

vRealize Suite Lifecycle Manager 1.x Programming Guide

vRealize Suite 2017

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<https://docs.vmware.com/>

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vRealize Suite Lifecycle Manager 1.0 Programming Guide

The *vRealize Suite Lifecycle Manager 1.0 Programming Guide* provides information about the vRealize Suite Lifecycle Manager REST APIs, including how to use the REST API services and resources, create HTTP bearer tokens for authentication and authorization, and construct REST API service calls.

Intended Audience

This information is intended for administrators and programmers who want to configure and manage vRealize Suite Lifecycle Manager programmatically using the vRealize Suite Lifecycle Manager REST API. The guide focuses on common use cases. For related information about all available REST API services, see the vRealize Suite Lifecycle Manager API reference documentation, which is installed with vRealize Suite Lifecycle Manager at the following URL:

```
https://vRSLCHost/api
```

VMware Technical Publications Glossary

VMware Technical Publications provides a glossary of terms that might be unfamiliar to you. For definitions of terms as they are used in VMware technical documentation, go to <http://www.vmware.com/support/pubs>.

Overview of the vRealize Suite Lifecycle Manager REST API

1

You can perform vRealize Suite Lifecycle Manager functions programmatically by using REST API service calls. The API follows the REST style and is available to all licensed users.

- [Using the vRealize Suite Lifecycle Manager REST API](#)

To make vRealize Suite Lifecycle Manager REST API service calls, you can use a browser application or an HTTP client application to send requests and review responses.

- [About the API Use Cases](#)

Although the vRealize Suite Lifecycle Manager API reference contains a menu that lists all REST API service calls, it does not document use cases. The *vRealize Suite Lifecycle Manager Programming Guide* provides frequently used use cases.

Using the vRealize Suite Lifecycle Manager REST API

To make vRealize Suite Lifecycle Manager REST API service calls, you can use a browser application or an HTTP client application to send requests and review responses.

REST Client Programs

Any client application that can send HTTPS requests is an appropriate tool for developing REST applications with the vRealize Suite Lifecycle Manager API. The following open-source applications are commonly used:

- cURL. <http://curl.haxx.se>
- Postman application. <http://www.getpostman.com>

About the API Reference

The vRealize Suite Lifecycle Manager API reference lists all REST API service calls. It is provided as a Swagger document that is installed with vRealize Suite Lifecycle Manager at the following URL:

```
https://vRSLCMhost/api
```

About the API Use Cases

Although the vRealize Suite Lifecycle Manager API reference contains a menu that lists all REST API service calls, it does not document use cases. The *vRealize Suite Lifecycle Manager Programming Guide* provides frequently used use cases.

The following REST API use cases provide the prerequisite, command-line options, and format to help you perform various vRealize Suite Lifecycle Manager functions, such as creating an environment.

- [Request an Authentication Token](#)
- [Create a Data Center](#)
- [Add a vCenter](#)
- [Configuring vRealize Suite Lifecycle Manager Settings](#)
- [Working With Environments](#)
- [Working With Nodes](#)

Request an Authentication Token

2

Request a token to authenticate a vRealize Suite Lifecycle Manager API request.

All vRealize Suite Lifecycle Manager API requests require a valid authentication token in the header `x-xenon-auth-token`.

Prerequisites

- Secure a channel between the web browser and the vRealize Suite Lifecycle Manager server. Open a browser and enter the URL such as:

```
https://vRSLCM_IP_address/vr1cm
```

The system warns that your connection is not private. Click through to confirm the security exception and establish an SSL handshake.

- Log in to vRealize Suite Lifecycle Manager using the applicable credentials.

Procedure

- 1 Enter the command to request the HTTP bearer token.

```
curl 'http://localhost:8000/lcm/api/v1/login' \  
-H 'content-type: application/json' \  
-H 'accept: application/json' \  
--data-binary '${\n "username": "admin@localhost",\n "password": "vmware"\n}'
```

- 2 Examine the response.

A successful request returns an HTTP bearer token that you include in subsequent API requests.

```
{  
  "token":  
  "eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.eyJpc3MiOiJ4biIsInN1YiI6Ii9jb3JlL2F1dGh6L3VzZXJzL3ZMQ01BZG1pbiIsImV4cCI6MTUwNzE4ODQwM30.dAcsjxo3qNkZfLaxwsGKHuL_5MqdEmJUfmNf6zQqpZ0"  
}
```

- 3 For convenience, store the token in a variable.

```
export token="EXAMPLE-TOKEN-TEXT"
```

Create a Data Center

3

Create a data center to back vRealize Suite environments in vRealize Suite Lifecycle Manager.

Prerequisites

Verify that you have a valid authentication token that matches your login credentials. See [Request an Authentication Token](#).

Procedure

- 1 Log in to vRealize Suite Lifecycle Manager.

```
curl POST "http://localhost:8000/lcm/api/v1/login" \
```

- 2 Submit a request for a new data center with parameters inline.

```
curl -X POST "http://localhost:8000/lcm/api/v1/action/create/datacenter" \
-H "accept: application/json" \
-H "x-xenon-auth-token: $token" \
-H "content-type: application/json" \
-d '{"datacenterName": "$name",
    "city": "$city",
    "country": "$country",
    "latitude": "$latitude",
    "longitude": "$longitude",
    "state": "$state"}'
```

- 3 Examine the response to verify that the request is successful.
- 4 (Optional) View data center details.

```
curl GET "http://localhost:8000/lcm/api/v1/view/datacenter?datacenterId={datacenterId}"
```

Example: Create a Data Center Response

When the data center is successfully completed, vRealize Suite Lifecycle Manager returns a response similar to the following:

```
{
  "id": "$DataCenterID",
  "type": null,
  "state": null,
  "status": "SUCCESS",
  "isRetriable": null,
  "retryParameters": null
}
```

Add a vCenter

4

Add a vCenter to a Data Center before using that vCenter to create a private cloud environment.

Prerequisites

- Verify that you have a valid authentication token that matches your login credentials.
- Verify that you have added a data center and the request has completed successfully. See [Create a Data Center](#).
- Ensure that you have the vCenter fully qualified domain name, user name, and password.

Procedure

- 1 Log in to vRealize Suite Lifecycle Manager.

```
curl POST "http://localhost:8000/lcm/api/v1/login" \
```

- 2 Submit a request to add a vCenter to vRealize Suite Lifecycle Manager with parameters inline.

```
curl -X POST "http://localhost:8000/lcm/api/v1/action/add/vc" \  
-H "accept: application/json" \  
-H "x-xenon-auth-token: $token" \  
-H "content-type: application/json" \  
-d '{  
  "datacenterName": "$DataCenterName",  
  "vCenterName": "&vCenterFQDN",  
  "userName": "admin@localhost",  
  "password": "$adminPassword!",  
  "type": 3}'
```

Results

If the vCenter is successfully added, vRealize Suite Lifecycle Manager returns the following response:

```
200 Operation successful
```

Configuring vRealize Suite Lifecycle Manager Settings

5

You can modify settings for vRealize Suite Lifecycle Manager, such as VMware Identity Manager and MyVMware settings.

- [Manage vRealize Suite Lifecycle Manager Common Configuration Settings](#)
POST `/lcm/api/v1/settings` modifies vRealize Suite Lifecycle Manager common configuration settings.
- [Add a VMware Identity Manager](#)
`/lcm/api/v1/settings/add/vidm` adds a VMware Identity Manager (VIDM) to vRealize Suite Lifecycle Manager.
- [Add a MyVMware Account](#)
POST `/lcm/api/v1/settings/add/myvmware` adds your MyVMware account to vRealize Suite Lifecycle Manager, which enables vRealize Suite Lifecycle Manager to download product OVAs through MyVMware.

Manage vRealize Suite Lifecycle Manager Common Configuration Settings

POST `/lcm/api/v1/settings` modifies vRealize Suite Lifecycle Manager common configuration settings.

Prerequisites

Satisfy the following conditions before performing any tasks for this use case.

- Use POST `/lcm/api/v1/login` to log in to vRealize Suite Lifecycle Manager.
- Verify that you have a valid authentication token that matches your login credentials. See [Request an Authentication Token](#).

curl Command

The following example sets new passwords for admin, root, and SSH user, enables SSH and telemetry, and sets the vRealize Suite Lifecycle Manager host name.

```
curl -X POST "http://localhost:8000/lcm/api/v1/settings" \
  -H "accept: application/json" \
  -H "x-xenon-auth-token: $token" \
  -H "content-type: application/json" \
  -d '{
    "adminPassword": "$newAdminPassword",
    "rootPassword": "$newRootPassword",
    "sshuserPassword": "$newSSHUserPassword",
    "sshEnabled": true,
    "telemetryEnabled": true,
    "hostName": "$vRSLCMhostFQDN",
    "configType": ""}'
```

JSON Output

The following JSON output is returned when the operation completes successfully.

```
200 Operation successful
```

Add a VMware Identity Manager

`/lcm/api/v1/settings/add/vidm` adds a VMware Identity Manager (vIDM) to vRealize Suite Lifecycle Manager.

Prerequisites

Satisfy the following conditions before performing any tasks for this use case.

- Use `POST /lcm/api/v1/login` to log in to vRealize Suite Lifecycle Manager.
- Verify that you have a valid authentication token that matches your login credentials. See [Request an Authentication Token](#).
- Verify that you have an existing VMware Identity Manager version 2.9.2.

curl Command

The following example adds and enables a vIDM for all users.

```
curl -X POST "http://localhost:8000/lcm/api/v1/settings/add/vidm" \
  -H "accept: application/json" \
  -H "x-xenon-auth-token: $token" \
  -H "content-type: application/json" \
  -d '{
    "hostname": "$vIDMhostFQDN",
```

```
"adminUserName": "$adminUserName",
"adminPassword": "$adminPassword",
"vidmCloudAdminGroup": "ALL_USERS",
"enabled": true}'
```

JSON Output

The following JSON output is returned when the operation completes successfully.

```
200 Operation successful
```

Add a MyVMware Account

POST /lcm/api/v1/settings/add/myvmware adds your MyVMware account to vRealize Suite Lifecycle Manager, which enables vRealize Suite Lifecycle Manager to download product OVAs through MyVMware.

Prerequisites

Satisfy the following conditions before performing any tasks for this use case.

- Use POST /lcm/api/v1/login to log in to vRealize Suite Lifecycle Manager.
- Verify that you have a valid authentication token that matches your login credentials. See [Request an Authentication Token](#).
- Verify that you have valid MyVMware credentials.

curl Command

The following example adds a MyVMware account with the specified user name and password.

```
curl -X POST "http://localhost:8000/lcm/api/v1/settings/add/myvmware" \
-H "accept: application/json" \
-H "x-xenon-auth-token: $token" \
-H "content-type: application/json" \
-d '{
  "username": "$myVMwareUserName",
  "password": "$myVMwarePassword"}'
```

JSON Output

The following JSON output is returned when the operation completes successfully.

```
200 Operation successful
```

Working with Environments

6

You can use the REST API to create and monitor vRealize Suite environments.

Environments allow you to install, upgrade, and manage vRealize Suite products as unit. You can build your environment using either product-based or solution-based installation, or you can import an existing vRealize Suite environment to manage it with vRealize Suite Lifecycle Manager.

- [Create an Environment](#)

POST `/lcm/api/v1/action/create/environment` creates a vRealize Suite environment.

- [View an Environment](#)

GET `/lcm/api/v1/view/environment?environmentId={environmentId}` displays details for an existing environment.

- [Add a Product to an Existing Environment](#)

POST `/lcm/api/v1/action/add/product?id={environmentId}` adds a vRealize Suite product to an existing environment.

- [Collect Environment Logs](#)

POST `/lcm/api/v1/collectlogs/environment` collects log files for all vRealize Suite Lifecycle Manager environments that you can use for troubleshooting.

Create an Environment

POST `/lcm/api/v1/action/create/environment` creates a vRealize Suite environment.

Prerequisites

Satisfy the following conditions before performing any tasks for this use case.

- Use POST `/lcm/api/v1/login` to log in to vRealize Suite Lifecycle Manager.
- Verify that you have a valid authentication token that matches your login credentials. See [Request an Authentication Token](#).
- Configure OVA settings for the vRealize Suite to install.
- Verify that you have added a data center and the request has completed successfully. See [Create a Data Center](#).

- Verify that you have added a vCenter to the data center and the request has completed successfully. See [Add a vCenter](#).

curl Command

The following example creates a vRealize Suite environment with all available products and nodes.

```
curl -X POST "http://localhost:8000/lcm/api/v1/action/create/environment" \
  -H "accept: application/json" \
  -H "x-xenon-auth-token: $token" \
  -H "content-type: application/json" \
  -d '{
    "requestId": "null",
    "environmentId": "9ccc9fa9473da75558ab6613aa50",
    "infrastructure": {
      "sourceLink": "9ccc9fa9473da75558ab6613aa50",
      "properties": {
        "bindPassword": "$bindPassword",
        "dataCenterName": "Singapore DC",
        "vcHostname": "$vCenterHostFQDN",
        "environmentId": "9ccc9fa9473da75558ab6613aa50",
        "masterVidmAdminUserName": "$masterVIDMadminUserName",
        "netmask": "$netmask",
        "environmentName": "vRS Large Env LCMVCS2 Import BrownField",
        "clusterName": "LCM-DC#LCM-Cluster-01",
        "enableTelemetry": "true",
        "dnsServers": "$dnsServerAddresses",
        "diskFormat": "Thin",
        "baseDN": "$baseDN",
        "vcPassword": "$vCenterPassword",
        "defaultPassword": "$defaultPassword",
        "adminEmail": "admin@example.com",
        "adName": "$adName",
        "certificateChain": "$certificateChain",
        "masterKeyPassphrase": "",
        "datastoreName": "FC-LUN-15 TB",
        "masterVidmAdminPassword": "$masterVIDMadminPassword",
        "masterVidmEnabled": "true",
        "uberAdmin": "user@example.local",
        "license": "$licenseKey",
        "privateKey": "$privateKey",
        "bindDN": "bindDN",
        "vmNetwork": "infra-traffic-1006",
        "masterPrivateKey": "$masterPrivateKey",
        "groupDN": "groupDN",
        "masterVidmCloudAdminGroup": "SSO_Admins@example.local",
        "vcUsername": "Administrator@vsphere.local",
        "domain": "example.local",
        "acceptEULA": "true",
        "keyPassphrase": "$keyPassphrase",
        "gateway": "$gateway",
        "searchpath": "$searchpath",
        "masterCertificateChain": "$masterCertificateChain"
```

```

    }
  },
  "encoded": true,
  "products": [
    {
      "id": "vrli",
      "version": "4.3.0",
      "clusterVIP": [],
      "properties": {
        "vrliClusterVips": "$vrliClusterVIPs"
      }
    },
    {
      "sourceLink": "",
      "type": "vrli-master",
      "properties": {
        "guestFullName": "SUSE Linux Enterprise 11 (64-bit)",
        "esxHost": "$esxHostFQDN",
        "ipAddress": "$ipAddress",
        "cpu": "16",
        "vCenterHost": "$vCenterHostFQDN",
        "storage": "FC-LUN-15 TB",
        "userName": "Administrator@vsphere.local",
        "productName": "VMware vRealize Log Insight",
        "vrliAdminPassword": "$vrliAdminPassword",
        "network": "infra-traffic-1006",
        "password": "$password",
        "productVersion": "4.3.0 Build 5084751",
        "hostname": "$hostFQDN",
        "powerState": "poweredOn",
        "memoryInMb": "32768",
        "name": "S2-vrli-master",
        "vrliRootPassword": "$vrliRootPassword",
        "vrliClusterVips": "$vrliClusterVIPs",
        "LicenseKey": "$LicenseKey"
      }
    },
    {
      "sourceLink": "",
      "type": "vrli-worker",
      "properties": {
        "esxHost": "$esxHostFQDN",
        "guestFullName": "SUSE Linux Enterprise 11 (64-bit)",
        "ipAddress": "$ipAddress",
        "cpu": "16",
        "vCenterHost": "$vCenterHostFQDN",
        "storage": "FC-LUN-15 TB",
        "userName": "Administrator@vsphere.local",
        "productName": "VMware vRealize Log Insight",
        "vrliAdminPassword": "$vrliAdminPassword",
        "network": "infra-traffic-1006",
        "productVersion": "4.3.0 Build 5084751",
        "password": "$password",
        "hostname": "$hostname",
        "powerState": "poweredOn",

```

```

        "memoryInMb": "32768",
        "name": "S2-vrli-worker-03",
        "vrliRootPassword": "$vrliRootPassword"
    }
},
{
    "sourceLink": "",
    "type": "vrli-worker",
    "properties": {
        "guestFullName": "SUSE Linux Enterprise 11 (64-bit)",
        "esxHost": "$esxHostFQDN",
        "ipAddress": "$ipAddress",
        "cpu": "16",
        "vCenterHost": "$vCenterHostFQDN",
        "storage": "FC-LUN-15 TB",
        "userName": "Administrator@vsphere.local",
        "productName": "VMware vRealize Log Insight",
        "vrliAdminPassword": "$vrliAdminPassword",
        "network": "infra-traffic-1006",
        "password": "$password",
        "productVersion": "4.3.0 Build 5084751",
        "hostname": "$hostname",
        "powerState": "poweredOn",
        "memoryInMb": "32768",
        "name": "S2-vrli-worker-02",
        "vrliRootPassword": "$vrliRootPassword"
    }
},
{
    "sourceLink": "",
    "type": "vrli-worker",
    "properties": {
        "guestFullName": "SUSE Linux Enterprise 11 (64-bit)",
        "esxHost": "$esxHostFQDN",
        "ipAddress": "$ipAddress",
        "cpu": "16",
        "vCenterHost": "$vCenterHostFQDN",
        "storage": "FC-LUN-15 TB",
        "userName": "Administrator@vsphere.local",
        "productName": "VMware vRealize Log Insight",
        "vrliAdminPassword": "$vrliAdminPassword",
        "network": "infra-traffic-1006",
        "password": "$password",
        "hostname": "$hostname",
        "productVersion": "4.3.0 Build 5084751",
        "powerState": "poweredOn",
        "memoryInMb": "32768",
        "name": "S2-vrli-worker-01",
        "vrliRootPassword": "$vrliRootPassword"
    }
}
]
},
{
    "id": "vrops",

```

```

"version": "6.5.0",
"clusterVIP": [],
"properties": {
  "ntpServerIP": ""
},
"nodes": [
  {
    "sourceLink": "",
    "type": "master",
    "properties": {
      "esxHost": "$esxHostFQDN",
      "guestFullName": "SUSE Linux Enterprise 11 (64-bit)",
      "address": "$address",
      "role": "MASTER",
      "ipAddress": "$ipAddress",
      "cpu": "16",
      "vCenterHost": "$vCenterHostFQDN",
      "storage": "FC-LUN-15 TB",
      "userName": "Administrator@vsphere.local",
      "productName": "vRealize Operations Manager Appliance",
      "network": "infra-traffic-1006",
      "nodename": "MASTER-NODE",
      "hostname": "$hostname",
      "password": "$password",
      "productVersion": "6.5.0.5097674 Build 5073106",
      "powerState": "poweredOn",
      "memoryInMb": "49152",
      "name": "S2-master"
    }
  },
  {
    "sourceLink": "",
    "type": "replica",
    "properties": {
      "esxHost": "$esxHostFQDN",
      "guestFullName": "SUSE Linux Enterprise 11 (64-bit)",
      "role": "REPLICA",
      "address": "$address",
      "ipAddress": "$ipAddress",
      "cpu": "16",
      "vCenterHost": "$vCenterHostFQDN",
      "storage": "FC-LUN-15 TB",
      "userName": "Administrator@vsphere.local",
      "productName": "vRealize Operations Manager Appliance",
      "network": "infra-traffic-1006",
      "nodename": "S2-replica",
      "password": "$password",
      "productVersion": "6.5.0.5097674 Build 5073106",
      "hostname": "$hostname",
      "powerState": "poweredOn",
      "memoryInMb": "49152",
      "name": "S2-replica"
    }
  },
  {

```

```

"sourceLink": "",
"type": "data",
"properties": {
  "esxHost": "$esxHostFQDN",
  "guestFullName": "SUSE Linux Enterprise 11 (64-bit)",
  "address": "$address",
  "role": "DATA",
  "ipAddress": "$ipAddress",
  "cpu": "16",
  "vCenterHost": "$vCenterHostFQDN",
  "storage": "FC-LUN-15 TB",
  "userName": "Administrator@vsphere.local",
  "productName": "vRealize Operations Manager Appliance",
  "network": "infra-traffic-1006",
  "nodename": "S2-data-07",
  "productVersion": "6.5.0.5097674 Build 5073106",
  "hostname": "$hostname",
  "password": "$password",
  "powerState": "poweredOn",
  "memoryInMb": "49152",
  "name": "S2-data-07"
}
},
{
"sourceLink": "",
"type": "data",
"properties": {
  "esxHost": "$esxHostFQDN",
  "guestFullName": "SUSE Linux Enterprise 11 (64-bit)",
  "address": "$address",
  "role": "DATA",
  "ipAddress": "$ipAddress",
  "cpu": "16",
  "vCenterHost": "$vCenterHostFQDN",
  "storage": "FC-LUN-15 TB",
  "userName": "Administrator@vsphere.local",
  "productName": "vRealize Operations Manager Appliance",
  "network": "infra-traffic-1006",
  "nodename": "S2-data-10",
  "hostname": "$hostname",
  "password": "$password",
  "productVersion": "6.5.0.5097674 Build 5073106",
  "powerState": "poweredOn",
  "memoryInMb": "49152",
  "name": "S2-data-10"
}
},
{
"sourceLink": "",
"type": "data",
"properties": {
  "guestFullName": "SUSE Linux Enterprise 11 (64-bit)",
  "esxHost": "$esxHostFQDN",
  "role": "DATA",
  "address": "$address",

```

```

        "ipAddress": "$ipAddress",
        "cpu": "16",
        "vCenterHost": "vCenterHostFQDN",
        "storage": "FC-LUN-15 TB",
        "userName": "Administrator@vsphere.local",
        "productName": "vRealize Operations Manager Appliance",
        "network": "infra-traffic-1006",
        "nodename": "S2-data-11",
        "hostname": "$hostname",
        "password": "$password",
        "productVersion": "6.5.0.5097674 Build 5073106",
        "powerState": "poweredOn",
        "memoryInMb": "49152",
        "name": "S2-data-11"
    }
},
{
    "sourceLink": "",
    "type": "data",
    "properties": {
        "esxHost": "$esxHostFQDN",
        "guestFullName": "SUSE Linux Enterprise 11 (64-bit)",
        "address": "$address",
        "role": "DATA",
        "ipAddress": "$ipAddress",
        "cpu": "16",
        "vCenterHost": "$vCenterHostFQDN",
        "storage": "FC-LUN-15 TB",
        "userName": "Administrator@vsphere.local",
        "productName": "vRealize Operations Manager Appliance",
        "network": "infra-traffic-1006",
        "nodename": "S2-data-13",
        "password": "$password",
        "productVersion": "6.5.0.5097674 Build 5073106",
        "hostname": "$hostname",
        "powerState": "poweredOn",
        "memoryInMb": "49152",
        "name": "S2-data-13"
    }
},
{
    "sourceLink": "",
    "type": "data",
    "properties": {
        "esxHost": "$esxHostFQDN",
        "guestFullName": "SUSE Linux Enterprise 11 (64-bit)",
        "address": "$address",
        "role": "DATA",
        "ipAddress": "$ipAddress",
        "cpu": "16",
        "vCenterHost": "$vCenterHostFQDN",
        "storage": "FC-LUN-15 TB",
        "userName": "Administrator@vsphere.local",
        "productName": "vRealize Operations Manager Appliance",
        "network": "infra-traffic-1006",

```

```

        "nodename": "S2-data-12",
        "productVersion": "6.5.0.5097674 Build 5073106",
        "password": "$password",
        "hostname": $hostname",
        "powerState": "poweredOn",
        "memoryInMb": "49152",
        "name": "S2-data-12"
    }
},
{
    "sourceLink": "",
    "type": "data",
    "properties": {
        "esxHost": "$esxHostFQDN",
        "guestFullName": "SUSE Linux Enterprise 11 (64-bit)",
        "role": "DATA",
        "address": $address",
        "ipAddress": $ipAddress",
        "cpu": "16",
        "vCenterHost": $vCenterHostFQDN",
        "storage": "FC-LUN-15 TB",
        "userName": "Administrator@vsphere.local",
        "productName": "vRealize Operations Manager Appliance",
        "network": "infra-traffic-1006",
        "nodename": "S2-data-03",
        "password": "$password",
        "hostname": $hostname",
        "productVersion": "6.5.0.5097674 Build 5073106",
        "powerState": "poweredOn",
        "memoryInMb": "49152",
        "name": "S2-data-03"
    }
},
{
    "sourceLink": "",
    "type": "data",
    "properties": {
        "esxHost": "$esxHostFQDN",
        "guestFullName": "SUSE Linux Enterprise 11 (64-bit)",
        "address": $address",
        "role": "DATA",
        "ipAddress": $ipAddress",
        "cpu": "16",
        "vCenterHost": $vCenterHostFQDN",
        "storage": "FC-LUN-15 TB",
        "userName": "Administrator@vsphere.local",
        "productName": "vRealize Operations Manager Appliance",
        "network": "infra-traffic-1006",
        "nodename": "S2-data-09",
        "productVersion": "6.5.0.5097674 Build 5073106",
        "password": "$password",
        "hostname": $hostname",
        "powerState": "poweredOn",
        "memoryInMb": "49152",
        "name": "S2-data-09"
    }
}

```

```

    }
  },
  {
    "sourceLink": "",
    "type": "data",
    "properties": {
      "esxHost": "$esxHostFQDN",
      "guestFullName": "SUSE Linux Enterprise 11 (64-bit)",
      "address": "$address",
      "role": "DATA",
      "ipAddress": "$ipAddress",
      "cpu": "16",
      "vCenterHost": "$vCenterHostFQDN",
      "storage": "FC-LUN-15 TB",
      "userName": "Administrator@vsphere.local",
      "productName": "vRealize Operations Manager Appliance",
      "network": "infra-traffic-1006",
      "nodename": "S2-data-08",
      "password": "$password",
      "hostname": "$hostname",
      "productVersion": "6.5.0.5097674 Build 5073106",
      "powerState": "poweredOn",
      "memoryInMb": "49152",
      "name": "S2-data-08"
    }
  },
  {
    "sourceLink": "",
    "type": "data",
    "properties": {
      "guestFullName": "SUSE Linux Enterprise 11 (64-bit)",
      "esxHost": "$esxHostFQDN",
      "address": "$address",
      "role": "DATA",
      "ipAddress": "$ipAddress",
      "cpu": "16",
      "vCenterHost": "$vCenterHostFQDN",
      "storage": "FC-LUN-15 TB",
      "userName": "Administrator@vsphere.local",
      "productName": "vRealize Operations Manager Appliance",
      "network": "infra-traffic-1006",
      "nodename": "S2-data-06",
      "productVersion": "6.5.0.5097674 Build 5073106",
      "password": "$password",
      "hostname": "$hostname",
      "powerState": "poweredOn",
      "memoryInMb": "49152",
      "name": "S2-data-06"
    }
  },
  {
    "sourceLink": "",
    "type": "data",
    "properties": {
      "esxHost": "$esxHostFQDN",

```

```

    "guestFullName": "SUSE Linux Enterprise 11 (64-bit)",
    "role": "DATA",
    "address": "$address",
    "ipAddress": "$ipAddress",
    "cpu": "16",
    "vCenterHost": "$vCenterHostFQDN",
    "storage": "FC-LUN-15 TB",
    "userName": "Administrator@vsphere.local",
    "productName": "vRealize Operations Manager Appliance",
    "network": "infra-traffic-1006",
    "nodename": "S2-data-14",
    "hostname": "$hostname",
    "password": "$password",
    "productVersion": "6.5.0.5097674 Build 5073106",
    "powerState": "poweredOn",
    "memoryInMb": "49152",
    "name": "S2-data-14"
  }
},
{
  "sourceLink": "",
  "type": "data",
  "properties": {
    "esxHost": "$esxHostFQDN",
    "guestFullName": "SUSE Linux Enterprise 11 (64-bit)",
    "role": "DATA",
    "address": "$address",
    "ipAddress": "$ipAddress",
    "cpu": "16",
    "vCenterHost": "$vCenterHostFQDN",
    "storage": "FC-LUN-15 TB",
    "userName": "Administrator@vsphere.local",
    "productName": "vRealize Operations Manager Appliance",
    "network": "infra-traffic-1006",
    "nodename": "S2-data-02",
    "hostname": "$hostname",
    "password": "$password",
    "productVersion": "6.5.0.5097674 Build 5073106",
    "powerState": "poweredOn",
    "memoryInMb": "49152",
    "name": "S2-data-02"
  }
},
{
  "sourceLink": "",
  "type": "data",
  "properties": {
    "esxHost": "$esxHostFQDN",
    "guestFullName": "SUSE Linux Enterprise 11 (64-bit)",
    "role": "DATA",
    "address": "$address",
    "ipAddress": "$ipAddress",
    "cpu": "16",
    "vCenterHost": "$vCenterHostFQDN",
    "storage": "FC-LUN-15 TB",

```

```

        "userName": "Administrator@vsphere.local",
        "productName": "vRealize Operations Manager Appliance",
        "network": "infra-traffic-1006",
        "nodename": "S2-data-04",
        "password": "$password",
        "productVersion": "6.5.0.5097674 Build 5073106",
        "hostname": "$hostname",
        "powerState": "poweredOn",
        "memoryInMb": "49152",
        "name": "S2-data-04"
    }
},
{
    "sourceLink": "",
    "type": "data",
    "properties": {
        "esxHost": "$esxHostFQDN",
        "guestFullName": "SUSE Linux Enterprise 11 (64-bit)",
        "role": "DATA",
        "address": "$address",
        "ipAddress": "$ipAddress",
        "cpu": "16",
        "vCenterHost": "$vCenterHostFQDN",
        "storage": "FC-LUN-15 TB",
        "userName": "Administrator@vsphere.local",
        "productName": "vRealize Operations Manager Appliance",
        "network": "infra-traffic-1006",
        "nodename": "S2-data-05",
        "password": "$password",
        "hostname": "$hostname",
        "productVersion": "6.5.0.5097674 Build 5073106",
        "powerState": "poweredOn",
        "memoryInMb": "49152",
        "name": "S2-data-05"
    }
},
{
    "sourceLink": "",
    "type": "data",
    "properties": {
        "esxHost": "$esxHostFQDN",
        "guestFullName": "SUSE Linux Enterprise 11 (64-bit)",
        "address": "$address",
        "role": "DATA",
        "ipAddress": "$ipAddress",
        "cpu": "16",
        "vCenterHost": $vCenterHostFQDN,
        "storage": "FC-LUN-15 TB",
        "userName": "Administrator@vsphere.local",
        "productName": "vRealize Operations Manager Appliance",
        "network": "infra-traffic-1006",
        "nodename": "S2-data-01",
        "productVersion": "6.5.0.5097674 Build 5073106",
        "password": "$password",
        "hostname": "$hostname",

```

```

        "powerState": "poweredOn",
        "memoryInMb": "49152",
        "name": "S2-data-01"
    }
}
],
},
{
    "id": "vra",
    "version": "7.3.0",
    "clusterVIP": [
        {
            "type": "vra",
            "hostname": "$hostname",
            "ipAddress": ""
        },
        {
            "type": "iaas-web",
            "hostname": "$hostname",
            "ipAddress": ""
        },
        {
            "type": "iaas-manager",
            "hostname": "$hostname",
            "ipAddress": ""
        }
    ],
    "properties": {
        "windowsPassword": "$WindowsPassword",
        "windowsUsername": "$WindowsUserName"
    },
    "nodes": [
        {
            "sourceLink": "",
            "type": "vra-server-primary",
            "properties": {
                "cafeHostNamePrimary": "$cafeHostNamePrimary",
                "cafeRootPasswordPrimary": "$cafeRootPasswordPrimary",
                "esxHost": "$esxHostFQDN",
                "guestFullName": "SUSE Linux Enterprise 11 (64-bit)",
                "ipAddress": "$ipAddress",
                "cpu": "4",
                "vCenterHost": "$vCenterHostFQDN",
                "storage": "FC-LUN-15 TB",
                "userName": "Administrator@vsphere.local",
                "productName": "VMware vRealize Appliance",
                "network": "infra-traffic-1006",
                "vidmPassword": "$vidmPassword",
                "cafeRootPassword": "$cafeRootPassword",
                "hostname": "$hostname",
                "password": "$password",
                "productVersion": "7.2.0.381 Build 4660246",
                "powerState": "poweredOn",
                "memoryInMb": "18432",
                "name": "S2-vra-server-primary",

```

```

        "cafeLbHostName": "$cafeLbHostName"
    }
},
{
    "sourceLink": "",
    "type": "vra-server-secondary",
    "properties": {
        "cafeHostNamePrimary": "$cafeHostNamePrimary",
        "cafeRootPasswordPrimary": "$cafeRootPasswordPrimary",
        "esxHost": "$esxHostFQDN",
        "guestFullName": "SUSE Linux Enterprise 11 (64-bit)",
        "ipAddress": "$ipAddress",
        "cpu": "4",
        "vCenterHost": "$vCenterHostFQDN",
        "storage": "FC-LUN-15 TB",
        "userName": "Administrator@vsphere.local",
        "productName": "VMware vRealize Appliance",
        "network": "infra-traffic-1006",
        "cafeRootPassword": "$cafeRootPassword",
        "vidmPassword": "$vidmPassword",
        "hostname": "$hostname",
        "password": "$password",
        "productVersion": "7.2.0.381 Build 4660246",
        "powerState": "poweredOn",
        "memoryInMb": "18432",
        "name": "S2-vra-server-secondary",
        "cafeLbHostName": "$cafeLbHostName"
    }
},
{
    "sourceLink": "",
    "type": "vra-server-secondary",
    "properties": {
        "cafeHostNamePrimary": "$cafeHostNamePrimary",
        "cafeRootPasswordPrimary": "$cafeRootPasswordPrimary",
        "guestFullName": "SUSE Linux Enterprise 11 (64-bit)",
        "esxHost": "$esxHostFQDN",
        "ipAddress": "$ipAddress",
        "cpu": "4",
        "vCenterHost": "$vCenterHostFQDN",
        "storage": "FC-LUN-15 TB",
        "userName": "Administrator@vsphere.local",
        "productName": "VMware vRealize Appliance",
        "network": "infra-traffic-1006",
        "cafeRootPassword": "$cafeRootPassword",
        "vidmPassword": "$vidmPassword",
        "hostname": "$hostname",
        "productVersion": "7.2.0.381 Build 4660246",
        "password": "$password",
        "powerState": "poweredOn",
        "memoryInMb": "18432",
        "name": "S2-vra-server-secondary-S01",
        "cafeLbHostName": "$cafeLbHostName"
    }
},

```

```

{
  "sourceLink": "",
  "type": "db",
  "properties": {
    "Max Pool Size": "200",
    "Connect Timeout": "200",
    "Integrated Security": "True",
    "hostname": "$hostname",
    "Initial Catalog": "vcac",
    "MultipleActiveResultSets": "True",
    "Data Source": "$DataSource",
    "name": "$name",
    "Pooling": "True"
  }
},
{
  "sourceLink": "",
  "type": "iaas-web",
  "properties": {
    "esxHost": "$esxHostFQDN",
    "guestFullName": "Microsoft Windows Server 2012 (64-bit)",
    "nodetype": "Website",
    "ipAddress": "$ipAddress",
    "cpu": "4",
    "vCenterHost": "$vCenterHostFQDN",
    "storage": "FC-LUN-15 TB",
    "userName": "Administrator@vsphere.local",
    "network": "infra-traffic-1006",
    "hostname": "$hostname",
    "password": "$password",
    "powerState": "poweredOn",
    "memoryInMb": "16384",
    "name": "S2_LHA_iaas_web1"
  }
},
{
  "sourceLink": "",
  "type": "iaas-web",
  "properties": {
    "guestFullName": "Microsoft Windows Server 2012 (64-bit)",
    "esxHost": "$esxHostFQDN",
    "nodetype": "Website",
    "ipAddress": "$ipAddress",
    "cpu": "4",
    "vCenterHost": "$vCenterHostFQDN",
    "storage": "FC-LUN-15 TB",
    "userName": "Administrator@vsphere.local",
    "network": "infra-traffic-1006",
    "hostname": "$hostname",
    "password": "$password",
    "powerState": "poweredOn",
    "memoryInMb": "16384",
    "name": "S2_LHA_iaas_web2"
  }
},

```

```

{
  "sourceLink": "",
  "type": "iaas-manager-active",
  "properties": {
    "esxHost": "$esxHostFQDN",
    "guestFullName": "Microsoft Windows Server 2012 (64-bit)",
    "nodetype": "ManagerService",
    "ipAddress": "$ipAddress",
    "cpu": "4",
    "vCenterHost": "$vCenterHostFQDN",
    "storage": "FC-LUN-15 TB",
    "userName": "Administrator@vsphere.local",
    "network": "infra-traffic-1006",
    "hostname": "$hostname",
    "password": "$password",
    "powerState": "poweredOn",
    "memoryInMb": "16384",
    "name": "S2_LHA_iaas_ms1"
  }
},
{
  "sourceLink": "",
  "type": "iaas-manager-passive",
  "properties": {
    "guestFullName": "Microsoft Windows Server 2012 (64-bit)",
    "esxHost": "$esxHostFQDN",
    "nodetype": "ManagerService",
    "ipAddress": "$ipAddress",
    "cpu": "4",
    "vCenterHost": "$vCenterHostFQDN",
    "storage": "FC-LUN-15 TB",
    "userName": "Administrator@vsphere.local",
    "network": "infra-traffic-1006",
    "password": "$password",
    "hostname": "$hostname",
    "powerState": "poweredOn",
    "memoryInMb": "16384",
    "name": "S2_LHA_iaas_ms2"
  }
},
{
  "sourceLink": "",
  "type": "iaas-dem-orchestrator",
  "properties": {
    "guestFullName": "Microsoft Windows Server 2012 (64-bit)",
    "esxHost": "$esxHostFQDN",
    "ipAddress": "$ipAddress",
    "cpu": "4",
    "vCenterHost": "$vCenterHostFQDN",
    "storage": "FC-LUN-15 TB",
    "userName": "Administrator@vsphere.local",
    "demRole": "DemOrchestrator",
    "network": "infra-traffic-1006",
    "password": "$password",
    "hostname": "$hostname",
  }
}

```

```

        "powerState": "poweredOn",
        "memoryInMb": "16384",
        "name": "Dina-Dem0-S01"
    }
},
{
    "sourceLink": "",
    "type": "iaas-dem-orchestrator",
    "properties": {
        "esxHost": "$esxHostFQDN",
        "guestFullName": "Microsoft Windows Server 2012 (64-bit)",
        "ipAddress": "$ipAddress",
        "cpu": "4",
        "vCenterHost": "$vCenterHostFQDN",
        "storage": "FC-LUN-15 TB",
        "userName": "Administrator@vsphere.local",
        "demRole": "DemOrchestrator",
        "network": "infra-traffic-1006",
        "password": "$password",
        "hostname": "$hostname",
        "powerState": "poweredOn",
        "memoryInMb": "16384",
        "name": "Demorchestrator-01"
    }
},
{
    "sourceLink": "",
    "type": "iaas-dem-orchestrator",
    "properties": {
        "esxHost": "$esxHostFQDN",
        "guestFullName": "Microsoft Windows Server 2012 (64-bit)",
        "ipAddress": "$ipAddress",
        "cpu": "4",
        "vCenterHost": "$vCenterHostFQDN",
        "storage": "FC-LUN-15 TB",
        "userName": "Administrator@vsphere.local",
        "demRole": "DemOrchestrator",
        "network": "infra-traffic-1006",
        "password": "$password",
        "hostname": "$hostname",
        "powerState": "poweredOn",
        "memoryInMb": "16384",
        "name": "Dina-Dem0-2"
    }
},
{
    "sourceLink": "",
    "type": "iaas-dem-worker",
    "properties": {
        "guestFullName": "Microsoft Windows Server 2012 (64-bit)",
        "esxHost": "$esxHostFQDN",
        "ipAddress": "$ipAddress",
        "cpu": "4",
        "vCenterHost": "$vCenterHostFQDN",
        "storage": "FC-LUN-15 TB",

```

```

        "userName": "Administrator@vsphere.local",
        "demRole": "DemWorker",
        "network": "infra-traffic-1006",
        "hostname": "$hostname",
        "password": "$password",
        "powerState": "poweredOn",
        "memoryInMb": "16384",
        "name": "Dina-DemW-2"
    }
},
{
    "sourceLink": "",
    "type": "iaas-dem-worker",
    "properties": {
        "esxHost": "$esxHostFQDN",
        "guestFullName": "Microsoft Windows Server 2012 (64-bit)",
        "ipAddress": "$ipAddress",
        "cpu": "4",
        "vCenterHost": "$vCenterHostFQDN",
        "storage": "FC-LUN-15 TB",
        "userName": "Administrator@vsphere.local",
        "demRole": "DemWorker",
        "network": "infra-traffic-1006",
        "hostname": "$hostname",
        "password": "$password",
        "powerState": "poweredOn",
        "memoryInMb": "16384",
        "name": "Dina-DEMW-S01"
    }
},
{
    "sourceLink": "",
    "type": "iaas-dem-worker",
    "properties": {
        "guestFullName": "Microsoft Windows Server 2012 (64-bit)",
        "esxHost": "$esxHostFQDN",
        "ipAddress": "$ipAddress",
        "cpu": "4",
        "vCenterHost": "$vCenterHostFQDN",
        "storage": "FC-LUN-15 TB",
        "userName": "Administrator@vsphere.local",
        "demRole": "DemWorker",
        "network": "infra-traffic-1006",
        "hostname": "$hostname",
        "password": "$password",
        "powerState": "poweredOn",
        "memoryInMb": "16384",
        "name": "Demworker-01"
    }
},
{
    "sourceLink": "",
    "type": "proxy-agent-vsphere",
    "properties": {
        "esxHost": "$esxHostFQDN",

```

```

        "guestFullName": "Microsoft Windows Server 2012 (64-bit)",
        "ipAddress": "$ipAddress",
        "cpu": "4",
        "vCenterHost": "$vCenterHostFQDN",
        "storage": "FC-LUN-15 TB",
        "userName": "Administrator@vsphere.local",
        "network": "infra-traffic-1006",
        "hostname": "$hostname",
        "password": "$password",
        "powerState": "poweredOn",
        "memoryInMb": "16384",
        "name": "Dina-VCAGENT-S01"
    }
},
{
    "sourceLink": "",
    "type": "proxy-agent-vmware",
    "properties": {
        "guestFullName": "Microsoft Windows Server 2012 (64-bit)",
        "esxHost": "$esxHostFQDN",
        "ipAddress": "$ipAddress",
        "cpu": "4",
        "vCenterHost": "$vCenterHostFQDN",
        "storage": "FC-LUN-15 TB",
        "userName": "Administrator@vsphere.local",
        "network": "infra-traffic-1006",
        "hostname": "$hostname",
        "password": "$password",
        "powerState": "poweredOn",
        "memoryInMb": "16384",
        "name": "proxy-agent-vmware-01"
    }
},
{
    "sourceLink": "",
    "type": "proxy-agent-vmware",
    "properties": {
        "guestFullName": "Microsoft Windows Server 2012 (64-bit)",
        "esxHost": "$esxHostFQDN",
        "ipAddress": "$ipAddress",
        "cpu": "4",
        "vCenterHost": "$vCenterHostFQDN",
        "storage": "FC-LUN-15 TB",
        "userName": "Administrator@vsphere.local",
        "network": "infra-traffic-1006",
        "password": "$password",
        "hostname": "$hostname",
        "powerState": "poweredOn",
        "memoryInMb": "16384",
        "name": "proxy-agent-vmware-00"
    }
}
}

```

```

    ]
  }
]
}'

```

JSON Output

The following JSON output is returned when the operation completes successfully.

```
200 Operation successful
```

View an Environment

GET `/lcm/api/v1/view/environment?environmentId={environmentid}` displays details for an existing environment.

Prerequisites

Satisfy the following conditions before performing any tasks for this use case.

- Use POST `/lcm/api/v1/login` to log in to vRealize Suite Lifecycle Manager.
- Verify that you have a valid authentication token that matches your login credentials. See [Request an Authentication Token](#).
- Verify that you have the environment ID for the environment to view.

curl Command

The following example requests full environment details for the specified environment.

```

curl -X GET "http://localhost:8000/lcm/api/v1/view/environment?
environmentId=78b45f299cbdc275585cc2bb88f8" \
  -H "accept: application/json" \
  -H "x-xenon-auth-token: $token" \

```

JSON Output

The following JSON output is returned based on the command output.

```

[
  {
    "name": "vra",
    "id": "$environmentID",
    "version": "7.2.0"
  }
]

```

Add a Product to an Existing Environment

POST `/lcm/api/v1/action/add/product?id={environmentId}` adds a vRealize Suite product to an existing environment.

Prerequisites

Satisfy the following conditions before performing any tasks for this use case.

- Use POST `/lcm/api/v1/login` to log in to vRealize Suite Lifecycle Manager.
- Verify that you have a valid authentication token that matches your login credentials. See [Request an Authentication Token](#).

curl Command

The following example adds vRealize Business for Cloud to the specified environment.

```
curl -X POST "http://localhost:8000/lcm/api/v1/action/add/product?id=78b45f299cbdc2755585cc2bb88f8" \
-H "accept: application/json" \
-H "x-xenon-auth-token: $token" \
-H "content-type: application/json" \
-d '{
  "id": "vrbc",
  "version": "7.3.0",
  "clusterVIP": [],
  "properties": {
    "currency": "USD - US Dollar"
  },
  "nodes": [
    {
      "sourceLink": "",
      "type": "vrb-server",
      "properties": {
        "esxHost": "$esxHostFQDN",
        "guestFullName": "SUSE Linux Enterprise 12 (64-bit)",
        "ipAddress": "$ipAddress",
        "cpu": "4",
        "vCenterHost": "$vCenterHostFQDN",
        "ssoTenant": "vsphere.local",
        "storage": "FC-LUN-15 TB",
        "userName": "Administrator@vsphere.local",
        "productName": "vRealize Business for Cloud",
        "network": "infra-traffic-1006",
        "isTelemetryEnable": "true",
        "hostname": "$hostname",
        "password": "$password",
        "productVersion": "7.2.1.10029 Build 5101870",
        "powerState": "poweredOn",
        "cafeHost": "$cafeHost",
        "memoryInMb": "8192",
        "name": "S2-vrb-server",
        "vrbRootPassword": "$vrbRootPassword"
```

```

    }
  }
]
}'

```

JSON Output

The following JSON output is returned when the operation completes successfully.

```
200 Operation successful
```

Collect Environment Logs

POST `/lcm/api/v1/collectlogs/environment` collects log files for all vRealize Suite Lifecycle Manager environments that you can use for troubleshooting.

Prerequisites

Satisfy the following conditions before performing any tasks for this use case.

- Use POST `/lcm/api/v1/login` to log in to vRealize Suite Lifecycle Manager.
- Verify that you have a valid authentication token that matches your login credentials. See [Request an Authentication Token](#).

curl Command

The following example collects a support bundle of logs for the environment.

```
curl -X POST "http://localhost:8000/lcm/api/v1/collectlogs/environment" \
  -H "accept: application/json" \
  -H "x-xenon-auth-token: $token" \
```

JSON Output

The following JSON output is returned based on the command input.

```
{
  "requestId": "78b45f299cbdc2755589c4ee37bf8"
}
```

Working with Nodes

7

You can add nodes to vRealize Suite products to scale out your environment.

Each vRealize Suite product managed by vRealize Suite Lifecycle Manager includes nodes, or components, that provide functionality for the products. When you install vRealize Suite products using vRealize Suite Lifecycle Manager, you select which nodes to install with each product. As the size or needs of your environment grow, you can scale out the environment by adding additional nodes.

- [Add a Node](#)

POST `/lcm/api/v1/action/addNode` scales out the environment by adding a single node to a product in the environment. To add multiple nodes, make a separate request for each node.

- [View All Nodes and Node IDs](#)

GET `/lcm/api/v1/view/node` displays the nodes and node IDs managed by vRealize Suite Lifecycle Manager.

- [View Details for a Node](#)

GET `/lcm/api/v1/view/node?nodeID=$nodeID` displays details for the specified node.

- [View Node Types for a Product](#)

GET `/lcm/api/v1/productinfo?productId=$product&version=$productVersionNumber&queryFor=listOfComponents` displays the node types for the specified product and product version.

- [Node Types and Parameters](#)

vRealize Suite Lifecycle Manager supports the following node types and parameters.

Add a Node

POST `/lcm/api/v1/action/addNode` scales out the environment by adding a single node to a product in the environment. To add multiple nodes, make a separate request for each node.

Prerequisites

Satisfy the following conditions before performing any tasks for this use case.

- Use POST `/lcm/api/v1/login` to log in to vRealize Suite Lifecycle Manager.
- Verify that you have a valid authentication token that matches your login credentials. See [Request an Authentication Token](#).

Each node request requires the following parameters:

- `name`
- `ipAddress`
- `hostname`

See [Node Types and Parameters](#) for a full list of parameters for each node type.

The following node types cannot be scaled:

- `vra-server-primary`
- `db`
- `vrli-master`
- `iaas-manager-active`
- `master`
- `managementagent`
- `replica`

curl Command

The following example adds a `vrli-worker` node to the environment.

```
curl -X POST "http://localhost:8000/lcm/api/v1/action/addNode" \
  -H "accept: application/json" \
  -H "x-xenon-auth-token: $token" \
  -H "content-type: application/json" \
  -d '{
    "environmentId": "8c7e3ea7e945f475558855d497c68",
    "dataCenterId": "Data Center Name",
    "productId": "vrli",
    "version": "4.3.0",
    "node": {
      "type": "vrli-worker",
      "sourceLink": "",
      "properties": {
        "name": "VM Name",
        "cluster": "",
        "ipAddress": "1.1.1.1",
        "dns": "",
        "vCenterHost": "hostname",
        "storage": ""
      }
    }
  }
```

```

        "network": "",
        "hostname": "hostname",
        "netmask": "",
        "domain": "",
        "diskFormat": "",
        "searchpath": "",
        "gateway": "",
        "deployOption": "",
        "userName": "vCenter Username",
        "password": "password"
    }
}
}'

```

JSON Output

The following JSON output is returned when the operation completes successfully.

```
200 Operation successful
```

View All Nodes and Node IDs

GET /lcm/api/v1/view/node displays the nodes and node IDs managed by vRealize Suite Lifecycle Manager.

Prerequisites

Satisfy the following conditions before performing any tasks for this use case.

- Use POST /lcm/api/v1/login to log in to vRealize Suite Lifecycle Manager.
- Verify that you have a valid authentication token that matches your login credentials. See [Request an Authentication Token](#).

curl Command

The following example requests details for all nodes.

```

curl -X GET "http://localhost:8000/lcm/api/v1/view/node" \
-H "accept: application/json" \
-H "x-xenon-auth-token: $token" \

```

JSON Output

The following JSON output is returned based on the command input.

```

[
  {
    "name": "vra-server-primary",
    "id": "78b45f299cbdc2755585ce13babc8"
  }
]

```

```

    },
    {
      "name": "managementagent",
      "id": "78b45f299cbdc2755585ce13babd9"
    },
    {
      "name": "iaas-web",
      "id": "78b45f299cbdc2755585ce13babd7"
    },
    {
      "name": "iaas-dem-worker",
      "id": "78b45f299cbdc2755585ce13bb3ae"
    },
    {
      "name": "proxy-agent-vsphere",
      "id": "78b45f299cbdc2755585ce13bb3a8"
    }
  ]

```

View Details for a Node

GET `/lcm/api/v1/view/node?nodeID=$nodeID` displays details for the specified node.

Prerequisites

Satisfy the following conditions before performing any tasks for this use case.

- Use POST `/lcm/api/v1/login` to log in to vRealize Suite Lifecycle Manager.
- Verify that you have a valid authentication token that matches your login credentials. See [Request an Authentication Token](#).
- Verify that you have the node ID for the node. See [View All Nodes and Node IDs](#).

curl Command

The following example requests details for a data node.

```

curl -X GET "http://localhost:8000/lcm/api/v1/view/node?nodeID=a3b2e69ac10ad27555e68c9cc89ab" \
  -H "accept: application/json" \
  -H "x-xenon-auth-token: $token" \

```

JSON Output

The following JSON output is returned based on the command input.

```

{
  "name": "data",
  "id": "a3b2e69ac10ad27555e68c9cc89ab",
  "properties": [
    {
      "name": "ipAddress",

```

```
    "value": "10.000.000.000"
  },
  {
    "name": "dns",
    "value": "10.000.000.001,10.000.000.002"
  },
  {
    "name": "hostname",
    "value": "host.example.local"
  },
  {
    "name": "domain",
    "value": "example.local"
  },
  {
    "name": "netmask",
    "value": "255.255.255.0"
  },
  {
    "name": "diskFormat",
    "value": "Thin"
  },
  {
    "name": "name",
    "value": "data-host"
  },
  {
    "name": "storage",
    "value": "FC_LUN_1TB_1"
  },
  {
    "name": "cluster",
    "value": "CLUSTER#SS_MGMT_Cluster_TB1"
  },
  {
    "name": "vCenterHost",
    "value": "vcenter.example.local"
  },
  {
    "name": "network",
    "value": "NTWK_121"
  },
  {
    "name": "userName",
    "value": "Administrator@vsphere.local"
  },
  {
    "name": "searchpath",
    "value": "example.local"
  },
  {
    "name": "gateway",
    "value": "10.000.000.003"
  },
  {
```

```

    "name": "address",
    "value": "10.000.000.000"
  },
  {
    "name": "password",
    "value": "password"
  },
  {
    "name": "rootPassword",
    "value": "password"
  }
]
}

```

View Node Types for a Product

GET `/lcm/api/v1/productinfo?productId=$product&version=$productVersionNumber
$queryFor=listOfComponents` displays the node types for the specified product and product version.

Prerequisites

Satisfy the following conditions before performing any tasks for this use case.

- Use POST `/lcm/api/v1/login` to log in to vRealize Suite Lifecycle Manager.
- Verify that you have a valid authentication token that matches your login credentials. See [Request an Authentication Token](#).

curl Command

The following example requests node types for vRealize Automation 7.2.

```

curl -X GET "http://localhost:8000/lcm/api/v1/productinfo?
productId=vra&version=7.2$queryFor=listOfComponents"
-H "accept: application/json" \
-H "x-xenon-auth-token: $token" \

```

JSON Output

The following JSON output is returned based on the command input.

```

["db","iaas-dem-orchestrator","iaas-dem-worker","iaas-manager-active","iaas-manager-passive","iaas-
web","managementagent","proxy-agent-vsphere","vra-server-primary","vra-server-secondary"]

```

Node Types and Parameters

vRealize Suite Lifecycle Manager supports the following node types and parameters.

vrli-worker

| Parameter | Description |
|------------------|---|
| name | Specifies the virtual machine name |
| cluster | Specifies the cluster name in vCenter in the following format: <i>data_center_name#vcenter_cluster_name</i> |
| ipAddress | Specifies the IP address for the virtual machine. |
| dns | Specifies the DNS IP address. Use a comma to separate multiple addresses. |
| vCenterHost | Specifies the vCenter host name. |
| storage | Specifies the datastore name. |
| network | Specifies the network name. |
| hostname | Specifies the host name for the node. |
| netmask | Specifies the netmask IP address. |
| domain | Specifies the domain name. |
| vrliRootPassword | Specifies the root password for the vRealize Log Insight appliance. |
| diskFormat | Specifies whether the disk format is <i>thick</i> or <i>thin</i> . |
| searchpath | Specifies the DNS search path. |
| gateway | Specifies the gateway IP address. |
| deployOption | Specifies the deployment option: <i>small</i> , <i>medium</i> , or <i>large</i> . |
| userName | Specifies the vCenter administrator user name. |
| password | Specifies the vCenter administrator password. |

vrli-master

| Parameter | Description |
|-------------------|---|
| cluster | Specifies the cluster name in vCenter in the following format: <i>data_center_name#vcenter_cluster_name</i> |
| vrliLicenseKey | Specifies the vRealize Log Insight license key. |
| installerLocation | Specifies the file path location where the OVA is stored. |
| dns | Specifies the DNS IP address. Use a comma to separate multiple addresses. |
| ipAddress | Specifies the virtual machine IP address. |
| vCenterHost | Specifies the vCenter host name. |
| storage | Specifies the vCenter datastore name. |
| userName | Specifies the vCenter user name. |
| uberAdmin | Specifies the vIDM user to be assigned the product administrator role post-deployment. |

| Parameter | Description |
|-------------------|--|
| network | Specifies the network name. |
| masterVidmEnabled | Specifies whether to configure vRealize Log Insight with vRealize Suite Lifecycle Manager vIDM. Set to <code>true</code> or <code>false</code> . |
| vrliAdminEmail | Specifies the vRealize Log Insight administrator email address. |
| hostname | Specifies the host name for the virtual machine. |
| password | Specifies the vCenter password. |
| netmask | Specifies the netmask IP. |
| domain | Specifies the domain name. |
| name | Specifies the virtual machine name. |
| diskFormat | Specifies whether the disk format is <code>thick</code> or <code>thin</code> . |
| vrliClusterVips | Specifies the vRealize Log Insight cluster vIPS in the format <code>vRLI-Cluster-IP#vRLI-Cluster-IP-Hostname</code> . |
| searchpath | Specifies the DNS search path. |
| gateway | Specifies the gateway IP address. |

vrb-collector

| Parameter | Description |
|---------------------|---|
| name | Specifies the virtual machine name. |
| cluster | Specifies the cluster name in vCenter in the following format: <code>data_center_name#vcenter_cluster_name</code> |
| vrbTelemetryEnabled | Flag to enable telemetry in vRealize Business for Cloud. |
| vCenterHost | Specifies the vCenter host name. |
| storage | Specifies the datastore name. |
| network | Specifies the network name. |
| hostname | Specifies the host name for the node. |
| netmask | Specifies the netmask IP address. |
| diskFormat | Specifies whether the disk format is <code>thick</code> or <code>thin</code> . |
| vrbCurrency | Specifies the vRealize Business for Cloud currency format. |
| sshEnabled | Specifies whether SSH is enabled in <code>sshEnabled</code> . Set to <code>true</code> or <code>false</code> . |
| ipAddress | Specifies the IP address for the virtual machine. |
| dns | Specifies the DNS IP address. Use a comma to separate multiple addresses. |
| vrbLicenseKey | Specifies the vRealize Business for Cloud license key. |

| Parameter | Description |
|-------------------|---|
| isTelemetryEnable | Specifies whether telemetry is enabled in vRealize Business for Cloud. Set to <code>true</code> or <code>false</code> . |
| domain | Specifies the domain name. |
| vrbRootPassword | Specifies the root password for the vRealize Business for Cloud appliance. |
| uberAdmin | Specifies the vIDM user to be assigned the product administrator role post-deployment. |
| searchpath | Specifies the DNS search path. |
| gateway | Specifies the gateway IP address. |
| userName | Specifies the vCenter administrator user name. |
| password | Specifies the vCenter administrator password. |

vrb-server

| Parameter | Description |
|---------------------|---|
| name | Specifies the virtual machine name. |
| cluster | Specifies the cluster name in vCenter in the following format: <code>data_center_name#vcenter_cluster_name</code> |
| vrbTelemetryEnabled | Flag to enable telemetry in vRealize Business for Cloud. |
| tenantPassword | Specifies the password for the tenant user who has the business management administrator role in vRealize Automation. Used for vRB-vRA registration. |
| vCenterHost | Specifies the vCenter host name. |
| storage | Specifies the datastore name. |
| network | Specifies the network name. |
| tenantUser | Specifies the user name for the tenant user who has the business management administrator role in vRealize Automation. Used for vRB-vRA registration. |
| hostname | Specifies the host name for the node. |
| netmask | Specifies the netmask IP address. |
| diskFormat | Specifies whether the disk format is <code>thick</code> or <code>thin</code> . |
| vrbCurrency | Specifies the vRealize Business for Cloud currency format. |
| sshEnabled | Specifies whether SSH is enabled in <code>sshEnabled</code> . Set to <code>true</code> or <code>false</code> . |
| ipAddress | Specifies the IP address for the virtual machine. |
| dns | Specifies the DNS IP address. Use a comma to separate multiple addresses. |
| vrbLicenseKey | Specifies the vRealize Business for Cloud license key. |

| Parameter | Description |
|-------------------|---|
| isTelemetryEnable | Specifies whether telemetry is enabled in vRealize Business for Cloud. Set to <code>true</code> or <code>false</code> . |
| domain | Specifies the domain name. |
| vrbRootPassword | Specifies the root password for the vRealize Business for Cloud appliance. |
| searchpath | Specifies the DNS search path. |
| gateway | Specifies the gateway IP address. |
| isStandalone | Specifies whether vRealize Business for Cloud is provisioned as a standalone deployment. Set to <code>true</code> or <code>false</code> . |
| userName | Specifies the vCenter administrator user name. |
| password | Specifies the vCenter administrator password. |
| uberAdmin | Specifies the vIDM user to be assigned the product administrator role post-deployment. |

iaas-dem-orchestrator

| Parameter | Description |
|------------------|--|
| name | Specifies the virtual machine name |
| ipAddress | Specifies the IP address for the virtual machine. |
| vCenterHost | Specifies the vCenter host name. |
| demUserName | Specifies the DEM user name in <code>domain\username</code> format. If not provided, the default Windows user name given at the product level is used. |
| demPassword | Specifies the DEM password. If not provided, the default Windows password set at the product level is used. |
| hostname | Specifies the host name for the node. |
| installationPath | Specifies the Windows file path location where this component is installed. |
| userName | Specifies the vCenter administrator user name. |
| password | Specifies the vCenter administrator password. |

iaas-manager-passive

| Parameter | Description |
|------------|---|
| name | Specifies the virtual machine name |
| msUserName | Specifies the IaaS service user name in <code>domain\username</code> format. If not provided, the default Windows user name given at the product level is used. |

| Parameter | Description |
|------------------|---|
| msPassword | Specifies the IaaS service user password. If not provided, the default Windows password set at the product level is used. |
| ipAddress | Specifies the IP address for the virtual machine. |
| hostname | Specifies the host name for the node. |
| installationPath | Specifies the Windows file path location where this component is installed. |
| vCenterHost | Specifies the vCenter host name. |
| userName | Specifies the vCenter administrator user name. |
| password | Specifies the vCenter administrator password. |

iaas-web

| Parameter | Description |
|------------------|---|
| name | Specifies the virtual machine name |
| webUserName | Specifies the IaaS service user name in <i>domain\username</i> format. If not provided, the default Windows user name given at the product level is used. |
| webPassword | Specifies the IaaS service user password. If not provided, the default Windows password set at the product level is used. |
| ipAddress | Specifies the IP address for the virtual machine. |
| hostname | Specifies the host name for the node. |
| installationPath | Specifies the Windows file path location where this component is installed. |
| vCenterHost | Specifies the vCenter host name. |
| userName | Specifies the vCenter administrator user name. |
| password | Specifies the vCenter administrator password. |

proxy-agent-vsphere

| Parameter | Details |
|---------------|---|
| name | Specifies the virtual machine name |
| agentUserName | Specifies the IaaS service user name in <i>domain\username</i> format. If not provided, the default Windows user name given at the product level is used. |
| ipAddress | Specifies the IP address for the virtual machine. |
| vCenterHost | Specifies the vCenter host name. |

| Parameter | Details |
|---------------------|---|
| agentPassword | Specifies the IaaS service user password. If not provided, the default Windows password set at the product level is used. |
| hostname | Specifies the host name for the node. |
| installationPath | Specifies the Windows file path location where this component is installed. |
| vsphereEndpointName | Specifies the vCenter endpoint name. |
| userName | Specifies the vCenter administrator user name. |
| password | Specifies the vCenter administrator password. |

vra-server-secondary

| Parameter | Description |
|-------------|---|
| name | Specifies the virtual machine name |
| cluster | Specifies the cluster name in vCenter in the following format: <i>data_center_name#vcenter_cluster_name</i> |
| vCenterHost | Specifies the vCenter host name. |
| storage | Specifies the datastore name. |
| network | Specifies the network name. |
| hostname | Specifies the host name for the node. |
| netmask | Specifies the netmask IP address. |
| sshEnabled | Specifies whether SSH is enabled on the appliance. Set to <code>true</code> or <code>false</code> . |
| ipAddress | Specifies the IP address for the virtual machine. |
| dns | Specifies the DNS IP address. Use a comma to separate multiple addresses. |
| domain | Specifies the domain name. |
| searchpath | Specifies the DNS search path. |
| gateway | Specifies the gateway IP address. |
| userName | Specifies the vCenter administrator user name. |
| password | Specifies the vCenter administrator password. |

vra-server-primary

| Parameter | Description |
|-------------------------|---|
| vidmVraDisabledAdvanced | Federates vRealize Automation internal vIDM with vRealize Suite Lifecycle Manager vIDM. Set <code>true</code> to disable or <code>false</code> to enable. |
| cluster | Specifies the cluster name in vCenter in the following format: <code>data_center_name#vcenter_cluster_name</code> |
| installerLocation | Specifies the file path location where the OVA is stored. |
| ipAddress | Specifies the IP address for the virtual machine. |
| dns | Specifies the DNS IP address. Use a comma to separate multiple addresses. |
| vCenterHost | Specifies the vCenter host name. |
| storage | Specifies the datastore name. |
| userName | Specifies the vCenter administrator user name. |
| network | Specifies the network name. |
| vidmPassword | Specifies the vRealize Automation default SSO administrator password. |
| licenseKey | Specifies the vRealize Automation license key. |
| hostname | Specifies the host name for the node. |
| netmask | Specifies the netmask IP address. |
| password | Specifies the vCenter administrator password. |
| name | Specifies the virtual machine name |
| domain | Specifies the domain name. |
| searchpath | Specifies the DNS search path. |
| gateway | Specifies the gateway IP address. |

db

| Parameter | Description |
|--------------------------|--|
| useWindowsAuthentication | Specifies whether to use Windows authentication for IaaS DB. Set to <code>true</code> or <code>false</code> . |
| databaseUserName | Specifies the SA user name. Used in case Windows authentication is set to <code>false</code> . |
| databasePassword | Specifies the SA password. Used in case Windows authentication is set to <code>false</code> . |
| useExistingDatabase | Specifies whether to use an existing database within the machine. Set to <code>true</code> or <code>false</code> . |
| password | Specifies the vCenter administrator password. |
| hostname | Specifies the host name for the node. |

| Parameter | Description |
|--------------|---|
| databaseName | Specifies the IaaS database name. |
| name | Specifies the virtual machine name |
| ipAddress | Specifies the IP address for the virtual machine. |
| vCenterHost | Specifies the vCenter host name. |
| userName | Specifies the vCenter administrator user name. |

iaas-manager-active

| Parameter | Description |
|-------------|---|
| password | Specifies the vCenter administrator password. |
| hostname | Specifies the host name for the node. |
| msUserName | Specifies the IaaS service user name in <i>domain\username</i> format. If not provided, the default Windows user name given at the product level is used. |
| msPassword | Specifies the IaaS service user password. If not provided, the default Windows password set at the product level is used. |
| name | Specifies the virtual machine name |
| ipAddress | Specifies the IP address for the virtual machine. |
| vCenterHost | Specifies the vCenter host name. |
| userName | Specifies the vCenter administrator user name. |

master

| Parameter | Description |
|-------------------|---|
| cluster | Specifies the cluster name in vCenter in the following format: <i>data_center_name#vcenter_cluster_name</i> |
| installerLocation | Specifies the file path location where the OVA is stored. |
| vCenterHost | Specifies the vCenter host name. |
| storage | Specifies the datastore name. |
| network | Specifies the network name. |
| password | Specifies the vCenter administrator password. |
| hostname | Specifies the host name for the node. |
| netmask | Specifies the netmask IP address. |
| diskFormat | Specifies whether the disk format is <i>thick</i> or <i>thin</i> . |
| ntpServer | Specifies the NTP server IP address. |
| ipAddress | Specifies the IP address for the virtual machine. |

| Parameter | Description |
|-------------------|---|
| dns | Specifies the DNS IP address. Use a comma to separate multiple addresses. |
| userName | Specifies the vCenter administrator user name. |
| masterVidmEnabled | Specifies whether to register with vRealize Suite Lifecycle Manager vIDM. Set <code>true</code> or <code>false</code> . |
| license | Specifies the license key. |
| name | Specifies the virtual machine name |
| domain | Specifies the domain name. |
| searchpath | Specifies the DNS search path. |
| gateway | Specifies the gateway IP address. |

replica

| Parameter | Description |
|-------------|---|
| cluster | Specifies the cluster name in vCenter in the following format: <i>data_center_name#vcenter_cluster_name</i> |
| ipAddress | Specifies the IP address for the virtual machine. |
| dns | Specifies the DNS IP address. Use a comma to separate multiple addresses. |
| vCenterHost | Specifies the vCenter host name. |
| storage | Specifies the datastore name. |
| network | Specifies the network name. |
| userName | Specifies the vCenter administrator user name. |
| password | Specifies the vCenter administrator password. |
| hostname | Specifies the host name for the node. |
| netmask | Specifies the netmask IP address. |
| name | Specifies the virtual machine name |
| domain | Specifies the domain name. |
| diskFormat | Specifies whether the disk format is <code>thick</code> or <code>thin</code> . |
| searchpath | Specifies the DNS search path. |
| gateway | Specifies the gateway IP address. |

data

| Parameter | Description |
|-----------|---|
| cluster | Specifies the cluster name in vCenter in the following format: <i>data_center_name#vcenter_cluster_name</i> |
| ipAddress | Specifies the IP address for the virtual machine. |

| Parameter | Description |
|-----------------|---|
| dns | Specifies the DNS IP address. Use a comma to separate multiple addresses. |
| vCenterHost | Specifies the vCenter host name. |
| storage | Specifies the datastore name. |
| network | Specifies the network name. |
| userName | Specifies the vCenter administrator user name. |
| extendedStorage | Specifies the vCenter datastore name for extended storage. |
| password | Specifies the vCenter administrator password. |
| hostname | Specifies the host name for the node. |
| netmask | Specifies the netmask IP address. |
| name | Specifies the virtual machine name |
| domain | Specifies the domain name. |
| diskFormat | Specifies whether the disk format is thick or thin. |
| searchpath | Specifies the DNS search path. |
| gateway | Specifies the gateway IP address. |

remotecollector

| Parameter | Description |
|-------------|---|
| cluster | Specifies the cluster name in vCenter in the following format: <i>data_center_name#vcenter_cluster_name</i> |
| ipAddress | Specifies the IP address for the virtual machine. |
| dns | Specifies the DNS IP address. Use a comma to separate multiple addresses. |
| vCenterHost | Specifies the vCenter host name. |
| storage | Specifies the datastore name. |
| network | Specifies the network name. |
| userName | Specifies the vCenter administrator user name. |
| password | Specifies the vCenter administrator password. |
| hostname | Specifies the host name for the node. |
| netmask | Specifies the netmask IP address. |
| name | Specifies the virtual machine name |
| domain | Specifies the domain name. |
| diskFormat | Specifies whether the disk format is thick or thin. |
| ntpServer | Specifies the NTP server IP address. |

| Parameter | Description |
|------------|-----------------------------------|
| searchpath | Specifies the DNS search path. |
| gateway | Specifies the gateway IP address. |