



Red Hat CloudForms 4.6

Lenovo Physical Infrastructure Provider REST API

A reference to the Lenovo physical infrastructure provider REST API

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Abstract

A reference to the Lenovo physical infrastructure provider REST API. If you have a suggestion for improving this guide or have found an error, please submit a Bugzilla report at <http://bugzilla.redhat.com> against Red Hat CloudForms Management Engine for the Documentation component. Please provide specific details, such as the section number, guide name, and CloudForms version so we can easily locate the content.

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CHAPTER 1. REST API

You can use the REST API to retrieve information about providers, physical-infrastructure providers, and physical servers. You can use the CloudForms REST API if you need information about the servers in your physical infrastructure.

Before you begin

To use the REST API, you must log in to CloudForms Management Engine API as a user who has permission to access the API. The default user is `admin`, password is `smartvm`.

Use the following URL to access the CloudForms REST API:

```
<CloudForms_address>:<port>/api
```

For example:

```
localhost:3000/api
```

1.1. RETRIEVING PROVIDER DETAILS

To retrieve information for all providers, use the following request URL:

```
GET <CloudForms_address>:<port>/api/providers
```

A JSON response with the following keys is returned.

```
actions (list of actions that can be used)
count (total number of providers)
name (URI name)
pages (count of pages)
resource (list of URLs for each provider that is managed by CloudForms)
subcount (number of providers returned)
```

Examples

- To retrieve all information about the providers, use the `?expand=resources` query parameter, for example:

```
GET localhost:3000/api/providers?expand=resources
```

- To retrieve a specific information about the providers (such as name and ID), use the `?expand=resources&attributes=<attribute_list>` query parameters, for example:

```
GET localhost:3000/api/providers?
expand=resources&attributes=id,name
```

- To retrieve additional information about the providers (such as port, hostname, and IP address), use the `?expand=resources&attributes=<attribute_list>` query parameters, for example:

```
GET localhost:3000/api/providers?
expand=resources&attributes=port,hostname,ipaddress
```

-
- To retrieve information about only Lenovo physical-infrastructure providers, use the ?**expand=resources&filter[]=type=<provider_type>** attribute against all provider resources, for example:

```
GET localhost:3000/api/providers?  
expand=resources&filter[]=type=ManageIQ::Providers::Lenovo::Physical  
InfraManager
```

1.2. RETRIEVING PROVIDER DETAILS BY ID

To retrieve information for a specific provider, use the following request URL where <provider_ID> is the unique identifier of the provider:

```
GET <CloudForms_address>:<port>/api/providers/<provider_ID>
```

A JSON response with the following keys is returned.

```
href  
id  
name  
created_on  
updated_on  
guid  
zone_id  
type  
last_refresh_date  
tenant_id  
enabled  
options  
actions
```

Examples

- To retrieve a specific information about the provider (such as name and ID), use the ?**attributes=<attribute_list>** query parameters, for example:

```
GET localhost:3000/api/providers/<provider_ID>?  
expand=resources&attributes=id,name
```

- To retrieve additional information about the provider (such as port, hostname, and IP address), use the ?**attributes=<attribute_list>** query parameters, for example:

```
GET localhost:3000/api/providers/<provider_ID>?expand=resources  
&attributes=port,hostname,ipaddress
```

1.3. PERFORMING PHYSICAL-INFRASTRUCTURE PROVIDER ACTIONS

You can use the REST API to perform actions on a physical-infrastructure provider, such as creating, modifying and deleting.

Note: To perform actions on physical-infrastructure providers, you must create a basic authentication using your preferred tool or library, and use the user name and password for the CloudForms instance when using the REST API.

1.3.1. Creating a Lenovo physical-infrastructure provider

To create a Lenovo physical-infrastructure provider, send a POST request using the following request URL and JSON request body.

```
POST <CloudForms_address>:<port>/api/providers
```

Request body:

```
{
  "action": "create",
  "credentials": {
    "password": "<PASSWORD>",
    "userid": "<USERNAME>"
  },
  "hostname": "<LENOVO XCLARITY ADMINISTRATOR ADDRESS>",
  "name": "<NAME>",
  "port": "<THE SERVICE PORT>",
  "type": "ManageIQ::Providers::Lenovo::PhysicalInfraManager"
}
```

1.3.2. Modifying properties for a Lenovo physical-infrastructure provider

To modify properties of a Lenovo physical-infrastructure provider, send a POST request using the following request URL and JSON request body.

```
POST <CloudForms_address>:<port>/api/providers
```

Request body:

```
{
  "action": "edit",
  "credentials": {
    "password": "<new_passowrd>",
    "userid": "<new_user_name>"
  },
  "hostname": "<New_Lenovo_XClarity_Administrator_address>",
  "name": "<new_provider_name>",
  "port": "<new_service_port>"
}
```

1.3.3. Refreshing information about all providers

To refresh information about all providers, send a POST request using the following request URL and JSON request body.

```
POST <CloudForms_address>:<port>/api/providers
```

Request body:

```
{
  "action": "refresh"
}
```

1.3.4. Deleting a physical-infrastructure provider

To delete a specific provider:

- Send a DELETE request using the following request URL.

```
DELETE <CloudForms_address>:<port>/api/providers/<provider_ID>
```

- Send a POST request using the following request URL and JSON request body.

```
POST <CloudForms_address>:<port>/api/providers/<provider_ID>
```

Request body:

```
{
  "action": "delete"
}
```

1.3.5. Performing an action on multiple physical-infrastructure providers

To perform an action on more than one physical-infrastructure providers, send a POST request using the following request URL and JSON request body.

```
POST <CloudForms_address>:<port>/api/providers
```

Request body:

```
{
  "action": "<action>",
  "resources": [{
    "href": "<provider_ID>"
  },
  {
    "href": "<provider_ID>"
  }]
}
```

1.4. RETRIEVING PHYSICAL SERVER DETAILS

To retrieve information for all physical servers, use the following request URL:

```
GET <CloudForms_address>:<port>/api/physical_servers
```

A JSON response with the following keys is returned.

```
actions (list of actions that can be used)
count (count of the physical servers)
```

```

name (URI name)
pages (count of pages)
resource (list of URLs of the each physical servers)
subcount (count of the physical servers returned)

```

Examples

- To retrieve all information about the physical servers, use the **?expand=resources** query parameter, for example:

```
GET localhost:3000/api/physical_servers?expand=resources
```

- To retrieve a specific information about the physical servers (such as name and ID), use the **?expand=resources&attributes=<attribute_list>** query parameters, for example:

```
GET localhost:3000/api/physical_servers?
expand=resources&attributes=id,name
```

- To retrieve specific information about the physical servers (such as firmware, networks, guest devices, and asset details), use the **?expand=resources&attributes=<attribute_list>** query parameters, for example:

```
GET localhost:3000/api/physical_servers?expand=resources&attributes=
hardware.firmwares,hardware.networks,hardware.guest_devices,hardware
.assets_details
```

- To retrieve information about only a specific physical server, use the **?expand=resources&filter[]=name=<server_name>** query attributes on all physical-server resources, for example:

```
GET localhost:3000/api/physical_servers?
expand=resources&filter[]=name=Server1-20127X5462
```

1.5. RETRIEVING PHYSICAL SERVER DETAILS BY ID

To retrieve information for a specific physical server, use the following request URL:

```
GET <CloudForms_address>:<port>/api/physical_servers/<server_ID>
```

A JSON response with the following keys is returned.

```

actions
created_at
ems_id
ems_ref
field_replaceable_unit
health_state
hostname
href
location_led_state
machine_type
manufacturer
model

```

```

name
power_state
product_name
serial_number
type
uid_ems
updated_at
vendor

```

Examples

- To retrieve a specific information about a specific physical server (such as name and ID), use the `?expand=resources&attributes=<attribute_list>` query parameters, for example:

```

GET localhost:3000/api/physical_servers/<server_ID>?
expand=resources&attributes=id,name

```

- To retrieve a specific information about a specific physical server (such as firmware, networks, guest devices, and asset details), use the `?expand=resources&attributes=<attribute_list>` query parameters, for example:

```

GET localhost:3000/api/physical_servers/<server_ID>?
expand=resources
&attributes=hardware.firmwares,hardware.networks,hardware.guest_devices,hardware.assets_details

```

1.6. PERFORMING PHYSICAL SERVER ACTIONS

You can use the REST API to perform management tasks on a physical server, such as powering on an off, restarting, and changing the location-LED state.

Note: To perform actions on physical servers, you must create a basic authentication using your preferred tool or library, and enter your user name and password to access the CloudForms REST API.

1.6.1. Powering on a physical server

To power on a specific physical server, send a POST request using the following request URL and JSON request body.

```

POST <CloudForms_address>:<port>/api/physical_servers/<server_ID>

```

Request body:

```

{
  "action": "power_on"
}

```

1.6.2. Powering off a physical server

To shut down the operating system and power off a specific physical server, send a POST request using the following request URL and JSON request body.

```

POST <CloudForms_address>:<port>/api/physical_servers/<server_ID>

```

-

Request body:

```
{
  "action": "power_off"
}
```

1.6.3. Immediately powering off a physical server

To immediately power off a specific physical server, send a POST request using the following request URL and JSON request body.

```
POST <CloudForms_address>:<port>/api/physical_servers/<server_ID>
```

Request body:

```
{
  "action": "power_off_now"
}
```

1.6.4. Restarting a physical server

To shut down the operating system and restart a specific physical server, send a POST request using the following request URL and JSON request body.

```
POST <CloudForms_address>:<port>/api/physical_servers/<server_ID>
```

Request body:

```
{
  "action": "restart"
}
```

1.6.5. Immediately restarting a physical server

To immediately restart a specific physical server, send a POST request using the following request URL and JSON request body.

```
POST <CloudForms_address>:<port>/api/physical_servers/<server_ID>
```

Request body:

```
{
  "action": "restart_now"
}
```

1.6.6. Changing the location LED state on a physical server to blinking

To change the location-LED state to blinking on a specific server, send a POST request using the following request URL and JSON request body.

```
POST <CloudForms_address>:<port>/api/physical_servers/<server_ID>
```

Request body:

```
{
  "action": "blink_loc_led"
}
```

1.6.7. Performing an action on multiple physical servers

To perform an action on more than one physical servers, send a POST request using the following request URL and JSON request body.

```
POST <CloudForms_address>:<port>/api/physical_servers
```

Request body:

```
{
  "action": "<action>",
  "resources": [{
    "href": "<server_ID>"
  },
  {
    "href": "<server_ID>"
  }]
}
```