check the validity of a JSON file:

```
$ json_verify < test_file.json
```

4.1.2. Retrieving a List of Resources

This section outlines how to use `curl` with the Satellite 6 API to request information from your Satellite deployment. These examples include both requests and responses. Expect different results for each deployment.

Listing Users

This example is a basic request that returns a list of Satellite resources, Satellite users in this case. Such requests return a list of data wrapped in metadata, while other request types only return the actual object.

Example request:

```
$ curl --request GET --insecure --user sat_username:sat_password \
https://satellite6.example.com/api/users | python -m json.tool
```

Example response:

```
{
  "page": 1,
  "per_page": 20,
  "results": [
    {
      "admin": false,
      "auth_source_id": 1,
      "auth_source_name": "Internal",
      "created_at": "2018-09-21 08:59:22 UTC",
      "default_location": null,
      "default_organization": null,
      "description": "",
      "effective_admin": false,
      "firstname": "",
      "id": 5,
      "last_login_on": "2018-09-21 09:03:25 UTC",
      "lastname": "",
      "locale": null,
      "locations": [],
      "login": "test",
      "mail": "example@domain.com",
      "organizations": [
        {
          "id": 1,
          "name": "Default Organization"
        }
      ],
      "ssh_keys": [],
      "timezone": null,
      "updated_at": "2018-09-21 09:04:45 UTC"
    },
    {
      "admin": true,
```

```

        "auth_source_id": 1,
        "auth_source_name": "Internal",
        "created_at": "2018-09-20 07:09:41 UTC",
        "default_location": null,
        "default_organization": {
            "description": null,
            "id": 1,
            "name": "Default Organization",
            "title": "Default Organization"
        },
        "description": "",
        "effective_admin": true,
        "firstname": "Admin",
        "id": 4,
        "last_login_on": "2018-12-07 07:31:09 UTC",
        "lastname": "User",
        "locale": null,
        "locations": [
            {
                "id": 2,
                "name": "Default Location"
            }
        ],
        "login": "admin",
        "mail": "root@example.com",
        "organizations": [
            {
                "id": 1,
                "name": "Default Organization"
            }
        ],
        "ssh_keys": [],
        "timezone": null,
        "updated_at": "2018-11-14 08:19:46 UTC"
    }
],
"search": null,
"sort": {
    "by": null,
    "order": null
},
"subtotal": 2,
"total": 2
}

```

4.1.3. Creating and Modifying Resources

This section outlines how to use **curl** with the Satellite 6 API to manipulate resources on the Satellite Server. These API calls require that you pass data in **json** format with the API call. For more information, see [Section 4.1.1, “Passing JSON Data to the API Request”](#).

Creating a User

This example creates a user using **--data** option to provide required information.

Example request:

```
$ curl --header "Accept:application/json,version=2" \
--header "Content-Type:application/json" --request POST \
--user sat_username:sat_password --insecure \
--data "{\"firstname\":\"Test
Name\", \"mail\":\"test@example.com\", \"login\":\"test_user\", \"password\":
\"password123\", \"auth_source_id\":1}" \
https://satellite6.example.com/api/users | python -m json.tool
```

Modifying a User

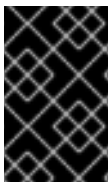
This example modifies first name and login of the `test_user` that was created in [Creating a User](#).

Example request:

```
$ curl --header "Accept:application/json,version=2" \
--header "Content-Type:application/json" --request PUT \
--user sat_username:sat_password --insecure \
--data "{\"firstname\":\"New Test
Name\", \"mail\":\"test@example.com\", \"login\":\"new_test_user\", \"password\":
\"password123\", \"auth_source_id\":1}" \
https://satellite6.example.com/api/users/8 | python -m json.tool
```

4.2. API REQUESTS WITH RUBY

This section outlines how to use Ruby with the Satellite API to perform various tasks.



IMPORTANT

These are example scripts and commands. Ensure you review these scripts carefully before use, and replace any variables, user names, passwords, and other information to suit your own deployment.

4.2.1. Creating Objects Using Ruby

This script connects to the Red Hat Satellite 6 API and creates an organization, and then creates three environments in the organization. If the organization already exists, the script uses that organization. If any of the environments already exist in the organization, the script raises an error and quits.

```
#!/usr/bin/ruby

require 'rest-client'
require 'json'

url = 'https://satellite6.example.com/api/v2/'
katello_url = "#{url}/katello/api/v2/"

$username = 'admin'
$password = 'changeme'

org_name = "MyOrg"
environments = [ "Development", "Testing", "Production" ]

# Performs a GET using the passed URL location
def get_json(location)
```

```

response = RestClient::Request.new(
  :method => :get,
  :url => location,
  :user => $username,
  :password => $password,
  :headers => { :accept => :json,
  :content_type => :json }
).execute
JSON.parse(response.to_str)
end

# Performs a POST and passes the data to the URL location
def post_json(location, json_data)
  response = RestClient::Request.new(
    :method => :post,
    :url => location,
    :user => $username,
    :password => $password,
    :headers => { :accept => :json,
    :content_type => :json},
    :payload => json_data
  ).execute
  JSON.parse(response.to_str)
end

# Creates a hash with ids mapping to names for an array of records
def id_name_map(records)
  records.inject({}) do |map, record|
    map.update(record['id'] => record['name'])
  end
end

# Get list of existing organizations
orgs = get_json("#{katello_url}/organizations")
org_list = id_name_map(orgs['results'])

if !org_list.has_value?(org_name)
  # If our organization is not found, create it
  puts "Creating organization: \t#{org_name}"
  org_id = post_json("#{katello_url}/organizations",
  JSON.generate({"name"=> org_name}))["id"]
else
  # Our organization exists, so let's grab it
  org_id = org_list.key(org_name)
  puts "Organization \"#{org_name}\" exists"
end

# Get list of organization's lifecycle environments
envs = get_json("#{katello_url}/organizations/#{org_id}/environments")
env_list = id_name_map(envs['results'])
prior_env_id = env_list.key("Library")

# Exit the script if at least one life cycle environment already exists
environments.each do |e|
  if env_list.has_value?(e)
    puts "ERROR: One of the Environments is not unique to organization"
  end
end

```

```

        exit
      end
    end
  end

  # Create life cycle environments
  environments.each do |environment|
    puts "Creating environment: \t#{environment}"
    prior_env_id = post_json("#{katello_url}/organizations/#
{org_id}/environments", JSON.generate({"name" => environment,
"organization_id" => org_id, "prior_id" => prior_env_id}))["id"]
  end
end

```

4.2.2. Using Apipie Bindings with Ruby

Apipie bindings are the Ruby bindings for apipie documented API calls. They fetch and cache the API definition from Satellite and then generate API calls on demand. This example creates an organization, and then creates three environments in the organization. If the organization already exists, the script uses that organization. If any of the environments already exist in the organization, the script raises an error and quits.

```

#!/usr/bin/tfm-ruby

require 'apipie-bindings'

org_name = "MyOrg"
environments = [ "Development", "Testing", "Production" ]

# Create an instance of apipie bindings
@api = ApipieBindings::API.new({
  :uri => 'https://satellite6.example.com/',
  :username => 'admin',
  :password => 'changeme',
  :api_version => 2
})

# Performs an API call with default options
def call_api(resource_name, action_name, params = {})
  http_headers = {}
  apipie_options = { :skip_validation => true }
  @api.resource(resource_name).call(action_name, params, http_headers,
apipie_options)
end

# Creates a hash with IDs mapping to names for an array of records
def id_name_map(records)
  records.inject({}) do |map, record|
    map.update(record['id'] => record['name'])
  end
end

# Get list of existing organizations
orgs = call_api(:organizations, :index)
org_list = id_name_map(orgs['results'])

if !org_list.has_value?(org_name)

```

```

# If our organization is not found, create it
puts "Creating organization: \t#{org_name}"
org_id = call_api(:organizations, :create, {'organization' => { :name =>
org_name }})['id']
else
# Our organization exists, so let's grab it
org_id = org_list.key(org_name)
puts "Organization \"#{org_name}\" exists"
end

# Get list of organization's life cycle environments
envs = call_api(:lifecycle_environments, :index, {'organization_id' =>
org_id})
env_list = id_name_map(envs['results'])
prior_env_id = env_list.key("Library")

# Exit the script if at least one life cycle environment already exists
environments.each do |e|
if env_list.has_value?(e)
puts "ERROR: One of the Environments is not unique to organization"
exit
end
end

# Create life cycle environments
environments.each do |environment|
puts "Creating environment: \t#{environment}"
prior_env_id = call_api(:lifecycle_environments, :create, {"name" =>
environment, "organization_id" => org_id, "prior_id" => prior_env_id })
['id']
end

```

4.3. API REQUESTS WITH PYTHON

This section outlines how to use Python with the Satellite API to perform various tasks.



IMPORTANT

These are example scripts and commands. Ensure you review these scripts carefully before use, and replace any variables, user names, passwords, and other information to suit your own deployment.

Example scripts in this section do not use SSL verification for interacting with the REST API.

4.3.1. Creating Objects Using Python

This script connects to the Red Hat Satellite 6 API and creates an organization, and then creates three environments in the organization. If the organization already exists, the script uses that organization. If any of the environments already exist in the organization, the script raises an error and quits.

```

#!/usr/bin/python

import json
import sys

```



```

try:
    import requests
except ImportError:
    print "Please install the python-requests module."
    sys.exit(-1)

# URL to your Satellite 6 server
URL = "https://satellite6.example.com"
# URL for the API to your deployed Satellite 6 server
SAT_API = "%s/katello/api/v2/" % URL
# Katello-specific API
KATELLO_API = "%s/katello/api/" % URL
POST_HEADERS = {'content-type': 'application/json'}
# Default credentials to login to Satellite 6
USERNAME = "admin"
PASSWORD = "changeme"
# Ignore SSL for now
SSL_VERIFY = False

# Name of the organization to be either created or used
ORG_NAME = "MyOrg"
# Name for life cycle environments to be either created or used
ENVIRONMENTS = ["Development", "Testing", "Production"]

def get_json(location):
    """
    Performs a GET using the passed URL location
    """

    r = requests.get(location, auth=(USERNAME, PASSWORD),
verify=SSL_VERIFY)

    return r.json()

def post_json(location, json_data):
    """
    Performs a POST and passes the data to the URL location
    """

    result = requests.post(
        location,
        data=json_data,
        auth=(USERNAME, PASSWORD),
        verify=SSL_VERIFY,
        headers=POST_HEADERS)

    return result.json()

def main():
    """
    Main routine that creates or re-uses an organization and
    life cycle environments. If life cycle environments already

```

```

exist, exit out.
"""

# Check if our organization already exists
org = get_json(SAT_API + "organizations/" + ORG_NAME)

# If our organization is not found, create it
if org.get('error', None):
    org_id = post_json(
        SAT_API + "organizations/",
        json.dumps({"name": ORG_NAME}))["id"]
    print "Creating organization: \t" + ORG_NAME
else:
    # Our organization exists, so let's grab it
    org_id = org['id']
    print "Organization '%s' exists." % ORG_NAME

# Now, let's fetch all available life cycle environments for this
org...
envs = get_json(
    SAT_API + "organizations/" + str(org_id) + "/environments/")

# ... and add them to a dictionary, with respective 'Prior'
environment
prior_env_id = 0
env_list = {}
for env in envs['results']:
    env_list[env['id']] = env['name']
    prior_env_id = env['id'] if env['name'] == "Library" else
prior_env_id

# Exit the script if at least one life cycle environment already
exists
if all(environment in env_list.values() for environment in
ENVIRONMENTS):
    print "ERROR: One of the Environments is not unique to
organization"
    sys.exit(-1)

# Create life cycle environments
for environment in ENVIRONMENTS:
    new_env_id = post_json(
        SAT_API + "organizations/" + str(org_id) + "/environments/",
        json.dumps(
            {
                "name": environment,
                "organization_id": org_id,
                "prior": prior_env_id}
        ))["id"]

    print "Creating environment: \t" + environment
    prior_env_id = new_env_id

if __name__ == "__main__":
    main()

```

4.3.2. Requesting information from the API using Python

This is an example script that uses Python for various API requests.

```
#!/usr/bin/python
import json
import sys
try:
    import requests
except ImportError:
    print "Please install the python-requests module."
    sys.exit(-1)

SAT_API = 'https://satellite6.example.com/api/v2/'
USERNAME = "admin"
PASSWORD = "password"
SSL_VERIFY = False # Ignore SSL for now

def get_json(url):
    # Performs a GET using the passed URL location
    r = requests.get(url, auth=(USERNAME, PASSWORD), verify=SSL_VERIFY)
    return r.json()

def get_results(url):
    jsn = get_json(url)
    if jsn.get('error'):
        print "Error: " + jsn['error']['message']
    else:
        if jsn.get('results'):
            return jsn['results']
        elif 'results' not in jsn:
            return jsn
        else:
            print "No results found"
    return None

def display_all_results(url):
    results = get_results(url)
    if results:
        print json.dumps(results, indent=4, sort_keys=True)

def display_info_for_hosts(url):
    hosts = get_results(url)
    if hosts:
        for host in hosts:
            print "ID: %-10d Name: %-30s IP: %-20s OS: %-30s" %
(host['id'], host['name'], host['ip'], host['operatingsystem_name'])

def main():
    host = 'satellite6.example.com'
    print "Displaying all info for host %s ..." % host
    display_all_results(SAT_API + 'hosts/' + host)

    print "Displaying all facts for host %s ..." % host
    display_all_results(SAT_API + 'hosts/%s/facts' % host)
```

```
    host_pattern = 'example'
    print "Displaying basic info for hosts matching pattern '%s'..." %
host_pattern
    display_info_for_hosts(SAT_API + 'hosts?search=' + host_pattern)

    environment = 'production'
    print "Displaying basic info for hosts in environment %s..." %
environment
    display_info_for_hosts(SAT_API + 'hosts?search=environment=' +
environment)

    model = 'RHEV Hypervisor'
    print "Displaying basic info for hosts with model name %s..." % model
    display_info_for_hosts(SAT_API + 'hosts?search=model="' + model + '"')

if __name__ == "__main__":
    main()
```

CHAPTER 5. USING THE RED HAT SATELLITE API

This chapter provides a range of examples of how to use the Red Hat Satellite API to perform different tasks. You can use the API on Satellite Server via HTTPS on port 443, or on Capsule Server via HTTPS on port 8443.

You can address these different port requirements within the script itself. For example, in Ruby, you can specify the Satellite and Capsule URLs as follows:

```
url = 'https://satellite6.example.com/api/v2/'
capsule_url = 'https://capsule.example.com:8443/api/v2/'
katello_url = 'https://satellite6.example.com/katello/api/v2/'
```

For the host that is subscribed to Satellite Server or Capsule Server, you can determine the correct port required to access the API from the `/etc/rhsm/rhsm.conf` file, in the port entry of the `[server]` section. You can use these values to fully automate your scripts, removing any need to verify which ports to use.

This chapter uses `curl` for sending API requests. For more information, see [Section 4.1, “API Requests with curl”](#).

Examples in this chapter use the Python `json.tool` module to format the output.

5.1. WORKING WITH HOSTS

Listing Hosts

This example returns a list of Satellite hosts.

Example request:

```
$ curl -request GET --insecure --user sat_username:sat_password \
https://satellite6.example.com/api/v2/hosts | python -m json.tool
```

Example response:

```
{
  ...
  "total" => 2,
  "subtotal" => 2,
  "page" => 1,
  "per_page" => 1000,
  "search" => nil,
  "sort" => {
    "by" => nil,
    "order" => nil
  },
  "results" => [
    ...
  ]
}
```

Requesting Information for a Host

This request returns information for the host `satellite6.example.com`.

Example request:

```
$ curl --request GET --insecure --user sat_username:sat_password \  
https://satellite6.example.com/api/v2/hosts/satellite6.example.com \  
| python -m json.tool
```

Example response:

```
{  
  "all_puppetclasses": [],  
  "architecture_id": 1,  
  "architecture_name": "x86_64",  
  "build": false,  
  "capabilities": [  
    "build"  
  ],  
  "certname": "satellite6.example.com",  
  "comment": null,  
  "compute_profile_id": null,  
  ...  
}
```

Listing Host Facts

This request returns all facts for the host `satellite6.example.com`.

Example request:

```
$ curl --request GET --insecure --user sat_username:sat_password \  
https://satellite6.example.com/api/v2/hosts/satellite6.example.com/facts \  
| python -m json.tool
```

Example response:

```
{  
  ...  
  "results": {  
    "satellite6.example.com": {  
      "augeasversion": "1.0.0",  
      "bios_release_date": "01/01/2007",  
      "bios_version": "0.5.1",  
      "blockdevice_sr0_size": "1073741312",  
      "facterversion": "1.7.6",  
      ...  
    }  
  }  
}
```

Searching for Hosts with Matching Patterns

This query returns all hosts that match the pattern "example".

Example request:

```
$ curl --request GET --insecure --user sat_username:sat_password \  
https://satellite6.example.com/api/v2/hosts?search=example \  
| python -m json.tool
```

Example response:

```
{
  ...
  "results": [
    {
      "name": "satellite6.example.com",
      ...
    }
  ],
  "search": "example",
  ...
}
```

Searching for Hosts in an Environment

This query returns all hosts in the **production** environment.

Example request:

```
$ curl --request GET --insecure --user sat_username:sat_password \
https://satellite6.example.com/api/v2/hosts?search=environment=production \
| python -m json.tool
```

Example response:

```
{
  ...
  "results": [
    {
      "environment_name": "production",
      "name": "satellite6.example.com",
      ...
    }
  ],
  "search": "environment=production",
  ...
}
```

Searching for Hosts with a Specific Fact Value

This query returns all hosts with a model name **RHEV Hypervisor**.

Example request:

```
$ curl --request GET --insecure --user sat_username:sat_password \
https://satellite6.example.com/api/v2/hosts?
search=model=\"RHEV+Hypervisor\" \
| python -m json.tool
```

Example response:

```
{
```

```

...
"results": [
  {
    "model_id": 1,
    "model_name": "RHEV Hypervisor",
    "name": "satellite6.example.com",
    ...
  }
],
"search": "model=\"RHEV Hypervisor\"",
...
}

```

Deleting a Host

This request deletes a host with a name *host1.example.com*.

Example request:

```

curl --request DELETE --insecure --user sat_username:sat_password \
https://satellite6.example.com/api/v2/hosts/host1.example.com \
| python -m json.tool

```

5.2. WORKING WITH LIFE CYCLE ENVIRONMENTS

Satellite divides application life cycles into life cycle environments, which represent each stage of the application life cycle. Life cycle environments are linked to from an environment path. To create linked life cycle environments with the API, use the **prior_id** parameter.

You can find the built-in API reference for life cycle environments at https://satellite6.example.com/apidoc/v2/lifecycle_environments.html. The API routes include `/katello/api/environments` and `/katello/api/organizations/:organization_id/environments`.

Listing Life Cycle Environments

Use this API call to list all the current life cycle environments on your Satellite for the default organization with ID **1**.

Example request:

```

$ curl --header "Accept:application/json,version=2" \
--header "Content-Type:application/json" \
--request GET --user sat_username:sat_password --insecure \
https://satellite6.example.com/katello/api/organizations/1/environments \
| python -m json.tool`

```

Example response:

```

    output omitted
    "description": null,
    "id": 1,
    "label": "Library",
    "library": true,
    "name": "Library",

```



```

"organization": {
  "id": 1,
  "label": "Default_Organization",
  "name": "Default Organization"
},
"permissions": {
  "destroy_lifecycle_environments": false,
  "edit_lifecycle_environments": true,
  "promote_or_remove_content_views_to_environments": true,
  "view_lifecycle_environments": true
},
"prior": null,
"successor": null,
output truncated

```

Creating Linked Life Cycle Environments

Use this example to create a path of life cycle environments.

This procedure uses the default Library environment with ID **1** as the starting point for creating life cycle environments.

1. Choose an existing life cycle environment that you want to use as a starting point. List the environment using its ID, in this case, the environment with ID **1**:

Example request:

```

$ curl --request GET --user sat_username:sat_password --insecure \
https://satellite6.example.com/katello/api/environments/1 \
| python -m json.tool

```

Example response:

```

output omitted
  "id": 1,
  "label": "Library",
output omitted
  "prior": null,
  "successor": null,
output truncated

```

2. Create a JSON file, for example, **life-cycle.json**, with the following content:

```

{"organization_id":1,"label":"api-dev","name":"API
Development","prior":1}

```

3. Create a life cycle environment using the **prior** option set to **1**.

Example request:

```

$ curl --header "Accept:application/json,version=2" \
--header "Content-Type:application/json" \
--request POST --user sat_username:sat_password --insecure \
--data @life-cycle.json \
https://satellite6.example.com/katello/api/environments \
| python -m json.tool

```

Example response:

```

    output omitted
    "description": null,
    "id": 2,
    "label": "api-dev",
    "library": false,
    "name": "API Development",
    "organization": {
      "id": 1,
      "label": "Default_Organization",
      "name": "Default Organization"
    },
    "permissions": {
      "destroy_lifecycle_environments": true,
      "edit_lifecycle_environments": true,
      "promote_or_remove_content_views_to_environments": true,
      "view_lifecycle_environments": true
    },
    "prior": {
      "id": 1,
      "name": "Library"
    },
    output truncated

```

In the command output, you can see the ID for this life cycle environment is **2**, and the life cycle environment prior to this one is **1**. Use the life cycle environment with ID **2** to create a successor to this environment.

4. Edit the previously created **life-cycle.json** file, updating the **label**, **name**, and **prior** values.

```

{"organization_id":1,"label":"api-qa","name":"API QA","prior":2}

```

5. Create a life cycle environment, using the **prior** option set to **2**.

Example request:

```

$ curl --header "Accept:application/json,version=2" \
--header "Content-Type:application/json" \
--request POST --user sat_username:sat_password --insecure \
--data @life-cycle.json \
https://satellite6.example.com/katello/api/environments \
| python -m json.tool

```

Example response:

```

    output omitted
    "description": null,
    "id": 3,
    "label": "api-qa",
    "library": false,
    "name": "API QA",
    "organization": {
      "id": 1,

```

```

        "label": "Default_Organization",
        "name": "Default Organization"
    },
    "permissions": {
        "destroy_lifecycle_environments": true,
        "edit_lifecycle_environments": true,
        "promote_or_remove_content_views_to_environments": true,
        "view_lifecycle_environments": true
    },
    "prior": {
        "id": 2,
        "name": "API Development"
    },
    "successor": null,
    output truncated

```

In the command output, you can see the ID for this life cycle environment is **3**, and the life cycle environment prior to this one is **2**.

Updating a Life Cycle Environment

You can update a life cycle environment using a PUT command.

This example request updates a description of the life cycle environment with ID **3**.

Example request:

```

$ curl --header "Accept:application/json,version=2" \
--header "Content-Type:application/json" \
--request POST --user sat_username:sat_password --insecure \
--data '{"description":"Quality Acceptance Testing"}' \
https://satellite6.example.com/katello/api/environments/3 \
| python -m json.tool

```

Example response:

```

    output omitted
    "description": "Quality Acceptance Testing",
    "id": 3,
    "label": "api-qa",
    "library": false,
    "name": "API QA",
    "organization": {
        "id": 1,
        "label": "Default_Organization",
        "name": "Default Organization"
    },
    "permissions": {
        "destroy_lifecycle_environments": true,
        "edit_lifecycle_environments": true,
        "promote_or_remove_content_views_to_environments": true,
        "view_lifecycle_environments": true
    },
    "prior": {
        "id": 2,

```

```

      "name": "API Development"
    },
    output truncated

```

Deleting a Life Cycle Environment

You can delete a life cycle environment provided it has no successor. Therefore, delete them in reverse order using a command in the following format:

Example request:

```

$ curl --request DELETE --user sat_username:sat_password --insecure \
https://satellite6.example.com/katello/api/environments/:id

```

5.3. UPLOADING CONTENT TO THE SATELLITE SERVER

This section outlines how to use the Satellite 6 API to upload and import large files to your Satellite Server. This process involves four steps:

1. Create an upload request.
2. Upload the content.
3. Import the content.
4. Delete the upload request.

The maximum file size that you can upload is about 30 MB. For information about uploading larger content, see [Uploading Content Larger than 30 MB](#)

Procedure

1. Create the upload request. Ensure you modify the example parameters to suit your deployment.

Example request:

```

$ curl --header "Accept:application/json,version=2" \
--header "Content-Type:application/json" \
--request POST --insecure \
--user sat_username:sat_password --data "{}" \
https://satellite6.example.com/katello/api/repositories/3/content_uploads

```

This command returns the **upload_id**.

Example response:

```

{"upload_id":"0be156b1-f373-4cad-89d0-924f8f4491d2", "_href":"/pulp/api/v2/content/uploads/0be156b1-f373-4cad-89d0-924f8f4491d2/"}

```

Note the **upload_id** for uploading the content.

2. Upload your content. Ensure you use the correct MIME type when you upload data. The API uses the **application/json** MIME type for the majority of requests to Satellite 6. Combine the **upload_id**, MIME type, and other parameters to upload content.

Example request:

```
$ curl --header "Accept:application/json,version=2" \
--header "Content-Type:multipart/form-data" \
--request PUT --insecure --user sat_username:sat_password \
--data-urlencode
"content@/home/sat6user/rpmbuild/RPMS/noarch/python-scripttest-
1.1.1-1.fc21.noarch.rpm" \
--data-urlencode offset=0 \
https://satellite6.example.com/katello/api/repositories/3/content_uploads/0be156b1-f373-4cad-89d0-924f8f4491d2
```

3. After you have uploaded the content to the Satellite Server, you need to import it into the appropriate repository. Until you complete this step, the Satellite Server does not detect the new content.

Example request:

```
$ curl --header "Accept:application/json,version=2" \
--header "Content-Type:application/json" \
--request PUT --insecure \
--user sat_username:sat_password \
--data "{\"upload_ids\":[\"0be156b1-f373-4cad-89d0-924f8f4491d2\"]}" \
https://satellite6.example.com/katello/api/repositories/3/import_uploads
```

4. After you have successfully uploaded and imported your content, you can delete the upload request. This frees any temporary disk space that data is using during the upload.

Example request:

```
$ curl --header "Accept:application/json,version=2" \
--header "Content-Type:application/json" \
--request DELETE --insecure \
--user sat_username:sat_password --data "{}" \
https://satellite6.example.com/katello/api/repositories/3/content_uploads/0be156b1-f373-4cad-89d0-924f8f4491d2
```

Uploading Content Larger than 30 MB

The following example demonstrates how to split a large file into chunks, create an upload request, upload the individual files, import them to Satellite, and then delete the upload request. Note that this example uses sample content, host names, user names, and file names.

1. Download the sample module:

```
$ wget https://forgeapi.puppetlabs.com/v3/files/foreman-foreman-5.0.1.tar.gz?_ga=1.267255502.1792403825.1430297670 --output-document theforeman-foreman-5.0.1.tar.gz
```

2. Split the module into 50,000 byte chunks:

```
$ split --bytes 50000 --numeric-suffixes --suffix-length=1 \
theforeman-foreman-5.0.1.tar.gz foreman_module.
```

3. View the resulting files:

```
$ ls -la theforeman-foreman-5.0.1.tar.gz foreman_module.*
-rw-r--r--. 1 root root 50000 Nov  4 04:42 foreman_module.0
-rw-r--r--. 1 root root 32928 Nov  4 04:42 foreman_module.1
-rw-r--r--. 1 root root 82928 Nov  4 04:41 theforeman-foreman-
5.0.1.tar.gz
```

4. Create an upload request.

Example request:

```
$ curl --header "Accept:application/json,version=2" \
--header "Content-Type:application/json" \
--request POST --insecure --user sat_username:sat_password --data "
{}" \
https://ibm-
vm01.example.com/katello/api/repositories/2/content_uploads
```

Example response:

```
{"upload_id":"9585528f-07ad-4bb1-9c80-
ccece249b2b7","_href":"/pulp/api/v2/content/uploads/9585528f-07ad-
4bb1-9c80-ccece249b2b7/"}
```

Note the **upload_id** for uploading the content.

5. Upload the file chunks to Satellite Server. Notice the use of the **offset** parameter in this example and how it relates to the file size:

Example request:

```
$ curl --header "Accept:application/json,version=2" \
--header "Content-Type:multipart/form-data" \
--request PUT --insecure --user sat_username:sat_password \
--data-urlencode "content@foreman_module.0" \
--data-urlencode offset=0 \
https://ibm-
vm01.example.com/katello/api/repositories/2/content_uploads/9585528f
-07ad-4bb1-9c80-ccece249b2b7
```

6. Import the complete upload to the repository:

```
$ curl --header "Accept:application/json,version=2" \
--header "Content-Type:application/json" \
--request PUT --insecure --user sat_username:sat_password \
--data "{\"upload_ids\":[\"9585528f-07ad-4bb1-9c80-ccece249b2b7\"]}" \
\
https://ibm-
vm01.example.com/katello/api/repositories/2/import_uploads
```

7. Delete the upload request:

```
$ curl --header "Accept:application/json,version=2" \
--header "Content-Type:application/json" \
--request DELETE --insecure --user sat_username:sat_password --data
"{}" \
https://ibm-
vm01.example.com/katello/api/repositories/2/content_uploads/9585528f
-07ad-4bb1-9c80-ccece249b2b7
```

8. On Satellite Server, check the transferred file:

```
# ls -la /var/lib/pulp/content/puppet_module/foreman-foreman-
5.0.1.tar.gz
-rw-r--r--. 1 apache apache 82928 Nov  4 04:55
/var/lib/pulp/content/puppet_module/foreman-foreman-5.0.1.tar.gz
```

9. Verify that the initial file is the same as the transferred by comparing them:

```
$ cmp /var/lib/pulp/content/puppet_module/foreman-foreman-
5.0.1.tar.gz \
foreman-foreman-5.0.1.tar.gz
```

5.4. APPLYING ERRATA TO A HOST OR HOST COLLECTION

You can use the API to apply errata to a host, host group, or host collection. The following is the basic syntax of a PUT request:

```
$ curl --header "Accept:application/json,version=2" \
--header "Content-Type:application/json" --request PUT \
--user sat_username:sat_password --insecure \
--data json-formatted-data https://satellite7.example.com
```

You can browse the built in API doc to find a URL to use for applying Errata. You can use the Satellite web UI to help discover the format for the search query. Navigate to **Hosts > Host Collections** and select a host collection. Go to **Collection Actions > Errata Installation** and notice the search query box contents. For example, for a Host Collection called *my-collection*, the search box contains **host_collection="my-collection"**.

Applying Errata to a Host

This example uses the API URL for bulk actions `/katello/api/hosts/bulk/install_content` to show the format required for a simple search.

Example request:

```
$ curl --header "Accept:application/json,version=2" \
--header "Content-Type:application/json" --request PUT \
--user sat_username:sat_password --insecure \
--data "{\"organization_id\":1,\"included\":{\"search\":\"my-
host\"},\"content_type\":\"errata\",\"content\":[\"RHBA-2016:1981\"]}" \
https://satellite6.example.com/api/v2/hosts/bulk/install_content
```

Applying Errata to a Host Collection

In this example, notice the level of escaping required to pass the search string `host_collection="my-collection"` as seen in the Satellite web UI.

Example request:

```
$ curl --header "Accept:application/json,version=2" \
--header "Content-Type:application/json" --request PUT \
--user sat_username:sat_password --insecure \
--data "{\"organization_id\":1,\"included\":\
{\"search\":\"host_collection=\\\"my-
collection\\\"\", \"content_type\": \"errata\", \"content\": [\"RHBA-
2016:1981\"]}" \
https://satellite6.example.com/api/v2/hosts/bulk/install_content
```

5.5. USING EXTENDED SEARCHES

You can determine search terms that you can use to construct your queries in the web UI. Satellite 6 supports scoped search and tab completion.

For example, to search for hosts by their operating system, navigate to **Hosts > All Hosts** and click inside the **Search** text box to display a list of search terms. One of the search terms for operating systems is `os_description`, which you can use in your API query as follows:

Example request:

```
$ curl --insecure --user sat_username:sat_password \
https://satellite6.example.com/api/v2/hosts?
search=os_description=\"RHEL+Server+6.6\" \
| python -m json.tool
```

Example response:

```
{
  ...
  "results": [
    {
      "name": "satellite6.example.com",
      "operatingsystem_id": 1,
      "operatingsystem_name": "RHEL Server 6.6",
      ...
    }
  ],
  "search": "os_description=\"RHEL Server 6.6\"",
}
```

5.6. USING SEARCHES WITH PAGINATION CONTROL

You can use the `per_page` and `page` pagination parameters to limit the search results that an API search query returns. The `per_page` parameter specifies the number of results per page and the `page` parameter specifies which page, as calculated by the `per_page` parameter, to return.

The default number of items to return is set to 1000 when you do not specify any pagination parameters, but the `per_page` value has a default of 20 which applies when you specify the `page` parameter.

Listing Content Views

This example returns a list of Content Views in pages. The list contains 10 keys per page and returns the third page.

Example request:

```
$ curl --request GET --user sat_username:sat_password \
https://satellite6.example.com/katello/api/content_views?
per_page=10&page=3
```

Listing Activation Keys

This example returns a list of activation keys for an organization with ID **1** in pages. The list contains 30 keys per page and returns the second page.

Example request:

```
$ curl --request GET --user sat_username:sat_password \
https://satellite6.example.com/katello/api/activation_keys?
organization_id=1&per_page=30&page=2
```

Returning Multiple Pages

You can use a **for** loop structure to get multiple pages of results.

This example returns pages 1 to 3 of Content Views with 5 results per page:

```
$ for i in seq 1 3; do \
curl --request GET --user sat_username:sat_password \
https://satellite6.example.com/katello/api/content_views?
per_page=5&page=$i; \
done
```

5.7. OVERRIDING SMART CLASS PARAMETERS

You can search for Smart Parameters using the API and supply a value to override a Smart Parameter in a Class. You can find the full list of attributes that you can modify in the built-in API reference at https://satellite6.example.com/apidoc/v2/smart_class_parameters/update.html.

1. Find the ID of the Smart Class parameter you want to change:

- List all Smart Class Parameters.

Example request:

```
$ curl --request GET --insecure --user sat_username:sat_password \
https://satellite6.example.com/api/smart_class_parameters
```

- If you know the Puppet class ID, for example 5, you can restrict the scope:

Example request:

```
$ curl --request GET --insecure --user sat_username:sat_password \
```

```
https://satellite6.example.com/api/puppetclasses/5/smart_class_parameters
```

Both calls accept a search parameter. You can view the full list of searchable fields in the Satellite web UI. Navigate to **Configure > Smart variables** and click in the search query box to reveal the list of fields.

Two particularly useful search parameters are **puppetclass_name** and **key**, which you can use to search for a specific parameter. For example, using the **--data** option to pass URL encoded data.

Example request:

```
$ curl --request GET --insecure --user sat_username:sat_password \
  \
  --data 'search=puppetclass_name = access_insights_client and key
  = authmethod' \
  https://satellite6.example.com/api/smart_class_parameters
```

Satellite supports standard scoped-search syntax.

- When you find the ID of the parameter, list the full details including current override values.

Example request:

```
$ curl --request GET --insecure --user sat_username:sat_password \
  https://satellite6.example.com/api/smart_class_parameters/63
```

- Enable overriding of parameter values.

Example request:

```
$ curl --header "Accept:application/json,version=2" \
  --header "Content-Type:application/json" \
  --request PUT --insecure --user sat_username:sat_password \
  --data '{"smart_class_parameter":{"override":true}}' \
  https://satellite6.example.com/api/smart_class_parameters/63
```

Note that you cannot create or delete the parameters manually. You can only modify their attributes. Satellite creates and deletes parameters only upon class import from a proxy.

- Add custom override matchers.

Example request:

```
$ curl --header "Accept:application/json,version=2" \
  --header "Content-Type:application/json" \
  --request PUT --insecure --user sat_username:sat_password \
  --data '{"smart_class_parameter":{"override_value":
  {"match":"hostgroup=Test","value":"2.4.6"}}}' \
  https://satellite6.example.com/api/smart_class_parameters/63
```

For more information about override values, see

https://satellite6.example.com/apidoc/v2/override_values.html.

- You can delete override values.

Example request:

```
$ curl --request DELETE --user sat_username:sat_password \
https://satellite6.example.com/api/smart_class_parameters/63/override_values/3
```

5.8. MODIFYING A SMART CLASS PARAMETER USING AN EXTERNAL FILE

Using external files simplifies working with JSON data. Using an editor with syntax highlighting can help you avoid and locate mistakes.

Modifying a Smart Class Parameter Using an External File

This example uses a MOTD Puppet manifest.

1. Search for the Puppet Class by name, **motd** in this case.

Example request:

```
$ curl --header "Accept:application/json,version=2" \
--header "Content-Type:application/json" \
--request GET --user sat_user:sat_password --insecure \
https://satellite6.example.com/api/smart_class_parameters?
search=puppetclass_name=motd \
| python -m json.tool
```

2. Examine the following output. Each Smart Class Parameter has an ID that is global for the same Satellite instance. The **content** parameter of the **motd** class has **id=3** in this Satellite Server. Do not confuse this with the Puppet Class ID that displays before the Puppet Class name.

Example response:

```
{
  "avoid_duplicates": false,
  "created_at": "2017-02-06 12:37:48 UTC", # Remove this line.
  "default_value": "", # Add a new value here.
  "description": "",
  "hidden_value": "",
  "hidden_value?": false,
  "id": 3,
  "merge_default": false,
  "merge_overrides": false,
  "override": false, # Set the override value to true.
  "override_value_order": "fqdn\nhostgroup\nos\ndomain",
  "override_values": [], # Remove this line.
  "override_values_count": 0,
  "parameter": "content",
  "parameter_type": "string",
  "puppetclass_id": 3,
  "puppetclass_name": "motd",
  "required": false,
  "updated_at": "2017-02-07 11:56:55 UTC", # Remove this line.
  "use_puppet_default": false,
  "validator_rule": null,
  "validator_type": ""
}
```

- Use the parameter ID **3** to get the information specific to the **motd** parameter and redirect the output to a file, for example, **output_file.json**.

Example request:

```
$ curl --header "Accept:application/json,version=2" \
--header "Content-Type:application/json" --request GET \
--user sat_user:sat_password --insecure \
https://satellite6.example.com/api/smart_class_parameters/3 \
| python -m json.tool > output_file.json
```

- Copy the file created in the previous step to a new file for editing, for example, **changed_file.json**:

```
$ cp output_file.json changed_file.json
```

- Modify the required values in the file. In this example, change the content parameter of the **motd** module, which requires changing the **override** option from **false** to **true**:

```
{
  "avoid_duplicates": false,
  "created_at": "2017-02-06 12:37:48 UTC", # Remove this line.
  "default_value": "", # Add a new value here.
  "description": "",
  "hidden_value": "",
  "hidden_value?": false,
  "id": 3,
  "merge_default": false,
  "merge_overrides": false,
  "override": false, # Set the override value to true.
  "override_value_order": "fqdn\nhostgroup\nos\ndomain",
  "override_values": [], # Remove this line.
  "override_values_count": 0,
  "parameter": "content",
  "parameter_type": "string",
  "puppetclass_id": 3,
  "puppetclass_name": "motd",
  "required": false,
  "updated_at": "2017-02-07 11:56:55 UTC", # Remove this line.
  "use_puppet_default": false,
  "validator_rule": null,
  "validator_type": ""
}
```

- After editing the file, verify that it looks as follows and then save the changes:

```
{
  "avoid_duplicates": false,
  "default_value": "No Unauthorized Access Allowed",
  "description": "",
  "hidden_value": "",
  "hidden_value?": false,
  "id": 3,
  "merge_default": false,
  "merge_overrides": false,
```

```

"override": true,
  "override_value_order": "fqdn\nhostgroup\nos\ndomain",
"override_values_count": 0,
"parameter": "content",
"parameter_type": "string",
"puppetclass_id": 3,
"puppetclass_name": "motd",
"required": false,
"use_puppet_default": false,
"validator_rule": null,
"validator_type": ""
}

```

7. Apply the changes to Satellite Server:

```

$ curl --header "Accept:application/json,version=2" \
--header "Content-Type:application/json" \
--request PUT --user sat_username:sat_password --insecure \
--data @changed_file.json \
https://satellite6.example.com/api/smart_class_parameters/3

```

5.9. DELETING OPENSAP REPORTS

In Satellite Server, you can delete one or more OpenSCAP reports. However, when you delete reports, you must delete one page at a time. If you want to delete all Openscap reports, use the bash script that follows.

Deleting an OpenSCAP Report

To delete an OpenSCAP report, complete the following steps:

1. List all OpenSCAP reports. Note the IDs of the reports that you want to delete.

Example request:

```

curl --insecure --user username:_password_ \
https://satellite.example.com/api/v2/compliance/arf_reports/ |
python -m json.tool

```

Example response:

```

% Total    % Received % Xferd  Average Speed   Time    Time
Time  Current
                                 Dload  Upload   Total   Spent
Left  Speed
100 3252    0 3252    0    0   4319      0  ---:---  ---:---  --
:--:-- 4318
{
  "page": 1,
  "per_page": 20,
  "results": [
    {
      "created_at": "2017-05-16 13:27:09 UTC",
      "failed": 0,
      "host": "host1.example.com",
      "id": 404,

```

```

        "othered": 0,
        "passed": 0,
        "updated_at": "2017-05-16 13:27:09 UTC"
      },
      {
        "created_at": "2017-05-16 13:26:07 UTC",
        "failed": 0,
        "host": "host2.example.com",
        "id": 405,
        "othered": 0,
        "passed": 0,
        "updated_at": "2017-05-16 13:26:07 UTC"
      },
      {
        "created_at": "2017-05-16 13:25:07 UTC",
        "failed": 0,
        "host": "host3.example.com",
        "id": 406,
        "othered": 0,
        "passed": 0,
        "updated_at": "2017-05-16 13:25:07 UTC"
      },
      {
        "created_at": "2017-05-16 13:24:07 UTC",
        "failed": 0,
        "host": "host4.example.com",
        "id": 407,
        "othered": 0,
        "passed": 0,
        "updated_at": "2017-05-16 13:24:07 UTC"
      },
    ],
    "search": null,
    "sort": {
      "by": null,
      "order": null
    },
    "subtotal": 29,
    "total": 29
  }
}

```

- Using an ID from the previous step, delete the OpenSCAP report. Repeat for each ID that you want to delete.

Example request:

```

# curl --insecure --user username:_password_ \
--header "Content-Type: application/json" \
--request DELETE
https://satellite.example.com/api/v2/compliance/arf_reports/405

```

Example response:

```

HTTP/1.1 200 OK
Date: Thu, 18 May 2017 07:14:36 GMT
Server: Apache/2.4.6 (Red Hat Enterprise Linux)
X-Frame-Options: SAMEORIGIN

```

```

X-XSS-Protection: 1; mode=block
X-Content-Type-Options: nosniff
Foreman_version: 1.11.0.76
Foreman_api_version: 2
Apipie-Checksum: 2d39dc59aed19120d2359f7515e10d76
Cache-Control: max-age=0, private, must-revalidate
X-Request-Id: f47eb877-35c7-41fe-b866-34274b56c506
X-Runtime: 0.661831
X-Powered-By: Phusion Passenger 4.0.18
Set-Cookie: request_method=DELETE; path=/
Set-Cookie: _session_id=d58fe2649e6788b87f46eabf8a461edd; path=/;
secure; HttpOnly
ETag: "2574955fc0afc47cb5394ce95553f428"
Status: 200 OK
Vary: Accept-Encoding
Transfer-Encoding: chunked
Content-Type: application/json; charset=utf-8

```

Example BASH Script to Delete All OpenSCAP Reports

Use the following bash script to delete all the OpenSCAP reports:

```

#!/bin/bash

#this script removes all the arf reports from the satellite server

#settings
USER=username
PASS=password
URI=https://satellite.example.com

#check amount of reports
while [ $(curl --insecure --user $USER:$PASS
$URI/api/v2/compliance/arf_reports/ | python -m json.tool | grep
"\total\": | cut --fields=2 --delimiter":" | cut --fields=1 --
delimiter"," | sed "s/ //g") -gt 0 ]; do

#fetch reports
for i in $(curl --insecure --user $USER:$PASS
$URI/api/v2/compliance/arf_reports/ | python -m json.tool | grep "\id\":
| cut --fields=2 --delimiter":" | cut --fields=1 --delimiter"," | sed "s/
//g")

#delete reports
do
curl --insecure --user $USER:$PASS --header "Content-Type:
application/json" --request DELETE $URI/api/v2/compliance/arf_reports/$i
done
done

```

APPENDIX A. API RESPONSE CODES

The Red Hat Satellite 6 API provides HTTP response status codes for API calls. The following codes are common for all resources in the Satellite API.

Table A.1. API Response Codes

| Response | Explanation |
|----------------------------|--|
| 200 OK | For a successful request action: show, index, update, or delete (GET, PUT, DELETE requests). |
| 201 Created | For a successful create action (POST request). |
| 301 Moved Permanently | Redirect when Satellite is restricted to use HTTPS and HTTP is attempted. |
| 400 Bad Request | A required parameter is missing or the search query has invalid syntax. |
| 401 Unauthorized | Failed to authorize the user (for example, incorrect credentials). |
| 403 Forbidden | The user has insufficient permissions to perform the action or read the resource, or the action is unsupported in general. |
| 404 Not Found | The record with the given ID does not exist. It can appear in show and delete actions when the requested record does not exist; or in create, update and delete actions when one of the associated records does not exist. |
| 409 Conflict | Could not delete the record due to existing dependencies (for example, host groups with hosts). |
| 415 Unsupported Media Type | The content type of the HTTP request is not JSON. |
| 422 Unprocessable Entity | Failed to create an entity due to some validation errors. Applies to create or update actions only. |
| 500 Internal Server Error | Unexpected internal server error. |
| 503 Service Unavailable | The server is not running. |

APPENDIX B. API PERMISSIONS MATRIX

The Red Hat Satellite 6 API supports numerous actions, many of which require specific permissions. The following table lists the API permission names, the actions associated with those permissions, and the associated resource type.

Table B.1. API Permissions Matrix

| Permission Name | Actions | Resource Type |
|------------------------|--|------------------------|
| view_activation_keys | <ul style="list-style-type: none"> katello/activation_keys/all katello/activation_keys/index katello/activation_keys/automatic_complete_search katello/api/v2/activation_keys/index katello/api/v2/activation_keys/show katello/api/v2/activation_keys/available_host_collections katello/api/v2/activation_keys/available_releases katello/api/v2/activation_keys/product_content | Katello::ActivationKey |
| create_activation_keys | <ul style="list-style-type: none"> katello/api/v2/activation_keys/create katello/api/v2/activation_keys/copy | Katello::ActivationKey |
| edit_activation_keys | <ul style="list-style-type: none"> katello/api/v2/activation_keys/update katello/api/v2/activation_keys/content_override katello/api/v2/activation_keys/add_subscriptions katello/api/v2/activation_keys/remove_subscriptions | Katello::ActivationKey |

| Permission Name | Actions | Resource Type |
|-------------------------|---|------------------------|
| destroy_activation_keys | <ul style="list-style-type: none"> katello/api/v2/activation_keys/destroy | Katello::ActivationKey |
| logout | <ul style="list-style-type: none"> users/logout | |
| view_architectures | <ul style="list-style-type: none"> architectures/index architectures/show architectures/auto_complete_search api/v1/architectures/index api/v1/architectures/show api/v2/architectures/index api/v2/architectures/show | |
| create_architectures | <ul style="list-style-type: none"> architectures/new architectures/create api/v1/architectures/create api/v2/architectures/create | |
| edit_architectures | <ul style="list-style-type: none"> architectures/edit architectures/update api/v1/architectures/update api/v2/architectures/update | |

| Permission Name | Actions | Resource Type |
|-----------------------|---|---------------|
| destroy_architectures | <ul style="list-style-type: none"> • architectures/destroy • api/v1/architectures/destroy • api/v2/architectures/destroy | |
| view_audit_logs | <ul style="list-style-type: none"> • audits/index • audits/show • audits/auto_complete_search • api/v1/audits/index • api/v1/audits/show • api/v2/audits/index • api/v2/audits/show | |
| view_authenticators | <ul style="list-style-type: none"> • auth_source_ldaps/index • auth_source_ldaps/show • api/v1/auth_source_ldaps/index • api/v1/auth_source_ldaps/show • api/v2/auth_source_ldaps/index • api/v2/auth_source_ldaps/show | |
| create_authenticators | <ul style="list-style-type: none"> • auth_source_ldaps/new • auth_source_ldaps/create • api/v1/auth_source_ldaps/create • api/v2/auth_source_ldaps/create | |

| Permission Name | Actions | Resource Type |
|------------------------|---|---------------|
| edit_authenticators | <ul style="list-style-type: none"> • auth_source_ldaps/edit • auth_source_ldaps/update • api/v1/auth_source_ldaps/update • api/v2/auth_source_ldaps/update | |
| destroy_authenticators | <ul style="list-style-type: none"> • auth_source_ldaps/destroy • api/v1/auth_source_ldaps/destroy • api/v2/auth_source_ldaps/destroy | |
| view_bookmarks | <ul style="list-style-type: none"> • bookmarks/index • bookmarks/show • api/v1/bookmarks/index • api/v1/bookmarks/show • api/v2/bookmarks/index • api/v2/bookmarks/show | |
| create_bookmarks | <ul style="list-style-type: none"> • bookmarks/new • bookmarks/create • api/v1/bookmarks/new • api/v1/bookmarks/create • api/v2/bookmarks/new • api/v2/bookmarks/create | |

| Permission Name | Actions | Resource Type |
|-------------------|--|---------------|
| edit_bookmarks | <ul style="list-style-type: none"> • bookmarks/edit • bookmarks/update • api/v1/bookmarks/edit • api/v1/bookmarks/update • api/v2/bookmarks/edit • api/v2/bookmarks/update | |
| destroy_bookmarks | <ul style="list-style-type: none"> • bookmarks/destroy • api/v1/bookmarks/destroy • api/v2/bookmarks/destroy | |
| download_bootdisk | <ul style="list-style-type: none"> • foreman_bootdisk/disks/generic • foreman_bootdisk/disks/host • foreman_bootdisk/disks/full_host • foreman_bootdisk/disks/subnet • foreman_bootdisk/disks/help • foreman_bootdisk/api/v2/disks/generic • foreman_bootdisk/api/v2/disks/host | |

| Permission Name | Actions | Resource Type |
|------------------------|--|---------------|
| manage_capsule_content | <ul style="list-style-type: none"> katello/api/v2/capsule_content/lifecycle_environments katello/api/v2/capsule_content/available_lifecycle_environments katello/api/v2/capsule_content/add_lifecycle_environment katello/api/v2/capsule_content/remove_lifecycle_environment katello/api/v2/capsule_content/sync katello/api/v2/capsule_content/sync_status katello/api/v2/capsule_content/cancel_sync | SmartProxy |
| view_capsule_content | <ul style="list-style-type: none"> smart_proxies/pulp_storage smart_proxies/pulp_statuses smart_proxies/show_with_content | SmartProxy |
| view_compute_profiles | <ul style="list-style-type: none"> compute_profiles/index compute_profiles/show compute_profiles/auto_complete_search api/v2/compute_profiles/index api/v2/compute_profiles/show | |

| Permission Name | Actions | Resource Type |
|--------------------------|--|---------------|
| create_compute_profiles | <ul style="list-style-type: none">• compute_profiles/new• compute_profiles/create• api/v2/compute_profiles/create | |
| edit_compute_profiles | <ul style="list-style-type: none">• compute_profiles/edit• compute_profiles/update• api/v2/compute_profiles/update | |
| destroy_compute_profiles | <ul style="list-style-type: none">• compute_profiles/destroy• api/v2/compute_profiles/destroy | |

| Permission Name | Actions | Resource Type |
|------------------------|--|---------------|
| view_compute_resources | <ul style="list-style-type: none"> • compute_resources/index • compute_resources/show • compute_resources/auto_complete_search • compute_resources/ping • compute_resources/available_images • api/v1/compute_resources/index • api/v1/compute_resources/show • api/v2/compute_resources/index • api/v2/compute_resources/show • api/v2/compute_resources/available_images • api/v2/compute_resources/available_clusters • api/v2/compute_resources/available_folders • api/v2/compute_resources/available_flavors • api/v2/compute_resources/available_networks • api/v2/compute_resources/available_resource_pools • api/v2/compute_resources/available_security_groups • api/v2/compute_resources/available_storage_domains • api/v2/compute_resources/available_zones • api/v2/compute_resources/available_storage_pods | |

| Permission Name | Actions | Resource Type |
|---------------------------|--|---------------|
| create_compute_resources | <ul style="list-style-type: none"> • compute_resources/new • compute_resources/create • compute_resources/test_connection • api/v1/compute_resources/create • api/v2/compute_resources/create | |
| edit_compute_resources | <ul style="list-style-type: none"> • compute_resources/edit • compute_resources/update • compute_resources/test_connection • compute_attributes/new • compute_attributes/create • compute_attributes/edit • compute_attributes/update • api/v1/compute_resources/update • api/v2/compute_resources/update • api/v2/compute_attributes/create • api/v2/compute_attributes/update | |
| destroy_compute_resources | <ul style="list-style-type: none"> • compute_resources/destroy • api/v1/compute_resources/destroy • api/v2/compute_resources/destroy | |

| Permission Name | Actions | Resource Type |
|-------------------------------|--|---------------|
| view_compute_resources_vms | <ul style="list-style-type: none"> • compute_resources_vms/index • compute_resources_vms/show | |
| create_compute_resources_vms | <ul style="list-style-type: none"> • compute_resources_vms/new • compute_resources_vms/create | |
| edit_compute_resources_vms | <ul style="list-style-type: none"> • compute_resources_vms/edit • compute_resources_vms/update | |
| destroy_compute_resources_vms | <ul style="list-style-type: none"> • compute_resources_vms/destroy | |
| power_compute_resources_vms | <ul style="list-style-type: none"> • compute_resources_vms/power • compute_resources_vms/pause | |
| console_compute_resources_vms | <ul style="list-style-type: none"> • compute_resources_vms/console | |
| view_config_groups | <ul style="list-style-type: none"> • config_groups/index • config_groups/auto_complete_search • api/v2/config_groups/index • api/v2/config_groups/show | |

| Permission Name | Actions | Resource Type |
|-----------------------|---|---------------|
| create_config_groups | <ul style="list-style-type: none"> • config_groups/new • config_groups/create • api/v2/config_groups/create | |
| edit_config_groups | <ul style="list-style-type: none"> • config_groups/edit • config_groups/update • api/v2/config_groups/update | |
| destroy_config_groups | <ul style="list-style-type: none"> • config_groups/destroy • api/v2/config_groups/destroy | |
| view_config_reports | <ul style="list-style-type: none"> • api/v1/reports/index • api/v1/reports/show • api/v1/reports/last • api/v2/reports/index • api/v2/reports/show • api/v2/reports/last • config_reports/index • config_reports/show • config_reports/auto_complete_search • api/v2/config_reports/index • api/v2/config_reports/show • api/v2/config_reports/last | |

| Permission Name | Actions | Resource Type |
|-----------------------------|---|-----------------|
| destroy_config_reports | <ul style="list-style-type: none"> config_reports/destroy api/v1/reports/destroy api/v2/reports/destroy api/v2/config_reports/destroy | |
| upload_config_reports | <ul style="list-style-type: none"> api/v2/reports/create api/v2/config_reports/create | |
| view_containers | <ul style="list-style-type: none"> containers/index containers/show api/v2/containers/index api/v2/containers/show api/v2/containers/logs | Container |
| commit_containers | <ul style="list-style-type: none"> containers/commit | Container |
| create_containers | <ul style="list-style-type: none"> containers/steps/show containers/steps/update containers/new api/v2/containers/create api/v2/containers/power | Container |
| destroy_containers | <ul style="list-style-type: none"> containers/destroy api/v2/containers/destroy | Container |
| power_compute_resources_vms | <ul style="list-style-type: none"> containers/power api/v2/containers/create api/v2/containers/power | ComputeResource |

| Permission Name | Actions | Resource Type |
|----------------------|--|-----------------|
| view_content_hosts | <ul style="list-style-type: none"> • katello/content_hosts/auto_complete_search • katello/api/v2/systems/index • katello/api/v2/systems/show • katello/api/v2/systems/errata • katello/api/v2/systems/package_profile • katello/api/v2/systems/product_content • katello/api/v2/systems/report • katello/api/v2/systems/releases • katello/api/v2/systems/available_host_collections • katello/api/v2/host_collections/systems | Katello::System |
| create_content_hosts | <ul style="list-style-type: none"> • katello/api/v2/systems/create • katello/api/rhsm/candlepin_proxies/consumer_create • katello/api/rhsm/candlepin_proxies/consumer_show | Katello::System |

| Permission Name | Actions | Resource Type |
|-----------------------|---|----------------------|
| edit_content_hosts | <ul style="list-style-type: none"> katello/api/v2/systems/update katello/api/v2/systems/content_override katello/api/rhsm/candlepin_proxies/upload_package_profile katello/api/rhsm/candlepin_proxies/regenerate_identity_certificates katello/api/rhsm/candlepin_proxies/hypervisors_update | Katello::System |
| destroy_content_hosts | <ul style="list-style-type: none"> katello/api/v2/systems/destroy | Katello::System |
| view_content_views | <ul style="list-style-type: none"> katello/api/v2/content_views/index katello/api/v2/content_views/show katello/api/v2/content_views/available_puppet_modules katello/api/v2/content_views/available_puppet_module_names katello/api/v2/content_views_filters/index katello/api/v2/content_views_filters/show katello/api/v2/content_views_filter_rules/index katello/api/v2/content_views_filter_rules/show katello/api/v2/content_views_histories/index katello/api/v2/content_views_puppet_modules/index katello/api/v2/content_views_puppet_modules/show | Katello::ContentView |

| Permission Name | Actions | Resource Type |
|-----------------|---|---------------|
| | <ul style="list-style-type: none"> • katello/api/v2/content_views_versions/index • katello/api/v2/content_views_versions/show • katello/api/v2/package_groups/index • katello/api/v2/package_groups/show • katello/api/v2/errata/index • katello/api/v2/errata/show • katello/api/v2/puppet_modules/index • katello/api/v2/puppet_modules/show • katello/content_views/auto_complete • katello/content_views/auto_complete_search • katello/errata/short_details • katello/errata/auto_complete • katello/packages/details • katello/packages/auto_complete • katello/products/auto_complete • katello/repositories/auto_complete_library • katello/content_search/index • katello/content_search/products • katello/content_search/repos • katello/content_search/packages • katello/content_search/errata • katello/content_search/puppet_modules | |

| Permission Name | Actions | Resource Type |
|----------------------|--|----------------------|
| | <ul style="list-style-type: none"> • katello/content_search/packages_items • katello/content_search/errata_items • katello/content_search/puppet_modules_items • katello/content_search/views_packages • katello/content_search/views_puppet_modules • katello/content_search/repo_packages • katello/content_search/repo_errata • katello/content_search/repo_puppet_modules • katello/content_search/repo_compare_errata • katello/content_search/repo_compare_packages • katello/content_search/repo_compare_puppet_modules • katello/content_search/views_compare_errata • katello/content_search/views_compare_packages • katello/content_search/views_compare_puppet_modules • katello/content_search/views | |
| create_content_views | <ul style="list-style-type: none"> • katello/api/v2/content_views/create • katello/api/v2/content_views/copy | Katello::ContentView |

| Permission Name | Actions | Resource Type |
|-----------------------|---|----------------------|
| edit_content_views | <ul style="list-style-type: none"> • katello/api/v2/content_views/update • katello/api/v2/content_views/filters/create • katello/api/v2/content_views/filters/update • katello/api/v2/content_views/filters/destroy • katello/api/v2/content_views/filter_rules/create • katello/api/v2/content_views/filter_rules/update • katello/api/v2/content_views/filter_rules/destroy • katello/api/v2/content_views/puppet_modules/create • katello/api/v2/content_views/puppet_modules/update • katello/api/v2/content_views/puppet_modules/destroy | Katello::ContentView |
| destroy_content_views | <ul style="list-style-type: none"> • katello/api/v2/content_views/destroy • katello/api/v2/content_views/remove • katello/api/v2/content_views/versions/destroy | Katello::ContentView |
| publish_content_views | <ul style="list-style-type: none"> • katello/api/v2/content_views/publish • katello/api/v2/content_views/versions/incremental_update | Katello::ContentView |

| Permission Name | Actions | Resource Type |
|---------------------------------|---|----------------------|
| promote_or_remove_content_views | <ul style="list-style-type: none"> katello/api/v2/content_views/versions/promote katello/api/v2/content_views/remove_from_environment katello/api/v2/content_views/remove | Katello::ContentView |
| export_content_views | <ul style="list-style-type: none"> katello/api/v2/content_views/versions/export | Katello::ContentView |
| access_dashboard | <ul style="list-style-type: none"> dashboard/index dashboard/save_positions dashboard/reset_default dashboard/create dashboard/destroy api/v1/dashboard/index api/v2/dashboard/index | |
| view_discovered_hosts | <ul style="list-style-type: none"> discovered_hosts/index discovered_hosts/show discovered_hosts/auto_complete_search api/v2/discovered_hosts/index api/v2/discovered_hosts/show | Host |
| submit_discovered_hosts | <ul style="list-style-type: none"> api/v2/discovered_hosts/facts api/v2/discovered_hosts/create | Host |

| Permission Name | Actions | Resource Type |
|---------------------------------|---|---------------|
| auto_provision_discovered_hosts | <ul style="list-style-type: none"> • discovered_hosts/auto_provision • discovered_hosts/auto_provision_all • api/v2/discovered_hosts/auto_provision • api/v2/discovered_hosts/auto_provision_all | Host |
| provision_discovered_hosts | <ul style="list-style-type: none"> • discovered_hosts/edit • discovered_hosts/update • api/v2/discovered_hosts/update | Host |
| edit_discovered_hosts | <ul style="list-style-type: none"> • discovered_hosts/update_multiple_location • discovered_hosts/select_multiple_organization • discovered_hosts/update_multiple_organization • discovered_hosts/select_multiple_location • discovered_hosts/refresh_facts • discovered_hosts/reboot • discovered_hosts/reboot_all • api/v2/discovered_hosts/refresh_facts • api/v2/discovered_hosts/reboot • api/v2/discovered_hosts/reboot_all | Host |

| Permission Name | Actions | Resource Type |
|--------------------------|---|---------------|
| destroy_discovered_hosts | <ul style="list-style-type: none"> discovered_hosts/destroy discovered_hosts/submit_multiple_destroy discovered_hosts/multiple_destroy api/v2/discovered_hosts/destroy | Host |
| view_discovery_rules | <ul style="list-style-type: none"> discovery_rules/index discovery_rules/show discovery_rules/auto_complete_search api/v2/discovery_rules/index api/v2/discovery_rules/show | DiscoveryRule |
| create_discovery_rules | <ul style="list-style-type: none"> discovery_rules/new discovery_rules/create api/v2/discovery_rules/create | DiscoveryRule |
| edit_discovery_rules | <ul style="list-style-type: none"> discovery_rules/edit discovery_rules/update discovery_rules/enable discovery_rules/disable api/v2/discovery_rules/create api/v2/discovery_rules/update | DiscoveryRule |

| Permission Name | Actions | Resource Type |
|-------------------------|--|---------------|
| execute_discovery_rules | <ul style="list-style-type: none"> • discovery_rules/auto_provision • discovery_rules/auto_provision_all • api/v2/discovery_rules/auto_provision • api/v2/discovery_rules/auto_provision_all | DiscoveryRule |
| destroy_discovery_rules | <ul style="list-style-type: none"> • discovery_rules/destroy • api/v2/discovery_rules/destroy | DiscoveryRule |
| view_domains | <ul style="list-style-type: none"> • domains/index • domains/show • domains/auto_complete_search • api/v1/domains/index • api/v1/domains/show • api/v2/domains/index • api/v2/domains/show • api/v2/parameters/index • api/v2/parameters/show | |
| create_domains | <ul style="list-style-type: none"> • domains/new • domains/create • api/v1/domains/create • api/v2/domains/create | |

| Permission Name | Actions | Resource Type |
|---------------------|--|---------------|
| edit_domains | <ul style="list-style-type: none"> domains/edit domains/update api/v1/domains/update api/v2/domains/update api/v2/parameters/create api/v2/parameters/update api/v2/parameters/destroy api/v2/parameters/reset | |
| destroy_domains | <ul style="list-style-type: none"> domains/destroy api/v1/domains/destroy api/v2/domains/destroy | |
| view_environments | <ul style="list-style-type: none"> environments/index environments/show environments/autocomplete_search api/v1/environments/index api/v1/environments/show api/v2/environments/index api/v2/environments/show | |
| create_environments | <ul style="list-style-type: none"> environments/new environments/create api/v1/environments/create api/v2/environments/create | |

| Permission Name | Actions | Resource Type |
|--------------------------|---|---------------|
| edit_environments | <ul style="list-style-type: none"> • environments/edit • environments/update • api/v1/environments/update • api/v2/environments/update | |
| destroy_environments | <ul style="list-style-type: none"> • environments/destroy • api/v1/environments/destroy • api/v2/environments/destroy | |
| import_environments | <ul style="list-style-type: none"> • environments/import_environments • environments/obsolete_and_new • api/v1/environments/import_puppetclasses • api/v2/environments/import_puppetclasses • api/v1/smart_proxies/import_puppetclasses • api/v2/smart_proxies/import_puppetclasses | |
| view_external_usergroups | <ul style="list-style-type: none"> • external_usergroups/index • external_usergroups/show • api/v2/external_usergroups/index • api/v2/external_usergroups/show | |

| Permission Name | Actions | Resource Type |
|-----------------------------|--|---------------|
| create_external_usergroups | <ul style="list-style-type: none">external_usergroups/newexternal_usergroups/createapi/v2/external_usergroups/newapi/v2/external_usergroups/create | |
| edit_external_usergroups | <ul style="list-style-type: none">external_usergroups/editexternal_usergroups/updateexternal_usergroups/refreshapi/v2/external_usergroups/updateapi/v2/external_usergroups/refresh | |
| destroy_external_usergroups | <ul style="list-style-type: none">external_usergroups/destroyapi/v2/external_usergroups/destroy | |

| Permission Name | Actions | Resource Type |
|-------------------------|---|---------------|
| view_external_variables | <ul style="list-style-type: none"> • lookup_keys/index • lookup_keys/show • lookup_keys/auto_complete_search • puppetclass_lookup_keys/index • puppetclass_lookup_keys/show • puppetclass_lookup_keys/auto_complete_search • variable_lookup_keys/index • variable_lookup_keys/show • variable_lookup_keys/auto_complete_search • lookup_values/index • api/v1/lookup_keys/index • api/v1/lookup_keys/show • api/v2/smart_variables/index • api/v2/smart_variables/show • api/v2/smart_class_parameters/index • api/v2/smart_class_parameters/show • api/v2/override_values/index • api/v2/override_values/show | |

| Permission Name | Actions | Resource Type |
|---------------------------|--|---------------|
| create_external_variables | <ul style="list-style-type: none">• lookup_keys/new• lookup_keys/create• puppetclass_lookup_keys/new• puppetclass_lookup_keys/create• variable_lookup_keys/new• variable_lookup_keys/create• lookup_values/create• api/v1/lookup_keys/create• api/v2/smart_variables/create• api/v2/smart_class_parameters/create• api/v2/override_values/create | |

| Permission Name | Actions | Resource Type |
|-------------------------|---|---------------|
| edit_external_variables | <ul style="list-style-type: none"> • lookup_keys/edit • lookup_keys/update • puppetclass_lookup_keys/edit • puppetclass_lookup_keys/update • variable_lookup_keys/edit • variable_lookup_keys/update • lookup_values/create • lookup_values/update • lookup_values/destroy • api/v1/lookup_keys/update • api/v2/smart_variables/update • api/v2/smart_class_parameters/update • api/v2/override_values/create • api/v2/override_values/update • api/v2/override_values/destroy | |

| Permission Name | Actions | Resource Type |
|----------------------------|--|---------------|
| destroy_external_variables | <ul style="list-style-type: none"> • lookup_keys/destroy • puppetclass_lookup_keys/destroy • variable_lookup_keys/destroy • lookup_values/destroy • api/v1/lookup_keys/destroy • api/v2/smart_variables/destroy • api/v2/smart_class_parameters/destroy • api/v2/override_values/create • api/v2/override_values/update • api/v2/override_values/destroy | |
| view_facts | <ul style="list-style-type: none"> • facts/index • facts/show • fact_values/index • fact_values/show • fact_values/auto_complete_search • api/v1/fact_values/index • api/v1/fact_values/show • api/v2/fact_values/index • api/v2/fact_values/show | |
| upload_facts | <ul style="list-style-type: none"> • api/v2/hosts/facts | |

| Permission Name | Actions | Resource Type |
|-----------------|--|---------------|
| view_filters | <ul style="list-style-type: none"> • filters/index • filters/auto_complete_search • api/v2/filters/index • api/v2/filters/show | |
| create_filters | <ul style="list-style-type: none"> • filters/new • filters/create • api/v2/filters/create | |
| edit_filters | <ul style="list-style-type: none"> • filters/edit • filters/update • permissions/index • api/v2/filters/update • api/v2/permissions/index • api/v2/permissions/show • api/v2/permissions/resource_types | |
| destroy_filters | <ul style="list-style-type: none"> • filters/destroy • api/v2/filters/destroy | |

| Permission Name | Actions | Resource Type |
|---------------------|--|---------------|
| view_arf_reports | <ul style="list-style-type: none">• arf_reports/index• arf_reports/show• arf_reports/parse_html• arf_reports/show_html• arf_reports/parse_bzip• arf_reports/auto_complete_search• api/v2/compliance/arf_reports/index• api/v2/compliance/arf_reports/show• compliance_hosts/show | |
| destroy_arf_reports | <ul style="list-style-type: none">• arf_reports/destroy• arf_reports/delete_multiple• arf_reports/submit_delete_multiple• api/v2/compliance/arf_reports/destroy | |
| create_arf_reports | <ul style="list-style-type: none">• api/v2/compliance/arf_reports/create | |

| Permission Name | Actions | Resource Type |
|------------------|---|-------------------------|
| view_policies | <ul style="list-style-type: none"> • policies/index • policies/show • policies/parse • policies/auto_complete_search • policy_dashboard/index • compliance_dashboard/index • api/v2/compliance/policies/index • api/v2/compliance/policies/show • api/v2/compliance/policies/content | ForemanOpenscap::Policy |
| edit_policies | <ul style="list-style-type: none"> • policies/edit • policies/update • policies/scap_content_selected • api/v2/compliance/policies/update | ForemanOpenscap::Policy |
| create_policies | <ul style="list-style-type: none"> • policies/new • policies/create • api/v2/compliance/policies/create | ForemanOpenscap::Policy |
| destroy_policies | <ul style="list-style-type: none"> • policies/destroy • api/v2/compliance/policies/destroy | ForemanOpenscap::Policy |

| Permission Name | Actions | Resource Type |
|--------------------|--|------------------------------|
| assign_policies | <ul style="list-style-type: none"> • policies/select_multiple_hosts • policies/update_multiple_hosts • policies/disassociate_multiple_hosts • policies/remove_policy_from_multiple_hosts | ForemanOpenscap::Policy |
| view_scap_contents | <ul style="list-style-type: none"> • scap_contents/index • scap_contents/show • scap_contents/auto_complete_search • api/v2/compliance/scap_contents/index • api/v2/compliance/scap_contents/show | ForemanOpenscap::ScapContent |
| view_scap_contents | <ul style="list-style-type: none"> • scap_contents/index • scap_contents/show • scap_contents/auto_complete_search • api/v2/compliance/scap_contents/index • api/v2/compliance/scap_contents/show | ForemanOpenscap::ScapContent |
| edit_scap_contents | <ul style="list-style-type: none"> • scap_contents/edit • scap_contents/update • api/v2/compliance/scap_contents/update | ForemanOpenscap::ScapContent |

| Permission Name | Actions | Resource Type |
|-----------------------|---|------------------------------|
| create_scap_contents | <ul style="list-style-type: none">scap_contents/newscap_contents/createapi/v2/compliance/scap_contents/create | ForemanOpenscap::ScapContent |
| destroy_scap_contents | <ul style="list-style-type: none">scap_contents/destroyapi/v2/compliance/scap_contents/destroy | ForemanOpenscap::ScapContent |
| edit_hosts | <ul style="list-style-type: none">hosts/openscap_proxy_changed | Host |
| edit_hostgroups | <ul style="list-style-type: none">hostgroups/openscap_proxy_changed | Host |

| Permission Name | Actions | Resource Type |
|----------------------|---|---------------|
| view_job_templates | <ul style="list-style-type: none"> • job_templates/index • job_templates/show • job_templates/revision • job_templates/auto_complete_search • job_templates/auto_complete_job_category • job_templates/preview • job_templates/export • api/v2/job_templates/index • api/v2/job_templates/show • api/v2/job_templates/revision • api/v2/job_templates/export • api/v2/template_inputs/index • api/v2/template_inputs/show • api/v2/foreign_input_sets/index • api/v2/foreign_input_sets/show | JobTemplate |
| create_job_templates | <ul style="list-style-type: none"> • job_templates/new • job_templates/create • job_templates/clone_template • job_templates/import • api/v2/job_templates/create • api/v2/job_templates/clone • api/v2/job_templates/import | JobTemplate |

| Permission Name | Actions | Resource Type |
|-----------------|---------|---------------|
|-----------------|---------|---------------|

| | | |
|--------------------|--|--|
| edit_job_templates | <ul style="list-style-type: none">• job_templates/edit• job_templates/update• api/v2/job_templates/update• api/v2/template_inputs/create• api/v2/template_inputs/update• api/v2/template_inputs/destroy• api/v2/foreign_input_sets/create• api/v2/foreign_input_sets/update• api/v2/foreign_input_sets/destroy | |
|--------------------|--|--|

| Permission Name | Actions | Resource Type |
|--------------------------------|--|------------------------|
| edit_job_templates | <ul style="list-style-type: none"> job_templates/edit job_templates/update api/v2/job_templates/update api/v2/template_inputs/create api/v2/template_inputs/update api/v2/template_inputs/destroy api/v2/foreign_input_sets/create api/v2/foreign_input_sets/update api/v2/foreign_input_sets/destroy | |
| edit_remote_execution_features | <ul style="list-style-type: none"> remote_execution_features/index remote_execution_features/show remote_execution_features/update api/v2/remote_execution_features/index api/v2/remote_execution_features/show api/v2/remote_execution_features/update | RemoteExecutionFeature |
| destroy_job_templates | <ul style="list-style-type: none"> job_templates/destroy api/v2/job_templates/destroy | JobTemplate |
| lock_job_templates | <ul style="list-style-type: none"> job_templates/lock job_templates/unlock | JobTemplate |

| Permission Name | Actions | Resource Type |
|---|--|--------------------|
| create_job_invocations | <ul style="list-style-type: none"> • job_invocations/new • job_invocations/create • job_invocations/refresh • job_invocations/rerun • job_invocations/preview_hosts • api/v2/job_invocations/create | JobInvocation |
| view_job_invocations | <ul style="list-style-type: none"> • job_invocations/index • job_invocations/show • template_invocations/show • api/v2/job_invocations/index • api/v2/job_invocations/show • api/v2/job_invocations/output | JobInvocation |
| execute_template_invocation | | TemplateInvocation |
| filter_autocompletion_for_template_invocation | <ul style="list-style-type: none"> • template_invocations/auto_complete_search • job_invocations/show • template_invocations/index | TemplateInvocation |

| Permission Name | Actions | Resource Type |
|-------------------------|---|------------------------------|
| view_foreman_tasks | <ul style="list-style-type: none"> • foreman_tasks/tasks/auto_complete_search • foreman_tasks/tasks/sub_tasks • foreman_tasks/tasks/index • foreman_tasks/tasks/show • foreman_tasks/api/tasks/bulk_search • foreman_tasks/api/tasks/show • foreman_tasks/api/tasks/index • foreman_tasks/api/tasks/summary | ForemanTasks::Task |
| edit_foreman_tasks | <ul style="list-style-type: none"> • foreman_tasks/tasks/resume • foreman_tasks/tasks/unlock • foreman_tasks/tasks/force_unlock • foreman_tasks/tasks/cancel_step • foreman_tasks/api/tasks/bulk_resume | ForemanTasks::Task |
| create_recurring_logics | | ForemanTasks::RecurringLogic |
| view_recurring_logics | <ul style="list-style-type: none"> • foreman_tasks/recurring_logics/index • foreman_tasks/recurring_logics/show • foreman_tasks/api/recurring_logics/index • foreman_tasks/api/recurring_logics/show | ForemanTasks::RecurringLogic |

| Permission Name | Actions | Resource Type |
|-----------------------|---|------------------------------|
| edit_recurring_logics | <ul style="list-style-type: none"> • foreman_tasks/recurring_logics/cancel • foreman_tasks/api/recurring_logics/cancel | ForemanTasks::RecurringLogic |
| view_globals | <ul style="list-style-type: none"> • common_parameters/index • common_parameters/show • common_parameters/auto_complete_search • api/v1/common_parameters/index • api/v1/common_parameters/show • api/v2/common_parameters/index • api/v2/common_parameters/show | |
| create_globals | <ul style="list-style-type: none"> • common_parameters/new • common_parameters/create • api/v1/common_parameters/create • api/v2/common_parameters/create | |
| edit_globals | <ul style="list-style-type: none"> • common_parameters/edit • common_parameters/update • api/v1/common_parameters/update • api/v2/common_parameters/update | |

| Permission Name | Actions | Resource Type |
|-----------------------|--|-------------------------|
| destroy_globals | <ul style="list-style-type: none"> • common_parameters/destroy • api/v1/common_parameters/destroy • api/v2/common_parameters/destroy | |
| view_gpg_keys | <ul style="list-style-type: none"> • katello/gpg_keys/all • katello/gpg_keys/index • katello/gpg_keys/auto_complete_search • katello/api/v2/gpg_keys/index • katello/api/v2/gpg_keys/show | Katello::GpgKey |
| create_gpg_keys | <ul style="list-style-type: none"> • katello/api/v2/gpg_keys/create | Katello::GpgKey |
| edit_gpg_keys | <ul style="list-style-type: none"> • katello/api/v2/gpg_keys/update • katello/api/v2/gpg_keys/content | Katello::GpgKey |
| destroy_gpg_keys | <ul style="list-style-type: none"> • katello/api/v2/gpg_keys/destroy | Katello::GpgKey |
| view_host_collections | <ul style="list-style-type: none"> • katello/api/v2/host_collections/index • katello/api/v2/host_collections/show • katello/host_collections/auto_complete_search | Katello::HostCollection |

| Permission Name | Actions | Resource Type |
|--------------------------|---|-------------------------|
| create_host_collections | <ul style="list-style-type: none"> katello/api/v2/host_collections/create katello/api/v2/host_collections/copy | Katello::HostCollection |
| edit_host_collections | <ul style="list-style-type: none"> katello/api/v2/host_collections/update katello/api/v2/host_collections/add_systems katello/api/v2/host_collections/remove_systems | Katello::HostCollection |
| destroy_host_collections | <ul style="list-style-type: none"> katello/api/v2/host_collections/destroy | Katello::HostCollection |
| edit_classes | <ul style="list-style-type: none"> host_editing/edit_classes api/v2/host_classes/index api/v2/host_classes/create api/v2/host_classes/destroy | |
| create_params | <ul style="list-style-type: none"> host_editing/create_params api/v2/parameters/create | |
| edit_params | <ul style="list-style-type: none"> host_editing/edit_params api/v2/parameters/update | |

| Permission Name | Actions | Resource Type |
|-----------------|--|---------------|
| destroy_params | <ul style="list-style-type: none">• host_editing/destroy_params• api/v2/parameters/destroy• api/v2/parameters/reset | |
| view_hostgroups | <ul style="list-style-type: none">• hostgroups/index• hostgroups/show• hostgroups/auto_complete_search• api/v1/hostgroups/index• api/v1/hostgroups/show• api/v2/hostgroups/index• api/v2/hostgroups/show | |

| Permission Name | Actions | Resource Type |
|-------------------|---|---------------|
| create_hostgroups | <ul style="list-style-type: none"> • hostgroups/new • hostgroups/create • hostgroups/clone • hostgroups/nest • hostgroups/process_host_group • hostgroups/architecture_selected • hostgroups/domain_selected • hostgroups/environment_selected • hostgroups/medium_selected • hostgroups/os_selected • hostgroups/use_image_selected • hostgroups/process_host_group • hostgroups/puppetclass_parameters • host/process_hostgroup • puppetclasses/parameters • api/v1/hostgroups/create • api/v1/hostgroups/clone • api/v2/hostgroups/create • api/v2/hostgroups/clone | |

| Permission Name | Actions | Resource Type |
|-----------------|--|---------------|
| edit_hostgroups | <ul style="list-style-type: none"> • hostgroups/edit • hostgroups/update • hostgroups/architecture_selected • hostgroups/process_hostgroup • hostgroups/architecture_selected • hostgroups/domain_selected • hostgroups/environment_selected • hostgroups/medium_selected • hostgroups/os_selected • hostgroups/use_image_selected • hostgroups/process_hostgroup • hostgroups/puppetclass_parameters • host/process_hostgroup • puppetclasses/parameters • api/v1/hostgroups/update • api/v2/hostgroups/update • api/v2/parameters/create • api/v2/parameters/update • api/v2/parameters/destroy • api/v2/parameters/reset • api/v2/hostgroup_classes/index • api/v2/hostgroup_classes/create • api/v2/hostgroup_classes/destroy | |

| Permission Name | Actions | Resource Type |
|--------------------|--|---------------|
| destroy_hostgroups | <ul style="list-style-type: none"> • hostgroups/destroy • api/v1/hostgroups/destroy • api/v2/hostgroups/destroy | |
| view_hosts | <ul style="list-style-type: none"> • hosts/index • hosts/show • hosts/errors • hosts/active • hosts/out_of_sync • hosts/disabled • hosts/pending • hosts/vm • hosts/externalNodes • hosts/pxe_config • hosts/storeconfig_klasses • hosts/auto_complete_search • hosts/bmc • hosts/runtime • hosts/resources • hosts/templates • hosts/overview • hosts/nics • dashboard/OutOfSync • dashboard/errors • dashboard/active • unattended/host_template • unattended/hostgroup_template • api/v1/hosts/index • api/v1/hosts/show | |

| Permission Name | Actions | Resource Type |
|-----------------|---|---------------|
| | <ul style="list-style-type: none"> • api/v1/hosts/status • api/v2/hosts/index • api/v2/hosts/show • api/v2/hosts/status • api/v2/hosts/get_status • api/v2/hosts/vm_compute_attributes • api/v2/hosts/template • api/v2/interfaces/index • api/v2/interfaces/show • locations/mismatches • organizations/mismatches • hosts/puppet_environment_for_content_view • katello/api/v2/host_autocomplete/auto_complete_search • katello/api/v2/host_errata/index • katello/api/v2/host_errata/show • katello/api/v2/host_errata/auto_complete_search • katello/api/v2/host_subscriptions/index • katello/api/v2/host_subscriptions/events • katello/api/v2/host_subscriptions/product_content • katello/api/v2/hosts_bulk_actions/installable_errata • katello/api/v2/hosts_bulk_actions/available_incremental_updates • katello/api/v2/host_packages/index | |
| create_hosts | <ul style="list-style-type: none"> • hosts/new • hosts/create | |

| Permission Name | Actions | Resource Type |
|-----------------|---|---------------|
| | <ul style="list-style-type: none"> • hosts/clone • hosts/architecture_selected • hosts/compute_resource_selected • hosts/domain_selected • hosts/environment_selected • hosts/hostgroup_or_environment_selected • hosts/medium_selected • hosts/os_selected • hosts/use_image_selected • hosts/process_hostgroup • hosts/process_taxonomy • hosts/current_parameters • hosts/puppetclass_parameters • hosts/template_used • hosts/interfaces • compute_resources/cluster_selected • compute_resources/template_selected • compute_resources/provider_selected • compute_resources/resource_pools • puppetclasses/parameters • subnets/freeip • interfaces/new • api/v1/hosts/create • api/v2/hosts/create • api/v2/interfaces/create • api/v2/tasks/index | |

| Permission Name | Actions | Resource Type |
|-----------------|---|---------------|
| | <ul style="list-style-type: none"> • hosts/edit • hosts/update • hosts/multiple_actions • hosts/reset_multiple • hosts/submit_multiple_enable • hosts/select_multiple_hostgroup • hosts/select_multiple_environment • hosts/submit_multiple_disable • hosts/multiple_parameters • hosts/multiple_disable • hosts/multiple_enable • hosts/update_multiple_environment • hosts/update_multiple_hostgroup • hosts/update_multiple_parameters • hosts/toggle_manage • hosts/select_multiple_organization • hosts/update_multiple_organization • hosts/disassociate • hosts/multiple_disassociate • hosts/update_multiple_disassociate • hosts/select_multiple_owner • hosts/update_multiple_owner • hosts/select_multiple_power_state • hosts/update_multiple_power_state | |

| Permission Name | Actions | Resource Type |
|-----------------|---|---------------|
| | <ul style="list-style-type: none"> • hosts/select_multiple_puppet_proxy • hosts/update_multiple_puppet_proxy • hosts/select_multiple_puppet_ca_proxy • hosts/update_multiple_puppet_ca_proxy • hosts/select_multiple_location • hosts/update_multiple_location • hosts/architecture_selected • hosts/compute_resource_selected • hosts/domain_selected • hosts/environment_selected • hosts/hostgroup_or_environment_selected • hosts/medium_selected • hosts/os_selected • hosts/use_image_selected • hosts/process_hostgroup • hosts/process_taxonomy • hosts/current_parameters • hosts/puppetclass_parameters • hosts/template_used • hosts/interfaces • compute_resources/associate • compute_resources[:cluster_selected, :template_selected, :provider_selected, :resource_pools] • compute_resources_vms/associate | |

| Permission Name | Actions | Resource Type |
|-----------------|--|---------------|
| | <ul style="list-style-type: none"> • puppetclasses/parameters • subnets/freeip • interfaces/new • api/v1/hosts/update • api/v2/hosts/update • api/v2/hosts/disassociate • api/v2/interfaces/create • api/v2/interfaces/update • api/v2/interfaces/destroy • api/v2/compute_resources/associate • api/v2/hosts/host_collections • katello/api/v2/host_errata/apply • katello/api/v2/host_packages/install • katello/api/v2/host_packages/upgrade • katello/api/v2/host_packages/upgrade_all • katello/api/v2/host_packages/remove • katello/api/v2/host_subscriptions/auto_attach • katello/api/v2/host_subscriptions/add_subscriptions • katello/api/v2/host_subscriptions/remove_subscriptions • katello/api/v2/host_subscriptions/content_override • katello/api/v2/hosts_bulk_actions/bulk_add_host_collections • katello/api/v2/hosts_bulk_actions/bulk_remove_host_collections • katello/api/v2/hosts_bulk_actions/install_content | |

| Permission Name | Actions | Resource Type |
|-----------------|--|---------------|
| | <ul style="list-style-type: none"> • katello/api/v2/hosts_bulk_actions/update_content • katello/api/v2/hosts_bulk_actions/remove_content • katello/api/v2/hosts_bulk_actions/environment_content_view | |
| destroy_hosts | <ul style="list-style-type: none"> • hosts/destroy • hosts/multiple_actions • hosts/reset_multiple • hosts/multiple_destroy • hosts/submit_multiple_destroy • api/v1/hosts/destroy • api/v2/hosts/destroy • api/v2/interfaces/destroy • katello/api/v2/hosts_bulk_actions/destroy_hosts | |
| build_hosts | <ul style="list-style-type: none"> • hosts/setBuild • hosts/cancelBuild • hosts/multiple_build • hosts/submit_multiple_build • hosts/review_before_build • hosts/rebuild_config • hosts/submit_rebuild_config • tasks/show • api/v2/tasks/index • api/v2/hosts/rebuild_config | |
| power_hosts | <ul style="list-style-type: none"> • hosts/power • api/v2/hosts/power | |

| Permission Name | Actions | Resource Type |
|--------------------------------|--|--------------------|
| console_hosts | <ul style="list-style-type: none"> • hosts/console | |
| ipmi_boot | <ul style="list-style-type: none"> • hosts/ipmi_boot • api/v2/hosts/boot | |
| puppetrun_hosts | <ul style="list-style-type: none"> • hosts/puppetrun • hosts/multiple_puppetrun • hosts/update_multiple_puppetrun • api/v2/hosts/puppetrun | |
| search_repository_image_search | <ul style="list-style-type: none"> • image_search/auto_complete_repository_name • image_search/auto_complete_image_tag • image_search/search_repository | Docker/ImageSearch |
| view_images | <ul style="list-style-type: none"> • images/index • images/show • images/auto_complete_search • api/v1/images/index • api/v1/images/show • api/v2/images/index • api/v2/images/show | |
| create_images | <ul style="list-style-type: none"> • images/new • images/create • api/v1/images/create • api/v2/images/create | |

| Permission Name | Actions | Resource Type |
|---|--|-------------------------|
| edit_images | <ul style="list-style-type: none"> images/edit images/update api/v1/images/update api/v2/images/update | |
| destroy_images | <ul style="list-style-type: none"> images/destroy api/v1/images/destroy api/v2/images/destroy | |
| view_lifecycle_environments | <ul style="list-style-type: none"> katello/api/v2/environments/index katello/api/v2/environments/show katello/api/v2/environments/paths katello/api/v2/environments/repositories katello/api/rhsm/candlepin_proxies/rhsm_index katello/environments/auto_complete_search | Katello::KTEEnvironment |
| create_lifecycle_environments | <ul style="list-style-type: none"> katello/api/v2/environments/create | Katello::KTEEnvironment |
| edit_lifecycle_environments | <ul style="list-style-type: none"> katello/api/v2/environments/update | Katello::KTEEnvironment |
| destroy_lifecycle_environments | <ul style="list-style-type: none"> katello/api/v2/environments/destroy | Katello::KTEEnvironment |
| promote_or_remove_content_views_to_environments | | Katello::KTEEnvironment |

| Permission Name | Actions | Resource Type |
|-------------------|---|---------------|
| view_locations | <ul style="list-style-type: none"> • locations/index • locations/show • locations/auto_complete_search • api/v1/locations/index • api/v1/locations/show • api/v2/locations/index • api/v2/locations/show | |
| create_locations | <ul style="list-style-type: none"> • locations/new • locations/create • locations/clone_taxonomy • locations/step2 • locations/nest • api/v1/locations/create • api/v2/locations/create | |
| edit_locations | <ul style="list-style-type: none"> • locations/edit • locations/update • locations/import_mismatches • locations/parent_taxonomy_selected • api/v1/locations/update • api/v2/locations/update | |
| destroy_locations | <ul style="list-style-type: none"> • locations/destroy • api/v1/locations/destroy • api/v2/locations/destroy | |

| Permission Name | Actions | Resource Type |
|-------------------------|---|---------------|
| assign_locations | <ul style="list-style-type: none"> • locations/assign_all_hosts • locations/assign_hosts • locations/assign_selected_hosts | |
| view_mail_notifications | <ul style="list-style-type: none"> • mail_notifications/index • mail_notifications/auto_complete_search • mail_notifications/show • api/v2/mail_notifications/index • api/v2/mail_notifications/show | |
| view_media | <ul style="list-style-type: none"> • media/index • media/show • media/auto_complete_search • api/v1/media/index • api/v1/media/show • api/v2/media/index • api/v2/media/show | |
| create_media | <ul style="list-style-type: none"> • media/new • media/create • api/v1/media/create • api/v2/media/create | |

| Permission Name | Actions | Resource Type |
|-----------------|--|---------------|
| edit_media | <ul style="list-style-type: none">• media/edit• media/update• api/v1/media/update• api/v2/media/update | |
| destroy_media | <ul style="list-style-type: none">• media/destroy• api/v1/media/destroy• api/v2/media/destroy | |
| view_models | <ul style="list-style-type: none">• models/index• models/show• models/auto_complete_search• api/v1/models/index• api/v1/models/show• api/v2/models/index• api/v2/models/show | |
| create_models | <ul style="list-style-type: none">• models/new• models/create• api/v1/models/create• api/v2/models/create | |
| edit_models | <ul style="list-style-type: none">• models/edit• models/update• api/v1/models/update• api/v2/models/update | |

| Permission Name | Actions | Resource Type |
|-------------------------|--|---------------|
| destroy_models | <ul style="list-style-type: none"> • models/destroy • api/v1/models/destroy • api/v2/models/destroy | |
| view_operatingsystems | <ul style="list-style-type: none"> • operatingsystems/index • operatingsystems/show • operatingsystems/bootfiles • operatingsystems/autocomplete_search • api/v1/operatingsystems/index • api/v1/operatingsystems/show • api/v1/operatingsystems/bootfiles • api/v2/operatingsystems/index • api/v2/operatingsystems/show • api/v2/operatingsystems/bootfiles • api/v2/os_default_templates/index • api/v2/os_default_templates/show | |
| create_operatingsystems | <ul style="list-style-type: none"> • operatingsystems/new • operatingsystems/create • api/v1/operatingsystems/create • api/v2/operatingsystems/create • api/v2/os_default_templates/create | |

| Permission Name | Actions | Resource Type |
|--------------------------|---|---------------|
| edit_operatingsystems | <ul style="list-style-type: none"> • operatingsystems/edit • operatingsystems/update • api/v1/operatingsystems/update • api/v2/operatingsystems/update • api/v2/parameters/create • api/v2/parameters/update • api/v2/parameters/destroy • api/v2/parameters/reset • api/v2/os_default_templates/create • api/v2/os_default_templates/update • api/v2/os_default_templates/destroy | |
| destroy_operatingsystems | <ul style="list-style-type: none"> • operatingsystems/destroy • api/v1/operatingsystems/destroy • api/v2/operatingsystems/destroy • api/v2/os_default_templates/create | |

| Permission Name | Actions | Resource Type |
|----------------------|---|---------------|
| view_organizations | <ul style="list-style-type: none"> • organizations/index • organizations/show • organizations/auto_complete_search • api/v1/organizations/index • api/v1/organizations/show • api/v2/organizations/index • api/v2/organizations/show • katello/api/v2/organizations/index • katello/api/v2/organizations/show • katello/api/v2/organizations/redhat_provider • katello/api/v2/organizations/download_debug_certificate • katello/api/v2/tasks/index | |
| create_organizations | <ul style="list-style-type: none"> • organizations/new • organizations/create • organizations/clone_taxonomy • organizations/step2 • organizations/nest • api/v1/organizations/create • api/v2/organizations/create • katello/api/v2/organizations/create | |

| Permission Name | Actions | Resource Type |
|-----------------------|---|---------------|
| edit_organizations | <ul style="list-style-type: none"> • organizations/edit • organizations/update • organizations/import_mismatches • organizations/parent_taxonomy_selected • api/v1/organizations/update • api/v2/organizations/update • katello/api/v2/organizations/update • katello/api/v2/organizations/autoattach_subscriptions | |
| destroy_organizations | <ul style="list-style-type: none"> • organizations/destroy • api/v1/organizations/destroy • api/v2/organizations/destroy • katello/api/v2/organizations/destroy | |
| assign_organizations | <ul style="list-style-type: none"> • organizations/assign_all_hosts • organizations/assign_hosts • organizations/assign_selected_hosts | |

| Permission Name | Actions | Resource Type |
|-----------------|---|---------------|
| view_ptables | <ul style="list-style-type: none"> • ptables/index • ptables/show • ptables/auto_complete_search • ptables/revision • ptables/preview • api/v1/ptables/index • api/v1/ptables/show • api/v2/ptables/index • api/v2/ptables/show • api/v2/ptables/revision | |
| create_ptables | <ul style="list-style-type: none"> • ptables/new • ptables/create • ptables/clone_template • api/v1/ptables/create • api/v2/ptables/create • api/v2/ptables/clone | |
| edit_ptables | <ul style="list-style-type: none"> • ptables/edit • ptables/update • api/v1/ptables/update • api/v2/ptables/update | |
| destroy_ptables | <ul style="list-style-type: none"> • ptables/destroy • api/v1/ptables/destroy • api/v2/ptables/destroy | |

| Permission Name | Actions | Resource Type |
|-----------------|--|------------------|
| lock_ptables | <ul style="list-style-type: none"> • ptables/lock • ptables/unlock • api/v2/ptables/lock • api/v2/ptables/unlock | |
| view_plugins | <ul style="list-style-type: none"> • plugins/index • api/v2/plugins/index | |
| view_products | <ul style="list-style-type: none"> • katello/products/auto_complete • katello/products/auto_complete_search • katello/api/v2/products/index • katello/api/v2/products/show • katello/api/v2/repositories/index • katello/api/v2/repositories/show • katello/api/v2/packages/index • katello/api/v2/packages/show • katello/api/v2/distributions/index • katello/api/v2/distributions/show • katello/api/v2/package_groups/index • katello/api/v2/package_groups/show • katello/api/v2/errata/index • katello/api/v2/errata/show • katello/api/v2/puppet_modules/index | Katello::Product |

| Permission Name | Actions | Resource Type |
|-----------------|---|---------------|
| | <ul style="list-style-type: none"> • katello/api/v2/puppet_modules/show • katello/errata/short_details • katello/errata/auto_complete • katello/packages/details • katello/packages/auto_complete • katello/puppet_modules/show • katello/repositories/auto_complete_library • katello/repositories/repository_types • katello/content_search/index • katello/content_search/products • katello/content_search/repos • katello/content_search/packages • katello/content_search/errata • katello/content_search/puppet_modules • katello/content_search/packages_items • katello/content_search/errata_items • katello/content_search/puppet_modules_items • katello/content_search/repo_packages • katello/content_search/repo_errata • katello/content_search/repo_puppet_modules • katello/content_search/repo_compare_errata • katello/content_search/repo_compare_packages | |

| Permission Name | Actions | Resource Type |
|-----------------|---|------------------|
| | <ul style="list-style-type: none"> katello/content_search/repo_compare_puppet_modules | |
| create_products | <ul style="list-style-type: none"> katello/api/v2/products/create katello/api/v2/repositories/create | Katello::Product |
| edit_products | <ul style="list-style-type: none"> katello/api/v2/products/update katello/api/v2/repositories/update katello/api/v2/repositories/remove_content katello/api/v2/repositories/import_uploads katello/api/v2/repositories/upload_content katello/api/v2/products_bulk_actions/update_sync_plans katello/api/v2/content_uploads/create katello/api/v2/content_uploads/update katello/api/v2/content_uploads/destroy katello/api/v2/organizations/repo_discover katello/api/v2/organizations/cancel_repo_discover | Katello::Product |

| Permission Name | Actions | Resource Type |
|------------------|--|------------------|
| destroy_products | <ul style="list-style-type: none"> • katello/api/v2/products/destroy • katello/api/v2/repositories/destroy • katello/api/v2/products_bulk_actions/destroy_products • katello/api/v2/repositories_bulk_actions/destroy_repositories | Katello::Product |
| sync_products | <ul style="list-style-type: none"> • katello/api/v2/products/sync • katello/api/v2/repositories/sync • katello/api/v2/products_bulk_actions/sync_products • katello/api/v2/repositories_bulk_actions/sync_repositories • katello/api/v2/sync/index • katello/api/v2/sync_plans/sync • katello/sync_management/index • katello/sync_management/sync_status • katello/sync_management/product_status • katello/sync_management/sync • katello/sync_management/destroy | Katello::Product |
| export_products | <ul style="list-style-type: none"> • katello/api/v2/repositories/export | Katello::Product |

| Permission Name | Actions | Resource Type |
|-----------------------------|--|---------------|
| view_provisioning_templates | <ul style="list-style-type: none"> • provisioning_templates/index • provisioning_templates/show • provisioning_templates/revision • provisioning_templates/automatic_search • provisioning_templates/review • api/v1/config_templates/index • api/v1/config_templates/show • api/v1/config_templates/revision • api/v2/config_templates/index • api/v2/config_templates/show • api/v2/config_templates/revision • api/v2/provisioning_templates/index • api/v2/provisioning_templates/show • api/v2/provisioning_templates/revision • api/v2/template_combinations/index • api/v2/template_combinations/show • api/v1/template_kinds/index • api/v2/template_kinds/index | |

| Permission Name | Actions | Resource Type |
|-------------------------------|---|---------------|
| create_provisioning_templates | <ul style="list-style-type: none"> • provisioning_templates/new • provisioning_templates/create • provisioning_templates/clone_template • api/v1/config_templates/create • api/v2/config_templates/create • api/v2/config_templates/clone • api/v2/provisioning_templates/create • api/v2/provisioning_templates/clone • api/v2/template_combinations/create | |
| edit_provisioning_templates | <ul style="list-style-type: none"> • provisioning_templates/edit • provisioning_templates/update • api/v1/config_templates/update • api/v2/config_templates/update • api/v2/provisioning_templates/update • api/v2/template_combinations/update | |

| Permission Name | Actions | Resource Type |
|--------------------------------|--|---------------|
| destroy_provisioning_templates | <ul style="list-style-type: none"> provisioning_templates/destroy api/v1/config_templates/destroy api/v2/config_templates/destroy api/v2/provisioning_templates/destroy api/v2/template_combinations/destroy | |
| deploy_provisioning_templates | <ul style="list-style-type: none"> provisioning_templates/build_pxe_default api/v1/config_templates/build_pxe_default api/v2/config_templates/build_pxe_default api/v2/provisioning_templates/build_pxe_default | |
| lock_provisioning_templates | <ul style="list-style-type: none"> provisioning_templates/lock provisioning_templates/unlock api/v2/config_templates/lock api/v2/config_templates/unlock api/v2/provisioning_templates/lock api/v2/provisioning_templates/unlock | |
| user_logout | <ul style="list-style-type: none"> users/logout | |
| my_account | <ul style="list-style-type: none"> users/edit katello/api/v2/tasks/show | |

| Permission Name | Actions | Resource Type |
|----------------------|--|---------------|
| api_status | <ul style="list-style-type: none"> • api/v1/home/status • api/v2/home/status | |
| view_puppetclasses | <ul style="list-style-type: none"> • puppetclasses/index • puppetclasses/show • puppetclasses/auto_complete_search • api/v1/puppetclasses/index • api/v1/puppetclasses/show • api/v2/puppetclasses/index • api/v2/puppetclasses/show • api/v1/lookup_keys/index • api/v1/lookup_keys/show • api/v2/smart_variables/index • api/v2/smart_variables/show • api/v2/smart_class_parameters/index • api/v2/smart_class_parameters/show | |
| create_puppetclasses | <ul style="list-style-type: none"> • puppetclasses/new • puppetclasses/create • api/v1/puppetclasses/create • api/v2/puppetclasses/create | |

| Permission Name | Actions | Resource Type |
|-----------------------|---|---------------|
| edit_puppetclasses | <ul style="list-style-type: none"> • puppetclasses/edit • puppetclasses/update • puppetclasses/override • api/v1/puppetclasses/update • api/v2/puppetclasses/update • api/v1/lookup_keys/create • api/v1/lookup_keys/update • api/v1/lookup_keys/destroy • api/v2/smart_variables/create • api/v2/smart_variables/update • api/v2/smart_variables/destroy • api/v2/smart_class_parameters/create • api/v2/smart_class_parameters/update • api/v2/smart_class_parameters/destroy | |
| destroy_puppetclasses | <ul style="list-style-type: none"> • puppetclasses/destroy • api/v1/puppetclasses/destroy • api/v2/puppetclasses/destroy | |

| Permission Name | Actions | Resource Type |
|----------------------|---|---------------|
| import_puppetclasses | <ul style="list-style-type: none"> • puppetclasses/import_environments • puppetclasses/obsolete_and_new • api/v1/environments/import_puppetclasses • api/v2/environments/import_puppetclasses • api/v1/smart_proxies/import_puppetclasses • api/v2/smart_proxies/import_puppetclasses | |
| view_realms | <ul style="list-style-type: none"> • realms/index • realms/show • realms/auto_complete_search • api/v2/realms/index • api/v2/realms/show | |
| create_realms | <ul style="list-style-type: none"> • realms/new • realms/create • api/v2/realms/create | |
| edit_realms | <ul style="list-style-type: none"> • realms/edit • realms/update • api/v2/realms/update | |
| destroy_realms | <ul style="list-style-type: none"> • realms/destroy • api/v2/realms/destroy | |
| view_search | <ul style="list-style-type: none"> • redhat_access/search/index | |

| Permission Name | Actions | Resource Type |
|-----------------------------|--|---------------|
| view_cases | <ul style="list-style-type: none"> redhat_access/cases/index redhat_access/cases/create | |
| attachments | <ul style="list-style-type: none"> redhat_access/attachments/index redhat_access/attachments/create | |
| configuration | <ul style="list-style-type: none"> redhat_access/configuration/index | |
| app_root | <ul style="list-style-type: none"> redhat_access/redhat_access/index | |
| view_log_viewer | <ul style="list-style-type: none"> redhat_access/logviewer/index | |
| logs | <ul style="list-style-type: none"> redhat_access/logs/index | |
| rh_telemetry_api | <ul style="list-style-type: none"> redhat_access/api/telemetry_api/proxy redhat_access/api/telemetry_api/connection_status | |
| rh_telemetry_view | <ul style="list-style-type: none"> redhat_access/analytics_dashboard/index | |
| rh_telemetry_configurations | <ul style="list-style-type: none"> redhat_access/telemetry_configurations/show redhat_access/telemetry_configurations/update | |

| Permission Name | Actions | Resource Type |
|--------------------|---|----------------|
| view_registries | <ul style="list-style-type: none"> registries/index registries/show api/v2/registries/index api/v2/registries/show | DockerRegistry |
| view_registries | <ul style="list-style-type: none"> registries/index registries/show api/v2/registries/index api/v2/registries/show | DockerRegistry |
| create_registries | <ul style="list-style-type: none"> registries/new registries/create registries/update registries/edit api/v2/registries/create api/v2/registries/update | DockerRegistry |
| destroy_registries | <ul style="list-style-type: none"> registries/destroy api/v2/registries/destroy | DockerRegistry |
| view_roles | <ul style="list-style-type: none"> roles/index roles/auto_complete_search api/v2/roles/index api/v2/roles/show | |
| create_roles | <ul style="list-style-type: none"> roles/new roles/create roles/clone api/v2/roles/create | |

| Permission Name | Actions | Resource Type |
|-----------------|---|---------------|
| edit_roles | <ul style="list-style-type: none">roles/editroles/updateapi/v2/roles/update | |
| destroy_roles | <ul style="list-style-type: none">roles/destroyapi/v2/roles/destroy | |
| access_settings | <ul style="list-style-type: none">home/settings | |

| Permission Name | Actions | Resource Type |
|--------------------|---|---------------|
| view_smart_proxies | <ul style="list-style-type: none"> • smart_proxies/index • smart_proxies/ping • smart_proxies/auto_complete_search • smart_proxies/version • smart_proxies/show • smart_proxies/plugin_version • smart_proxies/tftp_server • smart_proxies/puppet_environments • smart_proxies/puppet_dashboard • smart_proxies/log_pane • smart_proxies/failed_modules • smart_proxies/errors_card • smart_proxies/modules_card • api/v1/smart_proxies/index • api/v1/smart_proxies/show • api/v2/smart_proxies/index • api/v2/smart_proxies/show • api/v2/smart_proxies/version • api/v2/smart_proxies/log | |

| Permission Name | Actions | Resource Type |
|-----------------------------|--|---------------|
| create_smart_proxies | <ul style="list-style-type: none"> • smart_proxies/new • smart_proxies/create • api/v1/smart_proxies/create • api/v2/smart_proxies/create | |
| edit_smart_proxies | <ul style="list-style-type: none"> • smart_proxies/edit • smart_proxies/update • smart_proxies/refresh • smart_proxies/expire_logs • api/v1/smart_proxies/update • api/v1/smart_proxies/refresh • api/v2/smart_proxies/update • api/v2/smart_proxies/refresh | |
| destroy_smart_proxies | <ul style="list-style-type: none"> • smart_proxies/destroy • api/v1/smart_proxies/destroy • api/v2/smart_proxies/destroy | |
| view_smart_proxies_autosign | <ul style="list-style-type: none"> • autosign/index • autosign/show • autosign/counts • api/v1/autosign/index • api/v2/autosign/index | |

| Permission Name | Actions | Resource Type |
|--------------------------------|---|---------------|
| create_smart_proxies_autosign | <ul style="list-style-type: none"> • autosign/new • autosign/create | |
| destroy_smart_proxies_autosign | <ul style="list-style-type: none"> • autosign/destroy | |
| view_smart_proxies_puppetca | <ul style="list-style-type: none"> • puppetca/index • puppetca/counts • puppetca/expiry | |
| edit_smart_proxies_puppetca | <ul style="list-style-type: none"> • puppetca/update | |
| destroy_smart_proxies_puppetca | <ul style="list-style-type: none"> • puppetca/destroy | |
| view_statistics | <ul style="list-style-type: none"> • statistics/index • api/v1/statistics/index • api/v2/statistics/index | |
| view_subnets | <ul style="list-style-type: none"> • subnets/index • subnets/show • subnets/auto_complete_search • api/v1/subnets/index • api/v1/subnets/show • api/v2/subnets/index • api/v2/subnets/show | |
| create_subnets | <ul style="list-style-type: none"> • subnets/new • subnets/create • api/v1/subnets/create • api/v2/subnets/create | |

| Permission Name | Actions | Resource Type |
|----------------------|---|---------------|
| edit_subnets | <ul style="list-style-type: none"> • subnets/edit • subnets/update • api/v1/subnets/update • api/v2/subnets/update | |
| destroy_subnets | <ul style="list-style-type: none"> • subnets/destroy • api/v1/subnets/destroy • api/v2/subnets/destroy | |
| import_subnets | <ul style="list-style-type: none"> • subnets/import • subnets/create_multiple | |
| view_subscriptions | <ul style="list-style-type: none"> • katello/api/v2/subscriptions/index • katello/api/v2/subscriptions/show • katello/api/v2/subscriptions/available • katello/api/v2/subscriptions/manifest_history • katello/api/v2/subscriptions/auto_complete_search • katello/api/v2/repository_sets/index • katello/api/v2/repository_sets/show • katello/api/v2/repository_sets/available_repositories | Organization |
| attach_subscriptions | <ul style="list-style-type: none"> • katello/api/v2/subscriptions/create | Organization |

| Permission Name | Actions | Resource Type |
|------------------------|--|---------------|
| unattach_subscriptions | <ul style="list-style-type: none"> • katello/api/v2/subscriptions/destroy | Organization |
| import_manifest | <ul style="list-style-type: none"> • katello/products/available_repositories • katello/products/toggle_repository • katello/providers/redhat_provider • katello/providers/redhat_provider_tab • katello/api/v2/subscriptions/upload • katello/api/v2/subscriptions/refresh_manifest • katello/api/v2/repository_sets/enable • katello/api/v2/repository_sets/disable | Organization |
| delete_manifest | <ul style="list-style-type: none"> • katello/api/v2/subscriptions/delete_manifest | Organization |

| Permission Name | Actions | Resource Type |
|--------------------|--|-------------------|
| view_sync_plans | <ul style="list-style-type: none"> katello/sync_plans/all katello/sync_plans/index katello/sync_plans/auto_complete_search katello/api/v2/sync_plans/index katello/api/v2/sync_plans/show katello/api/v2/sync_plans/add_products katello/api/v2/sync_plans/remove_products katello/api/v2/sync_plans/available_products katello/api/v2/products/index | Katello::SyncPlan |
| create_sync_plans | <ul style="list-style-type: none"> katello/api/v2/sync_plans/create | Katello::SyncPlan |
| edit_sync_plans | <ul style="list-style-type: none"> katello/api/v2/sync_plans/update | Katello::SyncPlan |
| destroy_sync_plans | <ul style="list-style-type: none"> katello/api/v2/sync_plans/destroy | Katello::SyncPlan |
| view_tasks | <ul style="list-style-type: none"> trends/show | |
| view_trends | <ul style="list-style-type: none"> trends/index trends/show | |
| create_trends | <ul style="list-style-type: none"> trends/new trends/create | |

| Permission Name | Actions | Resource Type |
|-------------------|--|---------------|
| edit_trends | <ul style="list-style-type: none"> trends/edit trends/update | |
| destroy_trends | <ul style="list-style-type: none"> trends/destroy | |
| update_trends | <ul style="list-style-type: none"> trends/count | |
| my_organizations | <ul style="list-style-type: none"> katello/api/rhsm/candlepin_proxies/list_owners | |
| view_usergroups | <ul style="list-style-type: none"> usergroups/index usergroups/show usergroups/auto_complete_search api/v1/usergroups/index api/v1/usergroups/show api/v2/usergroups/index api/v2/usergroups/show | |
| create_usergroups | <ul style="list-style-type: none"> usergroups/new usergroups/create api/v1/usergroups/create api/v2/usergroups/create | |
| edit_usergroups | <ul style="list-style-type: none"> usergroups/edit usergroups/update api/v1/usergroups/update api/v2/usergroups/update | |

| Permission Name | Actions | Resource Type |
|--------------------|---|---------------|
| destroy_usergroups | <ul style="list-style-type: none"> • usergroups/destroy • api/v1/usergroups/destroy • api/v2/usergroups/destroy | |
| view_users | <ul style="list-style-type: none"> • users/index • users/show • users/auto_complete_search • api/v1/users/index • api/v1/users/show • api/v2/users/index • api/v2/users/show | |
| create_users | <ul style="list-style-type: none"> • users/new • users/create • users/auth_source_selected • api/v1/users/create • api/v2/users/create | |
| edit_users | <ul style="list-style-type: none"> • users/edit • users/update • users/auth_source_selected • users/test_mail • api/v1/users/update • api/v2/users/update | |

| Permission Name | Actions | Resource Type |
|-----------------|---|---------------|
| destroy_users | <ul style="list-style-type: none"><li data-bbox="667 241 858 271">• users/destroy<li data-bbox="667 304 935 333">• api/v1/users/destroy<li data-bbox="667 367 935 396">• api/v2/users/destroy | |