

# Programming Guide

vRealize Automation 6.2



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# vRealize Automation Programming Guide

The *Programming Guide* provides information about the vRealize Automation 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 Automation programmatically using the vRealize Automation REST API. The guide focuses on common use cases. For related information about all available REST API services, see in *REST API Reference* at <https://www.vmware.com/support/pubs/vcac-pubs.html>.

## 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 <https://www.vmware.com/support/pubs/vcac-pubs.html>.

# Updated Information

This *Programming Guide* is updated with each release of the product or when necessary.

This table provides the update history of the *Programming Guide*.

Revision	Description
EN-001636-04	Updated the input URL in <a href="#">Syntax for Displaying All Available Resource Types</a> .
EN-001636-03	<ul style="list-style-type: none"><li>Removed the section titled Logging in Programmatically.</li><li>Minor reorganization of <a href="#">Using the API Explorer</a>.</li></ul>
EN-001636-02	<ul style="list-style-type: none"><li>Updated the format of the Use Cases section topics.</li><li>Updated the order of topics in the Authentication, Filtering, and Related Tools sections.</li></ul>
EN-001636-01	Updated the documentation to include the following changes: <ul style="list-style-type: none"><li>Added new topic section <a href="#">Working with Key Pairs</a>.</li><li>Added new topic section <a href="#">Working with Network Profiles</a>.</li><li>Added new topic <a href="#">Syntax for Creating a vCloud Reservation</a>.</li><li>Added new topic <a href="#">Syntax for Creating an Amazon Reservation</a>.</li><li>Added new topic <a href="#">Get Resources Schema for an Amazon EC2 Reservation Syntax</a>.</li><li>Added new topic <a href="#">Get Resources Schema for a vCloud Reservation Syntax</a>.</li><li>Added new topic <a href="#">Syntax for Displaying a Schema Definition for an Amazon Reservation</a>.</li><li>Added new topic <a href="#">Syntax for Displaying a Schema Definition for a vCloud Reservation</a>.</li><li>Added new topic <a href="#">Creating an API Explorer Command Using Supplied curl Examples</a>.</li><li>Added Amazon EC2 and vCloud information to <a href="#">Syntax for Getting a Compute Resource for a Reservation</a>.</li><li>Updated <a href="#">Syntax for Constructing a JSON File For a Machine Request</a> and <a href="#">Syntax for Requesting a Machine</a>.</li><li>Updated <a href="#">Syntax for Constructing a JSON File for a vCloud Air Machine Request</a> and <a href="#">Syntax for Requesting a vCloud Air Machine</a>.</li><li>Updated <a href="#">Syntax for Constructing a JSON File for an Amazon Machine Request</a> and <a href="#">Syntax for Requesting an Amazon Machine</a>.</li><li>Revised topic flow and content formatting throughout the guide.</li></ul>
EN-001636-00	Initial 6.2 release.

# Overview of the vRealize Automation REST API

# 1

The vRealize Automation REST API provides consumer, administrator, and provider-level access to the service catalog with the same services that support the vRealize Automation console user interface. You can perform vRealize Automation functions programmatically by using REST API service calls.

The vRealize Automation REST API offers the following services and functions.

**Table 1-1. vRealize Automation REST API Services**

Service	Description
Advanced Designer Service	Manage Advanced Service Designer elements such as forms, endpoints vRealize Orchestrator workflows, and work items through the Advanced Designer Service.
Approval Service	Retrieve, create, update, and delete approval policies, policy types, policy instances, and policy requests.
Branding Service	Change the background and text colors, company logo, company name, product name, tenant name, and other resources in the console.
Catalog Service	Retrieve global and entitled catalog items, and entitlements for a catalog item and its service that the current user can review. A consumer can retrieve, edit, and submit a request form for a catalog item. A provider can retrieve, register, update, and delete catalog items. Provision and manage systems.
Component Registry	Access and manage all services and serves as the central view for all service lookups.
Event Log Service	Provide a central location and a consistent way of recording events and querying for events.
File Service	Unused.
Identity Service	Manage tenants, business groups, SSO and custom groups, users, and identity stores.
Licensing Service	Retrieve permissions and post serial keys.
Management Service	Retrieve work item forms, callbacks, and tasks. Manage endpoint details including tenant, password, user name, and endpoint URL. Retrieve performance metrics. Retrieve and cancel reclamation requests.
Notification Service	Configure and send notifications for several types of events such as the successful completion of a catalog request or a required approval.
Plug-in Service	Retrieve, create, update, and delete a resource. Retrieve an extension. Retrieve license notifications.

**Table 1-1. vRealize Automation REST API Services (Continued)**

Service	Description
Portal Service	Retrieve, create, update, and delete a portal resource.
Reservation Service	Retrieve, create, update, and delete a reservation or reservation policy.
vCO Service	Manage vRealize Orchestrator actions, tasks, packages, and workflows. Browse system and plug-in inventories.
WorkItem Service	Retrieve, create, update, complete, cancel, and delete a work item. Also retrieve form data, metadata, detail forms, and submission forms from service providers.

When a service request contains a resource URL, the first part of the URL identifies the service and the last part identifies the resource. For example, the following resource URL identifies the catalog service and the providers resource:

```
https://$host/component-registry/api/services
```

For more information about all the vRealize Automation REST API service calls, see [Using the vRealize Automation REST API Reference](#) and the *REST API Reference* in the vRealize Automation Documentation Center at <https://www.vmware.com/support/pubs/vcac-pubs.html>.

# REST API Authentication

In the REST API, vRealize Automation requires HTTP bearer tokens in request headers for authentication of consumer requests. A consumer request applies to tasks that you can perform in the vRealize Automation console, such as requesting a machine.

To acquire an HTTP bearer token, you authenticate with an identity service that manages the communication with the SSO server. The identity service returns an HTTP bearer token that you include in all request headers until the token expires, or you delete it. An HTTP bearer token expires in 24 hours by default, but you can configure the token with a different duration.

## Using HTTP Bearer Tokens

You use HTTP bearer tokens for tasks that you can also perform in the vRealize Automation console. You create a request header with the `curl` command or with some other utility.

For information about requesting a bearer token, see the Identity option on the *REST API Reference* landing page.

You use POST, HEAD, and DELETE methods to manage HTTP bearer tokens.

Method	URL	Description
POST	<code>/tokens</code>	Authenticate the user with the identity service <code>/tokens</code> and generate a new token.
HEAD	<code>/tokens/tokenID</code>	Validate the token <code>tokenID</code> .
DELETE	<code>/tokens/tokenID</code>	Delete the token <code>tokenID</code> .

The root URL for HTTP bearer calls is `https://$vra_server/identity/api/tokens`.

## Configure the Duration of an HTTP Bearer Token

You set the duration of HTTP bearer tokens in the `/etc/vcac/security.properties` file on the vRealize Automation appliance.

The effective duration or lifetime of an HTTP bearer token depends on the duration of its corresponding SAML token, which the SSO server creates at request time. An HTTP bearer token expires when it reaches the end of its configured duration, or at the end of the configured duration of the SAML token, whichever comes first. For example, if the configured duration is three days for the HTTP bearer token and two days for the SAML token, the HTTP bearer token expires in two days. A configuration setting on the SSO server determines the duration of SAML tokens.

### Prerequisites

- Log in to the vRealize Automation appliance with SSH as root. The password is the one you specified when you deployed the appliance.
- The `/etc/vcac/security.properties` file on the appliance must be editable.

### Procedure

- 1 Open the `/etc/vcac/security.properties` file for editing.
- 2 Add the following lines to the file, where *N* is an integer specifying the duration of the token in hours.

```
identity.basic.token.lifetime.hours=N
#The number is in hours.
```

- 3 Save and close the file.
- 4 Log out of the vRealize Automation appliance.

The new value applies the next time someone requests an HTTP bearer token.

## Request an HTTP Bearer Token

You use an HTTP bearer token to authenticate a vRealize Automation REST API consumer request .

A consumer request must specify the correct component registry service and resource. For example, the URL to obtain an HTTP bearer token must specify the identity service and token resource.

The HTTP bearer token expires in 24 hours by default. See [Configure the Duration of an HTTP Bearer Token](#) for information on how to set the duration.

For related information, see [Syntax for Requesting an HTTP Bearer Token](#).

### Prerequisites

- Log in to vRealize Automation using the applicable credentials. For example, to assign a user to a role, log in as a tenant administrator.
- Verify that the host name and fully qualified domain name of the vRealize Automation instance are available.

## Procedure

- ◆ Enter a `curl` command in the following format, replacing the variables with the correct values.

The variable `$vRA` used in this example represents the host `name.domain` name of the vRealize Automation server, for example, `mycompany.mktg.mydomain.com`.

```
curl --insecure -H "Accept: application/json" -H 'Content-Type: application/json'
--data '{"username":"usrname","password":"passwd","tenant":"tenantURLtoken}'
https://$vRA/identities/api/tokens
```

For example, enter the following command line:

```
curl --insecure -H "Accept: application/json" -H 'Content-Type: application/json' --data
'{"username":"TenantAdminUser @example.com","password":"password","tenant":"MYCOMPANY"}'
https://vra.mycompany.com/identities/api/tokens
```

The command returns a response header with a status code and, if your request is successful, an HTTP bearer token.

For example, the following sample output displays based on the command input:

```
HTTP/1.1 200 OK
Server: Apache-Coyote/1.1
Cache-Control: no-cache, no-store
Pragma: no-cache
Expires: Thur, 16 Jul 2015 23:59:59 GMT
Content-Type: application/json;charset=UTF-8
Content-Length: 324
Date: Wed, 15 Jul 2015 13:04:50 GMT
{
  "expires":"2015-16-01T13:09:45.619Z",
  "id":"MTM5MTI1OTg5MDQwMzozNDQyZWxZmQ5ZDliODUzMGFiMjpwZW5hbnQ6cWV1c2VybmFtZTpmcm10ekBjb2t1LmNvb
  TplMDViNGU0NGM2ZWU0MwQ1OWEwMTNmZGExNTQwZjNlNGM3YTB1M2I5MDh1YWZjYjY1ZjhiODI2OTg4ODU3M2UwOTUwOVRk
  MjlmYWRjNWQ4NjJkOTk1YmE3MTg1MWZhOTc2MjE5YjYxZmU3YTU3ZDcwNmM3ZTg3ZDNjNDk2ZDlmNA==",
  "tenant":"MYCOMPANY"
}
```

## What to do next

Include the HTTP bearer token in your REST API service calls. You can store the token in a variable such as `$AUTH` and then use the variable in your requests.

## Syntax for Requesting an HTTP Bearer Token

An HTTP bearer token is required by the REST client to use the vRealize Automation REST API. You can obtain a bearer token by authenticating to the identity service.

## Input

Use the supported input parameters to control the command output.

A consumer request must specify the correct component registry service and resource. For example, the URL to obtain an HTTP bearer token must contain the identity service and token resource values.

Input	Description
<i>host</i>	<i>host name.domain name</i> of the vRealize Automation server, for example, mycompany.mktg.mydomain.com.
<i>username</i>	Specifies the tenant administrator user name.
<i>passwd</i>	Specifies the tenant administrator password.
<i>tenantURLtoken</i>	Specifies the tenant URL token determined by the system administrator when creating the tenant, for example, support.

## Output

The following information is displayed as a result of your HTTP bearer token request.

Output	Description
<i>expires</i>	Contains the ISO 8601 timestamp indicating when the token expires.
<i>id</i>	Contains the HTTP bearer token to use in Authorization header in subsequent requests.
<i>tenant</i>	Displays the tenant ID associated with the token.

## Response Status Codes

One of the following codes are displayed as a result of your HTTP bearer token request.

Status Code	Description
200 OK	Your request succeeded and the resource was updated. The response body contains the full representation of the resource.
400 BAD REQUEST	The data you provided in the POST failed validation. Inspect the response body for details.
401 UNAUTHORIZED	The request could not authenticate the user or authentication credentials required.

## Example: curl Command

You can enter the following command line format to request an HTTP bearer token.

```
curl --insecure -H "Accept: application/json" -H 'Content-Type: application/json' --data
'{"username": "username",
"password": "passwd", "tenant": "tenantURLtoken"}' https://$host/identity/api/tokens
```

When your request succeeds, the system returns the 200 OK status code, the expiration date and time of the token, and the HTTP bearer token. After receiving the bearer token, you can include it in your request headers.

## Validate an HTTP Bearer Token

You can validate an existing HTTP bearer token.

### Prerequisites

- [Request an HTTP Bearer Token.](#)

### Procedure

- ◆ Create the request to validate the HTTP bearer token, as in the following example.

```
HEAD
/tokens/MTM5MTI1OTg5MDQwMzozNDQyZWZmZmQ5ZDliODUzMGFiMjpwZW5hbnQ6cWV1c2VybmFtZTJyYjY1ZjhiODI2OTg4ODU3M2UwOTUwOWRkMjlmYWRjNWQ4NjJkOTk1YmE3MTg1MWZhOTc2MjE5YjYxZmU3YTZhZDcwNmM3ZTg3ZDNjNDk2ZDlmNA==
Accept: application/json
```

The system returns one of the following status codes.

Status Code	Description
204 NO CONTENT	The request succeeded.
401 UNAUTHORIZED	You must have authentication credentials to access the resource. All requests must be authenticated.
403 FORBIDDEN	Your authentication credentials do not provide sufficient access to the resource.
404 NOT FOUND	Could not locate the resource based on the specified URI.
405 METHOD NOT ALLOWED	The HEAD method is not supported for the resource.
500 SERVER ERROR	Could not create or update the resource because of an internal server error.

## Delete an HTTP Bearer Token

You can delete an HTTP bearer token.

### Prerequisites

- [Request an HTTP Bearer Token.](#)

### Procedure

- ◆ Create the request to delete the HTTP bearer token, as in the following example.

```
DELETE
/tokens/MTM5MTI1OTg5MDQwMzozNDQyZWZmZmQ5ZDliODUzMGFiMjpwZW5hbnQ6cWV1c2VybmFtZTJyYjY1ZjhiODI2OTg4ODU3M2UwOTUwOWRkMjlmYWRjNWQ4NjJkOTk1YmE3MTg1MWZhOTc2MjE5YjYxZmU3YTZhZDcwNmM3ZTg3ZDNjNDk2ZDlmNA==
Accept: application/json
```

The system returns one of the following status codes.

<b>Status Code</b>	<b>Description</b>
204 NO CONTENT	The request succeeded. The resource has been deleted.
401 UNAUTHORIZED	You must have authentication credentials to access the resource. All requests must be authenticated.
403 FORBIDDEN	Your authentication credentials do not provide sufficient access to the resource.
404 NOT FOUND	Could not locate the resource based on the specified URI.
405 METHOD NOT ALLOWED	The DELETE method is not supported for the resource.
500 SERVER ERROR	Could not create or update the resource because of an internal server error.

## REST API Use Cases

Available use cases provide the prerequisite, command line options and format, and sample results to help you perform a variety of vRealize Automation functions, such as requesting a machine or creating a reservation.

You can find information about all of the available vRealize Automation REST API calls in the *REST API Reference* zip file located in the vRealize Automation Documentation Center. The use cases provide samples of calls that you might commonly use and descriptions of example inputs and outputs relative to those calls.

This chapter includes the following topics:

- [Create a Tenant](#)
- [Requesting a Machine By Type](#)
- [Approve a Machine Request](#)
- [List Provisioned Resources](#)
- [Reprovision a Machine Resource](#)
- [Working with Reservations](#)
- [Working with Reservation Policies](#)
- [Working with Key Pairs](#)
- [Working with Network Profiles](#)

### Create a Tenant

You can use the REST API identity service to create a vRealize Automation tenant and perform related functions. Perform the tasks required to create a tenant with the REST API in sequence. For information about creating and working with tenants and roles by using the vRealize Automation application user interface, see the *Tenant Administration and IaaS Configuration* documentation.

#### Prerequisites

- Log in to vRealize Automation as a **system administrator** and a **tenant administrator**.
- Verify that there is access to a functional LDAP, Active Directory, or Native Active Directory identity server.

- Verify that the identity server details required for the JSON template are available.
- Verify that the host name and fully qualified domain name of the vRealize Automation instance are available.
- If you are not using the API Explorer, verify that you have a valid HTTP bearer token that matches your login credentials. See [Chapter 2 REST API Authentication](#).

## Procedure

- 1 Use the identity service to display all the available tenants.

```
curl --insecure -H "Accept:text/xml"
-H "Authorization: Bearer $token"
https://$host/identity/api/tenants
```

- 2 Submit a request for a new tenant and either call a JSON file that contains tenant request parameters or specify those parameters using inline text. The first example uses a JSON file as input. The second example uses inline text as input.

The first example calls the following sample `newTenant.json` file.

```
{
  "@type" : "Tenant",
  "id" : "development",
  "urlName" : "development",
  "name" : "DevelopmentTenant",
  "description" : "Tenant for all developers",
  "contactEmail" : "admin@mycompany.com",
  "defaultTenant" : false
}
```

Examples	Command
<b>Example 1</b> Call the above <code>newTenant.json</code> file, which contains parameters for the tenant request.	<pre>curl --insecure -H "Content-Type: application/json" -H "Authorization: Bearer \$token" https://\$host/identity/api/tenants/development --data @C:\Temp\newTenant.json</pre>
<b>Example 2</b> Specify the parameters for the tenant request by using inline text.	<pre>curl --insecure -H "Accept: application/json" -H "Content- Type: application/json" -H "Authorization: Bearer \$token" --data '{"@type":"Tenant","id":"development","urlName":"development"," name": "DevelopmentTenant","description":"Tenant for all developers","contactEmail": "admin@mycompany.com","defaultTenant":false}'</pre>

- List all available identity stores for a named tenant, such as the default tenant `vsphere.local` by using variables, instead of the full token and host name.domain name.

```
curl --insecure -H "Accept: application/json" -H 'Content-Type: application/json'
-H "Authorization: Bearer $token" https://$host/identity/api/tenants/MYCOMPANY/directories
```

- Link an LDAP, Active Directory, or Native Active Directory identity store to the tenant by using the identity service.

Call the following sample `ldap.json.txt` input file from the command line to specify necessary parameters.

```
{
  "alias": "example.com",
  "domain": "example.mycompany.com",
  "groupBaseSearchDn": "ou=demo,dc=example,dc=mycompany,dc=com",
  "name": "openLDAPDemo",
  "password": "password",
  "type": "LDAP",
  "url": "ldap://10.000.00.000:389",
  "userBaseSearchDn": "ou=demo,dc=example,dc=mycompany,dc=com",
  "userNameDn": "cn=demoadmin,ou=demo,dc=example,dc=mycompany,dc=com"
}
```

Use the following command to call the example JSON text file and link an identity store to a tenant. The command also tests that vRealize Automation can connect to the identity store successfully. If the command finishes successfully, vRealize Automation succeeded in connecting to the identity store.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/identity/api/tenants/development/directories/example.mycompany.com
--data @C:\Temp\ldap.json.txt
```

- Query the configured LDAP directory, Active Directory, or Native Active Directory for a specific user.

```
curl --insecure -H "Accept:text/xml"
-H "Authorization: Bearer $token"
https://$host/identity/api/tenants/$tenantId/principals/$userId
```

- Assign a user to a role with the REST API identity service.

Use the following command string to submit a request to assign the user *tony* in the *domain example.mycompany.com* to the tenant administrator role. It provides empty braces for the required JSON payload.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
"https://$host/identity/api/authorization/tenants/development/principals/
susan@example.mycompany.com/roles/CSP_TENANT_ADMIN/" --data "{}"
```

## 7 Display all of the roles assigned to a user with the identity service.

Use the following command to list all the roles that are assigned to *tony@example.mycompany.com*.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/identity/api/authorization/tenants/development/principals/
tony@example.mycompany.com/roles
```

### What to do next

## Syntax for Displaying Your Current Tenants

You can use the REST API identity service to list of all the vRealize Automation tenants in your system.

### Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	https://\$host/identity/api/tenants
<i>\$host</i>	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
<i>\$token</i>	Specifies a valid HTTP bearer token with necessary credentials.

### Output

The command output contains property names and values based on the command input parameters.

Parameter	Description
Links	<p>Specifies an array of link objects, each of which contains the following parts:</p> <ul style="list-style-type: none"> <li>■ rel                             <p>Specifies the name of the link.</p> <ul style="list-style-type: none"> <li>■ Self refers to the object that was returned or requested.</li> <li>■ First, Previous, Next, and Last refer to corresponding pages of pageable lists.</li> <li>■ Specifies the application or service that determines the other names.</li> </ul> </li> <li>■ href                             <p>Specifies the URL that produces the result.</p> </li> </ul>
Content	<p>Specifies an array of data rows, each of which represents one of the tenant objects returned in a pageable list. Each tenant object can contain the following information:</p> <ul style="list-style-type: none"> <li>■ Id:                             <p>Specifies the unique tenant identifier.</p> </li> <li>■ urlName:                             <p>Specifies the name of the tenant as it appears in URLs.</p> </li> <li>■ Name:                             <p>Specifies the name of the tenant for display purposes.</p> </li> <li>■ description:                             <p>Specifies the long description of the tenant.</p> </li> <li>■ contactEmail:                             <p>Specifies the primary contact email address.</p> </li> <li>■ Password:                             <p>Unused</p> </li> <li>■ defaultTenant:                             <p>Is set to True if the corresponding tenant is the default tenant (vsphere.local).</p> </li> </ul>
Metadata	<p>Specifies the following paging-related data:</p> <ul style="list-style-type: none"> <li>■ Size: Specifies the maximum number of rows per page.</li> <li>■ totalElement: Specifies the number of rows returned.</li> <li>■ totalPages: Specifies the total number of pages of data available.</li> <li>■ Number: Specifies the current page number.</li> <li>■ Offset: Specifies the number of rows skipped.</li> </ul>

## Example: curl Command

The following example command displays all available tenants.

```
curl --insecure -H "Accept:text/xml"
-H "Authorization: Bearer $token"
https://$host/identity/api/tenants
```

Format the XML output to improve its readability. For information about formatting output, see [Chapter 4 Filtering and Formatting REST API Information](#).

## Example: JSON Output

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

```
{
  "links" : [ ],
  "content" : [ {
    "@type" : "Tenant",
    "id" : "vsphere.local",
    "urlName" : "vsphere.local",
    "name" : "vsphere.local",
    "description" : null,
    "contactEmail" : null,
    "password" : null,
    "defaultTenant" : true
  }, {
    "@type" : "Tenant",
    "id" : "MYCOMPANY",
    "urlName" : "MYCOMPANY",
    "name" : "QETenant",
    "description" : "Test tenant",
    "contactEmail" : null,
    "password" : "defaultPwd#1",
    "defaultTenant" : false
  } ],
  "metadata" : {
    "size" : 19,
    "totalElements" : 2,
    "totalPages" : 1,
    "number" : 1,
    "offset" : 0
  }
}
```

## Syntax for Requesting a New Tenant

You can use the REST API identity service to submit a request for a tenant. You can specify request parameters using JSON command line input or by calling an existing JSON file from the command line.

## Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	<code>https://\$host/identity/api/tenants/\$tenantId --data @\$inputFileName.json</code>
<i>\$token</i>	Specifies a valid HTTP bearer token with necessary credentials.
<i>\$host</i>	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
<i>\$tenantId</i>	Specifies the ID of the tenant.
<i>\$tenantURL</i>	Specifies the URL of the tenant.
<i>\$tenantName</i>	Specifies the name of the tenant.
<i>\$description</i>	Specifies a description of the tenant.
<i>\$emailAddress</i>	Specifies the contact email address for the tenant.

## JSON Input File Template

To simplify command line input, create a JSON file and call that file from the command line. To create a JSON file, copy the following template to a new text file. To maintain formatting, use an XML editor. Replace the italicized variables in the template with your specific values.

```
{
  "@type" : "Tenant",
  "id" : "$tenantId",
  "urlName" : "$tenantURL",
  "name" : "$tenantName",
  "description" : "$description",
  "contactEmail" : "$emailAddress",
  "defaultTenant" : false
}
```

## Output

The command output contains property names and values based on the command input parameters.

Parameter	Description
Links	<p>Specifies an array of link objects, each of which contains the following parts:</p> <ul style="list-style-type: none"> <li>■ rel <ul style="list-style-type: none"> <li>Specifies the name of the link.</li> <li>■ Self refers to the object that was returned or requested.</li> <li>■ First, Previous, Next, and Last refer to corresponding pages of pageable lists.</li> <li>■ Specifies the application or service that determines the other names.</li> </ul> </li> <li>■ href <ul style="list-style-type: none"> <li>Specifies the URL that produces the result.</li> </ul> </li> </ul>
Content	<p>Specifies an array of data rows, each of which represents one of the tenant objects returned in a pageable list. Each tenant object can contain the following information:</p> <ul style="list-style-type: none"> <li>■ Id: <ul style="list-style-type: none"> <li>Specifies the unique tenant identifier.</li> </ul> </li> <li>■ urlName: <ul style="list-style-type: none"> <li>Specifies the name of the tenant as it appears in URLs.</li> </ul> </li> <li>■ Name: <ul style="list-style-type: none"> <li>Specifies the name of the tenant for display purposes.</li> </ul> </li> <li>■ description: <ul style="list-style-type: none"> <li>Specifies the long description of the tenant.</li> </ul> </li> <li>■ contactEmail: <ul style="list-style-type: none"> <li>Specifies the primary contact email address.</li> </ul> </li> <li>■ Password: <ul style="list-style-type: none"> <li>Unused</li> </ul> </li> <li>■ defaultTenant: <ul style="list-style-type: none"> <li>Is set to True if the corresponding tenant is the default tenant (vsphere.local).</li> </ul> </li> </ul>
Metadata	<p>Specifies the following paging-related data:</p> <ul style="list-style-type: none"> <li>■ Size: Specifies the maximum number of rows per page.</li> <li>■ totalElement: Specifies the number of rows returned.</li> <li>■ totalPages: Specifies the total number of pages of data available.</li> <li>■ Number: Specifies the current page number.</li> <li>■ Offset: Specifies the number of rows skipped.</li> </ul>

### Example: curl Command

Submit a request for a new tenant and either call a JSON file that contains tenant request parameters or specify those parameters using inline text. The first example uses a JSON file as input. The second example uses inline text as input.

The first example calls the following sample `newTenant.json` file.

```
{
  "@type" : "Tenant",
  "id" : "development",
  "urlName" : "development",
  "name" : "DevelopmentTenant",
  "description" : "Tenant for all developers",
  "contactEmail" : "admin@mycompany.com",
  "defaultTenant" : false
}
```

Example 1: Use the following example to call the above `newTenant.json` file, which contains parameters for the tenant request.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/identity/api/tenants/development --data @C:\Temp\newTenant.json
```

Example 2: Use the following example to specify parameters for the tenant request by using inline text.

```
curl --insecure -H "Accept: application/json" -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
--data '{"@type":"Tenant","id":"development","urlName":"development","name":
"DevelopmentTenant","description":"Tenant for all developers","contactEmail":
"admin@mycompany.com","defaultTenant":false}'
```

## Syntax for Listing All Tenant Identity Stores

You can use the REST API identity service to list all available identity stores for a named vRealize Automation tenant, such as the default tenant `vsphere.local`.

### Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	<code>https://\$host/identity/api/tenants/\$tenantId/directories</code>
<i>\$host</i>	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
<i>\$token</i>	Specifies a valid HTTP bearer token with necessary credentials.
<i>\$tenantId</i>	Specifies the ID of the tenant.

### Output

The command output contains property names and values based on the command input parameters.

Parameter	Description
Links	<p>Specifies an array of link objects, each of which contains the following parts:</p> <ul style="list-style-type: none"> <li>■ rel                             <p>Specifies the name of the link.</p> <ul style="list-style-type: none"> <li>■ Self refers to the object that was returned or requested.</li> <li>■ First, Previous, Next, and Last refer to corresponding pages of pageable lists.</li> <li>■ Specifies the application or service that determines the other names.</li> </ul> </li> <li>■ href                             <p>Specifies the URL that produces the result.</p> </li> </ul>
Content	<p>Specifies an array of data rows, each of which represents one of the tenant objects returned in a pageable list. Each tenant object can contain the following information:</p> <ul style="list-style-type: none"> <li>■ Id:                             <p>Specifies the unique tenant identifier.</p> </li> <li>■ urlName:                             <p>Specifies the name of the tenant as it appears in URLs.</p> </li> <li>■ Name:                             <p>Specifies the name of the tenant for display purposes.</p> </li> <li>■ description:                             <p>Specifies the long description of the tenant.</p> </li> <li>■ contactEmail:                             <p>Specifies the primary contact email address.</p> </li> <li>■ Password:                             <p>Unused</p> </li> <li>■ defaultTenant:                             <p>Is set to True if the corresponding tenant is the default tenant (vsphere.local).</p> </li> </ul>
Metadata	<p>Specifies the following paging-related data:</p> <ul style="list-style-type: none"> <li>■ Size: Specifies the maximum number of rows per page.</li> <li>■ totalElement: Specifies the number of rows returned.</li> <li>■ totalPages: Specifies the total number of pages of data available.</li> <li>■ Number: Specifies the current page number.</li> <li>■ Offset: Specifies the number of rows skipped.</li> </ul>

## Example: curl Command

The following example command lists the identity stores by using variables, instead of the full token and host name.domain name.

```
curl --insecure -H "Accept: application/json" -H 'Content-Type: application/json'
-H "Authorization: Bearer $token" https://$host/identity/api/tenants/MYCOMPANY/directories
```

## Example: JSON Output

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

```
HTTP/1.1 200 OK
Server: Apache-Beach/1.1
Cache-Control: no-cache, no-store
Pragma: no-cache
Expires: Wed, 31 Dec 1969 23:59:59 GMT
Content-Type: application/json;charset=UTF-8
Content-Length: 830
Date: Sat, 01 Feb 2014 13:07:54 GMT
{"links": [],
"content": [
  {"@type": "IdentityStore",
  "domain": "vcac.mycompany.com",
  "name": "openLDAPPromocom",
  "description": null,
  "alias": "promocom.com",
  "type": "LDAP",
  "userNameDn": "cn=promocomadmin,ou=promocom,dc=vcac,dc=mycompany,dc=com",
  "password": null,
  "url": "ldap://10.000.00.000:389",
  "groupBaseSearchDn": "ou=promocom,dc=vcac,dc=mycompany,dc=com",
  "userBaseSearchDn": "ou=promocom,dc=vcac,dc=mycompany,dc=com"
  },
  {"@type": "IdentityStore",
  "domain": "example.mycompany.com",
  "name": "openLDAPDemo",
  "description": null,
  "alias": "example.com",
  "type": "LDAP",
  "userNameDn": "cn=demoadmin,ou=demo,dc=example,dc=mycompany,dc=com",
  "password": null,
  "url": "ldap://10.000.00.000:389",
  "groupBaseSearchDn": "ou=demo,dc=example,dc=mycompany,dc=com",
  "userBaseSearchDn": "ou=demo,dc=example,dc=mycompany,dc=com"
  }
  ],
"metadata": {
  "size": 20,
  "totalElements": 2,
  "totalPages": 1,
```

```

    "number":1,
    "offset":0
  }
}

```

## Syntax for Linking an Identity Store to the Tenant

You can use the REST API identity service to link an LDAP, Active Directory, or Native Active Directory identity store to the vRealize Automation tenant.

### Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	<code>https://\$host/identity/api/tenants/\$tenantId/directories/\$domainName --data @\$inputFileName.json</code>
<i>\$host</i>	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
<i>\$token</i>	Specifies a valid HTTP bearer token with necessary credentials.
<i>\$tenantId</i>	Specifies the ID of the tenant.
<i>userId</i>	Specifies the ID of the user in the form name@domain.
<i>\$domainAlias</i>	Specifies the domain alias.
<i>\$domainName</i>	Specifies the domain of the identity store.
<i>\$grpBaseSearchDn</i>	Specifies the group search base Distinguished Name.
<i>\$identityStoreName</i>	Specifies a description of the new tenant.
<i>\$password</i>	Specifies the password.
<i>\$identityStoreType</i>	Specifies the identity store type for the tenant. The following values are supported: <ul style="list-style-type: none"> <li>■ LDAP</li> <li>■ AD</li> <li>■ NATIVE_AD</li> </ul>
<i>\$identityServerUrl</i>	Specifies the URL of the identity server.
<i>\$usrBaseSearchDn</i>	Specifies the user search base Distinguished Name.
<i>\$usrNameDn</i>	Specifies the Distinguished Name for the login user.

### JSON Input File Template

Use this template to create a JSON input file. Replace the variables in the template with actual values in the file.

```

{
  "alias": "$domainAlias",
  "domain": "$domainName",
  "groupBaseSearchDn": "$grpBaseSearchDn",

```

```
"name": "$identityStoreName",  
"password": "$password",  
"type": "$identityStoreType",  
"url": "$identityServerUrl",  
"userBaseSearchDn": "$usrBaseSearchDn",  
"userNameDn": "$usrNameDn"  
}
```

## Output

The command output contains property names and values based on the command input parameters.

Parameter	Description
Links	<p>Specifies an array of link objects, each of which contains the following parts:</p> <ul style="list-style-type: none"> <li>■ rel                             <p>Specifies the name of the link.</p> <ul style="list-style-type: none"> <li>■ Self refers to the object that was returned or requested.</li> <li>■ First, Previous, Next, and Last refer to corresponding pages of pageable lists.</li> <li>■ Specifies the application or service that determines the other names.</li> </ul> </li> <li>■ href                             <p>Specifies the URL that produces the result.</p> </li> </ul>
Content	<p>Specifies an array of data rows, each of which represents one of the tenant objects returned in a pageable list. Each tenant object can contain the following information:</p> <ul style="list-style-type: none"> <li>■ Id:                             <p>Specifies the unique tenant identifier.</p> </li> <li>■ urlName:                             <p>Specifies the name of the tenant as it appears in URLs.</p> </li> <li>■ Name:                             <p>Specifies the name of the tenant for display purposes.</p> </li> <li>■ description:                             <p>Specifies the long description of the tenant.</p> </li> <li>■ contactEmail:                             <p>Specifies the primary contact email address.</p> </li> <li>■ Password:                             <p>Unused</p> </li> <li>■ defaultTenant:                             <p>Is set to True if the corresponding tenant is the default tenant (vsphere.local).</p> </li> </ul>
Metadata	<p>Specifies the following paging-related data:</p> <ul style="list-style-type: none"> <li>■ Size: Specifies the maximum number of rows per page.</li> <li>■ totalElement: Specifies the number of rows returned.</li> <li>■ totalPages: Specifies the total number of pages of data available.</li> <li>■ Number: Specifies the current page number.</li> <li>■ Offset: Specifies the number of rows skipped.</li> </ul>

## Example JSON Input File

Call the following sample `ldap.json.txt` input file from the command line to specify necessary parameters.

```
{
  "alias": "example.com",
  "domain": "example.mycompany.com",
  "groupBaseSearchDn": "ou=demo,dc=example,dc=mycompany,dc=com",
  "name": "openLDAPDemo",
  "password": "password",
  "type": "LDAP",
  "url": "ldap://10.000.00.000:389",
  "userBaseSearchDn": "ou=demo,dc=example,dc=mycompany,dc=com",
  "userNameDn": "cn=demoadmin,ou=demo,dc=example,dc=mycompany,dc=com"
}
```

## Example: curl Command

The following example command calls the example JSON text file and links an identity store to a tenant. The command also tests that vRealize Automation can connect to the identity store successfully. If the command finishes successfully, vRealize Automation succeeded in connecting to the identity store.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/identity/api/tenants/development/directories/example.mycompany.com
--data @C:\Temp\ldap.json.txt
```

## Example: JSON Output

This output indicates that an identity store is successfully linked to the specified tenant.

```
Request Headers
{
  Content-Type = application/json
  Accept = application/json
  Content-Length = 413
  Accept-Charset = big5, big5-hkscs, euc-jp, euc-kr, gb18030, gb2312, gbk,
  ibm-thai, ibm00858, ibm01140, ibm01141, ibm01142, ibm01143, ibm01144, ibm01145,
  ibm01146, ibm01147, ibm01148, ibm01149, ibm037, ibm1026, ibm1047, ibm273, ibm277,
  ibm278, ibm280, ibm284, ibm285, ibm290, ibm297, ibm420, ibm424, ibm437, ibm500,
  ibm775, ibm850, ibm852, ibm855, ibm857, ibm860, ibm861, ibm862, ibm863, ibm864,
  ibm865, ibm866, ibm868, ibm869, ibm870, ibm871, ibm918, iso-2022-cn, iso-2022-jp,
  iso-2022-jp-2, iso-2022-kr, iso-8859-1, iso-8859-13, iso-8859-15, iso-8859-2,
  iso-8859-3, iso-8859-4, iso-8859-5, iso-8859-6, iso-8859-7, iso-8859-8, iso-8859-9,
  jis_x0201, jis_x0212-1990, koi8-r, koi8-u, shift_jis, tis-620, us-ascii, utf-16,
  utf-16be, utf-16le, utf-32, utf-32be, utf-32le, utf-8, windows-1250, windows-1251,
  windows-1252, windows-1253, windows-1254, windows-1255, windows-1256, windows-1257,
  windows-1258, windows-31j, x-big5-hkscs-2001, x-big5-solaris, x-compound_text,
  x-euc-jp-linux, x-euc-tw, x-eucjp-open, x-ibm1006, x-ibm1025, x-ibm1046, x-ibm1097,
  x-ibm1098, x-ibm1112, x-ibm1122, x-ibm1123, x-ibm1124, x-ibm1364, x-ibm1381,
```

```

x-ibm1383, x-ibm300, x-ibm33722, x-ibm737, x-ibm833, x-ibm834, x-ibm856, x-ibm874,
x-ibm875, x-ibm921, x-ibm922, x-ibm930, x-ibm933, x-ibm935, x-ibm937, x-ibm939,
x-ibm942, x-ibm942c, x-ibm943, x-ibm943c, x-ibm948, x-ibm949, x-ibm949c, x-ibm950,
x-ibm964, x-ibm970, x-iscii91, x-iso-2022-cn-cns, x-iso-2022-cn-gb, x-iso-8859-11,
x-jis0208, x-jisautodetect, x-johab, x-macarabic, x-macentraleurope, x-maccroatian,
x-maccyrillic, x-macdingbat, x-macgreek, x-machebrew, x-maciceland, x-macroman,
x-macromania, x-macsymbol, x-macthai, x-macturkish, x-macukraine, x-ms932_0213,
x-ms950-hksks, x-ms950-hksks-xp, x-mswin-936, x-pck, x-sjis_0213, x-utf-16le-bom,
x-utf-32be-bom, x-utf-32le-bom, x-windows-50220, x-windows-50221, x-windows-874,
x-windows-949, x-windows-950, x-windows-iso2022jp
}
Response Headers
{
    Date = Wed, 29 Oct 2014 22:41:57 GMT
    Content-Type = application/json;charset=UTF-8
    Content-Length = 0
    Vary = Accept-Encoding,User-Agent
    Keep-Alive = timeout=15, max=100
    Connection = Keep-Alive
}
Successful

```

## Unlinked Identity Store Error

The following output indicates that an identity store is not linked to the specified tenant. To resolve the problem, correct the identity store and connection details in the JSON input file and rerun the command.

```

Command failed [Rest Error]: {Status code: 400}, {Error code: 90027} , {Error
Source: null}, {Error Msg: Cannot connect to the directory service.}, {System
Msg: 90027-Connection to directory service can't be established}

```

## Syntax for Searching LDAP or Active Directory for a User

You can use the vRealize Automation REST API identity service to search the configured LDAP directory, Active Directory, or Native Active Directory for a user.

### Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	<code>https://\$host/identity/api/tenants/\$tenantId/principals/\$userId</code>
<i>\$host</i>	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
<i>\$token</i>	Specifies a valid HTTP bearer token with necessary credentials.
<i>\$tenantId</i>	Specifies the ID of the tenant.
<i>\$userId</i>	Specifies the ID of the user in the form name@domain.

## Output

The command output contains property names and values based on the command input parameters.

Property	Description
Links	<p>Specifies an array of link objects, each of which contains the following parts:</p> <ul style="list-style-type: none"> <li>■ rel           <p>Specifies the name of the link.</p> <ul style="list-style-type: none"> <li>■ Self refers to the object that was returned or requested.</li> <li>■ First, Previous, Next, and Last refer to corresponding pages of pageable lists.</li> <li>■ Specifies the application or service that determines the other names.</li> </ul> </li> <li>■ href           <p>Specifies the URL that produces the result.</p> </li> </ul>
@type	Specifies the user name.
firstName	Specifies the first name of the user.
lastName	Specifies the last name of the user.
description	Specifies the description of the user.
emailAddress	Specifies the email address of the user.
locked	Specifies the Boolean flag indicating if the user is locked out.
disabled	Specifies the Boolean flag indicating if the user is disabled.
principalId	Specifies the principal ID of the user in username@domain format.
tenantName	Specifies the name of tenant to which user belongs.
name	Specifies the first and last name concatenated.

### Example: curl Command

The following example command queries the configured LDAP directory for a specific user.

```
curl --insecure -H "Accept:text/xml"
-H "Authorization: Bearer $token"
https://$host/identity/api/tenants/$tenantId/principals/$userId
```

### Example: JSON Output

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

```
{
  "links" : [ ],
  "content" : [ {
    "@type" : "User",
    "firstName" : "Tony",
    "lastName" : "Anteater",
    "emailAddress" : "tony@example.mycompany.com",
    "locked" : false,
```

```

    "disabled" : false,
    "principalId" : {
      "domain" : "example.mycompany.com",
      "name" : "susan"
    },
    "tenantName" : "MYCOMPANY1",
    "name" : "Tony Anteater"
  } ]
}

```

## Syntax for Assigning a User to a Role

You can use the REST API identity service to assign a user to a role.

### Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	<code>https://\$host/identity/api/authorization/tenants/\$tenantId/principals/\$principalId/roles/\$roleId</code>
<i>\$host</i>	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
<i>\$token</i>	Specifies a valid HTTP bearer token with necessary credentials.
<i>\$tenantId</i>	Specifies the ID of the tenant.
<i>\$principalId</i>	Specifies the ID of the user in name@domain format.
<i>\$roleId</i>	Specifies the ID of the user role.

### Example: curl Command

The following example command string submits a request to assign the user **tony** in the domain **example.mycompany.com** to the tenant administrator role. It provides empty braces for the required JSON payload. See [Syntax for Searching LDAP or Active Directory for a User](#) for more information about getting the user name and domain values.

```

curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
"https://$host/identity/api/authorization/tenants/development/principals/
susan@example.mycompany.com/roles/CSP_TENANT_ADMIN/" --data "{}"

```

### Example: JSON Output

If the command is successful, the HTTP response body is empty except for a 204 No Content status statement.

## Syntax for Displaying all Roles Assigned to a User

You can use the REST API identity service to display all of the roles assigned to a user.

## Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	https://\$host/identity/api/authorization/tenants/\$tenantId/principals/\$principalId/roles
\$token	Specifies a valid HTTP bearer token with necessary credentials.
\$host	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
\$tenantId	Specifies the ID of the tenant.
principalId	Specifies the ID of the user in the form name@domain.

## Output

The command output contains property names and values based on the command input parameters.

Property	Description
id	Specifies the role ID.
name	Specifies the role name.
description	Specifies the role description.
status	Specifies the status of this role.
assignedPermissions	Specifies the set of permissions that are implied by this role assignment.

## Example: curl Command

The following example command lists all the roles that are assigned to **tony@example.mycompany.com**.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/identity/api/authorization/tenants/development/principals/
tony@example.mycompany.com/roles
```

## Example: JSON Output

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

```
{
  "links" : [ ],
  "content" : [ {
    "@type" : "SystemRole",
    "id" : "ABX_TENANT_ADMIN",
    "name" : "Tenant Administrator",
    "description" : "ABX Tenant Administrator",
    "assignedPermissions" : [ {
      "id" : "CATALOG_CONSUME_TENANT_MGMT",
```

```

"name" : "Catalog Consume Tenant Management",
"description" : "Consume services, resources and manage requests on
behalf of any user within a Tenant",
"prereqAdminPermissions" : null
}, {
"id" : "MY_TENANT_MANAGEMENT",
"name" : "My Tenant Management",
"description" : "Manage my tenant.",
"prereqAdminPermissions" : null
}, {
"id" : "CATALOG_AUTHOR_TENANT",
"name" : "Catalog Tenant-level Author",
"description" : "Create, update and publish services, catalog items and actions shared across a
Tenant.",
"prereqAdminPermissions" : null
}, {
"id" : "GUI_MY_TENANT_MANAGEMENT",
"name" : "My Tenant Administration User Interface",
"description" : "Access my tenant administration GUI.",
"prereqAdminPermissions" : null
}, {
"id" : "CATALOG_ENTITLE_TENANT",
"name" : "Catalog Tenant-level Entitlement Management",
"description" : "Entitle services, catalog items and actions to all users within a tenant.",
"prereqAdminPermissions" : null
}, {
"id" : "FILE_EDIT_TENANT",
"name" : "Manage Tenant Files",
"description" : "Upload and delete files belonging to this tenant.",
"prereqAdminPermissions" : null
}, {
"id" : "TENANT_USER_DATA_MANAGEMENT",
"name" : "Manage user data (requests, items, tasks etc) within a tenant.",
"description" : "Manage user created objects belonging to the tenant.",
"prereqAdminPermissions" : null
}, {
"id" : "TENANT_ADMIN_ROLE_ASSIGNMENT",
"name" : "Tenant Administrator Role Assignment",
"description" : "Assign the tenant administrator role to other users.",
"prereqAdminPermissions" : null
}, {
"id" : "GUI_MY_TENANT_TUG_MANAGEMENT",
"name" : "My Tenant Identity Stores, Groups and Users Administration User Interfaces",
"description" : "Access my tenant identity stores, groups and users administration GUIs.",
"prereqAdminPermissions" : null
} ]
} ],
"metadata" : {
"size" : 20,
"totalElements" : 1,
"totalPages" : 1,
"number" : 1,
"offset" : 0
}

```

## Requesting a Machine By Type

You can use the REST API catalog service to request a machine by type.

Your vRealize Automation API calls vary slightly based on your intended machine type.

For information about requesting a machine by using the vRealize Automation application user interface, see the *IaaS Configuration* documentation.

### Request a Machine

You can use a sequence of Rest API catalog service commands to request a machine. This procedure provides sample command line syntax to request a machine. Supporting information regarding available input and output parameters, command-line entry samples, and sample JSON output samples is available in the following reference topics.

This procedure provides sample command line syntax for approving a machine request. Supporting information regarding available input and output parameters, command-line entry samples, and sample JSON output samples is available.

#### Prerequisites

- Log in to vRealize Automation as a consumer and current business group user.
- Verify that the host name and fully qualified domain name of the vRealize Automation instance are available.
- If you are not using the API Explorer, verify that you have a valid HTTP bearer token that matches your login credentials. See [Chapter 2 REST API Authentication](#).

#### Procedure

- 1 List all shared catalog items in the catalog.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/entitledCatalogItems
```

- 2 Locate the details of a specific catalog item by name.

```
curl --insecure -H "Content-Type: application/json" -H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/entitledCatalogItems
```

- 3 Locate the blueprint values to complete a machine request by listing the entitled catalog items, and then locating the catalog item that corresponds to the machine blueprint.
- 4 Create a JSON file that contains the blueprint values to construct a machine request.
  - a Open a text editor and create a file, for example, `request.json`.
  - b Save the file with any valid file name and file extension, for example, `request.json`.

c Include the file in the command line when you submit the work item approval.

5 Submit the machine request with the catalog service.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/requests --verbose --data @C:/Temp/requestMachine.json
```

6 View the requests with the catalog service.

```
curl --insecure -H "Content-Type: application/json" -H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/requests
```

7 Find the corresponding resource with the catalog service using a request ID.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/resources/?$filter=request/id+eq+%279e3
e2e33-2361-4c0a-8dcf-ff0a347bb08e%27
```

8 View the details of a machine request by using the catalog service.

```
curl --insecure -H "Content-Type: application/json" -H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/requests/3a5d9697-e3c8-476f-9754-29e773af
```

## Syntax for Listing Shared and Private Catalog Items

You can use the REST API catalog service to retrieve a list of all shared viewable catalog items. Shared catalog items do not belong to a specific business group. Also, this service retrieves a list of all shared and private catalog items that can be viewed, including their business groups.

### Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	https://\$host/catalog-service/api/consumer/catalogItems
\$host	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
\$token	Specifies a valid HTTP bearer token with necessary credentials.

### Output

The command output contains property names and values based on the command input parameters.

Property	Description
version	
id	Specifies the UUID Identifier of the object. Specifies the property type is string.

Property	Description
outputResourceTypeRef	Specifies the type of the resource that results from requesting the catalog item.
name	Specifies the user friendly name of the catalog item. Specifies the property type is string.
description	Specifies a short description of the catalog item. Specifies the property type is string.
status	Specifies the life cycle stage of the catalog item.
statusName	Specifies the life cycle status name, such as Active.
catalogItemTypeRef	Specifies the type of the catalog item.
serviceRef	Specifies the catalog service that contains the catalog item.
iconId	Specifies the associated icon representing this item.
organization	Specifies the subtenant and/or tenant to which this item belongs
providerBinding	Specifies the provider side identifier of this item.
forms	Specifies the forms that are associated with catalog items of this type.
callbacks	Specifies the call-backs to the provider that are supported by this catalog item.
isNoteworthy	Specifies if the catalog item should be highlighted to users for a period of time.
dateCreated	Specifies the date that this item was created in the catalog.
lastUpdatedDate	Specifies the date that this item was last updated in the catalog.
entitledOrganizations	Specifies the organizations in which the catalog item can be consumed by the current user.
catalogItem	Specifies the catalog item value.

### Example: YouCommand

The following example command retrieves information about all the available shared catalog items.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/entitledCatalogItems
```

### Example: JSON Output

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

```
{
  "links" : [ ],
  "content" : [ {
    "@type" : "entitledCatalogItem",
    "id" : "65fbca06-a28e-46f3-bced-c6e5fb3a66f9",
    "version" : 1,
    "name" : "RHEL 6-vsphere",
    "description" : "",
    "status" : "PUBLISHED",
    "organization" : {
      "tenantRef" : "MYCOMPANY",
      "tenantLabel" : "ABTenant",
      "subtenantRef" : "cccd7a7e-5283-416b-beb0-45eb4e924dcb",
```

```

    "subtenantLabel" : "MyTestAgentBusinessGroup"
  },
  "providerBinding" : {
    "bindingId" : "e16edcf9-6a10-4bc7-98e2-a33361aeb857",
    "providerRef" : {
      "id" : "c6fb1980-75b4-4adc-ac71-020d75f61978",
      "label" : "iaas-service"
    }
  },
  "forms" : null,
  "callbacks" : null,
  "isNoteworthy" : true,
  "dateCreated" : "2014-02-14T21:53:39.072Z",
  "lastUpdatedDate" : "2014-02-14T21:54:07.756Z",
  "iconId" : "cafe_default_icon_genericCatalogItem",
  "catalogItemTypeRef" : {
    "id" : "Infrastructure.Virtual",
    "label" : "Virtual Machine"
  },
  "serviceRef" : {
    "id" : "e90847d7-03e1-45a9-8377-be77be03af6f",
    "label" : "Tyler's Service"
  },
  "outputResourceTypeRef" : {
    "id" : "Infrastructure.Virtual",
    "label" : "Virtual Machine"
  }
} ],
"metadata" : {
  "size" : 20,
  "totalElements" : 1,
  "totalPages" : 1,
  "number" : 1,
  "offset" : 0
}
}

```

## Syntax for Finding a Catalog Item by Name

You can use the REST API catalog service to locate a catalog item in the service catalog.

### Input

Use the input parameters to control the command output.

Parameter	Description
URL	<code>https://\$host/catalog-service/api/consumer/entitledCatalogItems?\$filter=name+eq+%27my+custom+blueprint%27</code>
<i>\$host</i>	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
<i>\$token</i>	Specifies a valid HTTP bearer token with necessary credentials.
<i>\$catalogItemId</i>	Specifies the ID of a catalog item.

## **Output**

The command output contains property names and values based on the command input parameters.

Property	Description
Links	<p>Specifies an array of link objects, each of which contains the following parts:</p> <ul style="list-style-type: none"> <li>■ rel                             <ul style="list-style-type: none"> <li>Specifies the name of the link.                                     <ul style="list-style-type: none"> <li>■ Self refers to the object that was returned or requested.</li> <li>■ First, Previous, Next, and Last refer to corresponding pages of pageable lists.</li> <li>■ Specifies the application or service that determines the other names.</li> </ul> </li> </ul> </li> <li>■ href                             <ul style="list-style-type: none"> <li>Specifies the URL that produces the result.</li> </ul> </li> </ul>
Content	<p>Specifies an array of data rows, each of which represents one of the tenant objects returned in a pageable list. Each tenant object can contain the following information:</p> <ul style="list-style-type: none"> <li>■ @type:                             <ul style="list-style-type: none"> <li>entitledCatalogItem</li> </ul> </li> <li>■ Id:                             <ul style="list-style-type: none"> <li>Specifies the unique tenant identifier.</li> </ul> </li> <li>■ version:                             <ul style="list-style-type: none"> <li>Displays the object version number.</li> </ul> </li> <li>■ Name:                             <ul style="list-style-type: none"> <li>Specifies the name of the tenant for display purposes.</li> </ul> </li> <li>■ description:                             <ul style="list-style-type: none"> <li>Specifies the long description of the tenant.</li> </ul> </li> <li>■ status:                             <ul style="list-style-type: none"> <li>Specifies the life cycle stage of this catalog item.</li> </ul> </li> <li>■ organization:                             <ul style="list-style-type: none"> <li>Business group or tenant to which this item belongs.                                     <ul style="list-style-type: none"> <li>■ tenantRef:   <ul style="list-style-type: none"> <li>ID of the tenant.</li> </ul> </li> <li>■ tenantLabel:   <ul style="list-style-type: none"> <li>Name of the tenant.</li> </ul> </li> <li>■ subtenantRef:   <ul style="list-style-type: none"> <li>ID of the business group.</li> </ul> </li> <li>■ subtenantLabel:   <ul style="list-style-type: none"> <li>Name of the business group.</li> </ul> </li> </ul> </li> </ul> </li> <li>■ providerBinding:                             <ul style="list-style-type: none"> <li>Provider side identifier of this item.                                     <ul style="list-style-type: none"> <li>■ bindingId:   <ul style="list-style-type: none"> <li>binding ID.</li> </ul> </li> </ul> </li> </ul> </li> </ul>

Property	Description
	<ul style="list-style-type: none"> <li>■ providerRef: Provider.</li> <li>■ forms: A specification for the various forms associated with catalog items of this type.</li> <li>■ callbacks: A specification for the various call-backs to the provider supported by this catalog item.</li> <li>■ isNoteworthy: Flag indicating that this catalog item should be highlighted to users for a period of time.</li> <li>■ dateCreated: Date this item was created in catalog.</li> <li>■ lastUpdatedDate: Date this item was last updated in catalog.</li> <li>■ iconId: Associated icon representing this item.</li> <li>■ catalogItemTypeRef: Type of the catalog item.</li> <li>■ serviceRef: Catalog service that contains this catalog item.</li> <li>■ outputResourceTypeRef: Type of the resource resulting from requesting this catalog item.</li> </ul>
Metadata	<p>Specifies the paging-related data:</p> <ul style="list-style-type: none"> <li>■ Size: Specifies the maximum number of rows per page.</li> <li>■ totalElements: Specifies the number of rows returned.</li> <li>■ totalPages: Specifies the total number of pages of data available.</li> <li>■ Number: Specifies the current page number.</li> <li>■ Offset: Specifies the number of rows skipped.</li> </ul>

### Example: curl Command

The following example command retrieves all allowed shared catalog items.

```
curl --insecure -H "Content-Type: application/json" -H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/entitledCatalogItems
```

**Example: JSON Output**

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

```
{
  "links" : [ ],
  "content" : [ {
    "@type" : "entitledCatalogItem",
    "id" : "65fbca06-a28e-46f3-bced-c6e5fb3a66f9",
    "version" : 1,
    "name" : "RHEL 6-vsphere",
    "description" : "",
    "status" : "PUBLISHED",
    "organization" : {
      "tenantRef" : "MYCOMPANY",
      "tenantLabel" : "ABTenant",
      "subtenantRef" : "cccd7a7e-5283-416b-beb0-45eb4e924dcb",
      "subtenantLabel" : "MyTestAgentBusinessGroup"
    },
    "providerBinding" : {
      "bindingId" : "e16edcf9-6a10-4bc7-98e2-a33361aeb857",
      "providerRef" : {
        "id" : "c6fb1980-75b4-4adc-ac71-020d75f61978",
        "label" : "iaas-service"
      }
    },
    "forms" : null,
    "callbacks" : null,
    "isNoteworthy" : true,
    "dateCreated" : "2014-02-14T21:53:39.072Z",
    "lastUpdatedDate" : "2014-02-14T21:54:07.756Z",
    "iconId" : "cafe_default_icon_genericCatalogItem",
    "catalogItemTypeRef" : {
      "id" : "Infrastructure.Virtual",
      "label" : "Virtual Machine"
    },
    "serviceRef" : {
      "id" : "e90847d7-03e1-45a9-8377-be77be03af6f",
      "label" : "Tyler's Service"
    },
    "outputResourceTypeRef" : {
      "id" : "Infrastructure.Virtual",
      "label" : "Virtual Machine"
    }
  } ],
  "metadata" : {
    "size" : 20,
    "totalElements" : 1,
    "totalPages" : 1,
    "number" : 1,
    "offset" : 0
  }
}
```

## Syntax for Locating the Blueprint Values Required to Construct a Machine Request

You can find the blueprint values you need to complete a machine request by listing your entitled catalog items, and then locating the catalog item that corresponds to the machine blueprint.

### Shared and Private Catalog Items

- In the list of catalog items requested, locate the catalog item that corresponds to the machine blueprint. Refer the sample catalog item output in the example.
- The following attributes and their values are available in the catalog item output. The actual values are required for the machine request.

**Table 3-1. Attribute Values**

Attribute	Sample Value	Description
id	65fbca06-a28e-46f3-bced-c6e5fb3a66f9	Catalog item ID
tenant Ref	MYCOMPANY	Tenant name
subtenantRef	cccd7a7e-5283-416b-beb0-45eb4e924dcb	Business group ID
bindingId	e16edcf9-6a10-4bc7-98e2-a33361aeb857	Machine blueprint ID

### Excerpt from Sample Catalog Item Output

```

...
  "@type" : "CatalogItem",
  "id" : "65fbca06-a28e-46f3-bced-c6e5fb3a66f9",
  "version" : 1,
  "name" : "RHEL 6-vsphere",
  "description" : "",
  "status" : "PUBLISHED",
  "organization" : {
    "tenantRef" : "MYCOMPANY",
    "tenantLabel" : "QETenant",
    "subtenantRef" : "cccd7a7e-5283-416b-beb0-45eb4e924dcb",
    "subtenantLabel" : "MyTestAgentBusinessGroup"
  },
  "providerBinding" : {
    "bindingId" : "e16edcf9-6a10-4bc7-98e2-a33361aeb857",
    "providerRef" : {
      "id" : "c6fb1980-75b4-4adc-ac71-020d75f61978",
      "label" : "iaas-service"
    }
  },
  },
...

```

## Syntax for Constructing a JSON File For a Machine Request

You can use the REST API catalog service to construct a JSON file for use in a command line machine request.

### Prerequisites

- Obtain the information that you need to add to your JSON file. See [Syntax for Locating the Blueprint Values Required to Construct a Machine Request](#).
- Use an XML editor to create your JSON file.

### Example: JSON Input File

Use the following JSON input file sample when constructing a file.

```
{
  "@type": "CatalogItemRequest",
  "catalogItemRef": {
    "id": "65fbca06-a28e-46f3-bced-c6e5fb3a66f9"
  },
  "organization": {
    "tenantRef": "MYCOMPANY",
    "subtenantRef": "cccd7a7e-5283-416b-beb0-45eb4e924dcb"
  },
  "requestedFor": "fritz@example.mycompany.com",
  "state": "SUBMITTED",
  "requestNumber": 0,
  "requestData": {
    "entries": [{
      "key": "provider-blueprintId",
      "value": {
        "type": "string",
        "value": "e16edcf9-6a10-4bc7-98e2-a33361aeb857"
      }
    },
    {
      "key": "provider-provisioningGroupId",
      "value": {
        "type": "string",
        "value": "cccd7a7e-5283-416b-beb0-45eb4e924dcb"
      }
    },
    {
      "key": "requestedFor",
      "value": {
        "type": "string",
        "value": "fritz@example.mycompany.com"
      }
    },
    {
      "key": "provider-VirtualMachine.CPU.Count",
      "value": {
        "type": "integer",
```

```

        "value": 1
    },
    {
        "key": "provider-VirtualMachine.Memory.Size",
        "value": {
            "type": "integer",
            "value": 1024
        }
    },
    {
        "key": "provider-VirtualMachine.LeaseDays",
        "value": {
            "type": "integer",
            "value": 30
        }
    },
    {
        "key": "provider-__Notes",
        "value": {
            "type": "string",
            "value": "MYCOMPANY machine"
        }
    },
    {
        "key": "provider-VirtualMachine.Disk0.Size",
        "value": {
            "type": "string",
            "value": "1"
        }
    },
    {
        "key": "provider-VirtualMachine.Disk0.Letter",
        "value": {
            "type": "string",
            "value": "C"
        }
    },
    {
        "key": "provider-VirtualMachine.Disk0.Label",
        "value": {
            "type": "string",
            "value": "main"
        }
    }
}
]
}

```

## Syntax for Requesting a Machine

You can use the REST API catalog service to submit a machine request.

## Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	<code>https://\$host/catalog-service/api/consumer/requests/requestId</code>
<i>\$host</i>	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
<i>\$token</i>	Specifies a valid HTTP bearer token with necessary credentials.
JSON file or string input	Add required JSON input to the command line. See <a href="#">Syntax for Constructing a JSON File For a Machine Request</a> .

## Output

The command output contains property names and values based on the command input parameters.

Property	Description
version	Displays the object version number.
state	Specifies the item state, such as submitted.
approvalStatus	Specifies a status indicating whether this request has been approved, rejected, or is still pending some form of approval.
waitingStatus	Specifies a status indicating whether this request is waiting on any external users or services before it is able to progress.
requestNumber	Specifies a more user-friendly identifier for this request.
executionStatus	Specifies the current execution status of the request.
stateName	Specifies the localized state name.
phase	Specifies the current phase of the request, which is more coarse grained and easier for users to understand.
id	Specifies the unique identifier of this resource.
iconId	Specifies an icon for this request based on the requested object type.
description	Contains a brief description of this request.
reasons	Specifies the business reasons entered by the requestor or owner of this request.
requestedFor	Specifies the ID of the user for whom this request is logged.
requestedBy	Specifies the ID of the user who actually submitted the request
organization	Subtenant and/or tenant owner of this request.
requestorEntitlementId	Specified the value of the requestorEntitlement setting.
preApprovalId	Specifies the ID of the preApproval setting.
postApprovalId	Specifies the ID of the approval generated for the post-provisioning workflow step.
dateCreated	Specifies the date when this request was sent to the catalog.
lastUpdated	Specifies the date when this request was last updated.
dateSubmitted	Specifies the date when this request was first submitted.

Property	Description
dateApproved	Specifies the date when this request was approved.
dateCompleted	Specifies the date when this request was completed.
quote	Contains a quote made by the provider defining the estimated cost(s) associated with the request and/or any resources provisioned as a result of the request.
requestCompletion	Contains additional request completion information.
requestData	Contains a map of the provider-specific field-value pairs collected for this request.
retriesRemaning	<p>Specifies the number of attempts remaining to move this request from its current state to the next state in the request workflow.</p> <p>Some state transitions require calls to external services. These calls may fail due to transient errors such as momentary network errors. In these cases, the catalog will retry the call a number of times before failing.</p> <p>This property defines the number of retries remaining for the current state transition. When it reaches 0, the catalog will stop retrying and mark the request as failed. This property is reset to the default number of retries for every new operation that is triggered.</p>
requestedItemName	Specifies the item name.
requestedItemDescription	Specifies the item description.

### Example: curl Command

The following example command submits a machine request.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/requests --verbose --data @C:/Temp/requestMachine.json
```

### Example: Output with Request and Response Headers

The following sample displays the request and response headers and the command output. Use the indicated JSON text file or inline text as input.

```
{
Accept = application/json
Content-Type = application/json
Content-Length = 2806
}
Response Headers
{
Date = Wed, 03 Dec 2014 20:58:34 GMT
ETag = "0"
Location = https://vcac152-013-208.mycompany.com/catalog-service/api/consumer/
requests/3a5d9697-e3c8-476f-9754-29e773af4aa8
Content-Type = application/json;charset=UTF-8
Content-Length = 0
Vary = Accept-Encoding,User-Agent
```

```
Keep-Alive = timeout=15, max=100
Connection = Keep-Alive
}
null
```

## Syntax for Viewing All of Your Requests

You can use the vRealize Automation REST API catalog service to view all of your requests.

### Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	<code>https://\$host/catalog-service/api/consumer/requests</code>
<i>\$host</i>	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
<i>\$token</i>	Specifies a valid HTTP bearer token with necessary credentials.

### Output

The command output contains property names and values based on the command input parameters.

Property	Description
Links	<p>Specifies an array of link objects, each of which contains the following parts:</p> <ul style="list-style-type: none"> <li>■ rel           <p>Specifies the name of the link.</p> <ul style="list-style-type: none"> <li>■ Self refers to the object that was returned or requested.</li> <li>■ First, Previous, Next, and Last refer to corresponding pages of pageable lists.</li> <li>■ Specifies the application or service that determines the other names.</li> </ul> </li> <li>■ href           <p>Specifies the URL that produces the result.</p> </li> </ul>
Content	<p>Specifies an array of data rows, each of which represents one of the tenant objects returned in a pageable list. Each tenant object can contain the following information:</p> <ul style="list-style-type: none"> <li>■ version:           <p>Displays the object version number.</p> </li> <li>■ state:           <p>Specifies the transaction state.</p> </li> <li>■ approvalStatus:           <p>Indicates whether this request has been approved, rejected, or is still pending some form of approval.</p> </li> <li>■ waitingStatus:           <p>Indicates whether this request is waiting on any external users or services before it is able to progress.</p> </li> <li>■ requestNumber:           <p>Specifies the number for this request.</p> </li> <li>■ executionStatus:           <p>Indicates the current execution status of the request.</p> </li> <li>■ stateName:           <p>Specifies the localized state name.</p> </li> <li>■ phase:           <p>Indicates current phase of the request, which is more coarse grained and easier for users to understand.</p> </li> <li>■ id:           <p>Specifies the UUID Identifier of this object.</p> </li> <li>■ iconId:           <p>Specifies the associated icon representing this item.</p> </li> <li>■ description:           <p>Contains a brief description of the tenant.</p> </li> <li>■ reasons:           <p>Contains the business reasons entered by the requestor or owner of this request.</p> </li> <li>■ requestedFor:           <p>Specifies the ID of the user for whom this request is logged.</p> </li> <li>■ requestedBy:           <p>ID of the user who actually submitted the request.</p> </li> </ul>

Property	Description
	<ul style="list-style-type: none"> <li> <p>■ organization:</p> <p>Specifies the business group or tenant to which this item belongs.</p> <ul style="list-style-type: none"> <li> <p>■ tenantRef:</p> <p>ID of the tenant.</p> </li> <li> <p>■ tenantLabel:</p> <p>Name of the tenant.</p> </li> <li> <p>■ subtenantRef:</p> <p>ID of the business group.</p> </li> <li> <p>■ subtenantLabel:</p> <p>Name of the business group.</p> </li> </ul> </li> <li> <p>■ requestorEntitlementId:</p> <p>Contains the requestorEntitlement value.</p> </li> <li> <p>■ preApprovalId:</p> <p>Specifies the ID of the preApproval entity.</p> </li> <li> <p>■ postApprovalId:</p> <p>Specifies the ID of the approval generated for the post-provisioning workflow step.</p> </li> <li> <p>■ dateCreated:</p> <p>Specifies the date this item was created in catalog.</p> </li> <li> <p>■ lastUpdatedDate:</p> <p>Specifies the date this item was last updated in catalog.</p> </li> <li> <p>■ dateSubmitted:</p> <p>Specifies the date this request was first submitted.</p> </li> <li> <p>■ dateApproved:</p> <p>Specifies the date this request was approved.</p> </li> <li> <p>■ dateCompleted:</p> <p>Specifies the date this request was completed.</p> </li> <li> <p>■ quote:</p> <p>Contains a quote made by the provider defining the estimated cost(s) associated with the request and/or any resources provisioned as a result.</p> </li> <li> <p>■ requestCompletion:</p> <p>Requests completion information.</p> </li> <li> <p>■ requestData:</p> <p>Requests a map of the provider-specific field-value pairs collected for this request.</p> </li> <li> <p>■ retriesRemaning:</p> <p>Specifies the number of attempts remaining to move this request from its current state to the next state in the request workflow.</p> <p>Some state transitions require calls to external services. These calls may fail due to transient errors such as momentary network errors. In these cases, the catalog will retry the call a number of times before failing.</p> </li> </ul>

Property	Description
	<p>This property defines the number of retries remaining for the current state transition. When it reaches 0, the catalog will stop retrying and mark the request as failed. This property is reset to the default number of retries for every new operation that is triggered.</p> <ul style="list-style-type: none"> <li>■ requestedItemName</li> <li>■ requestedItemDescription</li> </ul>
Metadata	<p>Specifies the paging-related data:</p> <ul style="list-style-type: none"> <li>■ Size: <ul style="list-style-type: none"> <li>Specifies the maximum number of rows per page.</li> </ul> </li> <li>■ totalElements: <ul style="list-style-type: none"> <li>Specifies the number of rows returned.</li> </ul> </li> <li>■ totalPages: <ul style="list-style-type: none"> <li>Specifies the total number of pages of data available.</li> </ul> </li> <li>■ Number: <ul style="list-style-type: none"> <li>Specifies the current page number.</li> </ul> </li> <li>■ Offset: <ul style="list-style-type: none"> <li>Specifies the number of rows skipped.</li> </ul> </li> </ul>

### Example: curl Command

The following example command displays all requests.

```
curl --insecure -H "Content-Type: application/json" -H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/requests
```

### Example: JSON Output

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

```
{
  "links" : [ ],
  "content" : [ {
    "@type" : "CatalogItemRequest",
    "id" : "ec813a12-68c3-40a2-9a33-7efa38e8e2c9",
    "iconId" : "Travel_100.png",
    "version" : 5,
    "requestNumber" : 1,
    "state" : "SUCCESSFUL",
    "description" : "Attending conference",
    "reasons" : "Cuz I wanna go to Australia",
    "requestedFor" : "tony@example.vmware.com",
    "requestedBy" : "tony@example.vmware.com",
    "organization" : {
      "tenantRef" : "MYCOMPANY",
      "tenantLabel" : "QETenant",
      "subtenantRef" : "27b85c29-2624-459d-91d6-09ad071c6eb1",
      "subtenantLabel" : "Finance"
    },
    "requestorEntitlementId" : "7840175e-08e8-4152-a3f9-c53a4dd10f38",
```

```

"preApprovalId" : null,
"postApprovalId" : null,
"dateCreated" : "2014-02-14T19:45:28.361Z",
"lastUpdated" : "2014-02-14T19:48:27.690Z",
"dateSubmitted" : "2014-02-14T19:45:28.361Z",
"dateApproved" : null,
"dateCompleted" : "2014-02-14T19:48:27.683Z",
"quote" : {
  "leasePeriod" : {
    "type" : "timeSpan",
    "unit" : "DAYS",
    "amount" : 5
  },
  "leaseRate" : {
    "type" : "moneyTimeRate",
    "cost" : {
      "type" : "money",
      "currencyCode" : null,
      "amount" : 213.0
    },
    "basis" : {
      "type" : "timeSpan",
      "unit" : "DAYS",
      "amount" : 1
    }
  },
  "totalLeaseCost" : {
    "type" : "money",
    "currencyCode" : null,
    "amount" : 1065.0
  }
},
"requestCompletion" : {
  "requestCompletionState" : "SUCCESSFUL",
  "completionDetails" : "The request was successfully completed"
},
"requestData" : {
  "entries" : [ {
    "key" : "provider-roomType",
    "value" : {
      "type" : "entityRef",
      "componentId" : null,
      "classId" : "roomType",
      "id" : "2",
      "label" : "Deluxe"
    }
  }, {
    "key" : "provider-workspaceType",
    "value" : {
      "type" : "entityRef",
      "componentId" : null,
      "classId" : "workspaceType",
      "id" : "1",
      "label" : "Private Office"
    }
  }
}

```

```

    }, {
      "key" : "provider-arrivalDate",
      "value" : {
        "type" : "dateTime",
        "value" : "2014-02-21T19:44:00.000Z"
      }
    }, {
      "key" : "provider-address",
      "value" : {
        "type" : "string",
        "value" : "25 McLaren Street\nNorth Sydney, NSW 2060\nAUS"
      }
    }, {
      "key" : "provider-hotel",
      "value" : {
        "type" : "entityRef",
        "componentId" : null,
        "classId" : "hotel",
        "id" : "8",
        "label" : "Racecar Hotel"
      }
    }, {
      "key" : "provider-location",
      "value" : {
        "type" : "entityRef",
        "componentId" : null,
        "classId" : "location",
        "id" : "3",
        "label" : "AUS-Sydney-Napier"
      }
    }, {
      "key" : "provider-duration",
      "value" : {
        "type" : "integer",
        "value" : 5
      }
    } ]
  },
  ...

```

## Syntax for Finding a Resource by its Request ID

You can use the REST API catalog service with a request ID to find its corresponding resource.

### Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	<code>https://\$host/catalog-service/api/consumer/resources?\$filter=request/id+eq+%27requestId%27</code>
<i>\$host</i>	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.

Parameter	Description
<i>\$token</i>	Specifies a valid HTTP bearer token with necessary credentials.
<i>requestId</i>	Specifies the ID of the request used for the resource, for example, 9e3e2e33-2361-4c0a-8dcf-ff0a347bb08e.

Add one of the following strings to the URL in the command line. Replace *requestId* with the actual request ID.

- `?$filter=request/id eq 'requestId'`
- `?$filter=request/id%20eq%20%27requestId%27`
- `?$filter=request/id+eq+%27requestId%27`

## Output

Use the supported input parameters to control the command output.

Property	Description
Links	Specifies an array of link objects, each of which contains the following parts: <ul style="list-style-type: none"> <li>■ <code>rel</code> <ul style="list-style-type: none"> <li>Specifies the name of the link.</li> <li>■ <code>Self</code> refers to the object that was returned or requested.</li> <li>■ <code>First</code>, <code>Previous</code>, <code>Next</code>, and <code>Last</code> refer to corresponding pages of pageable lists.</li> <li>■ Specifies the application or service that determines the other names.</li> </ul> </li> <li>■ <code>href</code> <ul style="list-style-type: none"> <li>Specifies the URL that produces the result.</li> </ul> </li> </ul>
<i>work itemNumber</i>	Displays a reference number for the work item.
<i>id</i>	Specifies the unique identifier of this resource.
<i>version</i>	Displays the object version number.
<i>assignees</i>	Displays the list of work item assignees.
<i>subTenantId</i>	Optionally associates the work item with a specific business group granting users with management responsibilities over that business group permission to see the approval.
<i>tenantId</i>	Specifies the tenant ID for the work item.
<i>callbackEntityId</i>	Specifies the callback entity ID for the work item.
<i>work itemType</i>	Specifies the work item type for the work item.
<i>completedDate</i>	Specifies the date when the work item was completed.
<i>assignedDate</i>	Specifies the date when the work item was assigned.
<i>createdDate</i>	Specifies the created date of this instance.
<i>assignedOrCompletedDate</i>	Specifies the date to be displayed on UI.
<i>formUrl</i>	Specifies the URL from which the layout for this work item can be retrieved.
<i>serviceId</i>	Specifies the service ID that generated this work item instance.
<i>work itemRequest</i>	Specifies the corresponding work item request object.

Property	Description
status	Specifies the status of the work item.
completedBy	Specifies the principal ID of user who completed the work item.
availableActions	Contains a list of relevant work item actions.
Metadata	Specifies the paging-related data: <ul style="list-style-type: none"> <li>■ Size: Specifies the maximum number of rows per page.</li> <li>■ totalElement: Specifies the number of rows returned.</li> <li>■ totalPages: Specifies the total number of pages of data available.</li> <li>■ Number: Specifies the current page number.</li> <li>■ Offset: Specifies the number of rows skipped.</li> </ul>

### Example: curl Command

The following example command locates a resource by using its resource ID.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/resources/?$filter=request/id+eq+%279e3
e2e33-2361-4c0a-8dcf-ff0a347bb08e%27
```

## Syntax for Viewing the Details of a Machine Request

You can use the vRealize Automation REST API catalog service to view the details of a machine request.

### Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	<code>https://\$host/catalog-service/api/consumer/requests/\$requestId</code>
<i>\$host</i>	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
<i>\$token</i>	Specifies a valid HTTP bearer token with necessary credentials.
<i>\$requestId</i>	Specifies the request ID. See <a href="#">Syntax for Viewing All of Your Requests</a> to view all of your requests and search for a request ID. The required request ID is located at the end of the Location URL in the response header. The request ID is located in the Location field of the response header if you submitted the request with the <code>--headers</code> flag.

### Output

The command output contains property names and values based on the command input parameters.

Property	Description
version	Displays the object version number.
state	Specifies the item state, such as submitted.

Property	Description
approvalStatus	Specifies a status indicating whether this request has been approved, rejected, or is still pending some form of approval.
waitingStatus	Specifies a status indicating whether this request is waiting on any external users or services before it is able to progress.
requestNumber	Specifies a more user-friendly identifier for this request.
executionStatus	Specifies the current execution status of the request.
stateName	Specifies the localized state name.
phase	Specifies the current phase of the request, which is more coarse grained and easier for users to understand.
id	Specifies the unique identifier of this resource.
iconId	Specifies an icon for this request based on the requested object type.
description	Contains a brief description of this request.
reasons	Specifies the business reasons entered by the requestor or owner of this request.
requestedFor	Specifies the ID of the user for whom this request is logged.
requestedBy	Specifies the ID of the user who actually submitted the request
organization	Subtenant and/or tenant owner of this request.
requestorEntitlementId	Specified the value of the requestorEntitlement setting.
preApprovalId	Specifies the ID of the preApproval setting.
postApprovalId	Specifies the ID of the approval generated for the post-provisioning workflow step.
dateCreated	Specifies the date when this request was sent to the catalog.
lastUpdated	Specifies the date when this request was last updated.
dateSubmitted	Specifies the date when this request was first submitted.
dateApproved	Specifies the date when this request was approved.
dateCompleted	Specifies the date when this request was completed.
quote	Contains a quote made by the provider defining the estimated cost(s) associated with the request and/or any resources provisioned as a result of the request.
requestCompletion	Contains additional request completion information.
requestData	Contains a map of the provider-specific field-value pairs collected for this request.
retriesRemaning	<p>Specifies the number of attempts remaining to move this request from its current state to the next state in the request workflow.</p> <p>Some state transitions require calls to external services. These calls may fail due to transient errors such as momentary network errors. In these cases, the catalog will retry the call a number of times before failing.</p> <p>This property defines the number of retries remaining for the current state transition. When it reaches 0, the catalog will stop retrying and mark the request as failed. This property is reset to the default number of retries for every new operation that is triggered.</p>
requestedItemName	Specifies the item name.
requestedItemDescription	Specifies the item description.

**Example: curl Command**

The following example command displays details of a request.

```
curl --insecure -H "Content-Type: application/json" -H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/requests/3a5d9697-e3c8-476f-9754-29e773af
```

**Example: JSON Output**

The following sample output contains information about the catalog item request 3a5d9697-e3c8-476f-9754-29e773af4aa8.

```
{
  "@type" : "CatalogItemRequest",
  "id" : "3a5d9697-e3c8-476f-9754-29e773af4aa8",
  "iconId" : "cafe_default_icon_genericCatalogItem",
  "version" : 5,
  "requestNumber" : 5,
  "state" : "SUCCESSFUL",
  "description" : "MYCOMPANY machine",
  "reasons" : "New QE hire",
  "requestedFor" : "fritz@example.mycompany.com",
  "requestedBy" : "fritz@example.mycompany.com",
  "organization" : {
    "tenantRef" : "MYCOMPANY",
    "tenantLabel" : "QETenant",
    "subtenantRef" : "cccd7a7e-5283-416b-beb0-45eb4e924dcb",
    "subtenantLabel" : "MyTestAgentBusinessGroup"
  },
  "requestorEntitlementId" : "1d896d03-96ad-4aae-9900-75f49b57a6bf",
  "preApprovalId" : null,
  "postApprovalId" : null,
  "dateCreated" : "2014-09-19T20:58:35.854Z",
  "lastUpdated" : "2014-09-19T20:59:14.014Z",
  "dateSubmitted" : "2014-09-19T20:58:35.854Z",
  "dateApproved" : null,
  "dateCompleted" : "2014-09-19T20:59:13.994Z",
  "quote" : null,
  "requestCompletion" : {
    "requestCompletionState" : "SUCCESSFUL",
    "completionDetails" : "Request succeeded. Created tyler-prefix04."
  },
  "requestData" : {
    "entries" : [ {
      "key" : "provider-blueprintId",
      "value" : {
        "type" : "string",
        "value" : "e16edcf9-6a10-4bc7-98e2-a33361aeb857"
      }
    }, {
      "key" : "provider-Cafe.Shim.VirtualMachine.MaxCost",
      "value" : {
        "type" : "string",
        "value" : "0.0000000000"
      }
    }
  ]
}
```

```

    }
  }, {
    "key" : "provider-Cafe.Shim.VirtualMachine.TotalStorageSize",
    "value" : {
      "type" : "decimal",
      "value" : 1.0
    }
  }, {
    "key" : "provider-provisioningGroupId",
    "value" : {
      "type" : "string",
      "value" : "cccd7a7e-5283-416b-beb0-45eb4e924dcb"
    }
  }, {
    "key" : "provider-Cafe.Shim.VirtualMachine.AssignToUser",
    "value" : {
      "type" : "string",
      "value" : "fritz@example.mycompany.com"
    }
  }, {
    "key" : "provider-VirtualMachine.LeaseDays",
    "value" : {
      "type" : "integer",
      "value" : 30
    }
  }, {
    "key" : "provider-Cafe.Shim.VirtualMachine.Description",
    "value" : {
      "type" : "string",
      "value" : "MYCOMPANY machine"
    }
  }, {
    "key" : "provider-Cafe.Shim.VirtualMachine.Reason",
    "value" : {
      "type" : "string",
      "value" : "New QE hire"
    }
  }, {
    "key" : "provider-VirtualMachine.CPU.Count",
    "value" : {
      "type" : "integer",
      "value" : 1
    }
  }, {
    "key" : "provider-Cafe.Shim.VirtualMachine.NumberOfInstances",
    "value" : {
      "type" : "integer",
      "value" : 1
    }
  }, {
    "key" : "provider-VirtualMachine.Disk0.Letter",
    "value" : {
      "type" : "string",
      "value" : "C"
    }
  }
}

```

```

    }, {
      "key" : "provider-__Notes",
      "value" : {
        "type" : "string",
        "value" : "MYCOMPANY machine"
      }
    }, {
      "key" : "provider-Cafe.Shim.VirtualMachine.MinCost",
      "value" : {
        "type" : "string",
        "value" : "0.0000000000"
      }
    }, {
      "key" : "provider-VirtualMachine.Disk0.Label",
      "value" : {
        "type" : "string",
        "value" : "main"
      }
    }, {
      "key" : "provider-VirtualMachine.Disk0.Size",
      "value" : {
        "type" : "string",
        "value" : "1"
      }
    }, {
      "key" : "provider-VirtualMachine.Memory.Size",
      "value" : {
        "type" : "integer",
        "value" : 1
      }
    } ]
  },
  "retriesRemaining" : 3,
  "phase" : "SUCCESSFUL",
  "executionStatus" : "STOPPED",
  "waitingStatus" : "NOT_WAITING",
  "approvalStatus" : "POST_APPROVED",
  "catalogItemRef" : {
    "id" : "65fbca06-a28e-46f3-bced-c6e5fb3a66f9",
    "label" : "RHEL 6-vsphere"
  }
}

```

## Request a vCloud Air Machine

You can use the vRealize Automation REST API catalog service to request a vCloud Air machine.

### Prerequisites

- Log in to vRealize Automation as a consumer and current business group user.
- Verify that the host name and fully qualified domain name of the vRealize Automation instance are available.

- If you are not using the API Explorer, verify that you have a valid HTTP bearer token that matches your login credentials. See [Chapter 2 REST API Authentication](#).
- View a list of catalog items. See [Syntax for Listing Shared and Private Catalog Items](#).
- Construct a JSON File for a vCloud Air machine request. See [Syntax for Constructing a JSON File for a vCloud Air Machine Request](#).
- Obtain the request ID (\$requestId) of the request for which to view status. See [Syntax for Viewing All of Your Requests](#).

### Procedure

- 1 Find the catalog item that corresponds to the vCloud Air blueprint to use for the machine request by retrieving a page of published blueprint catalog items.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/catalogItems?limit=10&page=1
```

- 2 Construct a JSON file that contains the work item ID information to approve a machine request.
  - a Copy the appropriate JSON input file template to a new file in an XML editor that maintains formatting.
  - b Substitute the input variables in the template with the values obtained for specific ID.
  - c Save the file with a new name, for example, request.json.
- 3 Request a machine as defined in the chosen blueprint or override the default values of the blueprint by adding properties to the JSON input file to override default values.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/requests --verbose --data @C:/Temp/requestMachine.json
```

- 4 View the details of the machine request by using the catalog service.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/requests/510051b5-52ce-45db-8889-d4eeabf68da1
```

## Syntax for Finding the Published Blueprint for a vCloud Air Machine Request

You can use the vRealize Automation REST API catalog service to retrieve a page of published blueprint catalog items that you can use to find the catalog item that corresponds to the vCloud Air blueprint for a vCloud Air machine request.

## Process Overview

Use the following sequence to find a vCloud Air blueprint for use in creating a vCloud Air machine request.

- 1 From the list of your entitled catalog items, find the catalog item that corresponds to the vCloud Air blueprint to use for the request. You can search on the catalog item ID `Infrastructure.vCloudAir` to locate a published vCloud Air blueprint.
- 2 In the catalog item output that contains a catalog item ID `Infrastructure.vCloudAir` entry, locate the following entries that are required by the vCloud Air machine request:
  - Catalog item ID, for example `c2cacf7c-b3c8-47fb-a938-2c09910b6713`
  - Tenant reference, for example `sqc`.
  - Blueprint identifier (binding ID), for example `46548940-eb20-4368-9e73-c1685cda8c64`.
  - Business group (subtenant ID), for example `name1`.

If the business group value is null, you do need to enter a business group value in the vCloud Air machine request.

If the request information about a catalog item for which one is not entitled, or the blueprint catalog item is not published, then the request is rejected.

## Input

Use the supported input parameters to control the command output.

Property	Description
<code>&amp;page</code>	Specifies a page number. Specifies the default value is 1.
<code>?limit</code>	Specifies the number of entries displayed on a page. Specifies the default value is 10.
<code>\$orderby</code>	Specifies how the results are sorted and paginated.
<code>\$skip</code>	Specifies how many results to skip before computing pagination.
<code>\$filter</code>	Specifies a Boolean expression to define whether a particular entry be included in the response. Each API supports a different set of filterable fields.

## Output

The command output contains property names and values based on the command input parameters.

Property	Description
<code>version</code>	Displays the object version number.
<code>id</code>	Specifies the unique identifier of this resource.
<code>outputResourceTypeRef</code>	Specifies the type of the resource that results from requesting the catalog item.
<code>name</code>	Specifies the user friendly name of the catalog item. Specifies the property type is string.
<code>description</code>	Specifies a short description of the catalog item. Specifies the property type is string.
<code>status</code>	Specifies the life cycle stage of the catalog item.

Property	Description
statusName	Specifies the life cycle status name, such as Active.
catalogItemTypeRef	Specifies the type of the catalog item.
serviceRef	Specifies the catalog service that contains the catalog item.
iconId	Specifies the associated icon representing this item.
organization	Specifies the subtenant and/or tenant to which this item belongs
providerBinding	Specifies the provider side identifier of this item.
forms	Specifies the forms that are associated with catalog items of this type.
callbacks	Specifies the callbacks to the provider that are supported by this catalog item.
isNoteworthy	Specifies if the catalog item should be highlighted to users for a period of time.
dateCreated	Specifies the date that this item was created in the catalog.
lastUpdatedDate	Specifies the date that this item was last updated in the catalog.

For sample curl and REST API calls, sample output is provided.

### Example: curl Command

The following example command displays the catalog items that you are entitled to view, including published vCloud Air blueprints, one page at a time with a maximum of 10 items on each page.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/catalogItems?limit=10&page=1
```

### Example: JSON Output

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

The following highlighted items, for this example, are required when you submit a request for a vCloud Air machine.

```
{
  "@type" : "CatalogItem",
  "id" : "c2cacf7c-b3c8-47fb-a938-2c09910b6713",
  "version" : 1,
  "name" : "vApp",
  "description" : "",
  "status" : "PUBLISHED",
  "organization" : {
    "tenantRef" : "acx",
    "tenantLabel" : "ACX",
    "subtenantRef" : null,
    "subtenantLabel" : null
  },
  "providerBinding" : {
    "bindingId" : "46548940-eb20-4368-9e73-c1685cda8c64",
    "providerRef" : {
      "id" : "ba3b18dd-a891-48d2-a3e7-faed239990ed",
```

```

        "label" : "iaas-service"
    }
},
"forms" : null,
"callbacks" : null,
"isNoteworthy" : false,
"dateCreated" : "2014-09-18T23:50:52.858Z",
"lastUpdatedDate" : "2014-11-11T23:52:14.407Z",
"iconId" : "cafe_default_icon_genericCatalogItem",
"catalogItemTypeRef" : {
    "id" : "Infrastructure.vCloudAir",
    "label" : "vCD vApp"
},
"serviceRef" : {
    "id" : "ca6b9988-fe07-4b25-b465-3e0c905b7aad",
    "label" : "vCloud Air machine"
},
"outputResourceTypeRef" : {
    "id" : "Infrastructure.vCloudAir",
    "label" : "vCloud Air machine"
}
} ],
"metadata" : {
    "size" : 10,
    "totalElements" : 3,
    "totalPages" : 1,
    "number" : 1,
    "offset" : 0
}
}

```

## Syntax for Constructing a JSON File for a vCloud Air Machine Request

You can use the vRealize Automation REST API catalog service to construct a JSON file for use in a command line vCloud Air machine request.

### Prerequisites

- Obtain the information to add to the JSON file. See [Syntax for Finding the Published Blueprint for a vCloud Air Machine Request](#).
- Use an XML editor to create a JSON file.

### Example: JSON Input File

Use the following JSON input file sample when constructing a file.

```

{
  "@type": "CatalogItemRequest",
  "catalogItemRef": {
    "id": "c2cacf7c-b3c8-47fb-a938-2c09910b6713"
  },
  "organization": {
    "tenantRef": "abx",
    "subtenantRef": "43a2f89a-c04e-4941-abc5-b4dc68a2810d"
  },
}

```

```

"requestedFor": "Auto.admin@abx.local",
"state": "SUBMITTED",
"requestNumber": 0,
"requestData": {
  "entries": [
    {
      "key": "provider-blueprintId",
      "value": {
        "type": "string",
        "value": "46548940-eb20-4368-9e73-c1685cda8c64"
      }
    },
    {
      "key": "provider-provisioningGroupId",
      "value": {
        "type": "string",
        "value": "43a2f89a-c04e-4941-abc5-b4dc68a2810d"
      }
    },
    {
      "key": "requestedFor",
      "value": {
        "type": "string",
        "value": "Auto.admin@abx.local"
      }
    },
    {
      "key": "provider-VirtualMachine.LeaseDays",
      "value": {
        "type": "integer",
        "value": 2
      }
    },
    {
      "key": "provider-__Notes",
      "value": {
        "type": "string",
        "value": "A simple vCD provisioning scenario."
      }
    },
    {
      "key": "provider-ASCT-1.VirtualMachine.CPU.Count",
      "value": {
        "type": "string",
        "value": "1"
      }
    },
    {
      "key": "provider-ASCT-1.VirtualMachine.Memory.Size",
      "value": {
        "type": "string",
        "value": "1"
      }
    },
    {

```

```

    "key": "provider-ASCT-1.__Notes",
    "value": {
      "type": "string",
      "value": ""
    }
  },
  {
    "key": "provider-ASCT-1.VirtualMachine.Disk0.Size",
    "value": {
      "type": "string",
      "value": "1"
    }
  },
  {
    "key": "provider-ASCT-1.VirtualMachine.Disk0.Letter",
    "value": {
      "type": "string",
      "value": "c"
    }
  },
  {
    "key": "provider-__MultiMachine.Provision.NumberOfInstances",
    "value": {
      "type": "string",
      "value": "<ArrayOfKeyValueOfintint xmlns:i=\\\\"http://www.w3.org/2001/XMLSchema-
instance\\\\" xmlns=\\\\"http://schemas.microsoft.com/2003/10/Serialization/Arrays\\\\">\r\n
<KeyValueOfintint>\r\n  <Key>1</Key>\r\n  <Value>1</Value>\r\n
</KeyValueOfintint>\r\n</ArrayOfKeyValueOfintint>"
    }
  },
  {
    "key": "provider-__requested_allocation_type",
    "value": {
      "type": "string",
      "value": "2"
    }
  },
  {
    "key": "provider-Cafe.Shim.VirtualMachine.TotalStorageSize",
    "value": {
      "type": "decimal",
      "value": 0
    }
  },
  {
    "key": "provider-Cafe.Shim.VirtualMachine.Description",
    "value": {
      "type": "string",
      "value": "A simple vApp provisioning scenario."
    }
  },
  {
    "key": "provider-Cafe.Shim.VirtualMachine.NumberOfInstances",
    "value": {
      "type": "integer",

```

```

        "value": 1
    },
    {
        "key": "provider-Cafe.Shim.VirtualMachine.Reason",
        "value": {
            "type": "string",
            "value": "Requesting a vApp."
        }
    },
    {
        "key": "provider-Cafe.Shim.VirtualMachine.AssignToUser",
        "value": {
            "type": "string",
            "value": "Auto.admin@abx.local"
        }
    },
    {
        "key": "provider-Cafe.Shim.VirtualMachine.MinCost",
        "value": {
            "type": "string",
            "value": "4.0000000000"
        }
    },
    {
        "key": "provider-Cafe.Shim.VirtualMachine.MaxCost",
        "value": {
            "type": "string",
            "value": "4.0000000000"
        }
    },
    {
        "key": "provider-Cafe.Shim.VirtualMachine.ProvisionInto",
        "value": {
            "type": "string",
            "value": "2"
        }
    },
    {
        "key": "description",
        "value": {
            "type": "string",
            "value": "A simple vApp provisioning scenario."
        }
    },
    {
        "key": "reasons",
        "value": {
            "type": "string",
            "value": "Requesting a vApp."
        }
    }
}

```

```

    }
  ]
}
}

```

## Syntax for Requesting a vCloud Air Machine

You can use the vRealize Automation REST API catalog service to request a vCloud Air machine as defined in a blueprint or you can override the default values of the blueprint by adding properties to your JSON input file to override default values.

### Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	<code>https://\$host/catalog-service/api/consumer/requests/requestId</code>
<i>\$host</i>	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
<i>\$token</i>	Specifies a valid HTTP bearer token with necessary credentials.
JSON file or string input	Add required JSON input to the command line. See <a href="#">Syntax for Constructing a JSON File for a vCloud Air Machine Request</a> .

### Output

The command output contains property names and values based on the command input parameters.

Property	Description
version	Displays the object version number.
state	Specifies the item state, such as submitted.
approvalStatus	Specifies a status indicating whether this request has been approved, rejected, or is still pending some form of approval.
waitingStatus	Specifies a status indicating whether this request is waiting on any external users or services before it is able to progress.
requestNumber	Specifies a more user-friendly identifier for this request.
executionStatus	Specifies the current execution status of the request.
stateName	Specifies the localized state name.
phase	Specifies the current phase of the request, which is more coarse grained and easier for users to understand.
id	Specifies the unique identifier of this resource.
iconId	Specifies an icon for this request based on the requested object type.
description	Contains a brief description of this request.
reasons	Specifies the business reasons entered by the requestor or owner of this request.
requestedFor	Specifies the ID of the user for whom this request is logged.

Property	Description
requestedBy	Specifies the ID of the user who actually submitted the request
organization	Subtenant and/or tenant owner of this request.
requestorEntitlementId	Specified the value of the requestorEntitlement setting.
preApprovalId	Specifies the ID of the preApproval setting.
postApprovalId	Specifies the ID of the approval generated for the post-provisioning workflow step.
dateCreated	Specifies the date when this request was sent to the catalog.
lastUpdated	Specifies the date when this request was last updated.
dateSubmitted	Specifies the date when this request was first submitted.
dateApproved	Specifies the date when this request was approved.
dateCompleted	Specifies the date when this request was completed.
quote	Contains a quote made by the provider defining the estimated cost(s) associated with the request and/or any resources provisioned as a result of the request.
requestCompletion	Contains additional request completion information.
requestData	Contains a map of the provider-specific field-value pairs collected for this request.
retriesRemaning	<p>Specifies the number of attempts remaining to move this request from its current state to the next state in the request workflow.</p> <p>Some state transitions require calls to external services. These calls may fail due to transient errors such as momentary network errors. In these cases, the catalog will retry the call a number of times before failing.</p> <p>This property defines the number of retries remaining for the current state transition. When it reaches 0, the catalog will stop retrying and mark the request as failed. This property is reset to the default number of retries for every new operation that is triggered.</p>
requestedItemName	Specifies the item name.
requestedItemDescription	Specifies the item description.

### Example: curl Command

The following example command submits a vCloud Air machine request, where `C:/Temp/requestMachine.json` is the file name and location of the JSON file that contains the necessary information for processing the request.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/requests --verbose --data @C:/Temp/requestMachine.json
```

### Example: JSON Output with Request and Response Headers

Display the request and response headers with the output. Reference the following example to submit a vCloud Air machine request by using JSON inline text that contains the necessary information, rather than by using a JSON file that contains the necessary information.

In this example, the `@C:\vca.txt` entry calls a `vca.txt` file that contains the request payload.

```
rest post --headers --service catalog-service --u consumer/requests --d @C:\vca.txt
Request Headers
{
    Accept = application/json
    Content-Type = application/json
    Content-Length = 2721
    Accept-Charset = big5, big5-hkscs, euc-jp, euc-kr, gb18030, gb2312, gbk, ibm-thai, ibm00858,
    ibm01140, ibm01141, ibm01142, ibm01143, ibm01144, ibm01145, ibm01146, ibm01147, ibm01148, ibm01149, ibm
    37, ibm500, ibm775, ibm850, ibm852, ibm855, ibm857, ibm860, ibm861, ibm862, ibm863, ibm864, ibm865,
    ibm866, ibm868, ibm869, ibm870, ibm871, ibm918, iso-2022-cn, iso-2022-jp, iso-2022-jp-2, iso-2022-kr,
    iso-8859-7, iso-8859-8, iso-8859-9, jis_x0201, jis_x0212-1990, koi8-r, koi8-u, shift_jis, tis-620, us-
    ascii, utf-16, utf-16be, utf-16le, utf-32, utf-32be, utf-32le, utf-8, windows-1250, windows-1251, w
    ndows-31j, x-big5-hkscs-2001, x-big5-solaris, x-euc-jp-linux, x-euc-tw, x-eucjp-open, x-ibm1006, x-
    ibm1025, x-ibm1046, x-ibm1097, x-ibm1098, x-ibm1112, x-ibm1122, x-ibm1123, x-ibm1124, x-ibm1364, x-ibm
    x-ibm922, x-ibm930, x-ibm933, x-ibm935, x-ibm937, x-ibm939, x-ibm942, x-ibm942c, x-ibm943, x-ibm943c,
    x-ibm948, x-ibm949, x-ibm949c, x-ibm950, x-ibm964, x-ibm970, x-iscii91, x-iso-2022-cn-cns, x-iso-20
    ccroatian, x-maccyrillic, x-macdingbat, x-macgreek, x-machebrew, x-maciceland, x-macroman, x-
    macromania, x-macsymbol, x-macthai, x-macturkish, x-macukraine, x-ms932_0213, x-ms950-hkscs, x-ms950-
    hkscs-x
    , x-windows-50221, x-windows-874, x-windows-949, x-windows-950, x-windows-iso2022jp
    subtenantId =
}
Response Headers
{
    Date = Tue, 11 November 2015 23:57:43 GMT
    ETag = "0"
    Location = https://abx148-084-124.mycompany.com/catalog-
    service/api/consumer/requests/510051b5-52ce-45db-8889-d4eeabf68da1
    Content-Type = application/json;charset=UTF-8
    Content-Length = 0
    Vary = Accept-Encoding,User-Agent
    Keep-Alive = timeout=15, max=100
    Connection = Keep-Alive
}
Null
```

## Syntax for Viewing the Details of a vCloud Air Machine Request

You can use the REST API catalog service to view details of your vCloud Air machine request.

### Input

Use the supported input parameters to control the command output.

Input	Description
URL	<code>https://\$host/catalog-service/api/consumer/requests/\$requestId</code>
<i>\$host</i>	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.

Input	Description
<i>\$token</i>	Specifies a valid HTTP bearer token with necessary credentials.
<i>\$requestId</i>	<p>Specifies a request ID. Specifies the UUID of the request. See <a href="#">Syntax for Viewing All of Your Requests</a> to view all of your requests and search for the request ID.</p> <p>The required request ID is located at the end of the Location URL in the response header.</p> <p>The request ID is located in the Location field of the response header if you submitted the request with the <b>-headers</b> flag.</p>

## Output

The command output contains property names and values based on the command input parameters.

Property	Description
version	Displays the object version number.
state	Specifies the item state, such as submitted.
approvalStatus	Specifies a status indicating whether this request has been approved, rejected, or is still pending some form of approval.
waitingStatus	Specifies a status indicating whether this request is waiting on any external users or services before it is able to progress.
requestNumber	Specifies a more user-friendly identifier for this request.
executionStatus	Specifies the current execution status of the request.
stateName	Specifies the localized state name.
phase	Specifies the current phase of the request, which is more coarse grained and easier for users to understand.
id	Specifies the unique identifier of this resource.
iconId	Specifies an icon for this request based on the requested object type.
description	Contains a brief description of this request.
reasons	Specifies the business reasons entered by the requestor or owner of this request.
requestedFor	Specifies the ID of the user for whom this request is logged.
requestedBy	Specifies the ID of the user who actually submitted the request
organization	Subtenant and/or tenant owner of this request.
requestorEntitlementId	Specified the value of the requestorEntitlement setting.
preApprovalId	Specifies the ID of the preApproval setting.
postApprovalId	Specifies the ID of the approval generated for the post-provisioning workflow step.
dateCreated	Specifies the date when this request was sent to the catalog.
lastUpdated	Specifies the date when this request was last updated.
dateSubmitted	Specifies the date when this request was first submitted.
dateApproved	Specifies the date when this request was approved.
dateCompleted	Specifies the date when this request was completed.

Property	Description
quote	Contains a quote made by the provider defining the estimated cost(s) associated with the request and/or any resources provisioned as a result of the request.
requestCompletion	Contains additional request completion information.
requestData	Contains a map of the provider-specific field-value pairs collected for this request.
retriesRemaning	Specifies the number of attempts remaining to move this request from its current state to the next state in the request workflow.  Some state transitions require calls to external services. These calls may fail due to transient errors such as momentary network errors. In these cases, the catalog will retry the call a number of times before failing.  This property defines the number of retries remaining for the current state transition. When it reaches 0, the catalog will stop retrying and mark the request as failed. This property is reset to the default number of retries for every new operation that is triggered.
requestedItemName	Specifies the item name.
requestedItemDescription	Specifies the item description.

### Example: curl Command

The following example command displays the status of a vCloud Air machine request, where 510051b5-52ce-45db-8889-d4eeabf68da1 is the value of the request ID.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/requests/510051b5-52ce-45db-8889-d4eeabf68da1
```

### Example: JSON Output

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

The following sample illustrates example output for a request to query the status of a vCloud Air machine, where 510051b5-52ce-45db-8889-d4eeabf68da1 is the value of the request ID.

```
{
  "@type" : "CatalogItemRequest",
  "id" : "510051b5-52ce-45db-8889-d4eeabf68da1",
  "iconId" : "cafe_default_icon_genericCatalogItem",
  "version" : 3,
  "requestNumber" : 16,
  "state" : "PROVIDER_FAILED",
  "description" : "A simple vCloud Air machine provisioning scenario.",
  "reasons" : "Requesting a vCloud Air machine.",
  "requestedFor" : "Auto.admin@abx.local",
  "requestedBy" : "Auto.admin@abx.local",
  "organization" : {
    "tenantRef" : "abx",
    "tenantLabel" : "ABX",
    "subtenantRef" : "43a2f89a-c04e-4941-abc5-b4dc68a2810d",
    "subtenantLabel" : "vCD business group"
  },
  "requestorEntitlementId" : "3391b550-fd41-413a-8b45-5ae94e34f36a",
```

```

"preApprovalId" : null,
"postApprovalId" : null,
"dateCreated" : "2015-08-11T23:58:06.445Z",
"lastUpdated" : "2015-08-11T23:59:30.151Z",
"dateSubmitted" : "2015-08-11T23:58:06.445Z",
"dateApproved" : null,
"dateCompleted" : null,
"quote" : {
  "leasePeriod" : {
    "type" : "timeSpan",
    "unit" : "DAYS",
    "amount" : 2
  },
  "leaseRate" : {
    "type" : "moneyTimeRate",
    "cost" : {
      "type" : "money",
      "currencyCode" : null,
      "amount" : 4.0
    },
    "basis" : {
      "type" : "timeSpan",
      "unit" : "DAYS",
      "amount" : 1
    }
  },
  "totalLeaseCost" : {
    "type" : "money",
    "currencyCode" : null,
    "amount" : 8.0
  }
},
"requestCompletion" : {
  "requestCompletionState" : "FAILED",
  "completionDetails" : "Request failed: Machine vcd4: an error occurred while creating the virtual
machine.."
},
"requestData" : {
  "entries" : [ {
    "key" : "provider-ASCT-1.VirtualMachine.Memory.Size",
    "value" : {
      "type" : "string",
      "value" : "1"
    }
  }
], {
  "key" : "provider-blueprintId",
  "value" : {
    "type" : "string",
    "value" : "46548940-eb20-4368-9e73-c1685cda8c64"
  }
}, {
  "key" : "provider-ASCT-1.VirtualMachine.Disk0.Letter",
  "value" : {
    "type" : "string",
    "value" : "c"
  }
}

```

```

    }
  }, {
    "key" : "provider-__requested_allocation_type",
    "value" : {
      "type" : "string",
      "value" : "2"
    }
  }, {
    "key" : "provider-ASCT-1.__Notes",
    "value" : {
      "type" : "string",
      "value" : ""
    }
  }, {
    "key" : "provider-Cafe.Shim.VirtualMachine.MaxCost",
    "value" : {
      "type" : "string",
      "value" : "4.0000000000"
    }
  }, {
    "key" : "provider-Cafe.Shim.VirtualMachine.TotalStorageSize",
    "value" : {
      "type" : "decimal",
      "value" : 0.0
    }
  }, {
    "key" : "provider-provisioningGroupId",
    "value" : {
      "type" : "string",
      "value" : "43a2f89a-c04e-4941-abc5-b4dc68a2810d"
    }
  }, {
    "key" : "provider-__MultiMachine.Provision.NumberOfInstances",
    "value" : {
      "type" : "string",
      "value" : "<ArrayOfKeyValueOfintint xmlns:i=\\\\"http://www.w3.org/2001/XMLSchema-instance\\"
xmlns=\\\\"http://schemas.microsoft.com/2003/10/Serialization/Arrays\\">\r\n
          <KeyValueOfintint>\r\n      <Key>1</Key>\r\n
<Value>1</Value>\r\n
</KeyValueOfintint>\r\n</ArrayOfKeyValueOfintint>"
    }
  }, {
    "key" : "provider-Cafe.Shim.VirtualMachine.AssignToUser",
    "value" : {
      "type" : "string",
      "value" : "Auto.admin@sqa.local"
    }
  }, {
    "key" : "provider-VirtualMachine.LeaseDays",
    "value" : {
      "type" : "integer",
      "value" : 2
    }
  }, {
    "key" : "provider-ASCT-1.VirtualMachine.Disk0.Size",

```

```

    "value" : {
      "type" : "string",
      "value" : "1"
    }
  }, {
    "key" : "provider-Cafe.Shim.VirtualMachine.ProvisionInto",
    "value" : {
      "type" : "string",
      "value" : "2"
    }
  }, {
    "key" : "provider-Cafe.Shim.VirtualMachine.Description",
    "value" : {
      "type" : "string",
      "value" : "A simple vCloud Air provisioning scenario."
    }
  }, {
    "key" : "provider-ASCT-1.VirtualMachine.CPU.Count",
    "value" : {
      "type" : "string",
      "value" : "1"
    }
  }, {
    "key" : "provider-Cafe.Shim.VirtualMachine.Reason",
    "value" : {
      "type" : "string",
      "value" : "Requesting a vCloud Air machine."
    }
  }, {
    "key" : "provider-Cafe.Shim.VirtualMachine.NumberOfInstances",
    "value" : {
      "type" : "integer",
      "value" : 1
    }
  }, {
    "key" : "provider-__Notes",
    "value" : {
      "type" : "string",
      "value" : "A simple vCloud Air machine provisioning scenario."
    }
  }, {
    "key" : "provider-Cafe.Shim.VirtualMachine.MinCost",
    "value" : {
      "type" : "string",
      "value" : "4.0000000000"
    }
  }
} ]
},
"retriesRemaining" : 3,
"phase" : "FAILED",
"executionStatus" : "STOPPED",
"waitingStatus" : "NOT_WAITING",
"approvalStatus" : "PRE_APPROVED",
"catalogItemRef" : {
  "id" : "c2cacf7c-b3c8-47fb-a938-2c09910b6713",

```

```

    "label" : "vCloud Air machine"
  }
}

```

## Request an Amazon Machine

You can use the vRealize Automation REST API catalog service to request an Amazon machine.

### Prerequisites

- Log in to vRealize Automation as a consumer and current business group user.
- Verify that the host name and fully qualified domain name of the vRealize Automation instance are available.
- If you are not using the API Explorer, verify that you have a valid HTTP bearer token that matches your login credentials. See [Chapter 2 REST API Authentication](#).
- Generate a list of catalog items from which to obtain the Amazon blueprint ID. See [Syntax for Listing Shared and Private Catalog Items](#).
- Construct a JSON file for an Amazon machine request. See [Syntax for Constructing a JSON File for an Amazon Machine Request](#).

### Procedure

- 1 Find the published Amazon blueprint to use for the machine request by displaying the entitled catalog items in the service catalog.

```

curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/catalogItems?limit=10&page

```

- 2 Request a machine by using a published Amazon blueprint, the resource values specified in the blueprint, and a JSON input file containing request data such as your user name and business group ID.

Construct a JSON file for an Amazon machine request.

- a Copy the appropriate JSON input file template to a new file in an XML editor that maintains formatting.
- b Substitute the input variables in the template with the values obtained for specific ID.
- c Save the file with a new name, for example, request.json.

- Request an Amazon machine as defined in the chosen blueprint or override the default values of the blueprint by adding properties to the JSON input file to override default values. For example, add ESB storage or choose a specific location.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/requests --data @ec2machine_specific.json
```

- Check the status of the Amazon machine request by using the catalog service.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/requests/25211c6c-f09d-4e2b-9be4-7b09c47c9f6c
```

## Syntax for Finding the Published Amazon Blueprint for a Machine Request

You can use the vRealize Automation REST API catalog service to display your entitled service catalog items and locate a published Amazon blueprint to use for your machine request.

### Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	https://\$host/catalog-service/api/consumer/catalogItems?limit=10&page=1
<i>\$host</i>	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
<i>\$token</i>	Specifies a valid HTTP bearer token with necessary credentials.

### Output

The command output contains property names and values based on the command input parameters.

Property	Description
Links	<p>Specifies an array of link objects, each of which contains the following parts:</p> <ul style="list-style-type: none"> <li>■ rel           <ul style="list-style-type: none"> <li>Specifies the name of the link.</li> <li>■ Self refers to the object that was returned or requested.</li> <li>■ First, Previous, Next, and Last refer to corresponding pages of pageable lists.</li> <li>■ Specifies the application or service that determines the other names.</li> </ul> </li> <li>■ href           <ul style="list-style-type: none"> <li>Specifies the URL that produces the result.</li> </ul> </li> </ul>
Content	<p>Specifies an array of data rows, each of which represents one of the tenant objects returned in a pageable list. Each tenant object can contain the following information:</p> <ul style="list-style-type: none"> <li>■ @type:           <ul style="list-style-type: none"> <li>entitledCatalogItem</li> </ul> </li> <li>■ Id:           <ul style="list-style-type: none"> <li>Contains the unique tenant identifier.</li> </ul> </li> <li>■ version:           <ul style="list-style-type: none"> <li>Displays the object version number.</li> </ul> </li> <li>■ name:           <ul style="list-style-type: none"> <li>Contains the name of the tenant for display purposes.</li> </ul> </li> <li>■ description:           <ul style="list-style-type: none"> <li>Contains a brief description of the tenant.</li> </ul> </li> <li>■ status:           <ul style="list-style-type: none"> <li>Specifies the life cycle stage of this catalog item.</li> </ul> </li> <li>■ organization:           <ul style="list-style-type: none"> <li>Specifies the business group or tenant to which this item belongs.</li> <li>■ tenantRef:               <ul style="list-style-type: none"> <li>ID of the tenant.</li> </ul> </li> <li>■ tenantLabel:               <ul style="list-style-type: none"> <li>Name of the tenant.</li> </ul> </li> <li>■ subtenantRef:               <ul style="list-style-type: none"> <li>ID of the business group.</li> </ul> </li> <li>■ subtenantLabel:               <ul style="list-style-type: none"> <li>Name of the business group.</li> </ul> </li> </ul> </li> <li>■ description:           <ul style="list-style-type: none"> <li>Contains a brief description of the tenant.</li> </ul> </li> <li>■ status:           <ul style="list-style-type: none"> <li>Specifies the life cycle stage of this catalog item.</li> </ul> </li> <li>■ organization:           <ul style="list-style-type: none"> <li>Specifies the business group or tenant to which this item belongs.</li> <li>■ tenantRef:               <ul style="list-style-type: none"> <li>ID of the tenant.</li> </ul> </li> </ul> </li> </ul>

Property	Description
	<ul style="list-style-type: none"> <li>■ <b>tenantLabel:</b> Name of the tenant.</li> <li>■ <b>subtenantRef:</b> ID of the business group.</li> <li>■ <b>subtenantLabel:</b> Name of the business group.</li> <li>■ <b>providerBinding:</b> Contains the provider-side identifier of this item. <ul style="list-style-type: none"> <li>■ <b>bindingId:</b> binding ID.</li> <li>■ <b>providerRef:</b> Provider.</li> </ul> </li> <li>■ <b>forms:</b> Specifies the form associated with catalog items of this type.</li> <li>■ <b>callbacks:</b> Specifies the call-backs to the provider supported by this catalog item.</li> <li>■ <b>isNoteworthy:</b> Indicates that this catalog item should be highlighted to users for a period of time.</li> <li>■ <b>dateCreated:</b> Specifies the date this item was created in the catalog.</li> <li>■ <b>lastUpdatedDate:</b> Specifies the date this item was last updated in the catalog.</li> <li>■ <b>iconId:</b> Specifies the associated icon representing this item.</li> <li>■ <b>catalogItemTypeRef:</b> Specifies the type of the catalog item.</li> <li>■ <b>serviceRef:</b> Specifies the catalog service that contains this catalog item.</li> <li>■ <b>outputResourceTypeRef:</b> Specifies the type of the resource that results from requesting this catalog item.</li> </ul>
<hr/> <b>Metadata</b>	<p>Specifies the paging-related data:</p> <ul style="list-style-type: none"> <li>■ <b>Size:</b> Specifies the maximum number of rows per page.</li> <li>■ <b>totalElements:</b> Specifies the number of rows returned.</li> <li>■ <b>totalPages:</b> Specifies the total number of pages of data available.</li> <li>■ <b>Number:</b> Specifies the current page number.</li> </ul>

Property	Description
	<ul style="list-style-type: none"> <li>■ Offset: Specifies the number of rows skipped.</li> </ul>

### Example: curl Command

The following example command displays all the catalog items that you have permission to view.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/catalogItems?limit=10&page
```

### Example: JSON Output

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

```
{
  "links" : [ ],
  "content" : [{
    "@type" : "CatalogItem",
    "id" : "6cca9fd9-83b7-4f5d-8884-fb8a005fc656",
    "version" : 1,
    "name" : "EC2 Blueprint",
    "description" : "EC2 blueprint for AMI: amzn-ami-pv-2013.09.2.x86_64-efs",
    "status" : "PUBLISHED",
    "organization" : {
      "tenantRef" : "sqa",
      "tenantLabel" : "SQA",
      "subtenantRef" : "b475039a-94dd-4bf3-97f6-8596f8cf8818",
      "subtenantLabel" : "Business Group"
    },
    "providerBinding" : {
      "bindingId" : "1701645d-7e43-479f-930c-fbef58d13d50",
      "providerRef" : {
        "id" : "ba3b18dd-a891-48d2-a3e7-faed239990ed",
        "label" : "iaas-service"
      }
    },
    "forms" : null,
    "callbacks" : null,
    "isNoteworthy" : false,
    "dateCreated" : "2015-09-11T18:53:44.474Z",
    "lastUpdatedDate" : "2015-09-11T18:55:11.957Z",
    "iconId" : "cafe_default_icon_genericCatalogItem",
    "catalogItemTypeRef" : {
      "id" : "Infrastructure.Cloud",
      "label" : "Cloud Machine"
    },
    "serviceRef" : {
      "id" : "5d4ce014-1ee5-41fa-aecd-ec8734f5317a",
      "label" : "CLI Service"
    }
  }],
}
```

```

    "outputResourceTypeRef" : {
      "id" : "Infrastructure.Cloud",
      "label" : "Cloud Machine"
    }
  } ],
  "metadata" : {
    "size" : 10,
    "totalElements" : 1,
    "totalPages" : 1,
    "number" : 1,
    "offset" : 0
  }
}

```

## Syntax for Constructing a JSON File for an Amazon Machine Request

You can use the vRealize Automation REST API catalog service to request a machine by using a published Amazon blueprint, the resource values specified in the blueprint, and a JSON input file containing request data such as your user name and business group ID.

### Prerequisites

- Obtain the information that you need to add to your JSON file. See [Syntax for Finding the Published Amazon Blueprint for a Machine Request](#).
- Use an XML editor to create your JSON file.

### Example: JSON Input File

Use the following JSON input file sample when constructing a file.

Populate all the highlighted value equivalents from the following example JSON file when you create a JSON input file.

```

{
  "@type": "CatalogItemRequest",
  "catalogItemRef": {
    "id": "6cca9fd9-83b7-4f5d-8884-fb8a005fc656"
  },
  "organization": {
    "tenantRef": "abx",
    "subtenantRef": "b475039a-94dd-4bf3-97f6-8596f8cf8818"
  },
  "requestedFor": "Auto.admin@abx.local",
  "state": "SUBMITTED",
  "requestData": {
    "entries": [{
      "key": "provider-blueprintId",
      "value": {
        "type": "string",
        "value": "1701645d-7e43-479f-930c-fbef58d13d50"
      }
    }
  ],
  {

```

```

    "key": "provider-provisioningGroupId",
    "value": {
      "type": "string",
      "value": " b475039a-94dd-4bf3-97f6-8596f8cf8818"
    }
  },
  {
    "key": "requestedFor",
    "value": {
      "type": "string",
      "value": "Auto.admin@abx.local"
    }
  },
  {
    "key": "provider-__Notes",
    "value": {
      "type": "string",
      "value": "CLI EC2 description"
    }
  },
  {
    "key": "description",
    "value": {
      "type": "string",
      "value": "CLI EC2 description"
    }
  },
  {
    "key": "reasons",
    "value": {
      "type": "string",
      "value": "CLI EC2 reason"
    }
  },
  {
    "key": "provider-Cafe.Shim.VirtualMachine.Reason",
    "value": {
      "type": "string",
      "value": "CLI EC2 reason"
    }
  },
  {
    "key": "provider-__amazon.instanceType",
    "value": {
      "type": "string",
      "value": "t1.micro"
    }
  }
}]
}

```

## Syntax for Requesting an Amazon Machine

You can use the vRealize Automation REST API catalog service to request an Amazon machine as defined in your chosen blueprint, or you can override the default values of the blueprint by adding properties to your JSON input file to override default values. For example, you can choose a specific location.

### Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	<code>https://\$host/catalog-service/api/consumer/requests/requestId</code>
<i>\$host</i>	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
<i>\$token</i>	Specifies a valid HTTP bearer token with necessary credentials.
JSON file or string input	Add required JSON input to the command line. See <a href="#">Syntax for Constructing a JSON File for an Amazon Machine Request</a> .

### JSON Template for Command Input

Use the following JSON template sample to create a JSON command input string set or file for use in the command line.

```
{
  "@type": "CatalogItemRequest",
  "catalogItemRef": {
    "id": "catalog_item_ID"
  },
  "organization": {
    "tenantRef": "tenant_name",
    "subtenantRef": "business_group_ID"
  },
  "requestedFor": "username@fqdn",
  "state": "SUBMITTED",
  "requestData": {
    "entries": [{
      "key": "provider-blueprintId",
      "value": {
        "type": "string",
        "value": "blueprint_ID"
      }
    },
    {
      "key": "provider-provisioningGroupId",
      "value": {
        "type": "string",
        "value": "business_group_ID"
      }
    }
  ]
}
```

```

{
  "key": "requestedFor",
  "value": {
    "type": "string",
    "value": "username@fqdn"
  }
},
{
  "key": "provider-__Notes",
  "value": {
    "type": "string",
    "value": "notes"
  }
},
{
  "key": "description",
  "value": {
    "type": "string",
    "value": "description"
  }
},
{
  "key": "reasons",
  "value": {
    "type": "string",
    "value": "reasons"
  }
},
{
  "key": "provider-Cafe.Shim.VirtualMachine.Reason",
  "value": {
    "type": "string",
    "value": "provider_reason"
  }
},
{
  "key": "provider-__amazon.instanceType",
  "value": {
    "type": "string",
    "value": "Amazon_ins_type"
  }
}
}]
}
}

```

The following table describes the IDs, machine resources, and other information to add to the JSON file to create the JSON input parameters to submit the machine request.

Populate all the highlighted value equivalents from the following example JSON file when you create a JSON input file.

Value	Description
<i>catalog_item_ID</i>	Specifies the value of CatalogItem ID in the machine blueprint catalog item.
<i>tenant_name</i>	Specifies the value of tenantRef in the machine blueprint catalog item.
<i>business_group_ID</i>	Specifies the value of subtenantRef in the machine blueprint catalog item.
<i>username@fqdn</i>	Specifies the user name of the consumer and business group manager account and fully qualified domain name.
<i>blueprint_ID</i>	Specifies the value of bindingId in the machine blueprint catalog item.
<i>notes</i>	Specifies notes that help to describe the request.
<i>description</i>	Contains a description of the request.
<i>reasons</i>	Contains a general reason for the request.
<i>provider_reason</i>	Contains a general provider reason for the request.
<i>Amazon_ins_type</i>	Specifies an Amazon instance type. Request only Amazon instance types that are supported by the blueprint. If necessary, consult the fabric administrator for details on what blueprint supports. For information about Amazon instance types, see Amazon product documentation.

### Example: JSON Input File

The following example requests a small Amazon instance type, which overrides the default location to us-west-1a. It also creates an EBS storage volume named Backup and mounts it to /dev/sdf.

```
{
  "@type": "CatalogItemRequest",
  "catalogItemRef": {
    "id": "catalog_item_ID"
  },
  "organization": {
    "tenantRef": "tenant_name",
    "subtenantRef": "business_group_ID"
  },
  "requestedFor": "username@fqdn",
  "state": "SUBMITTED",
  "requestData": {
    "entries": [{
      "key": "provider-blueprintId",
      "value": {
        "type": "string",
        "value": "blueprint_ID"
      }
    },
    {
      "key": "provider-provisioningGroupId",
      "value": {
```

```

        "type": "string",
        "value": "business_group_ID"
    }
},
{
    "key": "requestedFor",
    "value": {
        "type": "string",
        "value": "username@fqdn"
    }
},
{
    "key": "provider-__Notes",
    "value": {
        "type": "string",
        "value": "notes"
    }
},
{
    "key": "description",
    "value": {
        "type": "string",
        "value": "description"
    }
},
{
    "key": "reasons",
    "value": {
        "type": "string",
        "value": "reasons"
    }
},
{
    "key": "provider-Cafe.Shim.VirtualMachine.Reason",
    "value": {
        "type": "string",
        "value": "provider_reason"
    }
},
{
    "key": "provider-__amazon.instanceType",
    "value": {
        "type": "string",
        "value": "Amazon_ins_type"
    }
}
}]
}
}

```

### Example: Output

The command output contains property names and values based on the command input parameters.

Property	Description
version	Displays the object version number.
state	Specifies the item state, such as submitted.
approvalStatus	Specifies a status indicating whether this request has been approved, rejected, or is still pending some form of approval.
waitingStatus	Specifies a status indicating whether this request is waiting on any external users or services before it is able to progress.
requestNumber	Specifies a more user-friendly identifier for this request.
executionStatus	Specifies the current execution status of the request.
stateName	Specifies the localized state name.
phase	Specifies the current phase of the request, which is more coarse grained and easier for users to understand.
id	Specifies the unique identifier of this resource.
iconId	Specifies an icon for this request based on the requested object type.
description	Contains a brief description of this request.
reasons	Specifies the business reasons entered by the requestor or owner of this request.
requestedFor	Specifies the ID of the user for whom this request is logged.
requestedBy	Specifies the ID of the user who actually submitted the request
organization	Subtenant and/or tenant owner of this request.
requestorEntitlementId	Specified the value of the requestorEntitlement setting.
preApprovalId	Specifies the ID of the preApproval setting.
postApprovalId	Specifies the ID of the approval generated for the post-provisioning workflow step.
dateCreated	Specifies the date when this request was sent to the catalog.
lastUpdated	Specifies the date when this request was last updated.
dateSubmitted	Specifies the date when this request was first submitted.
dateApproved	Specifies the date when this request was approved.
dateCompleted	Specifies the date when this request was completed.
quote	Contains a quote made by the provider defining the estimated cost(s) associated with the request and/or any resources provisioned as a result of the request.
requestCompletion	Contains additional request completion information.
requestData	Contains a map of the provider-specific field-value pairs collected for this request.
retriesRemaning	<p>Specifies the number of attempts remaining to move this request from its current state to the next state in the request workflow.</p> <p>Some state transitions require calls to external services. These calls may fail due to transient errors such as momentary network errors. In these cases, the catalog will retry the call a number of times before failing.</p> <p>This property defines the number of retries remaining for the current state transition. When it reaches 0, the catalog will stop retrying and mark the request as failed. This property is reset to the default number of retries for every new operation that is triggered.</p>

Property	Description
requestedItemName	Specifies the item name.
requestedItemDescription	Specifies the item description.

### Example: curl Command

The following example command submits a request that includes the specifications in an `ec2machine_specific.json` input file.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/requests --data @ec2machine_specific.json
```

### Example: JSON Output

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

The highlighted URL in the following sample indicates the location and ID of the vRealize Automation request.

```
Request Headers
{
    Accept = application/json
    Content-Type = application/json
    Content-Length = 1347
    Accept-Charset = big5, big5-hkscs, ...
}
Response Headers
{
    Date = Tue, 11 Oct 2014 22:28:35 GMT
    ETag = "0"
    Location = https://abx148-084-124.eng.mycompany.com/catalog-
service/api/consumer/requests/25211c6c-f09d-4e2b-
9be4-7b09c47c9f6c
    Content-Type = application/json;charset=UTF-8
    Content-Length = 0
    Vary = Accept-Encoding,User-Agent
    Keep-Alive = timeout=15, max=100
    Connection = Keep-Alive
}
null
```

## Syntax for Viewing the Details of an Amazon Machine Request

You can use the REST API catalog service to check the status of your Amazon EC2 Machine request.

### Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	https://\$host/catalog-service/api/consumer/requests/requestId
\$host	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
\$token	Specifies a valid HTTP bearer token with necessary credentials.
requestId	Specifies the ID of the request to check.

## Output

The command output contains property names and values based on the command input parameters.

Property	Description
version	Displays the object version number.
state	Specifies the item state, such as submitted.
approvalStatus	Specifies a status indicating whether this request has been approved, rejected, or is still pending some form of approval.
waitingStatus	Specifies a status indicating whether this request is waiting on any external users or services before it is able to progress.
requestNumber	Specifies a more user-friendly identifier for this request.
executionStatus	Specifies the current execution status of the request.
stateName	Specifies the localized state name.
phase	Specifies the current phase of the request, which is more coarse grained and easier for users to understand.
id	Specifies the unique identifier of this resource.
iconId	Specifies an icon for this request based on the requested object type.
description	Contains a brief description of this request.
reasons	Specifies the business reasons entered by the requestor or owner of this request.
requestedFor	Specifies the ID of the user for whom this request is logged.
requestedBy	Specifies the ID of the user who actually submitted the request
organization	Subtenant and/or tenant owner of this request.
requestorEntitlementId	Specified the value of the requestorEntitlement setting.
preApprovalId	Specifies the ID of the preApproval setting.
postApprovalId	Specifies the ID of the approval generated for the post-provisioning workflow step.
dateCreated	Specifies the date when this request was sent to the catalog.
lastUpdated	Specifies the date when this request was last updated.
dateSubmitted	Specifies the date when this request was first submitted.
dateApproved	Specifies the date when this request was approved.
dateCompleted	Specifies the date when this request was completed.

Property	Description
quote	Contains a quote made by the provider defining the estimated cost(s) associated with the request and/or any resources provisioned as a result of the request.
requestCompletion	Contains additional request completion information.
requestData	Contains a map of the provider-specific field-value pairs collected for this request.
retriesRemaning	Specifies the number of attempts remaining to move this request from its current state to the next state in the request workflow.  Some state transitions require calls to external services. These calls may fail due to transient errors such as momentary network errors. In these cases, the catalog will retry the call a number of times before failing.  This property defines the number of retries remaining for the current state transition. When it reaches 0, the catalog will stop retrying and mark the request as failed. This property is reset to the default number of retries for every new operation that is triggered.
requestedItemName	Specifies the item name.
requestedItemDescription	Specifies the item description.

### Example: curl Command

The following example command checks the status of an Amazon machine request where 25211c6c-f09d-4e2b-9be4-7b09c47c9f6c is the value of the request ID.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/requests/25211c6c-f09d-4e2b-9be4-7b09c47c9f6c
```

### Example: JSON Output

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

```
{
  "@type" : "CatalogItemRequest",
  "id" : "25211c6c-f09d-4e2b-9be4-7b09c47c9f6c",
  "iconId" : "cafe_default_icon_genericCatalogItem",
  "version" : 5,
  "requestNumber" : 14,
  "state" : "SUCCESSFUL",
  "description" : "CLI EC2 description",
  "reasons" : "CLI EC2 reason",
  "requestedFor" : "Auto.admin@abx.local",
  "requestedBy" : "Auto.admin@abx.local",
  "organization" : {
    "tenantRef" : "sqa",
    "tenantLabel" : "SQA",
    "subtenantRef" : "b475039a-94dd-4bf3-97f6-8596f8cf8818",
    "subtenantLabel" : "Business Group"
  },
  "requestorEntitlementId" : "04f4588f-548a-4bc6-baf8-c22241918322",
  "preApprovalId" : null,
  "postApprovalId" : null,
  "dateCreated" : "2014-09-11T22:29:02.190Z",
```

```

"lastUpdated" : "2014-09-11T22:31:05.780Z",
"dateSubmitted" : "2014-09-11T22:29:02.190Z",
"dateApproved" : null,
"dateCompleted" : "2014-09-11T22:31:05.779Z",
"quote" : {
  "leaseRate" : {
    "type" : "moneyTimeRate",
    "cost" : {
      "type" : "money",
      "currencyCode" : null,
      "amount" : 3.0
    },
    "basis" : {
      "type" : "timeSpan",
      "unit" : "DAYS",
      "amount" : 1
    }
  }
},
"requestCompletion" : {
  "requestCompletionState" : "SUCCESSFUL",
  "completionDetails" : "Request succeeded. Created mp108."
},
"requestData" : {
  "entries" : [ {
    "key" : "provider-blueprintId",
    "value" : {
      "type" : "string",
      "value" : "1701645d-7e43-479f-930c-fbef58d13d50"
    }
  }, {
    "key" : "provider-provisioningGroupId",
    "value" : {
      "type" : "string",
      "value" : "b475039a-94dd-4bf3-97f6-8596f8cf8818"
    }
  }, {
    "key" : "provider-__Notes",
    "value" : {
      "type" : "string",
      "value" : "CLI EC2 description"
    }
  }, {
    "key" : "provider-Cafe.Shim.VirtualMachine.Reason",
    "value" : {
      "type" : "string",
      "value" : "CLI EC2 reason"
    }
  }, {
    "key" : "provider-__amazon.instanceType",
    "value" : {
      "type" : "string",
      "value" : "t1.micro"
    }
  }
]

```

```

},
"retriesRemaining" : 3,
"phase" : "SUCCESSFUL",
"executionStatus" : "STOPPED",
"waitingStatus" : "NOT_WAITING",
"approvalStatus" : "POST_APPROVED",
"catalogItemRef" : {
  "id" : "6cca9fd9-83b7-4f5d-8884-fb8a005fc656",
  "label" : "EC2 Blueprint"
}
}

```

## Approve a Machine Request

You can use a sequence of REST API workitem service commands to approve a machine request.

### Prerequisites

- Log in to vRealize Automation as an approver with at least one of the following qualifications:
  - You are designated as an approver in an approval policy.
  - You belong to a group which has been designated as an approval group in an approval policy.
  - You are designated as a delegate for someone who is an approver.
- Verify that the host name and fully qualified domain name of the vRealize Automation instance are available.
- If you are not using the API Explorer, verify that you have a valid HTTP bearer token that matches your login credentials. See [Chapter 2 REST API Authentication](#).

### Procedure

- 1 List all available work item IDs.

```

curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/workitem-service/api/workitems

```

- 2 Get details for a specific work item ID.

For example, get the details for work item 5e3e9519-78ea-4409-a52c-e4aa3bc56511.

```

curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/workitem-service/api/workitems/5e3e9519-78ea-4409-a52c-e4aa3bc56511

```

- 3 Construct a JSON file that contains the work item ID information that you need to approve a machine request.
  - a Copy the appropriate JSON input file template to a new file in an XML editor that maintains formatting.

- b Substitute the input variables in the template with the values you obtained for your specific work item ID, for example 5e3e9519-78ea-4409-a52c-e4aa3bc56511.
  - c Save the file with a new name, for example, approve.json.
- 4 Approve the submitted machine request by specifying the work item ID and including the JSON file as part of the command line.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/workitem-service/api/workitems/5e3e9519-78ea-4409-
a52c-e4aa3bc56511/actions/com.mycompany.csp.core.approval.action.approve
--d @approve.json
```

If the command is successful, the HTTP status is 201 Created. If the command is not successful, the HTTP status is 204 No Content.

## Syntax for Listing Work Items

You can use the vRealize Automation REST API workitem service to list the unique IDs of all available work items.

### Inputs

Use the supported input parameters to control the command output.

Parameter	Description
URL	https://\$host/workitem-service/api/workitems
\$host	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
\$token	Specifies a valid HTTP bearer token with necessary credentials.

### Output

The command output contains property names and values based on the command input parameters.

Property	Description
Links	<p>Specifies an array of link objects, each of which contains the following parts:</p> <ul style="list-style-type: none"> <li>■ rel <ul style="list-style-type: none"> <li>Specifies the name of the link.</li> <li>■ Self refers to the object that was returned or requested.</li> <li>■ First, Previous, Next, and Last refer to corresponding pages of pageable lists.</li> <li>■ Specifies the application or service that determines the other names.</li> </ul> </li> <li>■ href <ul style="list-style-type: none"> <li>Specifies the URL that produces the result.</li> </ul> </li> </ul>
work itemNumber	Displays a reference number for the work item.
id	Specifies the unique identifier of this resource.

Property	Description
version	Displays the object version number.
assignees	Displays the list of work item assignees.
subTenantId	Optionally associates the work item with a specific business group granting users with management responsibilities over that business group permission to see the approval.
tenantId	Specifies the tenant ID for the work item.
callbackEntityId	Specifies the callback entity ID for the work item.
work itemType	Specifies the work item type for the work item.
completedDate	Specifies the date when the work item was completed.
assignedDate	Specifies the date when the work item was assigned.
createdDate	Specifies the created date of this instance.
assignedOrCompletedDate	Specifies the date to be displayed on UI.
formUrl	Specifies the URL from which the layout for this work item can be retrieved.
serviceId	Specifies the service ID that generated this work item instance.
work itemRequest	Specifies the corresponding work item request object.
status	Specifies the status of the work item.
completedBy	Specifies the principal ID of user who completed the work item.
availableActions	Contains a list of relevant work item actions.
Metadata	Specifies the paging-related data: <ul style="list-style-type: none"> <li>■ Size: Specifies the maximum number of rows per page.</li> <li>■ totalElement: Specifies the number of rows returned.</li> <li>■ totalPages: Specifies the total number of pages of data available.</li> <li>■ Number: Specifies the current page number.</li> <li>■ Offset: Specifies the number of rows skipped.</li> </ul>

## Example: curl Command

The following example command retrieves all the available work item IDs.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/workitem-service/api/workitems
```

## Example: JSON Output

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

```
{
  "links" : [ ],
  "content" : [ {
    "@type" : "WorkItem",
    "id" : "1755ef1a-d6f0-4901-9ecd-d03352ae4a05",
    "version" : 1,
```

```

"workItemNumber" : 1,
"assignees" : [ {
  "principalId" : "tony@example.mycompany.com",
  "principalType" : "USER"
} ],
"tenantId" : "MYCOMPANY",
"callbackEntityId" : "1",
"workItemType" : {
  "id" : "com.mycompany.cafe.samples.travel.workItem",
  "name" : "Workspace Assignment",
  "pluralizedName" : "Workspace Assignments",
  "description" : "Location Specific Workspace Assignment",
  "serviceTypeId" : "com.mycompany.cafe.samples.travel.api",
  "actions" : [ {
    "id" : "com.mycompany.cafe.samples.travel.workItem.complete",
    "name" : "Reserve Workspace",
    "stateName" : "Completed",
    "icon" : {
      "id" : "baa623db-0ca0-4db7-af41-9a301bc9e152",
      "name" : "Complete Action Icon",
      "contentType" : "image/png",
      "image" : null
    }
  }, {
    "id" : "com.mycompany.cafe.samples.travel.workItem.cancel",
    "name" : "Workspace Unavailable",
    "stateName" : "Cancelled",
    "icon" : {
      "id" : "b03f994a-e1ec-4aae-8fae-e747ed680a5e",
      "name" : "Cancel Action Icon",
      "contentType" : "image/png",
      "image" : null
    }
  }
] ],
"completeByEmail" : true,
"commentsField" : null,
"listView" : {
  "columns" : [ {
    "id" : "duration",
    "label" : "Duration",
    "description" : "The length of stay, measured in days.",
    "dataType" : {
      "type" : "primitive",
      "typeId" : "INTEGER"
    }
  },
  "displayAdvice" : null,
  "state" : {
    "dependencies" : [ ],
    "facets" : [ ]
  },
  "filterable" : false,
  "sortable" : false,
  "isMultiValued" : false
}, {
  "id" : "location",

```

```

    "label" : "Destination",
    "description" : "The destination to which travel is being requested.",
    "dataType" : {
      "type" : "ref",
      "componentTypeId" : null,
      "componentId" : null,
      "classId" : "location",
      "typeFilter" : null,
      "label" : null
    },
    "displayAdvice" : null,
    "state" : {
      "dependencies" : [ ],
      "facets" : [ ]
    },
    "filterable" : false,
    "sortable" : false,
    "isMultiValued" : false
  }, {
    "id" : "arrivalDate",
    "label" : "Arrival Date",
    "description" : "The date of arrival at the destination",
    "dataType" : {
      "type" : "primitive",
      "typeId" : "DATE_TIME"
    },
    "displayAdvice" : null,
    "state" : {
      "dependencies" : [ ],
      "facets" : [ ]
    },
    "filterable" : false,
    "sortable" : false,
    "isMultiValued" : false
  } ],
  "defaultSequence" : [ "location", "arrivalDate", "duration" ]
},
"version" : 3,
"forms" : {
  "workItemDetails" : {
    "type" : "external",
    "formId" : "travel.seating.task"
  },
  "workItemSubmission" : {
    "type" : "external",
    "formId" : "travel.seating.task"
  },
  "workItemNotification" : {
    "type" : "external",
    "formId" : "travel.itinerary.details"
  }
}
},

```

```

    .
    .

    "completedDate" : null,
    "assignedDate" : "2014-02-20T23:55:31.600Z",
    "createdDate" : "2014-02-20T23:55:31.600Z",
    "assignedOrCompletedDate" : "2014-02-20T23:55:31.600Z",
    "serviceId" : "2af18227-6a00-49e9-a76b-96de3ee767d2",
    "workItemRequest" : {
      "itemId" : "531660fd-b540-4946-9917-38c023b61c02",
      "itemName" : "test travel 1",
      "itemDescription" : "test travel 1",
      "itemRequestor" : "tony@example.mycompany.com",
      "itemCost" : 0.0,
      "itemData" : {
        "entries" : [ {
          "key" : "requestLeaseTotal",
          "value" : {
            "type" : "money",
            "currencyCode" : null,
            "amount" : 1065.0
          }
        }, {
          "key" : "approvalId",
          "value" : {
            "type" : "string",
            "value" : "7a8b6054-1922-4f82-9266-245dffaa957c"
          }
        }, {
          "key" : "requestClassId",
          "value" : {
            "type" : "string",
            "value" : "request"
          }
        }, {
          "key" : "requestedFor",
          "value" : {
            "type" : "string",
            "value" : "tony@example.mycompany.com"
          }
        }, {
          "key" : "requestReasons"
        }, {
          "key" : "requestedItemName",
          "value" : {
            "type" : "string",
            "value" : "test travel 1"
          }
        }, {
          "key" : "requestInstanceId",
          "value" : {
            "type" : "string",
            "value" : "1cfe7177-74e3-4d68-a559-ea17587022ca"
          }
        }
      }
    }
  }
}

```

```

}, {
  "key" : "requestRef",
  "value" : {
    "type" : "string",
    "value" : "15"
  }
}, {
  "key" : "requestedItemDescription",
  "value" : {
    "type" : "string",
    "value" : "test travel 1"
  }
}, {
  "key" : "requestLeaseRate",
  "value" : {
    "type" : "moneyTimeRate",
    "cost" : {
      "type" : "money",
      "currencyCode" : null,
      "amount" : 213.0
    },
    "basis" : {
      "type" : "timeSpan",
      "unit" : "DAYS",
      "amount" : 1
    }
  }
}, {
  "key" : "requestingServiceId",
  "value" : {
    "type" : "string",
    "value" : "f91d044a-04f9-4b96-8542-375e3e4e1dc1"
  }
}, {
  "key" : "policy",
  "value" : {
    "type" : "string",
    "value" : "test travel approval policy"
  }
}, {
  "key" : "phase",
  "value" : {
    "type" : "string",
    "value" : "Pre Approval"
  }
}, {
  "key" : "requestDescription",
  "value" : {
    "type" : "string",
    "value" : "t"
  }
}, {
  "key" : "requestLease",
  "value" : {
    "type" : "timeSpan",

```

```

        "unit" : "DAYS",
        "amount" : 5
    }
}, {
    "key" : "requestedBy",
    "value" : {
        "type" : "string",
        "value" : "tony@example.mycompany.com"
    }
} ]
}
},
"status" : "Active",
"availableActions" : [ ]
} ],
"metadata" : {
    "size" : 20,
    "totalElements" : 7,
    "totalPages" : 1,
    "number" : 1,
    "offset" : 0
}
}

```

## Syntax for Getting Work Item Details

You can use the vRealize Automation REST API `workitem` service to display the details of a pending work item. You need these details to submit a completion request.

### Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	<code>https://\$host/workitem-service/api/workitems/workitem_ID</code>
<i>\$host</i>	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
<i>\$token</i>	Specifies a valid HTTP bearer token with necessary credentials.
<i>workitem_ID</i>	Specifies the unique identifier of a work item. See <a href="#">Syntax for Listing Work Items</a> .

### Output

The command output contains property names and values based on the command input parameters.

Property	Description
Links	<p>Specifies an array of link objects, each of which contains the following parts:</p> <ul style="list-style-type: none"> <li>■ rel <ul style="list-style-type: none"> <li>Specifies the name of the link.</li> <li>■ Self refers to the object that was returned or requested.</li> <li>■ First, Previous, Next, and Last refer to corresponding pages of pageable lists.</li> <li>■ Specifies the application or service that determines the other names.</li> </ul> </li> <li>■ href <ul style="list-style-type: none"> <li>Specifies the URL that produces the result.</li> </ul> </li> </ul>
work itemNumber	Displays a reference number for the work item.
id	Specifies the unique identifier of this resource.
version	Displays the object version number.
assignees	Displays the list of work item assignees.
subTenantId	Optionally associates the work item with a specific business group granting users with management responsibilities over that business group permission to see the approval.
tenantId	Specifies the tenant ID for the work item.
callbackEntityId	Specifies the callback entity ID for the work item.
work itemType	Specifies the work item type for the work item.
completedDate	Specifies the date when the work item was completed.
assignedDate	Specifies the date when the work item was assigned.
createdDate	Specifies the created date of this instance.
assignedOrCompletedDate	Specifies the date to be displayed on UI.
formUrl	Specifies the URL from which the layout for this work item can be retrieved.
serviceId	Specifies the service ID that generated this work item instance.
work itemRequest	Specifies the corresponding work item request object.
status	Specifies the status of the work item.
completedBy	Specifies the principal ID of user who completed the work item.
availableActions	Contains a list of relevant work item actions.
Metadata	<p>Specifies the paging-related data:</p> <ul style="list-style-type: none"> <li>■ Size: Specifies the maximum number of rows per page.</li> <li>■ totalElement: Specifies the number of rows returned.</li> <li>■ totalPages: Specifies the total number of pages of data available.</li> <li>■ Number: Specifies the current page number.</li> <li>■ Offset: Specifies the number of rows skipped.</li> </ul>

## Example: curl Command

The following example command retrieves the necessary details for the specified work item.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/workitem-service/api/workitems/5e3e9519-78ea-4409-a52c-e4aa3bc56511
```

## Example: JSON Output

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

To view the contents of a JSON output file, for example `workItemDetails.json`, use the `!` command with `more` in UNIX or `type` in Windows.

- (UNIX) `vcac-shell>! more workItemDetails.json`
- (Windows) `vcac-shell> ! CMD /C type workItemDetails.json`

```
vcac-shell> ! more workItemDetails.json
{
  "id" : "5e3e9519-78ea-4409-a52c-e4aa3bc56511",
  "version" : 0,
  "workItemNumber" : 8,
  "assignees" : [ {
    "principalId" : "tony@example.mycompany.com",
    "principalType" : "USER"
  } ],
  "subTenantId" : "eab762cb-6e75-4379-83ef-171a71c9f00e",
  "tenantId" : "MYCOMPANY",
  "callbackEntityId" : "069dc3ce-a260-4d6a-b191-683141c994c0",
  "workItemType" : {
    "id" : "com.mycompany.csp.core.approval.workitem.request",
    "name" : "Approval",
    "pluralizedName" : "Approvals",
    "description" : "",
    "serviceTypeId" : "com.mycompany.csp.core.cafe.approvals",
    "actions" : [ {
      "id" : "com.mycompany.csp.core.approval.action.approve",
      "name" : "Approve",
      "stateName" : "Approved",
      "icon" : {
        "id" : "c192b6a7-5b35-4a3b-8593-107ffcfc8c3a8",
        "name" : "approved.png",
        "contentType" : "image/png",
        "image" : null
      }
    }, {
      "id" : "com.mycompany.csp.core.approval.action.reject",
      "name" : "Reject",
      "stateName" : "Rejected",
      "icon" : {
        "id" : "61c6da67-1164-421d-b575-10a245c89e10",
```

```

        "name" : "rejected.png",
        "contentType" : "image/png",
        "image" : null
    }
} ],
"completeByEmail" : true,
"commentsField" : "businessJustification",
"listView" : {
    "columns" : [ {
        "id" : "requestedItemName",
        "label" : "Requested Item",
        "description" : "",
        "dataType" : {
            "type" : "primitive",
            "typeId" : "STRING"
        },
    },
    "displayAdvice" : null,
    "state" : {
        "dependencies" : [ ],
        "facets" : [ ]
    },
    "filterable" : false,
    "sortable" : false,
    "isMultiValued" : false
},
    .
    .
    .

{
    "id" : "requestLease",
    "label" : "Lease",
    "description" : "",
    "dataType" : {
        "type" : "primitive",
        "typeId" : "TIME_SPAN"
    },
    "displayAdvice" : null,
    "state" : {
        "dependencies" : [ ],
        "facets" : [ ]
    },
    "filterable" : false,
    "sortable" : false,
    "isMultiValued" : false
} ],
    "defaultSequence" : [ "requestRef", "requestedItemName", "requestedFor", "requestLease",
"requestLeaseRate", "requestLeaseTotal" ]
},
"version" : 1,
"forms" : {
    "workItemDetails" : {
        "type" : "external",
        "formId" : "approval.details"
    }
}

```

```

    },
    "workItemSubmission" : {
      "type" : "external",
      "formId" : "approval.submission"
    },
    "workItemNotification" : {
      "type" : "external",
      "formId" : "approval.notification"
    }
  }
},
"completedDate" : null,
"assignedDate" : "2014-02-25T01:26:07.153Z",
"createdDate" : "2014-02-25T01:26:07.153Z",
"assignedOrCompletedDate" : "2014-02-25T01:26:07.153Z",
"serviceId" : "2af18227-6a00-49e9-a76b-96de3ee767d2",
"workItemRequest" : {
  "itemId" : "069dc3ce-a260-4d6a-b191-683141c994c0",
  "itemName" : "test-blueprint",
  "itemDescription" : "",
  "itemRequestor" : "fritz@example.mycompany.com",
  "itemCost" : 0.0,
  "itemData" : {
    "entries" : [ {
      "key" : "requestLeaseTotal"
    }, {
      "key" : "approvalId",
      "value" : {
        "type" : "string",
        "value" : "469c11ae-ed27-4790-baf1-c6839f35d474"
      }
    }, {
      "key" : "requestClassId",
      "value" : {
        "type" : "string",
        "value" : "request"
      }
    }, {
      "key" : "requestedFor",
      "value" : {
        "type" : "string",
        "value" : "fritz@example.mycompany.com"
      }
    }, {
      "key" : "requestReasons",
      "value" : {
        "type" : "string",
        "value" : ""
      }
    }, {
      "key" : "requestedItemName",
      "value" : {
        "type" : "string",
        "value" : "test-blueprint"
      }
    }
  }
}

```

```

        .
        .
        .
    }, {
        "key" : "requestLease"
    }, {
        "key" : "requestedBy",
        "value" : {
            "type" : "string",
            "value" : "fritz@example.mycompany.com"
        }
    } ]
}
},
"status" : "Active",
"availableActions" : [ ]
}

```

## Syntax for Constructing a JSON File to Approve a Machine Request

You can specify a JSON file in your vRealize Automation REST API command line input. For example, when you enter a command to approve a machine request, you can include the name of a JSON file that contains all the parameters required to approve the request and complete the work item.

### Template JSON File Values

Copy the following template to start constructing a properly formatted JSON file in a text editor. Replace the highlighted values with your obtained work item details. After you create the JSON file, you can include it, or its contents, when you approve a submitted machine request. See [Syntax for Approving a Submitted Machine Request](#).

```

{
  "formData": {
    "entries": [
      {
        "key": "source-source-provider-Cafe.Shim.VirtualMachine.NumberOfInstances",
        "value": {
          "type": "integer",
          "value": 1
        }
      },
      {
        "key": "source-source-provider-VirtualMachine.Memory.Size",
        "value": {
          "type": "integer",
          "value": 512
        }
      }
    ]
  },
  {

```

```

    "key": "source-source-provider-VirtualMachine.CPU.Count",
    "value": {
      "type": "integer",
      "value": 1
    }
  },
  {
    "key": "source-businessJustification",
    "value": {
      "type": "string",
      "value": "solves abx request"
    }
  },
  {
    "key": "source-source-provider-VirtualMachine.LeaseDays",
    "value": {
      "type": "integer",
      "value": 0
    }
  }
]
},
"workItemId": "5e3e9519-78ea-4409-a52c-e4aa3bc56511",
"workItemActionId": "com.mycompany.csp.core.approval.action.approve"
}

```

Certain parameters are available to use in the JSON template.

**Table 3-2. JSON Template Value Table**

JSON File Parameter Name	Description of Value
workItemId	Specifies the value of the corresponding work item ID obtained from the work item list.
source-source-provider-Cafe.Shim.VirtualMachine.NumberOfInstances value	Specifies the number of instances requested.
source-source-provider-VirtualMachine.Memory.Size	Specifies the amount of memory requested in GB.
source-source-provider-VirtualMachine.CPU.Count	Specifies the number of CPUs requested.
source-businessJustification	Specifies the text description of reason for request.
source-source-provider-VirtualMachine.LeaseDays	Specifies the number of days to lease.
workItemActionId	To approve a request, include the approve statement, for example <b>com.mycompany.csp.core.approval.action.approve..</b> To reject a request, include the reject statement, for example <b>com.mycompany.csp.core.approval.action.reject.</b>

## Example: JSON Input File

Use the following JSON input file sample when constructing a file.

```
{
  "@type": "CatalogItemRequest",
  "catalogItemRef": {
    "id": "65fbca06-a28e-46f3-bced-c6e5fb3a66f9"
  },
  "organization": {
    "tenantRef": "MYCOMPANY",
    "subtenantRef": "cccd7a7e-5283-416b-beb0-45eb4e924dcb"
  },
  "requestedFor": "fritz@example.mycompany.com",
  "state": "SUBMITTED",
  "requestNumber": 0,
  "requestData": {
    "entries": [{
      "key": "provider-blueprintId",
      "value": {
        "type": "string",
        "value": "e16edcf9-6a10-4bc7-98e2-a33361aeb857"
      }
    },
    {
      "key": "provider-provisioningGroupId",
      "value": {
        "type": "string",
        "value": "cccd7a7e-5283-416b-beb0-45eb4e924dcb"
      }
    },
    {
      "key": "requestedFor",
      "value": {
        "type": "string",
        "value": "fritz@example.mycompany.com"
      }
    },
    {
      "key": "provider-VirtualMachine.CPU.Count",
      "value": {
        "type": "integer",
        "value": 1
      }
    },
    {
      "key": "provider-VirtualMachine.Memory.Size",
      "value": {
        "type": "integer",
        "value": 1024
      }
    },
    {
      "key": "provider-VirtualMachine.LeaseDays",
```

```

        "value": {
            "type": "integer",
            "value": 30
        }
    },
    {
        "key": "provider-__Notes",
        "value": {
            "type": "string",
            "value": "MYCOMPANY machine"
        }
    },
    {
        "key": "provider-VirtualMachine.Disk0.Size",
        "value": {
            "type": "string",
            "value": "1"
        }
    },
    {
        "key": "provider-VirtualMachine.Disk0.Letter",
        "value": {
            "type": "string",
            "value": "C"
        }
    },
    {
        "key": "provider-VirtualMachine.Disk0.Label",
        "value": {
            "type": "string",
            "value": "main"
        }
    }
}]]
}
}

```

## Syntax for Approving a Submitted Machine Request

You can approve a work item request to complete the request by using the vRealize Automation REST API. To construct the approval command, you add work item and work item form details to a JSON file, and call that JSON file from the command line. Use a template to correctly format the JSON file content.

### Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	<code>https://\$host/workitem-service/api/workitems/workitem_ID</code>
<i>\$host</i>	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.

Parameter	Description
<i>\$token</i>	Specifies a valid HTTP bearer token with necessary credentials.
<i>workitem_ID</i>	Specifies the unique identifier of a work item. See <a href="#">Syntax for Listing Work Items</a> .

## Output

The command output contains property names and values based on the command input parameters.

Property	Description
Links	Specifies an array of link objects, each of which contains the following parts: <ul style="list-style-type: none"> <li>■ rel <ul style="list-style-type: none"> <li>Specifies the name of the link. <ul style="list-style-type: none"> <li>■ Self refers to the object that was returned or requested.</li> <li>■ First, Previous, Next, and Last refer to corresponding pages of pageable lists.</li> <li>■ Specifies the application or service that determines the other names.</li> </ul> </li> </ul> </li> <li>■ href <ul style="list-style-type: none"> <li>Specifies the URL that produces the result.</li> </ul> </li> </ul>
work itemNumber	Displays a reference number for the work item.
id	Specifies the unique identifier of this resource.
version	Displays the object version number.
assignees	Displays the list of work item assignees.
subTenantId	Optionally associates the work item with a specific business group granting users with management responsibilities over that business group permission to see the approval.
tenantId	Specifies the tenant ID for the work item.
callbackEntityId	Specifies the callback entity ID for the work item.
work itemType	Specifies the work item type for the work item.
completedDate	Specifies the date when the work item was completed.
assignedDate	Specifies the date when the work item was assigned.
createdDate	Specifies the created date of this instance.
assignedOrCompletedDate	Specifies the date to be displayed on UI.
formUrl	Specifies the URL from which the layout for this work item can be retrieved.
serviceId	Specifies the service ID that generated this work item instance.
work itemRequest	Specifies the corresponding work item request object.
status	Specifies the status of the work item.
completedBy	Specifies the principal ID of user who completed the work item.

Property	Description
availableActions	Contains a list of relevant work item actions.
Metadata	Specifies the paging-related data: <ul style="list-style-type: none"> <li>■ Size: Specifies the maximum number of rows per page.</li> <li>■ totalElement: Specifies the number of rows returned.</li> <li>■ totalPages: Specifies the total number of pages of data available.</li> <li>■ Number: Specifies the current page number.</li> <li>■ Offset: Specifies the number of rows skipped.</li> </ul>

## Example: Example: curl Command

Approve a submitted machine request by specifying its work item ID and using a JSON file named `approve.json` to pass arguments to the command line.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/workitem-service/api/workitems/5e3e9519-78ea-4409-
a52c-e4aa3bc56511/actions/com.mycompany.csp.core.approval.action.approve
--d @approve.json
```

## Error Conditions

If the same request is submitted a second time, the following error response is received:

```
Command failed [Rest Error]: {Status code: 400}, {Error code: 12005} ,
{Error Source: null}, {Error Msg: Work item 5e3e9519-78ea-4409-a52c-e4aa3bc56511
is in COMPLETED state. Requested operation cannot be performed.}, {System Msg:
Work item 5e3e9519-78ea-4409-a52c-e4aa3bc56511 is in COMPLETED state. Requested
operation cannot be performed.}
```

If a user who is not authorized to approve the request submits the request, the following error response is received:

```
Command failed [Rest Error]: {Status code: 400}, {Error code: 12017} ,
{Error Source: null}, {Error Msg: User fritz@example.mycompany.com not authorized to
complete work item with ID 5e3e9519-78ea-4409-a52c-e4aa3bc56511.}, {System Msg:
User fritz@example.mycompany.com not authorized to complete Work item with id
5e3e9519-78ea-4409-a52c-e4aa3bc56511.}
```

## List Provisioned Resources

You can use the REST API catalog service to log in to vRealize Automation and display a full or filtered list of your provisioned resources .

### Prerequisites

- Log in to vRealize Automation as a **business group manager**.

- Verify that the host name and fully qualified domain name of the vRealize Automation instance are available.
- If you are not using the API Explorer, verify that you have a valid HTTP bearer token that matches your login credentials. See [Chapter 2 REST API Authentication](#).
- Obtain the business group subtenant ID values to specify on the command line. See [Syntax for Displaying Your Provisioned Resources](#).

### Procedure

- 1 Display a list of all the provisioned resources.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/resources/?page=n&limit=n
```

- 2 Display a list of the provisioned resources filtered by machine resource type.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/resourceTypes/Infrastructure.Machine/?page=1&limit=1
```

- 3 Display all the resource types that are available on the system.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/resourceTypes
```

- 4 Display all of the provisioned resources that are owned by the business groups. Optionally, filter the list by business group name.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/resources/types/Infrastructure.Machine/?page=1&limit=2&
$orderby=dateCreated desc&$filter=((organization/subTenant/id eq 'subtenantID_group1') or
(organization/subTenant/id eq ''subtenantID_group2') ... )"
```

- 5 Display the machine details for a provisioned machine.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/resources/resourceID/
```

## Syntax for Displaying Your Provisioned Resources

You can use the REST API catalog service to display a list of all the provisioned resources that you own.

### Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	https://\$host/catalog-service/api/consumer/resources
\$host	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
\$token	Specifies a valid HTTP bearer token with necessary credentials.

## Output

The command output contains property names and values based on the command input parameters.

Property	Description
id	Specifies the unique identifier of this resource.
iconId	Specifies an icon for this request based on the requested object type.
resourceTypeRef	Specifies the resource type.
name	Specifies the resource name.
description	Specifies the resource description.
status	Specifies the resource status.
catalogItem	Specifies the catalog item that defines the service this resource is based on.
requestId	Specifies the request ID that provisioned this resource.
providerBinding	Specifies the provider binding.
owners	Species the owners of this resource.
organization	Specifies the subtenant or tenant that owns this resource.
dateCreated	Specifies the data and time at which the resource was created.
lastUpdated	Specifies the date and time at which the resource was most recently modified.
hasLease	Returns true if the resource is subject to a lease.
lease	Displays the resource's current lease as start and end time stamps.
leaseForDisplay	Specifies the resource's current lease, #getLease, with time units synchronized with #getCosts.
hasCosts	Returns true if the resource is subject to per-time costs.
costs	Displays an optional rate of the cost charges for the resource.
costToDate	Displays an optional rate of the current cost charges for the resource.
totalCost	Displays an optional rate of the cost charges for the entire lease period.
parentResourceRef	Displays the parent of this resource.
childResources	Displays the children of this resource.
operations	Specifies the sequence of available operations that can be performed on this resource.
forms	Specifies the forms used to render this resource.
resourceData	Displays the extended provider-defined properties of the resource.

## Example: curl Command

The following example command displays all applicable provisioned resources.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/resources/?page=n&limit=n
```

## Example: JSON Output

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

```
{
  "links" : [ {
    "@type" : "link",
    "rel" : "next",
    "href" : "https://vra152-009-067.mycompany.com/catalog-service/api/consumer/resources/?
page=2&limit=1"
  } ],
  "content" : [ {
    "@type" : "ConsumerResource",
    "id" : "c24e8c75-c201-489c-b51c-8d7009c23563",
    "iconId" : "Travel_100.png",
    "resourceTypeRef" : {
      "id" : "com.mycompany.mystuff.samples.travel.packageType",
      "label" : "Reservation"
    },
    "name" : "example",
    "description" : "asd",
    "status" : "ACTIVE",
    "catalogResource" : {
      "id" : "6fddafcd-bc3d-4753-8a2a-5fa3f78a5a90",
      "label" : "example"
    },
    "requestId" : "55e7fcf3-4c77-4b11-a442-1f282333ac91",
    "providerBinding" : {
      "bindingId" : "1",
      "providerRef" : {
        "id" : "f60f5d1e-d6e9-4d98-9c48-f70a3e405346",
        "label" : "travel-service"
      }
    }
  },
  ...
}
```

## Syntax for Displaying Provisioned Resources by Resource Type

You can use the REST API catalog service to display a list of the provisioned resources that you own filtered by machine resource type.

## Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	<code>https://\$host/catalog-service/api/consumer/resourceType</code>
<i>\$host</i>	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
<i>\$token</i>	Specifies a valid HTTP bearer token with necessary credentials.

Filter by the following resource types:

- Infrastructure.Machine
- Infrastructure.AppService
- Infrastructure.Cloud
- Infrastructure.Physical
- Infrastructure.vApp
- Infrastructure.Virtual

## Output

The command output contains property names and values based on the command input parameters.

Property	Description
id	Specifies the unique identifier of this resource.
iconId	Specifies an icon for this request based on the requested object type.
resourceTypeRef	Specifies the resource type.
name	Specifies the resource name.
description	Specifies the resource description.
status	Specifies the resource status.
catalogItem	Specifies the catalog item that defines the service this resource is based on.
requestId	Specifies the request ID that provisioned this resource.
providerBinding	Specifies the provider binding.
owners	Species the owners of this resource.
organization	Specifies the subtenant or tenant that owns this resource.
dateCreated	Specifies the data and time at which the resource was created.
lastUpdated	Specifies the date and time at which the resource was most recently modified.
hasLease	Returns true if the resource is subject to a lease.
lease	Displays the resource's current lease as start and end time stamps.
leaseForDisplay	Specifies the resource's current lease, <code>#getLease</code> , with time units synchronized with <code>#getCosts</code> .

Property	Description
hasCosts	Returns true if the resource is subject to per-time costs.
costs	Displays an optional rate of the cost charges for the resource.
costToDate	Displays an optional rate of the current cost charges for the resource.
totalCost	Displays an optional rate of the cost charges for the entire lease period.
parentResourceRef	Displays the parent of this resource.
childResources	Displays the children of this resource.
operations	Specifies the sequence of available operations that can be performed on this resource.
forms	Specifies the forms used to render this resource.
resourceData	Displays the extended provider-defined properties of the resource.

## Example: curl Command

The following example command displays the provisioned resources by resource type.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/resourceTypes/Infrastructure.Machine/?page=1&limit=1
```

## Example: JSON Output

In this example, the highlighted resource ID (**3bfde906-81b9-44c3-8c2d-07d2c9768168**) corresponds to a provisioned machine owned by the logged-in user. The resource IDs are used in requests to retrieve the details for the corresponding machines.

Also in this example, the subtenantRef ID (**eab762cb-6e75-4379-83ef-171a71c9f00e**) corresponds to the business group of the logged-in user. If the logged-in user is also the manager of the business group, the subtenantRef ID is used to get resources from all business groups that the user manages.

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

```
{
  "links" : [ ],
  "content" : [ {
    "@type" : "ConsumerResource",
    "id" : "3bfde906-81b9-44c3-8c2d-07d2c9768168",
    "iconId" : "cafe_default_icon_genericCatalogResource",
    "resourceTypeRef" : {
      "id" : "Infrastructure.Virtual",
      "label" : "Virtual Machine"
    },
    },
    "name" : "test2",
    "description" : null,
    "status" : "ACTIVE",
    "catalogResource" : {
      "id" : "e2f397be-72ad-4ec4-a688-c017560fa1a3",
      "label" : "test-blueprint"
    }
  },
  ],
}
```

```

"requestId" : "b013d2fa-4ba4-416c-b46b-98bb8cc7b076",
"providerBinding" : {
  "bindingId" : "8a4581a0-84f9-4e80-9af6-75d79633e382",
  "providerRef" : {
    "id" : "6918cd49-b737-467f-94bf-d14d52c78fba",
    "label" : "iaas-service"
  }
},
"owners" : [ {
  "tenantName" : "MYCOMPANY",
  "ref" : "fritz@example.mycompany.com",
  "type" : "USER",
  "value" : "Fritz Arbeiter"
} ],
"organization" : {
  "tenantRef" : "MYCOMPANY",
  "tenantLabel" : "QETenant",
  "subtenantRef" : "eab762cb-6e75-4379-83ef-171a71c9f00e",
  "subtenantLabel" : "MyTestAgentBusinessGroup"
},
...
}

```

## Syntax for Displaying All Available Resource Types

You can use the REST API catalog service to display all the resource types that are available on the system.

### Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	https:// <i>\$host</i> /catalog-service/api/consumer/resourceTypes
<i>\$host</i>	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
<i>\$token</i>	Specifies a valid HTTP bearer token with necessary credentials.

### Output

The command output contains property names and values based on the command input parameters.

Property	Description
id	Specifies the unique identifier of this resource.
iconId	Specifies an icon for this request based on the requested object type.
resourceTypeRef	Specifies the resource type.
name	Specifies the resource name.
description	Specifies the resource description.

Property	Description
status	Specifies the resource status.
catalogItem	Specifies the catalog item that defines the service this resource is based on.
requestId	Specifies the request ID that provisioned this resource.
providerBinding	Specifies the provider binding.
owners	Species the owners of this resource.
organization	Specifies the subtenant or tenant that owns this resource.
dateCreated	Specifies the data and time at which the resource was created.
lastUpdated	Specifies the date and time at which the resource was most recently modified.
hasLease	Returns true if the resource is subject to a lease.
lease	Displays the resource's current lease as start and end time stamps.
leaseForDisplay	Specifies the resource's current lease, #getLease, with time units synchronized with #getCosts.
hasCosts	Returns true if the resource is subject to per-time costs.
costs	Displays an optional rate of the cost charges for the resource.
costToDate	Displays an optional rate of the current cost charges for the resource.
totalCost	Displays an optional rate of the cost charges for the entire lease period.
parentResourceRef	Displays the parent of this resource.
childResources	Displays the children of this resource.
operations	Specifies the sequence of available operations that can be performed on this resource.
forms	Specifies the forms used to render this resource.
resourceData	Displays the extended provider-defined properties of the resource.

## Example: curl Command

The following example command displays all available resource types.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/resourceTypes
```

## Example: JSON Output

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

```
{
  "links" : [ ],
  "content" : [ {
    "@type" : "ResourceType",
    "id" : "Infrastructure.Machine",
    "name" : "Machine",
    "pluralizedName" : "Machines",
    "description" : "The common parent type for all types of machines",
```

```

"primary" : true,
"schema" : {
  "classId" : "Infrastructure.Machine.Schema",
  "typeFilter" : null
},
"forms" : {
  "catalogResourceInfoHidden" : true,
  "details" : {
    "type" : "extension",
    "extensionId" : "csp.places.iaas.resource.details",
    "extensionPointId" : null
  }
}

```

## Syntax for Displaying Provisioned Resources by Business Groups You Manage

You can use the REST API catalog service to display all of the provisioned resources that are owned by the business groups that you manage. You can optionally filter the list by business group name.

### Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	<code>https://\$host/catalog-service/api/consumer/resources/type</code>
<i>\$host</i>	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
<i>\$token</i>	Specifies a valid HTTP bearer token with necessary credentials.

### Output

The command output contains property names and values based on the command input parameters.

Property	Description
id	Specifies the unique identifier of this resource.
iconId	Specifies an icon for this request based on the requested object type.
resourceTypeRef	Specifies the resource type.
name	Specifies the resource name.
description	Specifies the resource description.
status	Specifies the resource status.
catalogItem	Specifies the catalog item that defines the service this resource is based on.
requestId	Specifies the request ID that provisioned this resource.
providerBinding	Specifies the provider binding.
owners	Species the owners of this resource.
organization	Specifies the subtenant or tenant that owns this resource.

Property	Description
dateCreated	Specifies the data and time at which the resource was created.
lastUpdated	Specifies the date and time at which the resource was most recently modified.
hasLease	Returns true if the resource is subject to a lease.
lease	Displays the resource's current lease as start and end time stamps.
leaseForDisplay	Specifies the resource's current lease, #getLease, with time units synchronized with #getCosts.
hasCosts	Returns true if the resource is subject to per-time costs.
costs	Displays an optional rate of the cost charges for the resource.
costToDate	Displays an optional rate of the current cost charges for the resource.
totalCost	Displays an optional rate of the cost charges for the entire lease period.
parentResourceRef	Displays the parent of this resource.
childResources	Displays the children of this resource.
operations	Specifies the sequence of available operations that can be performed on this resource.
forms	Specifies the forms used to render this resource.
resourceData	Displays the extended provider-defined properties of the resource.

## Example: curl Command

The following example command displays the provisioned resources of one or more business groups.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/resources/types/Infrastructure.Machine/?page=1&limit=2&
$orderby=dateCreated desc&$filter=((organization/subTenant/id eq 'subtenantID_group1') or
(organization/subTenant/id eq 'subtenantID_group2') ... )"
```

## Example: JSON Output

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

For the following command input, the specified subtenant IDs correspond to business groups that are managed by the logged-in user.

```
rest get catalog-service --u "consumer/resources/types/Infrastructure.Machine/?page=1&limit=2&
$orderby=dateCreated desc&$filter=((organization/subTenant/id eq
'eab762cb-6e75-4379-83ef-171a71c9f00e') or (organization/subTenant/id eq 'fa995528-e289-455e-a0e6-
c2da8b0e1bf9') or (organization/subTenant/id eq '699efe66-fe6e-4e34-96e8-52a34f338d20') or
(organization/subTenant/id eq '4d949784-e93e-4538-accb-6a0a464e4a4b'))"
```

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

```
{
  "links" : [ ],
  "content" : [ {
    "@type" : "ConsumerResource",
```

```

"id" : "3bfde906-81b9-44c3-8c2d-07d2c9768168",
"iconId" : "cafe_default_icon_genericCatalogResource",
"resourceTypeRef" : {
  "id" : "Infrastructure.Virtual",
  "label" : "Virtual Machine"
},
"name" : "test2",
"description" : null,
"status" : "ACTIVE",
"catalogResource" : {
  "id" : "e2f397be-72ad-4ec4-a688-c017560fa1a3",
  "label" : "test-blueprint"
},
"requestId" : "b013d2fa-4ba4-416c-b46b-98bb8cc7b076",
"providerBinding" : {
  "bindingId" : "8a4581a0-84f9-4e80-9af6-75d79633e382",
  "providerRef" : {
    "id" : "6918cd49-b737-467f-94bf-d14d52c78fba",
    "label" : "iaas-service"
  }
},
"owners" : [ {
  "tenantName" : "MYCOMPANY",
  "ref" : "fritz@example.mycompany.com",
  "type" : "USER",
  "value" : "Fritz Arbeiter"
} ],
"organization" : {
  "tenantRef" : "MYCOMPANY",
  "tenantLabel" : "QETenant",
  "subtenantRef" : "eab762cb-6e75-4379-83ef-171a71c9f00e",
  "subtenantLabel" : "MyTestAgentBusinessGroup"
},
"dateCreated" : "2014-09-19T21:19:37.541Z",
"lastUpdated" : "2014-09-19T21:19:40.888Z",
"hasLease" : true,
"lease" : {
  "start" : "2014-09-19T21:18:57.000Z"
},
"leaseForDisplay" : null,
"hasCosts" : true,
"costs" : {
  "leaseRate" : {
    "type" : "moneyTimeRate",
    "cost" : {
      "type" : "money",
      "currencyCode" : "USD",
      "amount" : 0.0
    },
  },
  "basis" : {
    "type" : "timeSpan",
    "unit" : "DAYS",
    "amount" : 1
  }
}
}

```

```

},
"costToDate" : {
  "type" : "money",
  "currencyCode" : "USD",
  "amount" : 0.0
},
"totalCost" : null,
"childResources" : [ ],
"operations" : [ {
  "name" : "Reprovision",
  "description" : "Reprovision a machine.",
  "iconId" : "machineReprovision.png",
  "type" : "ACTION",
  "id" : "a1caee9b-d67f-41e8-a7b3-131616a0f6ac",
  "extensionId" : null,
  "providerTypeId" : "com.mycompany.csp.iaas.blueprint.service",
  "bindingId" : "Infrastructure.Machine.Action.Reprovision",
  "hasForm" : false,
  "formScale" : null
} ],
"forms" : {
  "catalogResourceInfoHidden" : true,
  "details" : {
    "type" : "extension",
    "extensionId" : "csp.places.iaas.resource.details",
    "extensionPointId" : null
  }
},
"resourceData" : {
  "entries" : [ {
    "key" : "Expire",
    "value" : {
      "type" : "boolean",
      "value" : true
    }
  }, {
    "key" : "MachineGroupName",
    "value" : {
      "type" : "string",
      "value" : "MyTestAgentBusinessGroup"
    }
  }, {
    "key" : "NETWORK_LIST",
    "value" : {
      "type" : "multiple",
      "elementTypeId" : "COMPLEX",
      "resources" : [ {
        "type" : "complex",
        "componentTypeId" : "com.mycompany.csp.component.iaas.proxy.provider",
        "componentId" : null,
        "classId" : "vra.api.model.NetworkViewModel",
        "typeFilter" : null,
        "values" : {
          "entries" : [ {
            "key" : "NETWORK_MAC_ADDRESS",

```

```

        "value" : {
            "type" : "string",
            "value" : "56:52:4d:e7:46:d4"
        }
    }, {
        "key" : "NETWORK_NAME",
        "value" : {
            "type" : "string",
            "value" : "Test Agent-network-1"
        }
    } ]
}
} ]
}
}, {
    "key" : "SNAPSHOT_LIST",
    "value" : {
        "type" : "multiple",
        "elementTypeId" : "COMPLEX",
        "resources" : [ ]
    }
}, {
    "key" : "ConnectViaRdp",
    "value" : {
        "type" : "boolean",
        "value" : true
    }
}, {
    "key" : "MachineStatus",
    "value" : {
        "type" : "string",
        "value" : "On"
    }
}, {
    "key" : "PowerOff",
    "value" : {
        "type" : "boolean",
        "value" : true
    }
}, {
    "key" : "DISK_VOLUMES",
    "value" : {
        "type" : "multiple",
        "elementTypeId" : "COMPLEX",
        "resources" : [ {
            "type" : "complex",
            "componentTypeId" : "com.mycompany.csp.component.iaas.proxy.provider",
            "componentId" : null,
            "classId" : "vra.api.model.DiskInputModel",
            "typeFilter" : null,
            "values" : {
                "entries" : [ {
                    "key" : "DISK_CAPACITY",
                    "value" : {
                        "type" : "integer",

```

```

        "value" : 1
      }
    }, {
      "key" : "DISK_DRIVE",
      "value" : {
        "type" : "string",
        "value" : "c"
      }
    }, {
      "key" : "DISK_INPUT_ID",
      "value" : {
        "type" : "string",
        "value" : "DISK_INPUT_ID1"
      }
    }
  ]
}
} ]
}
}, {
  "key" : "MachineBlueprintName",
  "value" : {
    "type" : "string",
    "value" : "test-blueprint"
  }
}, {
  "key" : "Suspend",
  "value" : {
    "type" : "boolean",
    "value" : true
  }
}, {
  "key" : "Reboot",
  "value" : {
    "type" : "boolean",
    "value" : true
  }
}, {
  "key" : "Reprovision",
  "value" : {
    "type" : "boolean",
    "value" : true
  }
}, {
  "key" : "MachineStorage",
  "value" : {
    "type" : "integer",
    "value" : 1
  }
}, {
  "key" : "MachineDailyCost",
  "value" : {
    "type" : "decimal",
    "value" : 0.0
  }
}, {

```

```

    "key" : "Destroy",
    "value" : {
      "type" : "boolean",
      "value" : true
    }
  }, {
    "key" : "MachineType",
    "value" : {
      "type" : "string",
      "value" : "Virtual"
    }
  }, {
    "key" : "InstallTools",
    "value" : {
      "type" : "boolean",
      "value" : true
    }
  }, {
    "key" : "Shutdown",
    "value" : {
      "type" : "boolean",
      "value" : true
    }
  }, {
    "key" : "ChangeLease",
    "value" : {
      "type" : "boolean",
      "value" : true
    }
  }, {
    "key" : "machineId",
    "value" : {
      "type" : "string",
      "value" : "8a4581a0-84f9-4e80-9af6-75d79633e382"
    }
  }, {
    "key" : "MachineMemory",
    "value" : {
      "type" : "integer",
      "value" : 0
    }
  }, {
    "key" : "MachineGuestOperatingSystem"
  }, {
    "key" : "MachineName",
    "value" : {
      "type" : "string",
      "value" : "test2"
    }
  }, {
    "key" : "MachineDestructionDate"
  }, {
    "key" : "MachineCPU",
    "value" : {
      "type" : "integer",

```



Parameter	Description
URL	https://\$host/catalog-service/api/consumer/resources/\$resourceId
\$host	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
\$token	Specifies a valid HTTP bearer token with necessary credentials.
\$resourceID	Specifies a resource ID. See <a href="#">Syntax for Displaying Your Provisioned Resources</a> to view all of your requests and search for a request ID.
managedOnly	If true, the returned requests are from the user's managed subtenants.
page	Specifies a page number.
limit	Specifies the number of entries to display on a page.
\$orderby	Specifies how to order multiple comma-separated properties sorted in ascending or descending order.
\$top	Specifies the number of returned entries from the top of the response (total number per page in relation to skip).
\$skip	Specifies the number of entries to skip.
filter	Contains a Boolean expression to determine if a particular entry is included in the response.

## Output

The command output contains property names and values based on the command input parameters.

Property	Description
id	Specifies the unique identifier of this resource.
iconId	Specifies an icon for this request based on the requested object type.
resourceTypeRef	Specifies the resource type.
name	Specifies the resource name.
description	Specifies the resource description.
status	Specifies the resource status.
catalogItem	Specifies the catalog item that defines the service this resource is based on.
requestId	Specifies the request ID that provisioned this resource.
providerBinding	Specifies the provider binding.
owners	Species the owners of this resource.
organization	Specifies the subtenant or tenant that owns this resource.
dateCreated	Specifies the data and time at which the resource was created.
lastUpdated	Specifies the date and time at which the resource was most recently modified.
hasLease	Returns true if the resource is subject to a lease.
lease	Displays the resource's current lease as start and end time stamps.
leaseForDisplay	Specifies the resource's current lease, #getLease, with time units synchronized with #getCosts.
hasCosts	Returns true if the resource is subject to per-time costs.

Property	Description
costs	Displays an optional rate of the cost charges for the resource.
costToDate	Displays an optional rate of the current cost charges for the resource.
totalCost	Displays an optional rate of the cost charges for the entire lease period.
parentResourceRef	Displays the parent of this resource.
childResources	Displays the children of this resource.
operations	Specifies the sequence of available operations that can be performed on this resource.
forms	Specifies the forms used to render this resource.
resourceData	Displays the extended provider-defined properties of the resource.

### Example: curl Command

The following example command displays machine details for a provisioned machine, where *resourceID* is the ID of the provisioned machine.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/resources/resourceID
```

### Example: JSON Output

In the following example, the provisioned machine *resourceID* value specified in the command line was **3bfde906-81b9-44c3-8c2d-07d2c9768168**.

```
{
  "id" : "3bfde906-81b9-44c3-8c2d-07d2c9768168",
  "iconId" : "cafe_default_icon_genericCatalogResource",
  "resourceTypeRef" : {
    "id" : "Infrastructure.Virtual",
    "label" : "Virtual Machine"
  },
  "name" : "test2",
  "description" : null,
  "status" : "DELETED",
  "catalogResource" : {
    "id" : "e2f397be-72ad-4ec4-a688-c017560fa1a3",
    "label" : "test-blueprint"
  },
  "requestId" : "b013d2fa-4ba4-416c-b46b-98bb8cc7b076",
  "providerBinding" : {
    "bindingId" : "8a4581a0-84f9-4e80-9af6-75d79633e382",
    "providerRef" : {
      "id" : "6918cd49-b737-467f-94bf-d14d52c78fba",
      "label" : "iaas-service"
    }
  },
  "owners" : [ {
    "tenantName" : "MYCOMPANY",
```

```

    "ref" : "fritz@example.mycompany.com",
    "type" : "USER",
    "value" : "Fritz Arbeiter"
  } ],
  "organization" : {
    "tenantRef" : "MYCOMPANY",
    "tenantLabel" : "QETenant",
    "subtenantRef" : "eab762cb-6e75-4379-83ef-171a71c9f00e",
    "subtenantLabel" : "MyTestAgentBusinessGroup"
  },
  "dateCreated" : "2014-02-19T21:19:37.541Z",
  "lastUpdated" : "2014-02-20T21:41:08.478Z",
  "hasLease" : true,
  "lease" : {
    "start" : "2014-02-19T21:18:57.000Z"
  },
  "leaseForDisplay" : null,
  "hasCosts" : true,
  "costs" : {
    "leaseRate" : {
      "type" : "moneyTimeRate",
      "cost" : {
        "type" : "money",
        "currencyCode" : "USD",
        "amount" : 0.0
      },
      "basis" : {
        "type" : "timeSpan",
        "unit" : "DAYS",
        "amount" : 1
      }
    }
  },
  "costToDate" : {
    "type" : "money",
    "currencyCode" : "USD",
    "amount" : 0.0
  },
  "totalCost" : null,
  "childResources" : [ ],
  "operations" : [ ],
  "forms" : {
    "catalogResourceInfoHidden" : true,
    "details" : {
      "type" : "extension",
      "extensionId" : "csp.places.iaas.resource.details",
      "extensionPointId" : null
    }
  },
  "resourceData" : {
    "entries" : [ ]
  }
}

```

## Reprovision a Machine Resource

You can use the vRealize Automation REST API catalog service to list the available actions for a provisioned machine and then reprovision the machine .

### Prerequisites

- Log in to vRealize Automation as a consumer and current business group user.
- Verify that the host name and fully qualified domain name of the vRealize Automation instance are available.
- If you are not using the API Explorer, verify that you have a valid HTTP bearer token that matches your login credentials. See [Chapter 2 REST API Authentication](#).
- Obtain the request ID (\$requestId) of the request for which to view status. See [Syntax for Viewing All of Your Requests](#).
- View [Syntax for Viewing Available Actions for a Provisioned Machine](#).

### Procedure

- 1 Display a list of actions enabled on the blueprint used to provision the specified machine, entitled to the logged-in user, and available in the current state of the provisioned machine.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/resources/resourceID/actions
```

- 2 Reprovision a provisioned machine, or perform other entitled and enabled actions with the catalog service.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/requests --d @C:\reprov_action.json.txt
```

## Syntax for Viewing Available Actions for a Provisioned Machine

You can use the REST API catalog service to display a list of actions enabled on the blueprint used to provision the specified machine, entitled to the logged-in user, and available in the current state of the provisioned machine.

### Input

Use the supported input parameters to control the command output.

**Table 3-3. Inputs for Viewing the Available Actions for a Provisioned Machine**

Parameter	Description
URL	<code>https://\$host/catalog-service/api/consumer/requests/\$requestId</code>
<i>\$host</i>	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
<i>\$token</i>	Specifies a valid HTTP bearer token with necessary credentials.
<i>\$resourceId</i>	Specifies the resource ID for the request.

## Output

The command output contains property names and values based on the command input parameters.

**Table 3-4. Outputs for Viewing the Available Actions for a Provisioned Machine**

Property	Description
type	Specifies the operation type. The property type is <code>resourceOperationType</code> .
id	Specifies the identifier for the resource operation. The property type is string.
extensionId	Specifies the unique ID of the UI extension that is associated with the operation if <code>#getType()</code> is set to <code>ResourceOperationType#EXTENSION</code> .
providerTypeId	Specifies the ID type for providers that support the action if <code>#getType()</code> is set to <code>ResourceOperationType#ACTION</code> . The property type is string.
bindingId	Specifies the unique ID of the action that the external provider that published it recognizes if <code>#getType()</code> is set to <code>ResourceOperationType#ACTION</code> . The property type is string.
hasForm	Indicates if the action has a request form to complete if <code>#getType()</code> is set to <code>ResourceOperationType#ACTION</code> . The property type is Boolean.
formScale	Specifies the form scale value of the request form for the action, if applicable. The property type is <code>formScale</code> .

## Example: curl Command

The following example command displays the available actions for a provisioned machine by using its resource ID.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/resources/resourceID/actions
```

## Example: JSON Output

The highlighted resource action ID corresponds to the reprovisioning actions that are available for the specified machine.

```
{
  "links" : [ ],
  "content" : [ {
    "@type" : "ConsumerResourceOperation",
    "name" : "Reprovision",
    "description" : "Reprovision a machine.",
    "iconId" : "machineReprovision.png",
    "type" : "ACTION",
    "id" : "a1caee9b-d67f-41e8-a7b3-131616a0f6ac",
    "extensionId" : null,
    "providerTypeId" : "com.mycompany.csp.iaas.blueprint.service",
    "bindingId" : "Infrastructure.Machine.Action.Reprovision",
    "hasForm" : false,
    "formScale" : null
  } ]
}
```

## Syntax for Reprovisioning a Provisioned Machine

You can use the REST API catalog service to reprovision a provisioned machine, or perform other entitled and enabled actions .

### Input

Use the supported input parameters to control the command output.

The JSON Template Values table describes the information used in, in conjunction with the JSON template format, to create a JSON text file to include in the reprovision command request.

**Table 3-5. JSON Template Values**

Property	Description
resourceRef : id	Specifies the resource ID of the resource on which the operation is to be performed.
resourceActionRef : id	Specifies the resource action ID on which the operations is to be performed.
organization	Specifies the organization to which the resource belongs. Supply the tenant and subtenant information as necessary. The tenant corresponds to the organization and the subtenant corresponds to the business group.
State	Specifies the state of the request. At the time of requesting, the state is SUBMITTED. The other possible state values are UNSUBMITTED, SUBMITTED, DELETED, PENDING_PRE_APPROVAL, PRE_APPROVAL_SEND_ERROR, PRE_APPROVED, PRE_REJECTED, IN_PROGRESS, PROVIDER_SEND_ERROR, PROVIDER_COMPLETED, PROVIDER_FAILED, PENDING_POST_APPROVAL, POST_APPROVAL_SEND_ERROR, POST_APPROVED, POST_REJECTION_RECEIVED, ROLLBACK_ERROR, POST_REJECTED, SUCCESSFUL, and FAILED.

**Table 3-5. JSON Template Values (Continued)**

Property	Description
requestNumber	Contains Get information that is generated by the system.
requestData	Specifies other custom request data.

## JSON Input File Template

Use the following JSON template to create a JSON text file that contains the information required to reprovision a machine.

This example `reprov_action.json` file contains a resource action request for the reprovision action (**resourceActionRef** and **id**) to be performed on the specified machine (**resourceRef** and **id**). The **organization** content include the names and labels of the tenant and business group.

```
{
  "@type": "ResourceActionRequest",
  "resourceRef": {
    "id": "b3adbe4f-274d-4a0c-8757-7843b8cb2ba4"
  },
  "resourceActionRef": {
    "id": "a1caee9b-d67f-41e8-a7b3-131616a0f6ac"
  },
  "organization": {
    "tenantRef": "MYCOMPANY",
    "tenantLabel": "QETenant",
    "subtenantRef": "eab762cb-6e75-4379-83ef-171a71c9f00e",
    "subtenantLabel": "MyTestAgentBusinessGroup"
  },
  "state": "SUBMITTED",
  "requestNumber": 0,
  "requestData": {
    "entries": []
  }
}
```

## Example: curl Command

The following example command calls the JSON text file and reprovisions a machine.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/requests --d @C:\reprov_action.json.txt
```

## Working with Reservations

You can work with the REST API reservation service to perform a variety of functions, such as creating and updating reservations.

The vRealize Automation REST API reservation service supports the following reservation types:

- vSphere (except for FlexClone in vSphere)
- vCloud
- Amazon
- Hyper-V
- KVM
- Xen

The reservation service is extensible, which allows you to add new reservation types.

A reservation must belong to a business group, also referred to as a subtenant. A business group can have multiple reservations on the same resources or on different resources.

## Create a Reservation

You can use the vRealize Automation REST API reservation service to create a reservation.

You can use the following procedure to create a vSphere, vCloud Air, or Amazon reservation.

### Prerequisites

- Log in to vRealize Automation as a **fabric group administrator**.
- Verify that the host name and fully qualified domain name of the vRealize Automation instance are available.
- If you are not using the API Explorer, verify that you have a valid HTTP bearer token that matches your login credentials. See [Chapter 2 REST API Authentication](#).
- Obtain the schema class ID of the reservation type to create. See [Display a List of Supported Reservation Types](#).
- Display a list of the reservation types that are supported in the vRealize Automation server. See [Display a List of Supported Reservation Types](#).
- Obtain the permissible value field information required to create a new reservation. After you retrieve all permissible value field information, you have the input information required to create a reservation. See [Get Resources Schema for a vSphere Reservation](#).
- Get the required compute resource ID. See [Get a Compute Resource for the Reservation](#).
- Finish creating a new reservation. Obtain the reservation ID from the output URL. See [Syntax for Creating a vSphere Reservation](#).
- Get the reservation ID if you do not already know it. See [Display a List of Reservations](#).

**Procedure**

- 1 Display a list of supported vRealize Automation reservation types by using the reservation service.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/reservations/types
```

- 2 Display a schema definition for a reservation.

- a Display a schema definition for a vSphere reservation.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/data-service/schema/$schemaclassid/default
```

- b Display a schema definition for an Amazon reservation.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/data-
service/schema/Infrastructure.Reservation.Cloud.Amazon/default
```

- c Display a schema definition for a vCloud Air reservation.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/data-
service/schema/Infrastructure.Reservation.Cloud.vCloudAir/default
```

- 3 Get the business group ID for a vRealize Automation reservation by using the reservation service.

```
insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/identity/api/tenants/qe/subtenants
```

#### 4 Obtain a compute resource for the vRealize Automation reservation by using the reservation service.

Use the following command to get a compute resource for a vSphere reservation.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/data-
service/schema/Infrastructure.Reservation.Virtual.vSphere/default/computeResource/values -d "{}"
Example: curl Command for an Amazon EC2 reservation
```

Use the following command to get a compute resource for an Amazon reservation.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/data-
service/schema/Infrastructure.Reservation.Cloud.Amazon/default/computeResource/values -d "{}"
```

Use the following command to get a compute resource for a vCloud Air reservation.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/data-
service/schema/Infrastructure.Reservation.Cloud.vCloudAir/default/computeResource/values -d "{}"
```

- 5 Use the vRealize Automation REST API reservation service to get a resources schema for any supported reservation type, including a vSphere, Amazon, or vCloud Air reservation.
  - a Display information about available resources, such as storage and network information, for a vSphere reservation by using the reservation service.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/data-service/schema/
Infrastructure.Reservation.Virtual.vSphere /default/ resourcePool /values -d "{
  \"text\": \"\",
  \"dependencyValues\": {
    \"entries\": [{
      \"key\": \"computeResource\",
      \"value\": {
        \"type\": \"entityRef\",
        \"componentId\": null,
        \"classId\": \"ComputeResource\",
        \"id\": \" cc254a84-95b8-434a-874d-bdfef8e8ad2c \"
      }
    }]
  }
}
```

- b Display resource schema, such as storage and network information, for an Amazon reservation by using the data and schema service.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/data-
service/schema/Infrastructure.Reservation.Cloud.Amazon/default/securityGroups/values -d "{
  \"text\": \"\",
  \"dependencyValues\": {
    \"entries\": [{
      \"key\": \"computeResource\",
      \"value\": {
        \"type\": \"entityRef\",
        \"componentId\": null,
        \"classId\": \"ComputeResource\",
        \"id\": \"9d1a3b5a-7162-4a5a-85b7-ec1b2824f554\"
      }
    }]
  }
}
```

```
    }]  
  }  
}  
”
```

- c Display information about available resources, such as storage and network information, for a vCloud Air reservation by using the reservation service.

```
curl --insecure -H "Accept:application/json"  
-H "Authorization: Bearer $token"  
https://$host/reservation-service/api/data-  
service/schema/Infrastructure.Reservation.Cloud.vCloudAir/default/reservationStorages/values -  
d “
```

- 6 Use the vRealize Automation REST API to create any supported reservation type, including a vSphere, Amazon, or vCloud Air reservation.
  - a Create a vSphere reservation by using the vRealize Automation reservation service.

```

curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/reservations -d
"
{
  "name": "TestCreateReservation",
  "reservationTypeId": "Infrastructure.Reservation.Virtual.vSphere",
  "tenantId": "qe",
  "subTenantId": "ef58f604-528d-4441-a219-4725bead629b",
  "enabled": true,
  "priority": 3,
  "reservationPolicyId": "b71c3a5f-087a-4d9e-9a56-fab785a3d128",
  "alertPolicy": {
    "enabled": true,
    "frequencyReminder": 20,
    "emailBgMgr": false,
    "recipients": ["test1@mycompany.com",
"test2@mycompany.com"],
    "alerts": [{
      "alertPercentLevel": 10,
      "referenceResourceId": "storage",
      "id": "storage"
    },
    {
      "alertPercentLevel": 20,
      "referenceResourceId": "memory",
      "id": "memory"
    },
    {
      "alertPercentLevel": 30,
      "referenceResourceId": "cpu",
      "id": "cpu"
    },
    {
      "alertPercentLevel": 40,
      "referenceResourceId": "machine",
      "id": "machine"
    }
  ]
  },
  "extensionData": {
    "entries": [{
      "key": "reservationNetworks",
      "value": {
        "type": "multiple",
        "elementTypeId": "COMPLEX",
        "items": [{
          "type": "complex",
          "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
          "componentId": null,
          "classId": "reservationNetwork",

```

```

    "typeFilter": null,
    "values": {
      "entries": [{
        "key": "reservationNetworkPath",
        "value": {
          "type": "entityRef",
          "componentId": null,
          "classId": "Network",
          "id": "44cb65d5-b321-43dd-a2ab-8ecf387bff8f",
          "label": "VM Network SQA"
        }
      }]
    }
  }
},
{
  "key": "custom-Properties-key0",
  "value": {
    "type": "string",
    "value": "custom-property-value0"
  }
},
{
  "key": "custom-Properties-key2",
  "value": {
    "type": "string",
    "value": "custom-property-value2"
  }
},
{
  "key": "reservationMemory",
  "value": {
    "type": "complex",
    "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
    "componentId": null,
    "classId": "reservationMemory",
    "typeFilter": null,
    "values": {
      "entries": [{
        "key": "hostMemoryTotalSizeMB",
        "value": {
          "type": "integer",
          "value": 57187
        }
      }],
      {
        "key": "reservationMemoryReservedSizeMb",
        "value": {
          "type": "integer",
          "value": 15872
        }
      }
    ]
  }
}
}

```

```

},
{
  "key": "computeResource",
  "value": {
    "type": "entityRef",
    "componentId": null,
    "classId": "ComputeResource",
    "id": "cc254a84-95b8-434a-874d-bdfef8e8ad2c",
    "label": "NSX61-RC-ComputeClusterA"
  }
},
{
  "key": "machineQuota",
  "value": {
    "type": "integer",
    "value": 2
  }
},
{
  "key": "reservationStorages",
  "value": {
    "type": "multiple",
    "elementType": "COMPLEX",
    "items": [{
      "type": "complex",
      "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
      "componentId": null,
      "classId": "reservationStorage",
      "typeFilter": null,
      "values": {
        "entries": [{
          "key": "storageTotalSizeGB",
          "value": {
            "type": "integer",
            "value": 394
          }
        }
      ],
      "key": "reservationStorageReservedSizeGB",
      "value": {
        "type": "integer",
        "value": 32
      }
    }
  ],
  "key": "reservationStorageEnabled",
  "value": {
    "type": "boolean",
    "value": true
  }
},
{
  "key": "reservationStoragePath",
  "value": {
    "type": "entityRef",

```

```

        "componentId": null,
        "classId": "StoragePath",
        "id": "f48a527b-30a6-4d54-8829-f549bc195b69",
        "label": "VNXe:qe-vnxe-nfs-1"
    }
},
{
    "key": "storageFreeSizeGB",
    "value": {
        "type": "integer",
        "value": 120
    }
},
{
    "key": "reservationStorageReservationPriority",
    "value": {
        "type": "integer",
        "value": 1
    }
}
]]
}
}
}
},
{
    "key": "resourcePool",
    "value": {
        "type": "entityRef",
        "componentId": null,
        "classId": "ResourcePools",
        "id": "4e51fab3-19e8-4e79-b413-d52309b3bb62",
        "label": "CoreDev"
    }
}
]]
}
}
"

```

- b Create a vCloud Air reservation by using the vRealize Automation reservation service.

```

curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/reservations -d "
{
    "id": "bf922450-d495-460d-9dbf-1c09b0692db2",
    "name": "TestvAppReservation",
    "reservationTypeId": "Infrastructure.Reservation.Cloud.vCloudAir",
    "tenantId": "qe",
    "subTenantId": "a5d056be-3aa2-4fdd-ba1e-a3805f26f0e0",
    "enabled": true,
    "priority": 1,
    "reservationPolicyId": null,
    "alertPolicy": {
        "enabled": false,

```

```

"frequencyReminder": 0,
"emailBgMgr": true,
"recipients": [

],
"alerts": [
  {
    "alertPercentLevel": 80,
    "referenceResourceId": "storage",
    "id": "storage"
  },
  {
    "alertPercentLevel": 80,
    "referenceResourceId": "memory",
    "id": "memory"
  },
  {
    "alertPercentLevel": 80,
    "referenceResourceId": "cpu",
    "id": "cpu"
  },
  {
    "alertPercentLevel": 80,
    "referenceResourceId": "machine",
    "id": "machine"
  }
]
},
"extensionData": {
  "entries": [
    {
      "key": "computeResource",
      "value": {
        "type": "entityRef",
        "componentId": null,
        "classId": "ComputeResource",
        "id": "c527a0f5-b1ae-4b61-8145-ad9d5c434dc7",
        "label": "Engineering Allocation VDC"
      }
    },
    {
      "key": "machineQuota",
      "value": {
        "type": "integer",
        "value": 0
      }
    },
    {
      "key": "allocationModel",
      "value": {
        "type": "integer",
        "value": 0
      }
    }
  ],
  {

```

```

"key": "reservationNetworks",
"value": {
  "type": "multiple",
  "elementType": "COMPLEX",
  "items": [
    {
      "type": "complex",
      "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
      "componentId": null,
      "classId": "Infrastructure.Reservation.Network",
      "typeFilter": null,
      "values": {
        "entries": [
          {
            "key": "networkPath",
            "value": {
              "type": "entityRef",
              "componentId": null,
              "classId": "Network",
              "id": "42c5063c-5422-448f-aac7-22ebe941ac8e",
              "label": "VM Network SQA"
            }
          }
        ]
      }
    }
  ]
},
{
  "key": "reservationStorages",
  "value": {
    "type": "multiple",
    "elementType": "COMPLEX",
    "items": [
      {
        "type": "complex",
        "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
        "componentId": null,
        "classId": "Infrastructure.Reservation.Storage",
        "typeFilter": null,
        "values": {
          "entries": [
            {
              "key": "computeResourceStorageTotalSizeGB",
              "value": {
                "type": "integer",
                "value": 1000
              }
            },
            {
              "key": "storagePath",
              "value": {
                "type": "entityRef",
                "componentId": null,

```





```

        "label": "EC2 841 Endpoint-us-east-1"
    }
},
{
    "key": "machineQuota",
    "value": {
        "type": "integer",
        "value": 0
    }
},
{
    "key": "securityGroups",
    "value": {
        "type": "multiple",
        "elementTypeId": "ENTITY_REFERENCE",
        "items": [
            {
                "type": "entityRef",
                "componentId": null,
                "classId": "AmazonSecurityGroup",
                "id": "10",
                "label": "default"
            }
        ]
    }
},
{
    "key": "loadBalancers",
    "value": {
        "type": "multiple",
        "elementTypeId": "ENTITY_REFERENCE",
        "items": [
            {
                "type": "entityRef",
                "componentId": null,
                "classId": "ElasticLoadBalancer",
                "id": "3",
                "label": "test1"
            }
        ]
    }
},
{
    "key": "locations",
    "value": {
        "type": "multiple",
        "elementTypeId": "ENTITY_REFERENCE",
        "items": [
            {
                "type": "entityRef",
                "componentId": null,
                "classId": "AvailabilityZone",
                "id": "10",
                "label": "us-east-1a"
            }
        ]
    }
}

```

```

    ]
  }
},
{
  "key": "keyPairs",
  "value": {
    "type": "string",
    "value": "Per Provisioning Group"
  }
}
]
}
}"

```

- 7 Use the reservation ID to verify that the reservation exists. Also use the ID to get information about the reservation in preparation for updating or deleting it.

```

curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/reservations/94d74105-831a-4598-8f42-efd590fea15c

```

## Display a List of Supported Reservation Types

You can use the vRealize Automation REST API reservation service to display a list of supported reservation types.

### Prerequisites

- Log in to vRealize Automation as a **fabric group administrator**.
- Verify that the host name and fully qualified domain name of the vRealize Automation instance are available.
- If you are not using the API Explorer, verify that you have a valid HTTP bearer token that matches your login credentials. See [Chapter 2 REST API Authentication](#).

### Procedure

- ◆ Display a list of supported vRealize Automation reservation types by using the reservation service.

```

curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/reservations/types

```

### JSON Output for a vSphere Reservation

```

{
  "links": [],
  "content": [{
    "@type": "ReservationType",
    "createdDate": "2015-10-13T04:44:32.008Z",
    "lastUpdated": "2015-10-13T04:44:32.009Z",
    "version": 1,

```

```

    "id": "Infrastructure.Reservation.Virtual.vSphere",
    "name": "vSphere",
    "description": "vSphere Reservation",
    "category": "Virtual",
    "serviceTypeId": "com.mycompany.csp.iaas.blueprint.service",
    "tenantId": null,
    "formReference": {
      "type": "external",
      "formId": "Infrastructure.Reservation.Virtual.vSphere.form.new"
    },
    "schemaClassId": "Infrastructure.Reservation.Virtual.vSphere",
    "alertTypes": [{
      "createdDate": "2015-10-13T04:44:32.008Z",
      "lastUpdated": "2015-10-13T04:44:32.008Z",
      "version": 0,
      "id": "d248eeee-238c-4e87-9e95-f263b04d113f",
      "name": "storage",
      "description": null,
      "referenceResourceId": "storage"
    }], //Omit 7 reservation types here
  ],
  "metadata": {
    "size": 20,
    "totalElements": 8,
    "totalPages": 1,
    "number": 1,
    "offset": 0
  }
}

```

### JSON Output for a vCloud Air Reservation

```

{
  "links": [],
  "content": [{
    {
      "@type": "ReservationType",
      "createdDate": "2015-11-06T10:21:06.010Z",
      "lastUpdated": "2015-11-06T10:21:06.011Z",
      "version": 1,
      "id": "Infrastructure.Reservation.Cloud.vCloudAir",
      "name": "vCloud",
      "description": "vCloud Air Reservation",
      "category": "Cloud",
      "serviceTypeId": "com.mycompany.csp.iaas.blueprint.service",
      "tenantId": null,
      "formReference": {
        "type": "external",
        "formId": "Infrastructure.Reservation.Cloud.vCloudAir.form.new"
      },
      "schemaClassId": "Infrastructure.Reservation.Cloud.vCloudAir",
      "alertTypes": [
        {
          "createdDate": "2015-11-06T10:21:06.010Z",

```

```

    "lastUpdated": "2015-11-06T10:21:06.010Z",
    "version": 0,
    "id": "cd707ad2-d504-43e2-8002-11ee670dcf41",
    "name": "storage",
    "description": null,
    "referenceResourceId": "storage"
  },
  {
    "createdDate": "2015-11-06T10:21:06.010Z",
    "lastUpdated": "2015-11-06T10:21:06.010Z",
    "version": 0,
    "id": "ef96fec4-a607-4944-a0af-fbe7df862ee2",
    "name": "memory",
    "description": null,
    "referenceResourceId": "memory"
  },
  {
    "createdDate": "2015-11-06T10:21:06.011Z",
    "lastUpdated": "2015-11-06T10:21:06.011Z",
    "version": 0,
    "id": "043e0815-9f02-4876-b5ce-ddbedabb8ff6",
    "name": "cpu",
    "description": null,
    "referenceResourceId": "cpu"
  },
  {
    "createdDate": "2015-11-06T10:21:06.011Z",
    "lastUpdated": "2015-11-06T10:21:06.011Z",
    "version": 0,
    "id": "77e90acd-93ab-4bbe-853a-b74923dae70a",
    "name": "machine",
    "description": null,
    "referenceResourceId": "machine"
  }
]
}, //Omit 7 reservation types here
],
"metadata": {
  "size": 20,
  "totalElements": 8,
  "totalPages": 1,
  "number": 1,
  "offset": 0
}
}

```

### JSON Output for an Amazon Reservation

```

{
  "links": [],
  "content": [{
    {
      "@type": "ReservationType",
      "createdDate": "2015-10-13T04:44:32.074Z",

```

```

    "lastUpdated": "2015-10-13T04:44:32.075Z",
    "version": 1,
    "id": "Infrastructure.Cloud.Amazon",
    "name": "Amazon",
    "description": "Amazon Reservation",
    "category": "Cloud",
    "serviceTypeId": "com.mycompany.csp.iaas.blueprint.service",
    "tenantId": null,
    "formReference": {
      "type": "external",
      "formId": "Infrastructure.Cloud.Amazon.form.new"
    },
    "schemaClassId": "Infrastructure.Cloud.Amazon",
    "alertTypes": [{
      "createdDate": "2015-10-13T04:44:32.075Z",
      "lastUpdated": "2015-10-13T04:44:32.075Z",
      "version": 0,
      "id": "2ef8f47c-045c-4ee4-821d-7b1543ea5f11",
      "name": "machine",
      "description": null,
      "referenceResourceId": "machine"
    }]
  },//Omit 7 reservation types here
],
"metadata": {
  "size": 20,
  "totalElements": 8,
  "totalPages": 1,
  "number": 1,
  "offset": 0
}
}

```

## Syntax for Displaying a List of Supported Reservation Types

You can use the REST API reservation service to display a list of supported vRealize Automation reservation types.

### Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	<code>https://\$host/reservation-service/api/reservations/types</code>
Method	Get
<i>\$host</i>	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
<i>\$token</i>	Specifies a valid HTTP bearer token with necessary credentials.

### Output

The command output contains property names and values based on the command input parameters.

Property	Description
Links	Species an array of link objects, each of which contains the following parts:
rel	<p>Specifies the name of the link.</p> <ul style="list-style-type: none"> <li>■ SELF refers to the object that was returned or requested.</li> <li>■ First, Previous, Next, and Last refer to corresponding pages of pageable lists.</li> <li>■ Specifies the application or service that determines the other names.</li> </ul>
href	Specifies the URL that produces the result.
Content	Specifies an array of data rows, each of which represents one of the objects returned in a pageable list. Each object contains the following information:
@type	Contains the ReservationType string.
createdDate	Specifies the create date.
lastUpdated	Specifies the last update date.
version	Displays the object version number.
Id	Specifies the unique identifier of this resource.
name	Specifies the reservation type name.
description	Specifies the reservation type description.
category	Specifies the reservation category of Virtual, Cloud or Physical.
serviceTypeId	Specifies the vRealize Automation service ID.
tenantId	This contains a null value.
FormReference	<p>Specifies the user interface form reference. This field is valid for user interface elements only.</p> <ul style="list-style-type: none"> <li>■ type -- user interface form type</li> <li>■ formId -- user interface form ID</li> </ul>
SchemaClassId	Specifies the schema class ID of the reservation type. Each supported reservation type contains specific fields. The supported fields are defined in the schema. For details, see the reservation service schema definitions in the <i>REST API Reference</i> in the vRealize Automation Documentation Center.



**Example: JSON Output for a vSphere Reservation**

In the following response, there are 8 reservation types. For the vSphere reservation, the reservation type ID is `Infrastructure.Reservation.Virtual.vSphere`, and its schema class ID is `Infrastructure.Reservation.Virtual.vSphere`.

```
{
  "links": [],
  "content": [{
    "@type": "ReservationType",
    "createdDate": "2015-10-13T04:44:32.008Z",
    "lastUpdated": "2015-10-13T04:44:32.009Z",
    "version": 1,
    "id": "Infrastructure.Reservation.Virtual.vSphere",
    "name": "vSphere",
    "description": "vSphere Reservation",
    "category": "Virtual",
    "serviceTypeId": "com.mycompany.csp.iaas.blueprint.service",
    "tenantId": null,
    "formReference": {
      "type": "external",
      "formId": "Infrastructure.Reservation.Virtual.vSphere.form.new"
    },
    "schemaClassId": "Infrastructure.Reservation.Virtual.vSphere",
    "alertTypes": [{
      "createdDate": "2015-10-13T04:44:32.008Z",
      "lastUpdated": "2015-10-13T04:44:32.008Z",
      "version": 0,
      "id": "d248eeee-238c-4e87-9e95-f263b04d113f",
      "name": "storage",
      "description": null,
      "referenceResourceId": "storage"
    }], //Omit 7 reservation types here
  }],
  "metadata": {
    "size": 20,
    "totalElements": 8,
    "totalPages": 1,
    "number": 1,
    "offset": 0
  }
}
```

**Example: JSON Output for a vCloud Air Reservation**

In the following response, there are 8 reservation types. For the vCloud Air reservation, the reservation type ID is `Infrastructure.Reservation.Cloud.vCloudAir` and its schema class ID is `Infrastructure.Reservation.Cloud.vCloudAir`.

```
{
  "links": [],
  "content": [{
    {
```

```

"@type": "ReservationType",
"createdDate": "2015-11-06T10:21:06.010Z",
"lastUpdated": "2015-11-06T10:21:06.011Z",
"version": 1,
"id": "Infrastructure.Reservation.Cloud.vCloudAir",
"name": "vCloud",
"description": "vCloud Reservation",
"category": "Cloud",
"serviceTypeId": "com.mycompany.csp.iaas.blueprint.service",
"tenantId": null,
"formReference": {
  "type": "external",
  "formId": "Infrastructure.Reservation.Cloud.vCloudAir.form.new"
},
"schemaClassId": "Infrastructure.Reservation.Cloud.vCloudAir",
>alertTypes": [
  {
    "createdDate": "2015-11-06T10:21:06.010Z",
    "lastUpdated": "2015-11-06T10:21:06.010Z",
    "version": 0,
    "id": "cd707ad2-d504-43e2-8002-11ee670dcf41",
    "name": "storage",
    "description": null,
    "referenceResourceId": "storage"
  },
  {
    "createdDate": "2015-11-06T10:21:06.010Z",
    "lastUpdated": "2015-11-06T10:21:06.010Z",
    "version": 0,
    "id": "ef96fec4-a607-4944-a0af-fbe7df862ee2",
    "name": "memory",
    "description": null,
    "referenceResourceId": "memory"
  },
  {
    "createdDate": "2015-11-06T10:21:06.011Z",
    "lastUpdated": "2015-11-06T10:21:06.011Z",
    "version": 0,
    "id": "043e0815-9f02-4876-b5ce-ddbedabb8ff6",
    "name": "cpu",
    "description": null,
    "referenceResourceId": "cpu"
  },
  {
    "createdDate": "2015-11-06T10:21:06.011Z",
    "lastUpdated": "2015-11-06T10:21:06.011Z",
    "version": 0,
    "id": "77e90acd-93ab-4bbe-853a-b74923dae70a",
    "name": "machine",
    "description": null,
    "referenceResourceId": "machine"
  }
]
}, //Omit 7 reservation types here
],

```

```

"metadata": {
  "size": 20,
  "totalElements": 8,
  "totalPages": 1,
  "number": 1,
  "offset": 0
}
}

```

### Example: JSON Output for an Amazon Reservation

In the following response, there are 8 reservation types. For the Amazon reservation, the reservation type ID is `Infrastructure.Reservation.Cloud.Amazon` and its schema class ID is `Infrastructure.Reservation.Cloud.Amazon`.

```

{
  "links": [],
  "content": [{
    {
      "@type": "ReservationType",
      "createdDate": "2015-10-13T04:44:32.074Z",
      "lastUpdated": "2015-10-13T04:44:32.075Z",
      "version": 1,
      "id": "Infrastructure.Cloud.Amazon",
      "name": "Amazon",
      "description": "Amazon Reservation",
      "category": "Cloud",
      "serviceTypeId": "com.mycompany.csp.iaas.blueprint.service",
      "tenantId": null,
      "formReference": {
        "type": "external",
        "formId": "Infrastructure.Cloud.Amazon.form.new"
      },
      "schemaClassId": "Infrastructure.Cloud.Amazon",
      "alertTypes": [{
        "createdDate": "2015-10-13T04:44:32.075Z",
        "lastUpdated": "2015-10-13T04:44:32.075Z",
        "version": 0,
        "id": "2ef8f47c-045c-4ee4-821d-7b1543ea5f11",
        "name": "machine",
        "description": null,
        "referenceResourceId": "machine"
      }]
    }
  ]}, //Omit 7 reservation types here
],
  "metadata": {
    "size": 20,
    "totalElements": 8,
    "totalPages": 1,
    "number": 1,
    "offset": 0
  }
}

```

## Displaying a Schema Definition for a Reservation

You can use the vRealize Automation REST API to display a schema definition for any supported reservation type, including a vSphere, Amazon EC2, or vCloud reservation.

### Display a Schema Definition for a vSphere Reservation

You can use the REST API reservation service to display a schema definition for a specific vRealize Automation reservation type, for example a vSphere reservation.

#### Prerequisites

- Log in to vRealize Automation as a **fabric group administrator**.
- Verify that the host name and fully qualified domain name of the vRealize Automation instance are available.
- If you are not using the API Explorer, verify that you have a valid HTTP bearer token that matches your login credentials. See [Chapter 2 REST API Authentication](#).
- Obtain the schema class ID of the reservation type to create. See [Display a List of Supported Reservation Types](#).

#### Procedure

- ◆ Display a schema definition for a specific vRealize Automation vSphere reservation type.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/data-service/schema/$schemaclassid/default
```

The schema definition in this example includes 9 extension fields that are supported for the vSphere type reservation.

```
{
  "fields": [{
    "id": "reservationNetworks",
    "label": "Network",
    "dataType": {
      "type": "complex",
      "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
      "componentId": null,
      "classId": "reservationNetwork",
      "typeFilter": null,
      "label": "Network"
    },
    "displayAdvice": "DATA_TABLE",
    "permissibleValues": {
      "type": "dynamic",
      "customAllowed": false,
      "dependencies": ["computeResource"]
    },
    "state": {
```

```

"dependencies": [],
"facets": [{
  "type": "mandatory",
  "value": {
    "type": "constantClause",
    "value": {
      "type": "boolean",
      "value": true
    }
  }
}]
},
"isMultiValued": true
},
{
  "id": "reservationVCNSTransportZone",
  "label": "Transport Zone",
  "description": "Transport zone of the vCNS settings",
  "dataType": {
    "type": "ref",
    "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
    "componentId": null,
    "classId": "NetworkScopes",
    "typeFilter": null,
    "label": "Transport Zone"
  },
  "displayAdvice": null,
  "permissibleValues": {
    "type": "dynamic",
    "customAllowed": false,
    "dependencies": ["computeResource"]
  },
  "state": {
    "dependencies": [],
    "facets": []
  },
  "isMultiValued": false
},
{
  "id": "reservationVCNSSecurityGroups",
  "label": "Security Groups",
  "description": "Security groups of the vCNS settings",
  "dataType": {
    "type": "ref",
    "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
    "componentId": null,
    "classId": "SecurityGroups",
    "typeFilter": null,
    "label": "Security Group"
  },
  "displayAdvice": null,
  "permissibleValues": {
    "type": "dynamic",
    "customAllowed": false,
    "dependencies": ["computeResource"]
  }
}

```

```

    },
    "state": {
      "dependencies": [],
      "facets": []
    },
    "isMultiValued": true
  },
  {
    "id": "reservationMemory",
    "label": "Memory",
    "dataType": {
      "type": "complex",
      "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
      "componentId": null,
      "classId": "reservationMemory",
      "typeFilter": null,
      "label": "Memory"
    },
    "displayAdvice": "DATA_TABLE",
    "permissibleValues": {
      "type": "dynamic",
      "customAllowed": false,
      "dependencies": ["computeResource"]
    },
    "state": {
      "dependencies": [],
      "facets": [{
        "type": "mandatory",
        "value": {
          "type": "constantClause",
          "value": {
            "type": "boolean",
            "value": true
          }
        }
      }
    ]
  },
  "isMultiValued": false
},
{
  "id": "computeResource",
  "label": "Compute Resource",
  "description": "The compute resource for the reservation",
  "dataType": {
    "type": "ref",
    "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
    "componentId": null,
    "classId": "ComputeResource",
    "typeFilter": "InterfaceTypeId",
    "label": "Compute Resource"
  },
  "displayAdvice": null,
  "permissibleValues": {
    "type": "dynamic",
    "customAllowed": false,

```

```

    "dependencies": []
  },
  "state": {
    "dependencies": [],
    "facets": [{
      "type": "mandatory",
      "value": {
        "type": "constantClause",
        "value": {
          "type": "boolean",
          "value": true
        }
      }
    }
  ]
},
"isMultiValued": false
},
{
  "id": "machineQuota",
  "label": "Machine Quota",
  "description": "The machine quota for the reservation",
  "dataType": {
    "type": "primitive",
    "typeId": "INTEGER"
  },
  "displayAdvice": null,
  "state": {
    "dependencies": [],
    "facets": []
  },
  "isMultiValued": false
},
{
  "id": "reservationStorages",
  "label": "Storage",
  "dataType": {
    "type": "complex",
    "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
    "componentId": null,
    "classId": "reservationStorage",
    "typeFilter": null,
    "label": "Storage"
  },
  "displayAdvice": "DATA_TABLE",
  "permissibleValues": {
    "type": "dynamic",
    "customAllowed": false,
    "dependencies": ["computeResource"]
  },
  "state": {
    "dependencies": [],
    "facets": [{
      "type": "mandatory",
      "value": {
        "type": "constantClause",

```



```

    },
    "isMultiValued": true
  }]
}

```

### Syntax for Displaying a Schema Definition for a vSphere Reservation

You can use the REST API reservation service to display a schema definition for a specific vRealize Automation reservation type, for example a vSphere reservation.

#### Overview

Each reservation contains several fields. Some fields are common to all reservation types and some are type-specific. The list of type-specific fields is defined in a schema. Call a data and schema service to get schema definition information. The data and schema service combines fetch data and fetch schema REST API calls.

**Table 3-6. Fields Common To All Reservation Types**

Parameter	Description	Parameter Type
Id	Specifies the reservation ID.	GUID
name	Specifies the reservation name.	String
reservationTypeId	Specifies the reservation type, for example Infrastructure.Reservation.Virtual.vSphere or Infrastructure.Reservation.Virtual.Amazon.	String
tenantId	Specifies the tenant ID that contains the reservation.	String
subTenantId	Specifies the subtenant ID that contains the reservation.	GUID
enabled	Specifies whether the reservation is enabled.	Boolean
priority	Specifies the priority of the reservation during VM provisioning.	Integer
reservationPolicyId	Specifies the reservation policy ID to bind to this reservation.	GUID
alertPolicy	Specifies the alert policy of the reservation. The detail schema of this field refers to the alert policy.	JSON
extensionData	Contains type-specific fields. The detail schema of this field is retrieved by the data and schema service.	JSON

The following table describes the vSphere reservation types field IDs that appear in the output schema definitions.

**Table 3-7. Extension Fields Supported in vSphere Reservations**

Field ID	Data Type	Type Class	Permissible Value	Depends on Field
reservationNetworks	Complex Type	reservationNetwork	Yes	computeResource
reservationVCNSTransportZone	Entity Reference	NetworkScopes	Yes	computeResource
reservationVCNSSecurityGroups	Entity Reference	SecurityGroups	Yes	computeResource
reservationMemory	Complex Type	reservationMemory	Yes	computeResource
computeResource	Entity Reference	ComputeResource	Yes	NA
machineQuota	Integer	N/A	No	NA
reservationStorages	Complex Type	reservationStorage	Yes	computeResource
resourcePool	Entity Reference	ResourcePools	Yes	computeResource
reservationVCNSRoutedGateways	Complex Type	reservationVCNSRoutedGateway	Yes	computeResource

**Note** The information in the table is subject to change. Call the data and schema service to retrieve the latest field information.

### Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	https://\$host/reservation-service/api/data-service/schema/\$schemaclassid/default
Method	Get
\$host	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
\$token	Specifies a valid HTTP bearer token with necessary credentials.
\$schemaclassid	Specifies the schema class of the reservation type. The schema class ID for a vSphere reservation is Infrastructure.Reservation.Virtual.vSphere. Each supported reservation type contains specific fields. The supported fields are defined in the schema. For details, see the reservation service schema definitions in the <i>REST API Reference</i> in the vRealize Automation documentation center.

### Output

The command output contains property names and values based on the command input parameters.

Each field contains an array of data rows. Each data row represents one of the fields defined in the schema.

Property	Description
Id	Specifies the unique identifier of this resource.
label	Specifies the field label.
dataType	<p>Specifies the dataType field value:</p> <ul style="list-style-type: none"> <li>■ type: Specifies the field value type: <ul style="list-style-type: none"> <li>■ Self refers to the object that was returned or requested.</li> <li>■ First, Previous, Next, and Last refer to corresponding pages of a pageable list.</li> <li>■ Specifies the application or service that determines the other names.</li> </ul> </li> <li>■ componentTypeId: <p>Specifies the type ID of the component.</p> </li> <li>■ component: <p>Specifies the unique identifier of the component.</p> </li> <li>■ classId: <p>Specifies the schema class of the field</p> <p>This property is valid for complex and ref field types only.</p> </li> <li>■ label: <p>Specifies the label of the field data type.</p> </li> </ul>
displayAdvice	Contains display advice for the field. This property is valid for a user interface element only.
permissibleValues	<p>Optional field. If this field is a permissible value list field, define the meta info for the permissible value by using the following options:</p> <ul style="list-style-type: none"> <li>■ type: <p>Specifies if the permissible value list is dynamic or static.</p> </li> <li>■ customAllowed: <p>Specifies if a custom value is allowed during user input in this field.</p> </li> <li>■ dependencies: <p>Specifies the list of fields that the current field depends on.</p> </li> </ul>

Property	Description
state	Provides a structure for defining the state of a content construct, for example {@link LayoutSection}. The element state identifies the field paths in the client data context upon which that element state depends. For example, the <code>callback</code> facet result indicates that facet evaluation must be delegated to the server of the object. This evaluation may be dependent on data collected in the client data context. For example, for a unique machine name, the evaluation requires the proposed name entered by the user.
dependencies	<p>Contains the set of field paths on which the server-side evaluation of the facets depends:</p> <ul style="list-style-type: none"> <li>■ <code>facets</code>: <ul style="list-style-type: none"> <li>Provides a higher level view of an {@link Constraint} collection and its current values. All rendering code should use this class to provide a common place to get the current state of the field.</li> <li>If a field is considered in need of server-side evaluation, its <code>facets</code> setting is <code>callback</code>.</li> <li>If a field is considered mandatory, its <code>facets</code> setting is <code>mandatory</code>.</li> </ul> </li> <li>■ <code>isMultiValued</code>: <ul style="list-style-type: none"> <li>Specifies if the field is a multi-value field, such as a list field.</li> <li>The state provides a higher level view of an {@link Constraint} collection and its current values. Rendering code should use this class to provide a common place to get the current state of the field.</li> </ul> </li> </ul>

### Example: curl Command

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/data-service/schema/$schemaclassid/default
```

### Example: JSON Output

The schema definition in this example includes 9 extension fields that are supported for the vSphere type reservation.

```
{
  "fields": [{
    "id": "reservationNetworks",
    "label": "Network",
    "dataType": {
      "type": "complex",
      "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
      "componentId": null,
      "classId": "reservationNetwork",
      "typeFilter": null,
      "label": "Network"
    },
    "displayAdvice": "DATA_TABLE",
    "permissibleValues": {
      "type": "dynamic",
      "customAllowed": false,
      "dependencies": ["computeResource"]
    },
  },
```

```

"state": {
  "dependencies": [],
  "facets": [{
    "type": "mandatory",
    "value": {
      "type": "constantClause",
      "value": {
        "type": "boolean",
        "value": true
      }
    }
  ]
},
"isMultiValued": true
},
{
  "id": "reservationVCNSTransportZone",
  "label": "Transport Zone",
  "description": "Transport zone of the vCNS settings",
  "dataType": {
    "type": "ref",
    "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
    "componentId": null,
    "classId": "NetworkScopes",
    "typeFilter": null,
    "label": "Transport Zone"
  },
  "displayAdvice": null,
  "permissibleValues": {
    "type": "dynamic",
    "customAllowed": false,
    "dependencies": ["computeResource"]
  },
  "state": {
    "dependencies": [],
    "facets": []
  },
  "isMultiValued": false
},
{
  "id": "reservationVCNSSecurityGroups",
  "label": "Security Groups",
  "description": "Security groups of the vCNS settings",
  "dataType": {
    "type": "ref",
    "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
    "componentId": null,
    "classId": "SecurityGroups",
    "typeFilter": null,
    "label": "Security Group"
  },
  "displayAdvice": null,
  "permissibleValues": {
    "type": "dynamic",
    "customAllowed": false,

```

```

    "dependencies": ["computeResource"]
  },
  "state": {
    "dependencies": [],
    "facets": []
  },
  "isMultiValued": true
},
{
  "id": "reservationMemory",
  "label": "Memory",
  "dataType": {
    "type": "complex",
    "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
    "componentId": null,
    "classId": "reservationMemory",
    "typeFilter": null,
    "label": "Memory"
  },
  "displayAdvice": "DATA_TABLE",
  "permissibleValues": {
    "type": "dynamic",
    "customAllowed": false,
    "dependencies": ["computeResource"]
  },
  "state": {
    "dependencies": [],
    "facets": [{
      "type": "mandatory",
      "value": {
        "type": "constantClause",
        "value": {
          "type": "boolean",
          "value": true
        }
      }
    }
  ]
},
  "isMultiValued": false
},
{
  "id": "computeResource",
  "label": "Compute Resource",
  "description": "The compute resource for the reservation",
  "dataType": {
    "type": "ref",
    "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
    "componentId": null,
    "classId": "ComputeResource",
    "typeFilter": "InterfaceTypeId",
    "label": "Compute Resource"
  },
  "displayAdvice": null,
  "permissibleValues": {
    "type": "dynamic",

```

```

    "customAllowed": false,
    "dependencies": []
  },
  "state": {
    "dependencies": [],
    "facets": [{
      "type": "mandatory",
      "value": {
        "type": "constantClause",
        "value": {
          "type": "boolean",
          "value": true
        }
      }
    }
  ]
},
"isMultiValued": false
},
{
  "id": "machineQuota",
  "label": "Machine Quota",
  "description": "The machine quota for the reservation",
  "dataType": {
    "type": "primitive",
    "typeId": "INTEGER"
  },
  "displayAdvice": null,
  "state": {
    "dependencies": [],
    "facets": []
  },
  "isMultiValued": false
},
{
  "id": "reservationStorages",
  "label": "Storage",
  "dataType": {
    "type": "complex",
    "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
    "componentId": null,
    "classId": "reservationStorage",
    "typeFilter": null,
    "label": "Storage"
  },
  "displayAdvice": "DATA_TABLE",
  "permissibleValues": {
    "type": "dynamic",
    "customAllowed": false,
    "dependencies": ["computeResource"]
  },
  "state": {
    "dependencies": [],
    "facets": [{
      "type": "mandatory",
      "value": {

```

```

        "type": "constantClause",
        "value": {
            "type": "boolean",
            "value": true
        }
    }
}]]
},
"isMultiValued": true
},
{
    "id": "resourcePool",
    "label": "Resource Pool",
    "description": "The resource pool for the reservation",
    "dataType": {
        "type": "ref",
        "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
        "componentId": null,
        "classId": "ResourcePools",
        "typeFilter": null,
        "label": "Resource Pool"
    },
    "displayAdvice": null,
    "permissibleValues": {
        "type": "dynamic",
        "customAllowed": false,
        "dependencies": ["computeResource"]
    },
    "state": {
        "dependencies": [],
        "facets": []
    },
    "isMultiValued": false
},
{
    "id": "reservationVCNSRoutedGateways",
    "label": "Routed Gateways",
    "dataType": {
        "type": "complex",
        "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
        "componentId": null,
        "classId": "reservationVCNSRoutedGateway",
        "typeFilter": null,
        "label": "Routed Gateways"
    },
    "displayAdvice": "DATA_TABLE",
    "permissibleValues": {
        "type": "dynamic",
        "customAllowed": false,
        "dependencies": ["computeResource"]
    },
    "state": {
        "dependencies": [],
        "facets": []
    }
}

```

```

    },
    "isMultiValued": true
  }]
}

```

## Display a Schema Definition for an Amazon Reservation

You can use the REST API reservation service to display a schema definition for a specific vRealize Automation reservation type, for example an Amazon reservation.

### Prerequisites

- Log in to vRealize Automation as a **fabric group administrator**.
- Verify that the host name and fully qualified domain name of the vRealize Automation instance are available.
- If you are not using the API Explorer, verify that you have a valid HTTP bearer token that matches your login credentials. See [Chapter 2 REST API Authentication](#).
- Obtain the schema class ID of the reservation type to create. See [Display a List of Supported Reservation Types](#).

### Procedure

- ◆ Display a schema definition for an Amazon reservation type.

```

curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/data-service/schema/$schemaclassid/default

```

The schema definition in this example includes 9 extension fields.

```

{
  "fields": [
    {
      "id": "securityGroups",
      "label": "Security groups",
      "description": "The security groups",
      "dataType": {
        "type": "ref",
        "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
        "componentId": null,
        "classId": "AmazonSecurityGroup",
        "typeFilter": null,
        "label": "Amazon Security Group"
      },
    },
    "displayAdvice": null,
    "permissibleValues": {
      "type": "dynamic",
      "customAllowed": false,
      "dependencies": [
        "computeResource"
      ]
    }
  ]
}

```

```

    },
    "state": {
      "dependencies": [
        ],
      "facets": [
        {
          "type": "visible",
          "value": {
            "type": "not",
            "subClause": {
              "type": "expression",
              "operator": {
                "type": "isDefined"
              },
              "leftOperand": {
                "type": "path",
                "path": "VPC"
              }
            }
          }
        },
        {
          "type": "mandatory",
          "value": {
            "type": "not",
            "subClause": {
              "type": "expression",
              "operator": {
                "type": "isDefined"
              },
              "leftOperand": {
                "type": "path",
                "path": "VPC"
              }
            }
          }
        }
      ]
    },
    "isMultiValued": true
  },
  {
    "id": "locations",
    "label": "Locations",
    "description": "The locations",
    "dataType": {
      "type": "ref",
      "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
      "componentId": null,
      "classId": "AvailabilityZone",
      "typeFilter": null,
      "label": "Availability Zone"
    },
    "displayAdvice": null,
  }

```

```

"permissibleValues": {
  "type": "dynamic",
  "customAllowed": false,
  "dependencies": [
    "computeResource"
  ]
},
"state": {
  "dependencies": [
  ],
"facets": [
  {
    "type": "visible",
    "value": {
      "type": "not",
      "subClause": {
        "type": "expression",
        "operator": {
          "type": "isDefined"
        },
        "leftOperand": {
          "type": "path",
          "path": "VPC"
        }
      }
    }
  },
  {
    "type": "mandatory",
    "value": {
      "type": "not",
      "subClause": {
        "type": "expression",
        "operator": {
          "type": "isDefined"
        },
        "leftOperand": {
          "type": "path",
          "path": "VPC"
        }
      }
    }
  }
]
},
"isMultiValued": true
},
{
  "id": "loadBalancers",
  "label": "Load balancers",
  "description": "The load balancers",
  "dataType": {
    "type": "ref",
    "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",

```

```

    "componentId": null,
    "classId": "ElasticLoadBalancer",
    "typeFilter": null,
    "label": "Elastic Load Balancer"
  },
  "displayAdvice": null,
  "permissibleValues": {
    "type": "dynamic",
    "customAllowed": false,
    "dependencies": [
      "locations",
      "computeResource"
    ]
  },
  "state": {
    "dependencies": [

  ],
  "facets": [
    {
      "type": "visible",
      "value": {
        "type": "not",
        "subClause": {
          "type": "expression",
          "operator": {
            "type": "isDefined"
          },
          "leftOperand": {
            "type": "path",
            "path": "VPC"
          }
        }
      }
    }
  ]
},
"isMultiValued": true
},
{
  "id": "specificKeyPairs",
  "label": "Specific key pair",
  "description": "The specific key pair",
  "dataType": {
    "type": "ref",
    "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
    "componentId": null,
    "classId": "KeyPair",
    "typeFilter": null,
    "label": "Key Pair"
  },
  "displayAdvice": null,
  "permissibleValues": {
    "type": "dynamic",
    "customAllowed": false,

```

```

    "dependencies": [
      "computeResource",
      "keyPairs"
    ]
  },
  "state": {
    "dependencies": [
    ],
    "facets": [
      {
        "type": "visible",
        "value": {
          "type": "and",
          "subClauses": [
            {
              "type": "expression",
              "operator": {
                "type": "isDefined"
              },
              "leftOperand": {
                "type": "path",
                "path": "keyPairs"
              }
            },
            {
              "type": "expression",
              "operator": {
                "type": "equals"
              },
              "leftOperand": {
                "type": "constant",
                "value": {
                  "type": "string",
                  "value": "Specific Key Pair"
                }
              },
              "rightOperand": {
                "type": "path",
                "path": "keyPairs"
              }
            }
          ]
        }
      },
      {
        "type": "mandatory",
        "value": {
          "type": "and",
          "subClauses": [
            {
              "type": "expression",
              "operator": {
                "type": "isDefined"
              },

```

```

        "leftOperand": {
            "type": "path",
            "path": "keyPairs"
        }
    },
    {
        "type": "expression",
        "operator": {
            "type": "equals"
        },
        "leftOperand": {
            "type": "constant",
            "value": {
                "type": "string",
                "value": "Specific Key Pair"
            }
        },
        "rightOperand": {
            "type": "path",
            "path": "keyPairs"
        }
    }
]
}
}
},
"isMultiValued": false
},
{
    "id": "computeResource",
    "label": "Compute Resource",
    "description": "The compute resource for the reservation",
    "dataType": {
        "type": "ref",
        "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
        "componentId": null,
        "classId": "ComputeResource",
        "typeFilter": "ReservationTypeId",
        "label": "Compute Resource"
    },
    "displayAdvice": null,
    "permissibleValues": {
        "type": "dynamic",
        "customAllowed": false,
        "dependencies": [

        ]
    },
    "state": {
        "dependencies": [

        ],
        "facets": [
            {

```

```

        "type": "mandatory",
        "value": {
            "type": "constantClause",
            "value": {
                "type": "boolean",
                "value": true
            }
        }
    }
    ],
    },
    "isMultiValued": false
},
{
    "id": "VPC",
    "label": "VPC",
    "dataType": {
        "type": "complex",
        "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
        "componentId": null,
        "classId": "Infrastructure.Reservation.Cloud.Amazon.VPC",
        "typeFilter": null,
        "label": "VPC",
        "schema": {
            "fields": [
                {
                    "id": "VPCSubnets",
                    "label": "Subnets",
                    "description": "The subnets.",
                    "dataType": {
                        "type": "ref",
                        "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
                        "componentId": null,
                        "classId": "Subnet",
                        "typeFilter": null,
                        "label": "Subnet"
                    },
                    "displayAdvice": null,
                    "permissibleValues": {
                        "type": "dynamic",
                        "customAllowed": false,
                        "dependencies": [
                            ]
                    },
                }
            ],
        },
        "state": {
            "dependencies": [
                ],
            "facets": [
                {
                    "type": "minCardinality",
                    "value": {
                        "type": "constant",
                        "value": {

```

```

        "type": "integer",
        "value": 1
    }
},
{
    "type": "mandatory",
    "value": {
        "type": "constantClause",
        "value": {
            "type": "boolean",
            "value": true
        }
    }
}
],
},
"isMultiValued": true
},
{
    "id": "VPCSecurityGroups",
    "label": "Security groups",
    "description": "The security groups",
    "dataType": {
        "type": "ref",
        "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
        "componentId": null,
        "classId": "AmazonSecurityGroup",
        "typeFilter": null,
        "label": "Amazon Security Group"
    },
    "displayAdvice": null,
    "permissibleValues": {
        "type": "dynamic",
        "customAllowed": false,
        "dependencies": [

        ]
    },
    "state": {
        "dependencies": [

        ],
        "facets": [
            {
                "type": "minCardinality",
                "value": {
                    "type": "constant",
                    "value": {
                        "type": "integer",
                        "value": 1
                    }
                }
            }
        ],
    },
}

```

```

        "type": "mandatory",
        "value": {
            "type": "constantClause",
            "value": {
                "type": "boolean",
                "value": true
            }
        }
    }
    ],
},
"isMultiValued": true
},
{
    "id": "VPCName",
    "label": "VPC Name",
    "description": "The virtual private cloud.",
    "dataType": {
        "type": "ref",
        "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
        "componentId": null,
        "classId": "VirtualPrivateCloud",
        "typeFilter": null,
        "label": "Virtual Private Cloud"
    },
    "displayAdvice": null,
    "state": {
        "dependencies": [

        ],
        "facets": [
            {
                "type": "readOnly",
                "value": {
                    "type": "constantClause",
                    "value": {
                        "type": "boolean",
                        "value": true
                    }
                }
            }
        ]
    },
    "isMultiValued": false
},
{
    "id": "VPCLoadBalancers",
    "label": "Load balancers",
    "description": "The load balancers.",
    "dataType": {
        "type": "ref",
        "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
        "componentId": null,
        "classId": "ElasticLoadBalancer",
        "typeFilter": null,

```

```

        "label": "Elastic Load Balancer"
    },
    "displayAdvice": null,
    "permissibleValues": {
        "type": "dynamic",
        "customAllowed": false,
        "dependencies": [
            "VPCSubnets"
        ]
    },
    "state": {
        "dependencies": [

        ],
        "facets": [

        ]
    },
    "isMultiValued": true
}
]
}
},
"displayAdvice": "DATA_TABLE",
"permissibleValues": {
    "type": "dynamic",
    "customAllowed": false,
    "dependencies": [
        "computeResource"
    ]
},
"state": {
    "dependencies": [

    ],
    "facets": [
        {
            "type": "visible",
            "value": {
                "type": "or",
                "subClauses": [
                    {
                        "type": "not",
                        "subClause": {
                            "type": "expression",
                            "operator": {
                                "type": "isDefined"
                            },
                            "leftOperand": {
                                "type": "path",
                                "path": "locations"
                            }
                        }
                    }
                ]
            }
        },
        {

```

```

        "type": "not",
        "subClause": {
            "type": "expression",
            "operator": {
                "type": "isDefined"
            },
            "leftOperand": {
                "type": "path",
                "path": "securityGroups"
            }
        }
    }
]
},
{
    "type": "mandatory",
    "value": {
        "type": "or",
        "subClauses": [
            {
                "type": "not",
                "subClause": {
                    "type": "expression",
                    "operator": {
                        "type": "isDefined"
                    },
                    "leftOperand": {
                        "type": "path",
                        "path": "locations"
                    }
                }
            },
            {
                "type": "not",
                "subClause": {
                    "type": "expression",
                    "operator": {
                        "type": "isDefined"
                    },
                    "leftOperand": {
                        "type": "path",
                        "path": "securityGroups"
                    }
                }
            }
        ]
    }
}
],
    "isMultiValued": true
},
{
    "id": "machineQuota",

```

```

"label": "Machine Quota",
"description": "The machine quota for the reservation",
"dataType": {
  "type": "primitive",
  "typeId": "INTEGER"
},
"displayAdvice": null,
"state": {
  "dependencies": [

  ],
  "facets": [

  ]
},
"isMultiValued": false
},
{
  "id": "keyPairs",
  "label": "Key pair",
  "description": "The key pair",
  "dataType": {
    "type": "primitive",
    "typeId": "STRING"
  },
  "displayAdvice": null,
  "permissibleValues": {
    "type": "static",
    "customAllowed": false,
    "values": [
      {
        "underlyingValue": {
          "type": "string",
          "value": "Not Specified"
        },
        "label": null
      },
      {
        "underlyingValue": {
          "type": "string",
          "value": "Per Provisioning Group"
        },
        "label": null
      },
      {
        "underlyingValue": {
          "type": "string",
          "value": "Per Machine"
        },
        "label": null
      },
      {
        "underlyingValue": {
          "type": "string",
          "value": "Specific Key Pair"
        }
      }
    ]
  }
}

```

```

        },
        "label": null
    }
]
},
"state": {
    "dependencies": [

    ],
    "facets": [
        {
            "type": "mandatory",
            "value": {
                "type": "constantClause",
                "value": {
                    "type": "boolean",
                    "value": true
                }
            }
        }
    ]
},
"isMultiValued": false
}
]

```

### Syntax for Displaying a Schema Definition for an Amazon Reservation

You can use the REST API reservation service to display a schema definition for a specific vRealize Automation reservation type, for example an Amazon reservation.

#### Overview

Each reservation contains several fields. Some fields are common to all reservation types and some are type-specific. The list of type-specific fields is defined in a schema. Call a data and schema service to get schema definition information. The data and schema service combines fetch data and fetch schema REST API calls.

**Table 3-8. Fields Common To All Reservation Types**

Parameter	Description	Parameter Type
Id	Specifies the reservation ID.	GUID
name	Specifies the reservation name.	String
reservationTypeId	Specifies the reservation type, for example Infrastructure.Reservation.Virtual.vSphere or Infrastructure.Reservation.Virtual.Amazon.	String
tenantId	Specifies the tenant ID that contains the reservation.	String

**Table 3-8. Fields Common To All Reservation Types (Continued)**

Parameter	Description	Parameter Type
subTenantId	Specifies the subtenant ID that contains the reservation.	GUID
enabled	Specifies whether the reservation is enabled.	Boolean
priority	Specifies the priority of the reservation during VM provisioning.	Integer
reservationPolicyId	Specifies the reservation policy ID to bind to this reservation.	GUID
alertPolicy	Specifies the alert policy of the reservation. The detail schema of this field refers to the alert policy.	JSON
extensionData	Contains type-specific fields. The detail schema of this field is retrieved by the data and schema service.	JSON

The following table describes the Amazon EC2 reservation types field IDs that appear in the output schema definitions.

**Table 3-9. Extension Fields Supported in Amazon Reservations**

Field ID	Data Type	Type Class	Permissible Value	Depends on Field
securityGroups	Entity Reference	AmazonSecurityGroup	Yes	computeResource
locations	Entity Reference	AvailabilityZone	Yes	computeResource
loadBalancers	Entity Reference	ElasticLoadBalancer	Yes	computeResource and locations
specificKeyPairs	Entity Reference	KeyPair	Yes	computeResource and keyPairs
computeResource	Entity Reference	ComputeResource	Yes	NA
VPC	Complex Type	Infrastructure.Reservation.Cloud.Amazon.VPC	Yes	computeResource
machineQuota	Integer	NA	No	NA
keyPairs	String	ResourcePools	Yes	computeResource

**Note** The information in the table is subject to change. Call the data and schema service to retrieve the latest field information.

**Input**

Use the supported input parameters to control the command output.

Parameter	Description
URL	https://\$host/reservation-service/api/data-service/schema/\$schemaclassid/default
Method	Get
\$host	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
\$token	Specifies a valid HTTP bearer token with necessary credentials.
\$schemaclassid	<p>Specifies the schema class of the reservation type.</p> <p>The schema class ID for an Amazon reservation is Infrastructure.Reservation.Cloud.Amazon.</p> <p>Each supported reservation type contains specific fields. The supported fields are defined in the schema. For details, see the reservation service schema definitions in the <i>REST API Reference</i> in vRealize Automation documentation.</p>

## Output

The command output contains property names and values based on the command input parameters. Each field contains an array of data rows. Each data row represents one of the fields defined in the schema.

Property	Description
Id	Specifies the unique identifier of this resource.
label	Specifies the field label.
dataType	<p>Specifies the dataType field value:</p> <ul style="list-style-type: none"> <li>■ type: Specifies the field value type: <ul style="list-style-type: none"> <li>■ Self refers to the object that was returned or requested.</li> <li>■ First, Previous, Next, and Last refer to corresponding pages of a pageable list.</li> <li>■ Specifies the application or service that determines the other names.</li> </ul> </li> <li>■ componentTypeId: <p>Specifies the type ID of the component.</p> </li> <li>■ component: <p>Specifies the unique identifier of the component.</p> </li> <li>■ classId: <p>Specifies the schema class of the field</p> <p>This property is valid for complex and ref field types only.</p> </li> <li>■ label: <p>Specifies the label of the field data type.</p> </li> </ul>
displayAdvice	Contains display advice for the field. This property is valid for a user interface element only.

Property	Description
permissibleValues	<p>Optional field. If this field is a permissible value list field, define the meta info for the permissible value by using the following options:</p> <ul style="list-style-type: none"> <li>■ type: <ul style="list-style-type: none"> <li>Specifies if the permissible value list is dynamic or static.</li> </ul> </li> <li>■ customAllowed: <ul style="list-style-type: none"> <li>Specifies if a custom value is allowed during user input in this field.</li> </ul> </li> <li>■ dependencies: <ul style="list-style-type: none"> <li>Specifies the list of fields that the current field depends on.</li> </ul> </li> </ul>
state	<p>Provides a structure for defining the state of a content construct, for example {@link LayoutSection}. The element state identifies the field paths in the client data context upon which that element state depends. For example, the callback facet result indicates that facet evaluation must be delegated to the server of the object. This evaluation may be dependent on data collected in the client data context. For example, for a unique machine name, the evaluation requires the proposed name entered by the user.</p>
dependencies	<p>Contains the set of field paths on which the server-side evaluation of the facets depends:</p> <ul style="list-style-type: none"> <li>■ facets: <ul style="list-style-type: none"> <li>Provides a higher level view of an {@link Constraint} collection and its current values. All rendering code should use this class to provide a common place to get the current state of the field.</li> <li>If a field is considered in need of server-side evaluation, its facets setting is callback.</li> <li>If a field is considered mandatory, its facets setting is mandatory.</li> </ul> </li> <li>■ isMultiValued: <ul style="list-style-type: none"> <li>Specifies if the field is a multi-value field, such as a list field.</li> <li>The state provides a higher level view of an {@link Constraint} collection and its current values. Rendering code should use this class to provide a common place to get the current state of the field.</li> </ul> </li> </ul>

### Example: curl Command

The following example command retrieves schema definition information for an Amazon type reservation.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/data-
service/schema/Infrastructure.Reservation.Cloud.Amazon/default
```

### Example: JSON Output

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

The schema definition in this example includes 8 extension fields that are supported for the Amazon EC2 type reservation.

```
{
  "fields": [
    {
      "id": "securityGroups",
      "label": "Security groups",
      "description": "The security groups",
      "dataType": {
        "type": "ref",
        "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
        "componentId": null,
        "classId": "AmazonSecurityGroup",
        "typeFilter": null,
        "label": "Amazon Security Group"
      },
      "displayAdvice": null,
      "permissibleValues": {
        "type": "dynamic",
        "customAllowed": false,
        "dependencies": [
          "computeResource"
        ]
      },
      "state": {
        "dependencies": [

        ],
        "facets": [
          {
            "type": "visible",
            "value": {
              "type": "not",
              "subClause": {
                "type": "expression",
                "operator": {
                  "type": "isDefined"
                },
                "leftOperand": {
                  "type": "path",
                  "path": "VPC"
                }
              }
            }
          }
        ],
        {
          "type": "mandatory",
          "value": {
            "type": "not",
            "subClause": {
              "type": "expression",
              "operator": {
                "type": "isDefined"
              }
            }
          }
        }
      ]
    }
  ]
}
```

```

        },
        "leftOperand": {
            "type": "path",
            "path": "VPC"
        }
    }
}
}
],
},
"isMultiValued": true
},
{
    "id": "locations",
    "label": "Locations",
    "description": "The locations",
    "dataType": {
        "type": "ref",
        "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
        "componentId": null,
        "classId": "AvailabilityZone",
        "typeFilter": null,
        "label": "Availability Zone"
    },
    "displayAdvice": null,
    "permissibleValues": {
        "type": "dynamic",
        "customAllowed": false,
        "dependencies": [
            "computeResource"
        ]
    },
    "state": {
        "dependencies": [

    ],
    "facets": [
        {
            "type": "visible",
            "value": {
                "type": "not",
                "subClause": {
                    "type": "expression",
                    "operator": {
                        "type": "isDefined"
                    },
                    "leftOperand": {
                        "type": "path",
                        "path": "VPC"
                    }
                }
            }
        }
    ],
    {
        "type": "mandatory",

```

```

        "value": {
            "type": "not",
            "subClause": {
                "type": "expression",
                "operator": {
                    "type": "isDefined"
                },
                "leftOperand": {
                    "type": "path",
                    "path": "VPC"
                }
            }
        }
    }
},
"isMultiValued": true
},
{
    "id": "loadBalancers",
    "label": "Load balancers",
    "description": "The load balancers",
    "dataType": {
        "type": "ref",
        "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
        "componentId": null,
        "classId": "ElasticLoadBalancer",
        "typeFilter": null,
        "label": "Elastic Load Balancer"
    },
    "displayAdvice": null,
    "permissibleValues": {
        "type": "dynamic",
        "customAllowed": false,
        "dependencies": [
            "locations",
            "computeResource"
        ]
    },
    "state": {
        "dependencies": [
        ],
    },
    "facets": [
        {
            "type": "visible",
            "value": {
                "type": "not",
                "subClause": {
                    "type": "expression",
                    "operator": {
                        "type": "isDefined"
                    },
                    "leftOperand": {
                        "type": "path",

```

```

        "path": "VPC"
      }
    }
  }
]
},
"isMultiValued": true
},
{
  "id": "specificKeyPairs",
  "label": "Specific key pair",
  "description": "The specific key pair",
  "dataType": {
    "type": "ref",
    "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
    "componentId": null,
    "classId": "KeyPair",
    "typeFilter": null,
    "label": "Key Pair"
  },
  "displayAdvice": null,
  "permissibleValues": {
    "type": "dynamic",
    "customAllowed": false,
    "dependencies": [
      "computeResource",
      "keyPairs"
    ]
  },
  "state": {
    "dependencies": [
    ],
  },
  "facets": [
    {
      "type": "visible",
      "value": {
        "type": "and",
        "subClauses": [
          {
            "type": "expression",
            "operator": {
              "type": "isDefined"
            },
            "leftOperand": {
              "type": "path",
              "path": "keyPairs"
            }
          },
          {
            "type": "expression",
            "operator": {
              "type": "equals"
            }
          }
        ]
      }
    }
  ]
}

```

```

        "leftOperand": {
            "type": "constant",
            "value": {
                "type": "string",
                "value": "Specific Key Pair"
            }
        },
        "rightOperand": {
            "type": "path",
            "path": "keyPairs"
        }
    }
]
},
{
    "type": "mandatory",
    "value": {
        "type": "and",
        "subClauses": [
            {
                "type": "expression",
                "operator": {
                    "type": "isDefined"
                },
                "leftOperand": {
                    "type": "path",
                    "path": "keyPairs"
                }
            },
            {
                "type": "expression",
                "operator": {
                    "type": "equals"
                },
                "leftOperand": {
                    "type": "constant",
                    "value": {
                        "type": "string",
                        "value": "Specific Key Pair"
                    }
                },
                "rightOperand": {
                    "type": "path",
                    "path": "keyPairs"
                }
            }
        ]
    }
}
],
    "isMultiValued": false
},
{

```

```

    "id": "computeResource",
    "label": "Compute Resource",
    "description": "The compute resource for the reservation",
    "dataType": {
      "type": "ref",
      "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
      "componentId": null,
      "classId": "ComputeResource",
      "typeFilter": "ReservationTypeId",
      "label": "Compute Resource"
    },
    "displayAdvice": null,
    "permissibleValues": {
      "type": "dynamic",
      "customAllowed": false,
      "dependencies": [

        ]
    },
    "state": {
      "dependencies": [

        ],
      "facets": [
        {
          "type": "mandatory",
          "value": {
            "type": "constantClause",
            "value": {
              "type": "boolean",
              "value": true
            }
          }
        }
      ]
    },
    "isMultiValued": false
  },
  {
    "id": "VPC",
    "label": "VPC",
    "dataType": {
      "type": "complex",
      "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
      "componentId": null,
      "classId": "Infrastructure.Reservation.Cloud.Amazon.VPC",
      "typeFilter": null,
      "label": "VPC",
      "schema": {
        "fields": [
          {
            "id": "VPCSubnets",
            "label": "Subnets",
            "description": "The subnets.",
            "dataType": {

```

```

    "type": "ref",
    "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
    "componentId": null,
    "classId": "Subnet",
    "typeFilter": null,
    "label": "Subnet"
  },
  "displayAdvice": null,
  "permissibleValues": {
    "type": "dynamic",
    "customAllowed": false,
    "dependencies": [

    ]
  },
  "state": {
    "dependencies": [

    ],
    "facets": [
      {
        "type": "minCardinality",
        "value": {
          "type": "constant",
          "value": {
            "type": "integer",
            "value": 1
          }
        }
      },
      {
        "type": "mandatory",
        "value": {
          "type": "constantClause",
          "value": {
            "type": "boolean",
            "value": true
          }
        }
      }
    ]
  },
  "isMultiValued": true
},
{
  "id": "VPCSecurityGroups",
  "label": "Security groups",
  "description": "The security groups",
  "dataType": {
    "type": "ref",
    "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
    "componentId": null,
    "classId": "AmazonSecurityGroup",
    "typeFilter": null,
    "label": "Amazon Security Group"
  }
}

```

```

    },
    "displayAdvice": null,
    "permissibleValues": {
      "type": "dynamic",
      "customAllowed": false,
      "dependencies": [

        ]
    },
    "state": {
      "dependencies": [

        ],
      "facets": [
        {
          "type": "minCardinality",
          "value": {
            "type": "constant",
            "value": {
              "type": "integer",
              "value": 1
            }
          }
        },
        {
          "type": "mandatory",
          "value": {
            "type": "constantClause",
            "value": {
              "type": "boolean",
              "value": true
            }
          }
        }
      ]
    },
    "isMultiValued": true
  },
  {
    "id": "VPCName",
    "label": "VPC Name",
    "description": "The virtual private cloud.",
    "dataType": {
      "type": "ref",
      "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
      "componentId": null,
      "classId": "VirtualPrivateCloud",
      "typeFilter": null,
      "label": "Virtual Private Cloud"
    },
    "displayAdvice": null,
    "state": {
      "dependencies": [

        ],

```

```

        "facets": [
            {
                "type": "readOnly",
                "value": {
                    "type": "constantClause",
                    "value": {
                        "type": "boolean",
                        "value": true
                    }
                }
            }
        ]
    },
    "isMultiValued": false
},
{
    "id": "VPCLoadBalancers",
    "label": "Load balancers",
    "description": "The load balancers.",
    "dataType": {
        "type": "ref",
        "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
        "componentId": null,
        "classId": "ElasticLoadBalancer",
        "typeFilter": null,
        "label": "Elastic Load Balancer"
    },
    "displayAdvice": null,
    "permissibleValues": {
        "type": "dynamic",
        "customAllowed": false,
        "dependencies": [
            "VPCSubnets"
        ]
    },
    "state": {
        "dependencies": [

        ],
        "facets": [

        ]
    },
    "isMultiValued": true
}
]
}
},
"displayAdvice": "DATA_TABLE",
"permissibleValues": {
    "type": "dynamic",
    "customAllowed": false,
    "dependencies": [
        "computeResource"
    ]
}
]

```

```

},
"state": {
  "dependencies": [
  ],
  "facets": [
    {
      "type": "visible",
      "value": {
        "type": "or",
        "subClauses": [
          {
            "type": "not",
            "subClause": {
              "type": "expression",
              "operator": {
                "type": "isDefined"
              },
              "leftOperand": {
                "type": "path",
                "path": "locations"
              }
            }
          },
          {
            "type": "not",
            "subClause": {
              "type": "expression",
              "operator": {
                "type": "isDefined"
              },
              "leftOperand": {
                "type": "path",
                "path": "securityGroups"
              }
            }
          }
        ]
      }
    },
    {
      "type": "mandatory",
      "value": {
        "type": "or",
        "subClauses": [
          {
            "type": "not",
            "subClause": {
              "type": "expression",
              "operator": {
                "type": "isDefined"
              },
              "leftOperand": {
                "type": "path",
                "path": "locations"
              }
            }
          }
        ]
      }
    }
  ]
}

```

```

        }
    },
    {
        "type": "not",
        "subClause": {
            "type": "expression",
            "operator": {
                "type": "isDefined"
            },
            "leftOperand": {
                "type": "path",
                "path": "securityGroups"
            }
        }
    }
]
}
}
],
},
"isMultiValued": true
},
{
    "id": "machineQuota",
    "label": "Machine Quota",
    "description": "The machine quota for the reservation",
    "dataType": {
        "type": "primitive",
        "typeId": "INTEGER"
    },
    "displayAdvice": null,
    "state": {
        "dependencies": [

        ],
        "facets": [

        ]
    },
    "isMultiValued": false
},
{
    "id": "keyPairs",
    "label": "Key pair",
    "description": "The key pair",
    "dataType": {
        "type": "primitive",
        "typeId": "STRING"
    },
    "displayAdvice": null,
    "permissibleValues": {
        "type": "static",
        "customAllowed": false,
        "values": [

```

```

    {
      "underlyingValue": {
        "type": "string",
        "value": "Not Specified"
      },
      "label": null
    },
    {
      "underlyingValue": {
        "type": "string",
        "value": "Per Provisioning Group"
      },
      "label": null
    },
    {
      "underlyingValue": {
        "type": "string",
        "value": "Per Machine"
      },
      "label": null
    },
    {
      "underlyingValue": {
        "type": "string",
        "value": "Specific Key Pair"
      },
      "label": null
    }
  ]
},
"state": {
  "dependencies": [
  ],
  "facets": [
    {
      "type": "mandatory",
      "value": {
        "type": "constantClause",
        "value": {
          "type": "boolean",
          "value": true
        }
      }
    }
  ]
},
"isMultiValued": false
}
]

```

### Display a Schema Definition for a vCloud Reservation

You can use the vRealize Automation REST API reservation service to display a schema definition for a specific reservation type, for example a vCloud reservation.

## Prerequisites

- Log in to vRealize Automation as a **fabric group administrator**.
- Verify that the host name and fully qualified domain name of the vRealize Automation instance are available.
- If you are not using the API Explorer, verify that you have a valid HTTP bearer token that matches your login credentials. See [Chapter 2 REST API Authentication](#).
- Obtain the schema class ID of the reservation type to create. See [Display a List of Supported Reservation Types](#).

## Procedure

- ◆ Display a schema definition for a specific vCloud Air reservation.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/data-
service/schema/Infrastructure.Reservation.Cloud.vCloudAir/default
```

The schema definition in this example includes 6 extension fields that are supported for the vCloud Air type reservation.

```
{
  "fields": [
    {
      "id": "reservationNetworks",
      "label": "Network",
      "dataType": {
        "type": "complex",
        "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
        "componentId": null,
        "classId": "Infrastructure.Reservation.Network",
        "typeFilter": null,
        "label": "Network",
        "schema": {
          "fields": [
            {
              "id": "networkPath",
              "label": "Network Path",
              "description": "Network path of the reservation",
              "dataType": {
                "type": "ref",
                "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
                "componentId": null,
                "classId": "Network",
                "typeFilter": null,
                "label": "Network"
              },
            },
            "displayAdvice": null,
            "state": {
              "dependencies": [
```

```

    ],
    "facets": [
      {
        "type": "mandatory",
        "value": {
          "type": "constantClause",
          "value": {
            "type": "boolean",
            "value": true
          }
        }
      }
    ]
  },
  "isMultiValued": false
},
{
  "id": "networkProfile",
  "label": "Network Profile",
  "description": "The Network Profile",
  "dataType": {
    "type": "ref",
    "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
    "componentId": null,
    "classId": "NetworkProfile",
    "typeFilter": null,
    "label": "Network Profile"
  },
  "displayAdvice": null,
  "permissibleValues": {
    "type": "dynamic",
    "customAllowed": false,
    "dependencies": [

    ]
  },
  "state": {
    "dependencies": [

    ],
    "facets": [

    ]
  },
  "isMultiValued": false
}
]
}
},
"displayAdvice": "DATA_TABLE",
"permissibleValues": {
  "type": "dynamic",
  "customAllowed": false,
  "dependencies": [

```

```

        "computeResource"
    ]
},
"state": {
    "dependencies": [

    ],
    "facets": [
        {
            "type": "mandatory",
            "value": {
                "type": "constantClause",
                "value": {
                    "type": "boolean",
                    "value": true
                }
            }
        }
    ]
},
"isMultiValued": true
},
{
    "id": "allocationModel",
    "label": "Allocation Model",
    "description": "The allocation model for the reservation",
    "dataType": {
        "type": "primitive",
        "typeId": "INTEGER"
    },
    "displayAdvice": null,
    "state": {
        "dependencies": [

        ],
        "facets": [
            {
                "type": "readOnly",
                "value": {
                    "type": "constantClause",
                    "value": {
                        "type": "boolean",
                        "value": true
                    }
                }
            }
        ]
    },
    "isMultiValued": false
},
{
    "id": "reservationMemory",
    "label": "Memory",
    "dataType": {
        "type": "complex",

```

```

"componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
"componentId": null,
"classId": "Infrastructure.Reservation.Memory",
"typeFilter": null,
"label": "Memory",
"schema": {
  "fields": [
    {
      "id": "computeResourceMemoryTotalSizeMB",
      "label": "Physical Memory (MB)",
      "description": "The physical capacity (MB) for the memory",
      "dataType": {
        "type": "primitive",
        "typeId": "INTEGER"
      },
      "displayAdvice": null,
      "state": {
        "dependencies": [

        ],
        "facets": [
          {
            "type": "readOnly",
            "value": {
              "type": "constantClause",
              "value": {
                "type": "boolean",
                "value": true
              }
            }
          }
        ]
      },
      "isMultiValued": false
    },
    {
      "id": "memoryReservedSizeMb",
      "label": "Memory Reservation (MB)",
      "description": "The reserved capacity (MB) for the memory",
      "dataType": {
        "type": "primitive",
        "typeId": "INTEGER"
      },
      "displayAdvice": null,
      "state": {
        "dependencies": [

        ],
        "facets": [

        ]
      },
      "isMultiValued": false
    }
  ]
}

```

```

    }
  },
  "displayAdvice": "DATA_TABLE",
  "state": {
    "dependencies": [

    ],
    "facets": [

    ]
  },
  "isMultiValued": false
},
{
  "id": "computeResource",
  "label": "Compute Resource",
  "description": "The compute resource for the reservation",
  "dataType": {
    "type": "ref",
    "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
    "componentId": null,
    "classId": "ComputeResource",
    "typeFilter": "ReservationTypeId",
    "label": "Compute Resource"
  },
  "displayAdvice": null,
  "permissibleValues": {
    "type": "dynamic",
    "customAllowed": false,
    "dependencies": [

    ]
  },
  "state": {
    "dependencies": [

    ],
    "facets": [
      {
        "type": "mandatory",
        "value": {
          "type": "constantClause",
          "value": {
            "type": "boolean",
            "value": true
          }
        }
      }
    ]
  },
  "isMultiValued": false
},
{
  "id": "machineQuota",
  "label": "Machine Quota",

```

```

    "description": "The machine quota for the reservation",
    "dataType": {
      "type": "primitive",
      "typeId": "INTEGER"
    },
    "displayAdvice": null,
    "state": {
      "dependencies": [

      ],
      "facets": [

      ]
    },
    "isMultiValued": false
  },
  {
    "id": "reservationStorages",
    "label": "Storage",
    "dataType": {
      "type": "complex",
      "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
      "componentId": null,
      "classId": "Infrastructure.Reservation.Storage",
      "typeFilter": null,
      "label": "Storage",
      "schema": {
        "fields": [
          {
            "id": "storagePath",
            "label": "Storage Path",
            "description": "The storage path of the storage",
            "dataType": {
              "type": "ref",
              "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
              "componentId": null,
              "classId": "Storage",
              "typeFilter": null,
              "label": "Storage Path"
            },
            "displayAdvice": null,
            "state": {
              "dependencies": [

              ],
              "facets": [
                {
                  "type": "mandatory",
                  "value": {
                    "type": "constantClause",
                    "value": {
                      "type": "boolean",
                      "value": true
                    }
                  }
                }
              ]
            }
          }
        ]
      }
    }
  }
}

```

```

    }
  ]
},
"isMultiValued": false
},
{
  "id": "storageReservationPriority",
  "label": "Priority",
  "description": "The reservation priority for the storage",
  "dataType": {
    "type": "primitive",
    "typeId": "INTEGER"
  },
  "displayAdvice": null,
  "state": {
    "dependencies": [

    ],
    "facets": [
      {
        "type": "mandatory",
        "value": {
          "type": "constantClause",
          "value": {
            "type": "boolean",
            "value": true
          }
        }
      }
    ]
  },
  "isMultiValued": false
},
{
  "id": "computeResourceStorageTotalSizeGB",
  "label": "Total (GB)",
  "description": "The total physical capacity (GB) for the storage",
  "dataType": {
    "type": "primitive",
    "typeId": "INTEGER"
  },
  "displayAdvice": null,
  "state": {
    "dependencies": [

    ],
    "facets": [
      {
        "type": "readOnly",
        "value": {
          "type": "constantClause",
          "value": {
            "type": "boolean",
            "value": true
          }
        }
      }
    ]
  }
}

```

```

        }
    }
]
},
"isMultiValued": false
},
{
    "id": "storageReservedSizeGB",
    "label": "This reservation reserved (GB)",
    "description": "The reserved capacity size (GB) for the storage",
    "dataType": {
        "type": "primitive",
        "typeId": "INTEGER"
    },
    "displayAdvice": null,
    "state": {
        "dependencies": [

        ],
        "facets": [

        ]
    },
    "isMultiValued": false
},
{
    "id": "storageEnabled",
    "label": "Enabled",
    "description": "Whether the storage is enabled to reserve",
    "dataType": {
        "type": "primitive",
        "typeId": "BOOLEAN"
    },
    "displayAdvice": null,
    "state": {
        "dependencies": [

        ],
        "facets": [
            {
                "type": "mandatory",
                "value": {
                    "type": "constantClause",
                    "value": {
                        "type": "boolean",
                        "value": true
                    }
                }
            }
        ]
    },
    "isMultiValued": false
},
{
    "id": "computeResourceStorageFreeSizeGB",

```

```

        "label": "Free (GB)",
        "description": "The free capacity (GB) for the storage",
        "dataType": {
            "type": "primitive",
            "typeId": "INTEGER"
        },
        "displayAdvice": null,
        "state": {
            "dependencies": [

                ],
            "facets": [
                {
                    "type": "readOnly",
                    "value": {
                        "type": "constantClause",
                        "value": {
                            "type": "boolean",
                            "value": true
                        }
                    }
                }
            ]
        },
        "isMultiValued": false
    }
]
},
"displayAdvice": "DATA_TABLE",
"permissibleValues": {
    "type": "dynamic",
    "customAllowed": false,
    "dependencies": [
        "computeResource"
    ]
},
"state": {
    "dependencies": [

        ],
    "facets": [
        {
            "type": "mandatory",
            "value": {
                "type": "constantClause",
                "value": {
                    "type": "boolean",
                    "value": true
                }
            }
        }
    ]
}
},

```

```

    "isMultiValued": true
  }
]
}

```

## Syntax for Displaying a Schema Definition for a vCloud Reservation

You can use the REST API reservation service to display a schema definition for a specific vRealize Automation reservation type, for example a vCloud reservation.

### Overview

Some vRealize Automation reservation fields are common to all reservation types and some are type-specific. The list of type-specific fields is defined in a schema. You can call a data and schema service to get schema definition information. The data and schema service combines fetch data and fetch schema REST API calls.

**Table 3-10. Fields Common To All Reservation Types**

Parameter	Description	Parameter Type
Id	Specifies the reservation ID.	GUID
name	Specifies the reservation name.	String
reservationTypeId	Specifies the reservation type, for example Infrastructure.Reservation.Virtual.vSphere or Infrastructure.Reservation.Virtual.Amazon.	String
tenantId	Specifies the tenant ID that contains the reservation.	String
subTenantId	Specifies the subtenant ID that contains the reservation.	GUID
enabled	Specifies whether the reservation is enabled.	Boolean
priority	Specifies the priority of the reservation during VM provisioning.	Integer
reservationPolicyId	Specifies the reservation policy ID to bind to this reservation.	GUID
alertPolicy	Specifies the alert policy of the reservation. The detail schema of this field refers to the alert policy.	JSON
extensionData	Contains type-specific fields. The detail schema of this field is retrieved by the data and schema service.	JSON

The following table describes the vCloud reservation types field IDs that appear in the output schema definitions.

**Table 3-11. Extension Fields Supported in vCloud Reservations**

Field ID	Data Type	Type Class	Permissible Value	Depends on Field
reservationNetworks	Complex Type	Infrastructure.Reservation.Network	Yes	computeResource
allocationModel	Integer	NA	No	NA
reservationMemory	Complex Type	Infrastructure.Reservation.Memory	No	NA
computeResource	Entity Reference	ComputeResource	Yes	NA
machineQuota	Integer	NA	No	NA
reservationStorages	Complex Type	Infrastructure.Reservation.Storage	Yes	computeResource

**Note** The information in the table is subject to change. Call the data and schema service to retrieve the latest field information.

### Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	https://\$host/reservation-service/api/data-service/schema/\$schemaclassid/default
Method	Get
\$host	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
\$token	Specifies a valid HTTP bearer token with necessary credentials.
\$schemaclassid	Specifies the schema class of the reservation type. The schema class ID for a vCloud reservation is Infrastructure.Reservation.Cloud.vCloud. Each supported reservation type contains specific fields. The supported fields are defined in the schema. For details, see the reservation service schema definitions in the <i>REST API Reference</i> in the vRealize Automation documentation center.

### Output

The command output contains property names and values based on the command input parameters.

Each field contains an array of data rows. Each data row represents one of the fields defined in the schema.

Property	Description
Id	Specifies the unique identifier of this resource.
label	Specifies the field label.

Property	Description
<p>dataType</p>	<p>Specifies the dataType field value:</p> <ul style="list-style-type: none"> <li>■ type: Specifies the field value type: <ul style="list-style-type: none"> <li>■ Self refers to the object that was returned or requested.</li> <li>■ First, Previous, Next, and Last refer to corresponding pages of a pageable list.</li> <li>■ Specifies the application or service that determines the other names.</li> </ul> </li> <li>■ componentTypeId: <p>Specifies the type ID of the component.</p> </li> <li>■ component: <p>Specifies the unique identifier of the component.</p> </li> <li>■ classId: <p>Specifies the schema class of the field</p> <p>This property is valid for complex and ref field types only.</p> </li> <li>■ label: <p>Specifies the label of the field data type.</p> </li> </ul>
<p>displayAdvice</p>	<p>Contains display advice for the field. This property is valid for a user interface element only.</p>
<p>permissibleValues</p>	<p>Optional field. If this field is a permissible value list field, define the meta info for the permissible value by using the following options:</p> <ul style="list-style-type: none"> <li>■ type: <p>Specifies if the permissible value list is dynamic or static.</p> </li> <li>■ customAllowed: <p>Specifies if a custom value is allowed during user input in this field.</p> </li> <li>■ dependencies: <p>Specifies the list of fields that the current field depends on.</p> </li> </ul>
<p>state</p>	<p>Provides a structure for defining the state of a content construct, for example <code>{@link LayoutSection}</code>. The element state identifies the field paths in the client data context upon which that element state depends. For example, the <code>callback</code> facet result indicates that facet evaluation must be delegated to the server of the object. This evaluation may be dependent on data collected in the client data context. For example, for a unique machine name, the evaluation requires the proposed name entered by the user.</p>
<p>dependencies</p>	<p>Contains the set of field paths on which the server-side evaluation of the facets depends:</p> <ul style="list-style-type: none"> <li>■ facets: <p>Provides a higher level view of an <code>{@link Constraint}</code> collection and its current values. All rendering code should use this class to provide a common place to get the current state of the field.</p> <p>If a field is considered in need of server-side evaluation, its <code>facets</code> setting is <code>callback</code>.</p> <p>If a field is considered mandatory, its <code>facets</code> setting is <code>mandatory</code>.</p> </li> <li>■ isMultiValued: <p>Specifies if the field is a multi-value field, such as a list field.</p> <p>The state provides a higher level view of an <code>{@link Constraint}</code> collection and its current values. Rendering code should use this class to provide a common place to get the current state of the field.</p> </li> </ul>

**Example: curl Command**

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/data-
service/schema/Infrastructure.Reservation.Cloud.vCloud/default
```

**Example: JSON Output**

The schema definition in this example includes 6 extension fields that are supported for the vCloud type reservation.

```
{
  "fields": [
    {
      "id": "reservationNetworks",
      "label": "Network",
      "dataType": {
        "type": "complex",
        "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
        "componentId": null,
        "classId": "Infrastructure.Reservation.Network",
        "typeFilter": null,
        "label": "Network",
        "schema": {
          "fields": [
            {
              "id": "networkPath",
              "label": "Network Path",
              "description": "Network path of the reservation",
              "dataType": {
                "type": "ref",
                "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
                "componentId": null,
                "classId": "Network",
                "typeFilter": null,
                "label": "Network"
              },
              "displayAdvice": null,
              "state": {
                "dependencies": [
                  ],
                  "facets": [
                    {
                      "type": "mandatory",
                      "value": {
                        "type": "constantClause",
                        "value": {
                          "type": "boolean",
                          "value": true
                        }
                      }
                    }
                  ]
                }
              }
            }
          ]
        }
      }
    }
  ]
}
```

```

        ]
    },
    "isMultiValued": false
},
{
    "id": "networkProfile",
    "label": "Network Profile",
    "description": "The Network Profile",
    "dataType": {
        "type": "ref",
        "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
        "componentId": null,
        "classId": "NetworkProfile",
        "typeFilter": null,
        "label": "Network Profile"
    },
    "displayAdvice": null,
    "permissibleValues": {
        "type": "dynamic",
        "customAllowed": false,
        "dependencies": [

            ]
    },
    "state": {
        "dependencies": [

            ],
        "facets": [

            ]
    },
    "isMultiValued": false
}
]
}
},
"displayAdvice": "DATA_TABLE",
"permissibleValues": {
    "type": "dynamic",
    "customAllowed": false,
    "dependencies": [
        "computeResource"
    ]
},
"state": {
    "dependencies": [

    ],
    "facets": [
        {
            "type": "mandatory",
            "value": {
                "type": "constantClause",
                "value": {

```

```

        "type": "boolean",
        "value": true
      }
    }
  ]
},
"isMultiValued": true
},
{
  "id": "allocationModel",
  "label": "Allocation Model",
  "description": "The allocation model for the reservation",
  "dataType": {
    "type": "primitive",
    "typeId": "INTEGER"
  },
  "displayAdvice": null,
  "state": {
    "dependencies": [
      ],
    "facets": [
      {
        "type": "readOnly",
        "value": {
          "type": "constantClause",
          "value": {
            "type": "boolean",
            "value": true
          }
        }
      }
    ]
  },
  "isMultiValued": false
},
{
  "id": "reservationMemory",
  "label": "Memory",
  "dataType": {
    "type": "complex",
    "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
    "componentId": null,
    "classId": "Infrastructure.Reservation.Memory",
    "typeFilter": null,
    "label": "Memory",
    "schema": {
      "fields": [
        {
          "id": "computeResourceMemoryTotalSizeMB",
          "label": "Physical Memory (MB)",
          "description": "The physical capacity (MB) for the memory",
          "dataType": {
            "type": "primitive",

```

```

        "typeId": "INTEGER"
    },
    "displayAdvice": null,
    "state": {
        "dependencies": [

        ],
        "facets": [
            {
                "type": "readOnly",
                "value": {
                    "type": "constantClause",
                    "value": {
                        "type": "boolean",
                        "value": true
                    }
                }
            }
        ]
    },
    "isMultiValued": false
},
{
    "id": "memoryReservedSizeMb",
    "label": "Memory Reservation (MB)",
    "description": "The reserved capacity (MB) for the memory",
    "dataType": {
        "type": "primitive",
        "typeId": "INTEGER"
    },
    "displayAdvice": null,
    "state": {
        "dependencies": [

        ],
        "facets": [

        ]
    },
    "isMultiValued": false
}
]
},
"displayAdvice": "DATA_TABLE",
"state": {
    "dependencies": [

    ],
    "facets": [

    ]
},
"isMultiValued": false
},

```

```

{
  "id": "computeResource",
  "label": "Compute Resource",
  "description": "The compute resource for the reservation",
  "dataType": {
    "type": "ref",
    "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
    "componentId": null,
    "classId": "ComputeResource",
    "typeFilter": "ReservationTypeId",
    "label": "Compute Resource"
  },
  "displayAdvice": null,
  "permissibleValues": {
    "type": "dynamic",
    "customAllowed": false,
    "dependencies": [

    ]
  },
  "state": {
    "dependencies": [

    ],
    "facets": [
      {
        "type": "mandatory",
        "value": {
          "type": "constantClause",
          "value": {
            "type": "boolean",
            "value": true
          }
        }
      }
    ]
  },
  "isMultiValued": false
},
{
  "id": "machineQuota",
  "label": "Machine Quota",
  "description": "The machine quota for the reservation",
  "dataType": {
    "type": "primitive",
    "typeId": "INTEGER"
  },
  "displayAdvice": null,
  "state": {
    "dependencies": [

    ],
    "facets": [

    ]
  }
}

```

```

    },
    "isMultiValued": false
  },
  {
    "id": "reservationStorages",
    "label": "Storage",
    "dataType": {
      "type": "complex",
      "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
      "componentId": null,
      "classId": "Infrastructure.Reservation.Storage",
      "typeFilter": null,
      "label": "Storage",
      "schema": {
        "fields": [
          {
            "id": "storagePath",
            "label": "Storage Path",
            "description": "The storage path of the storage",
            "dataType": {
              "type": "ref",
              "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
              "componentId": null,
              "classId": "Storage",
              "typeFilter": null,
              "label": "Storage Path"
            },
            "displayAdvice": null,
            "state": {
              "dependencies": [
                ],
              "facets": [
                {
                  "type": "mandatory",
                  "value": {
                    "type": "constantClause",
                    "value": {
                      "type": "boolean",
                      "value": true
                    }
                  }
                }
              ]
            },
            "isMultiValued": false
          },
          {
            "id": "storageReservationPriority",
            "label": "Priority",
            "description": "The reservation priority for the storage",
            "dataType": {
              "type": "primitive",
              "typeId": "INTEGER"
            },
          },

```

```

    "displayAdvice": null,
    "state": {
      "dependencies": [
        ],
      "facets": [
        {
          "type": "mandatory",
          "value": {
            "type": "constantClause",
            "value": {
              "type": "boolean",
              "value": true
            }
          }
        }
      ]
    },
    "isMultiValued": false
  },
  {
    "id": "computeResourceStorageTotalSizeGB",
    "label": "Total (GB)",
    "description": "The total physical capacity (GB) for the storage",
    "dataType": {
      "type": "primitive",
      "typeId": "INTEGER"
    },
    "displayAdvice": null,
    "state": {
      "dependencies": [
        ],
      "facets": [
        {
          "type": "readOnly",
          "value": {
            "type": "constantClause",
            "value": {
              "type": "boolean",
              "value": true
            }
          }
        }
      ]
    },
    "isMultiValued": false
  },
  {
    "id": "storageReservedSizeGB",
    "label": "This reservation reserved (GB)",
    "description": "The reserved capacity size (GB) for the storage",
    "dataType": {
      "type": "primitive",
      "typeId": "INTEGER"
    }
  }

```

```

    },
    "displayAdvice": null,
    "state": {
      "dependencies": [

        ],
        "facets": [

          ]
        ],
      "isMultiValued": false
    },
    {
      "id": "storageEnabled",
      "label": "Enabled",
      "description": "Whether the storage is enabled to reserve",
      "dataType": {
        "type": "primitive",
        "typeId": "BOOLEAN"
      },
      "displayAdvice": null,
      "state": {
        "dependencies": [

          ],
          "facets": [
            {
              "type": "mandatory",
              "value": {
                "type": "constantClause",
                "value": {
                  "type": "boolean",
                  "value": true
                }
              }
            }
          ]
        ],
        "isMultiValued": false
      },
      {
        "id": "computeResourceStorageFreeSizeGB",
        "label": "Free (GB)",
        "description": "The free capacity (GB) for the storage",
        "dataType": {
          "type": "primitive",
          "typeId": "INTEGER"
        },
        "displayAdvice": null,
        "state": {
          "dependencies": [

            ],
            "facets": [
              {

```

```

        "type": "readOnly",
        "value": {
            "type": "constantClause",
            "value": {
                "type": "boolean",
                "value": true
            }
        }
    }
}
],
},
"isMultiValued": false
}
]
},
"displayAdvice": "DATA_TABLE",
"permissibleValues": {
    "type": "dynamic",
    "customAllowed": false,
    "dependencies": [
        "computeResource"
    ]
},
"state": {
    "dependencies": [
    ],
    "facets": [
        {
            "type": "mandatory",
            "value": {
                "type": "constantClause",
                "value": {
                    "type": "boolean",
                    "value": true
                }
            }
        }
    ]
},
"isMultiValued": true
}
]
}

```

## Get the Business Group ID for a Reservation

You can use REST API reservation service to get the business group ID for a vRealize Automation reservation. The business group is also referred to as the subtenant in the API. When you create a reservation, you must supply the business group ID, also referred to as the subtenant ID, in the REST command line. Use this procedure to obtain the subTenantId value.

## Prerequisites

- Log in to vRealize Automation as a **fabric group administrator**.
- Verify that the host name and fully qualified domain name of the vRealize Automation instance are available.
- If you are not using the API Explorer, verify that you have a valid HTTP bearer token that matches your login credentials. See [Chapter 2 REST API Authentication](#).

## Procedure

- ◆ Get business group ID for a vRealize Automation reservation with the reservation service.

```
insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/identity/api/tenants/qe/subtenants
```

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

```
{
  "links": [],
  "content": [{
    "@type": "Subtenant",
    "id": "7d7dbb19-d2dc-44a3-9fc2-7435552c8a05",
    "name": "Development",
    "description": " Development ",
    "subtenantRoles": null,
    "extensionData": {
      "entries": [{
        "key": "iaas-manager-emails",
        "value": {
          "type": "string",
          "value": "user1@mycompany.com"
        }
      }
    ]
  },
  "tenant": "qe"
},
{
  "@type": "Subtenant",
  "id": "ade5b8d3-decf-405e-bd0b-297f976ef721",
  "name": "Finance",
  "description": "Finance",
  "subtenantRoles": null,
  "extensionData": {
    "entries": [{
      "key": "iaas-manager-emails",
      "value": {
        "type": "string",
        "value": " user1@mycompany.com "
      }
    }
  ]
},
  "tenant": "qe"
```

```

    },
    {
      "@type": "Subtenant",
      "id": "ef58f604-528d-4441-a219-4725bead629b",
      "name": "Test Sub Tenant",
      "description": "VMPS",
      "subtenantRoles": null,
      "extensionData": {
        "entries": []
      },
    },
    "tenant": "qe"
  },
  {
    "@type": "Subtenant",
    "id": "92926c91-37de-4647-9aee-70b8d557ce8d",
    "name": "Quality Engineering",
    "description": "created by demo content",
    "subtenantRoles": null,
    "extensionData": {
      "entries": [{
        "key": "iaas-manager-emails",
        "value": {
          "type": "string",
          "value": " user1@mycompany.com "
        }
      }
    ]
  },
  "tenant": "qe"
}],
"metadata": {
  "size": 20,
  "totalElements": 4,
  "totalPages": 1,
  "number": 1,
  "offset": 0
}
}

```

### Syntax for Getting the Business Group ID for a Reservation

You can use the REST API identity service to get the business group ID for a vRealize Automation reservation. The business group is also referred to as the subtenant in the API. When you create a reservation, you must supply the business group ID, also referred to as the subtenant ID, in the REST command line. Use this procedure to obtain the subTenantId value.

#### Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	<code>https://\$host/identity/api/tenants/\$tenantId/subtenants</code>
Method	Get

Parameter	Description
<i>\$host</i>	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
<i>\$token</i>	Specifies a valid HTTP bearer token with necessary credentials.
<i>\$tenantId</i>	Specifies the ID of the tenant. Use to indicate the tenant ID to be queried. Each subtenant, or business group, must belong to a tenant.

## Output

The command output contains property names and values based on the command input parameters.

Property	Description
Links	Species an array of link objects, each of which contains the following parts:
rel	Specifies the name of the link. <ul style="list-style-type: none"> <li>▪ Self refers to the object that was returned or requested.</li> <li>▪ First, Previous, Next, and Last refer to corresponding pages of pageable lists.</li> <li>▪ Specifies the application or service determines the other names.</li> </ul>
href	Specifies the URL which produces the result.
Content	Specifies an array of data rows, each of which represents one of the tenant objects returned in a pageable list. Each tenant object contains the following information:
@type	Constants the ReservationType string.
Id	Specifies the unique reservation type identifier.
name	Specifies the reservation type name.
description	Specifies the reservation type description.
subtenantRoles	Specifies the business group roles.
extensionData	Specifies the extension data of the business group. For example, the email address of the vRealize Automation business group manager is user1@mycompany.com.
Metadata	Specifies the paging-related data.
Size	Specifies the maximum number of rows per page.
totalElements	Specifies the number of rows returned.
totalPages	Specifies the total number of pages of data available.
Number	Specifies the current page number.
Offset	Specifies the number of rows skipped.

**Example: curl Command**

The following example command retrieves all available business group, or subtenant, IDs.

```
insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/identity/api/tenants/qe/subtenants
```

**Example: JSON Output**

In this example, all available business group, or subtenant, IDs are displayed. For related information about the subtenant ID **ef58f604-528d-4441-a219-4725bead629b**, see [Create a Reservation](#).

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

```
{
  "links": [],
  "content": [{
    "@type": "Subtenant",
    "id": "7d7dbb19-d2dc-44a3-9fc2-7435552c8a05",
    "name": "Development",
    "description": " Development ",
    "subtenantRoles": null,
    "extensionData": {
      "entries": [{
        "key": "iaas-manager-emails",
        "value": {
          "type": "string",
          "value": "user1@mycompany.com"
        }
      }
    ]
  }],
  "tenant": "qe"
},
{
  "@type": "Subtenant",
  "id": "ade5b8d3-decf-405e-bd0b-297f976ef721",
  "name": "Finance",
  "description": "Finance",
  "subtenantRoles": null,
  "extensionData": {
    "entries": [{
      "key": "iaas-manager-emails",
      "value": {
        "type": "string",
        "value": " user1@mycompany.com "
      }
    }
  ]
},
  "tenant": "qe"
},
{
  "@type": "Subtenant",
  "id": "ef58f604-528d-4441-a219-4725bead629b",
```

```

    "name": "Test Sub Tenant",
    "description": "VMPS",
    "subtenantRoles": null,
    "extensionData": {
      "entries": []
    },
    "tenant": "qe"
  },
  {
    "@type": "Subtenant",
    "id": "92926c91-37de-4647-9aee-70b8d557ce8d",
    "name": "Quality Engineering",
    "description": "created by demo content",
    "subtenantRoles": null,
    "extensionData": {
      "entries": [{
        "key": "iaas-manager-emails",
        "value": {
          "type": "string",
          "value": " user1@mycompany.com "
        }
      }]
    },
    "tenant": "qe"
  }
],
"metadata": {
  "size": 20,
  "totalElements": 4,
  "totalPages": 1,
  "number": 1,
  "offset": 0
}
}

```

## Get a Compute Resource for the Reservation

You can use the REST API reservation service to obtain compute resources for vRealize Automation reservations.

### Prerequisites

- Log in to vRealize Automation as a **fabric group administrator**.
- Verify that the host name and fully qualified domain name of the vRealize Automation instance are available.
- If you are not using the API Explorer, verify that you have a valid HTTP bearer token that matches your login credentials. See [Chapter 2 REST API Authentication](#).

When you create a reservation, you must provide compute resource information that corresponds to the `computeResource` parameter.

For example, for a vSphere, Amazon EC2, or vCloud reservation type schema definition, the following `permissibleValues` field in the compute resource output indicates if the compute resource is available and if it has any dependencies.

```
"permissibleValues": {"type": "dynamic","customAllowed": false, "dependencies": []}
```

## Procedure

- ◆ Use the following command to get a compute resource.

Command to get a compute resource for vSphere reservation.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/data-
service/schema/Infrastructure.Reservation.Virtual.vSphere/default/computeResource/values -d "{}"
```

Command to get a compute resource for an Amazon EC2 reservation.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/data-
service/schema/Infrastructure.Reservation.Cloud.Amazon/default/computeResource/values -d "{}"
Example: curl Command for a vCloud reservation
```

Command to get a compute resource for a vCloud reservation.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/data-
service/schema/Infrastructure.Reservation.Cloud.vCloud/default/computeResource/values -d "{}"
```

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

JSON Output for a vSphere Reservation

```
{
  "values": [{
    "underlyingValue": {
      "type": "entityRef",
      "componentId": null,
      "classId": "ComputeResource",
      "id": "047e00f5-5424-4ed2-a751-4a334aeaff54",
      "label": "VC51-Cluster"
    },
    "label": "VC51-Cluster"
  },
  {
    "underlyingValue": {
      "type": "entityRef",
      "componentId": null,
      "classId": "ComputeResource",
```

```

    "id": "a4349488-9a56-4906-83a5-7d8b33c9d435",
    "label": "NSX61-RC-ManagementCluster"
  },
  "label": "NSX61-RC-ManagementCluster"
},
{
  "underlyingValue": {
    "type": "entityRef",
    "componentId": null,
    "classId": "ComputeResource",
    "id": "40b151ce-e409-4d2a-8dae-bb456139a660",
    "label": "NSX61-RC-ComputeClusterB"
  },
  "label": "NSX61-RC-ComputeClusterB"
},
{
  "underlyingValue": {
    "type": "entityRef",
    "componentId": null,
    "classId": "ComputeResource",
    "id": "cc254a84-95b8-434a-874d-bdfef8e8ad2c",
    "label": "NSX61-RC-ComputeClusterA"
  },
  "label": "NSX61-RC-ComputeClusterA"
}
]]
}

```

### JSON output for an Amazon EC2 Reservation

```

{
  "values": [
    {
      "underlyingValue": {
        "type": "entityRef",
        "componentId": null,
        "classId": "ComputeResource",
        "id": "fdfa4b95-9476-4c18-81c5-1c0e5cb1131f",
        "label": "EC2 841 Endpoint-us-west-1"
      },
      "label": "EC2 841 Endpoint-us-west-1"
    },
    {
      "underlyingValue": {
        "type": "entityRef",
        "componentId": null,
        "classId": "ComputeResource",
        "id": "4e362590-b634-4269-9da4-548260148fa3",
        "label": "EC2 841 Endpoint-us-west-2"
      },
      "label": "EC2 841 Endpoint-us-west-2"
    },
    {
      "underlyingValue": {
        "type": "entityRef",

```

```

    "componentId": null,
    "classId": "ComputeResource",
    "id": "9d1a3b5a-7162-4a5a-85b7-ec1b2824f554",
    "label": "EC2 841 Endpoint-us-east-1"
  },
  "label": "EC2 841 Endpoint-us-east-1"
}
]
}

```

### JSON output for a vCloud Reservation

```

{
  "values": [
    {
      "underlyingValue": {
        "type": "entityRef",
        "componentId": null,
        "classId": "ComputeResource",
        "id": "c527a0f5-b1ae-4b61-8145-ad9d5c434dc7",
        "label": "Engineering Allocation VDC"
      },
      "label": "Engineering Allocation VDC"
    }
  ]
}

```

### Syntax for Getting a Compute Resource for a Reservation

You can use the REST API reservation service to obtain a compute resource for a vRealize Automation reservation.

#### Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	<code>https://\$host/reservation-service/api/data-service/schema/\$schemaclassid/default/\$fieldid/values</code>
Method	Post
<i>\$host</i>	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
<i>\$token</i>	Specifies a valid HTTP bearer token with necessary credentials.

Parameter	Description
<i>\$schemaClassid</i>	<p>Specifies the schema class ID.</p> <p>For a vSphere reservation, specify <b>Infrastructure.Reservation.Virtual.vSphere</b> as the <i>\$schemaClassid</i> value.</p> <p>For an Amazon EC2 reservation, specify <b>Infrastructure.Reservation.Cloud.Amazon</b> as the the <i>\$schemaClassid</i> value.</p> <p>For a vCloud reservation, specify <b>Infrastructure.Reservation.Cloud.vCloud</b> as the the <i>\$schemaClassid</i> value.</p>
<i>\$fieldId</i>	<p>From the schema definition, specifies the <code>schemaClassid</code> of the compute resource field, which is <code>computeResource</code>.</p> <p>Enter <b>computeResource</b> for the <i>\$fieldId</i> value.</p>
HTTP body	<p>Because the dependencies entry for this permissible value field is an empty string, provide an empty JSON string "{}" in the HTTP body.</p>

## Output

The command output contains property names and values based on the command input parameters.

The `values` section contains an array of data rows, each of which represents one of the compute resource objects, returned in a pageable list. Each compute resource object contains the following information.

Property	Description
<code>underlyingValue</code>	<p>Contains a JSON string representing one permissible value of field.</p> <ul style="list-style-type: none"> <li>■ <code>type</code> <p>Specifies one of the following permissible value data types.</p> <ul style="list-style-type: none"> <li>■ <code>entityRef</code> - Indicates that the object references a vRealize Automation entity.</li> <li>■ <code>complexRef</code> - Indicates that the object is a user-defined complex structure, for example <code>struct</code> in C or <code>Pojo</code> in Java.</li> <li>■ <code>primary</code> - Indicates the entity type such as string, integer, and so on.</li> </ul> </li> <li>■ <code>componentId</code> <p>Specifies the component ID.</p> </li> <li>■ <code>classId</code> <p>Specifies the schema class ID of the current data type.</p> </li> <li>■ <code>id</code> <p>Specifies the unique compute resource identifier.</p> </li> </ul>
<code>label</code>	<p>Contains the compute resource label. This value matches the <code>underlyingValue.label</code>.</p>

**Example: curl Command for a vSphere reservation**

The following command retrieves a compute resource for a vSphere reservation.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/data-
service/schema/Infrastructure.Reservation.Virtual.vSphere/default/computeResource/values -d "{}"
```

**Example: curl Command for an Amazon EC2 reservation**

The following command retrieves a compute resource for an Amazon EC2 reservation.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/data-
service/schema/Infrastructure.Reservation.Cloud.Amazon/default/computeResource/values -d "{}"
```

**Example: curl Command for a vCloud reservation**

The following command retrieves a compute resource for a vCloud reservation.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/data-
service/schema/Infrastructure.Reservation.Cloud.vCloud/default/computeResource/values -d "{}"
```

**Example: JSON Output for a vSphere Reservation**

In this example, there are 4 available compute resources that you can use to create a vSphere reservation, for example cc254a84-95b8-434a-874d-bdfef8e8ad2c. Save a copy of the `underlyingValue` section of the compute resource that you want to an XML editor and use the section content later to create a reservation request.

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

```
{
  "values": [{
    "underlyingValue": {
      "type": "entityRef",
      "componentId": null,
      "classId": "ComputeResource",
      "id": "047e00f5-5424-4ed2-a751-4a334aeaff54",
      "label": "VC51-Cluster"
    },
    "label": "VC51-Cluster"
  },
  {
    "underlyingValue": {
      "type": "entityRef",
      "componentId": null,
      "classId": "ComputeResource",
```

```

    "id": "a4349488-9a56-4906-83a5-7d8b33c9d435",
    "label": "NSX61-RC-ManagementCluster"
  },
  "label": "NSX61-RC-ManagementCluster"
},
{
  "underlyingValue": {
    "type": "entityRef",
    "componentId": null,
    "classId": "ComputeResource",
    "id": "40b151ce-e409-4d2a-8dae-bb456139a660",
    "label": "NSX61-RC-ComputeClusterB"
  },
  "label": "NSX61-RC-ComputeClusterB"
},
{
  "underlyingValue": {
    "type": "entityRef",
    "componentId": null,
    "classId": "ComputeResource",
    "id": "cc254a84-95b8-434a-874d-bdfef8e8ad2c",
    "label": "NSX61-RC-ComputeClusterA"
  },
  "label": "NSX61-RC-ComputeClusterA"
}
}]
}

```

### Example: JSON Output for an Amazon Reservation

In this example, there are 3 available compute resources that you can use to create an Amazon EC2 reservation. Save a copy of the `underlyingValue` section of the compute resource that you want to an XML editor and use the section content later to create a reservation request.

```

{
  "values": [
    {
      "underlyingValue": {
        "type": "entityRef",
        "componentId": null,
        "classId": "ComputeResource",
        "id": "fdfa4b95-9476-4c18-81c5-1c0e5cb1131f",
        "label": "EC2 841 Endpoint-us-west-1"
      },
      "label": "EC2 841 Endpoint-us-west-1"
    },
    {
      "underlyingValue": {
        "type": "entityRef",
        "componentId": null,
        "classId": "ComputeResource",
        "id": "4e362590-b634-4269-9da4-548260148fa3",
        "label": "EC2 841 Endpoint-us-west-2"
      },
      "label": "EC2 841 Endpoint-us-west-2"
    }
  ]
}

```

```

    },
    {
      "underlyingValue": {
        "type": "entityRef",
        "componentId": null,
        "classId": "ComputeResource",
        "id": "9d1a3b5a-7162-4a5a-85b7-ec1b2824f554",
        "label": "EC2 841 Endpoint-us-east-1"
      },
      "label": "EC2 841 Endpoint-us-east-1"
    }
  ]
}

```

### Example: Output for a vCloud Reservation

In this example, there is 1 available compute resource that you can use to create a vCloud reservation. Save a copy of the `underlyingValue` section of the compute resource that you want to an XML editor and use the section content later to create a reservation request.

```

{
  "values": [
    {
      "underlyingValue": {
        "type": "entityRef",
        "componentId": null,
        "classId": "ComputeResource",
        "id": "c527a0f5-b1ae-4b61-8145-ad9d5c434dc7",
        "label": "Engineering Allocation VDC"
      },
      "label": "Engineering Allocation VDC"
    }
  ]
}

```

## Getting a Resources Schema by Reservation Type

You can use the vRealize Automation REST API to get a resources schema for any supported reservation type, including a vSphere, Amazon EC2, or vCloud reservation.

### Get Resources Schema for a vSphere Reservation

You can use the REST API reservation service to display information about available resources, such as storage and network information, for a vSphere reservation.

#### Prerequisites

- Log in to vRealize Automation as a **fabric group administrator**.
- Verify that the host name and fully qualified domain name of the vRealize Automation instance are available.
- Get the required compute resource ID. See [Get a Compute Resource for the Reservation](#).

**Procedure**

- ◆ Display information about available resources.

The following example command queries resource pool information for the compute resource cc254a84-95b8-434a-874d-bdfef8e8ad2c.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/data-service/schema/
Infrastructure.Reservation.Virtual.vSphere /default/ resourcePool /values -d "{
  "text": "",
  "dependencyValues": {
    "entries": [{
      "key": "computeResource",
      "value": {
        "type": "entityRef",
        "componentId": null,
        "classId": "ComputeResource",
        "id": " cc254a84-95b8-434a-874d-bdfef8e8ad2c "
      }
    }]
  }
}"
```

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

```
{
  "values": [{
    "underlyingValue": {
      "type": "entityRef",
      "componentId": null,
      "classId": "ResourcePools",
      "id": " 4e51fabcd19e8-4e79-b413-d52309b3bb62",
      "label": " CoreDev"
    },
    "label": " CoreDev"
  },
  {
    "underlyingValue": {
      "type": "entityRef",
      "componentId": null,
      "classId": "ResourcePools",
      "id": "1186b5cc-cdef-4afb-8653-0ad41a36c194",
      "label": "Documentation"
    },
    "label": "Documentation"
  },
  //Omit other resource pool list
  ]
}
```

## Syntax for Getting Resources Schema for a vSphere Reservation

You can use the REST API reservation service to display information about available resources for a vSphere reservation, such as storage and network information.

### Overview

This example illustrates how to get a permissible value list for the `resourcePool` field. You can use the generated output as input for creating or updating a vSphere reservation.

**Table 3-12. Extension Fields Supported in vSphere Reservations**

Field ID	Data Type	Type Class	Permissible Value	Depends on Field
reservationNetworks	Complex Type	reservationNetwork	Yes	computeResource
reservationVCNSTransportZone	Entity Reference	NetworkScopes	Yes	computeResource
reservationVCNSSecurityGroups	Entity Reference	SecurityGroups	Yes	computeResource
reservationMemory	Complex Type	reservationMemory	Yes	computeResource
computeResource	Entity Reference	ComputeResource	Yes	NA
machineQuota	Integer	N/A	No	NA
reservationStorages	Complex Type	reservationStorage	Yes	computeResource
resourcePool	Entity Reference	ResourcePools	Yes	computeResource
reservationVCNSRoutedGateways	Complex Type	reservationVCNSRoutedGateway	Yes	computeResource

**Note** The information in the table is subject to change. Call the data and schema service to retrieve the latest field information.

For related information, see [Syntax for Displaying a Schema Definition for a vSphere Reservation](#).

### Input

Use the supported input parameters to control the command output.

Input	Description
URL	<code>https://\$host/reservation-service/api/data-service/schema/\$schemaclassid/default/\$fieldid/values</code>
Method	Post
<i>\$host</i>	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
<i>\$token</i>	Specifies a valid HTTP bearer token with necessary credentials.

Input	Description
<i>\$schemaClassid</i>	Specifies the schema class ID.  This example illustrates how to use the resourcePool field of a vSphere reservation type as an example. The schema class ID of a vSphere reservation is Infrastructure.Reservation.Virtual.vSphere. For this example, the input value for <i>\$schemaClassid</i> is Infrastructure.Reservation.Virtual.vSphere.
<i>\$fieldId</i>	Specifies the field ID of the resource.  For example, the field ID for the resource pool is resourcePool. For this example, the input value for <i>\$fieldId</i> is resourcePool.
HTTP body	Contains information about dependencies.  Because the dependency of this permissible value field is computeResource, you must provide a dependency definition in the HTTP body.

## Output

The command output contains property names and values based on the command input parameters.

Property	Description
values	An array of data rows, each of which represents one of the resource pool objects returned in a pageable list. Each resource pool object contains an underlyingValue and label entry.
underlyingValue	JSON string representing one permissible value for a field: <ul style="list-style-type: none"> <li>■ type -- data type of entityRef, complexRef, or primary</li> <li>■ component ID -- componentID</li> <li>■ classId -- schema class ID of current data type</li> <li>■ id -- unique resource pool ID</li> <li>■ label -- resource pool label</li> </ul>
label	Specifies the resource pool label. This value matches the underlyingValue value.

## Example: curl Command

The following example command returns vSphere reservation storage information.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/data-service/schema/
Infrastructure.Reservation.Virtual.vSphere /default/ resourcePool /values -d "{
  "text": "",
  "dependencyValues": {
    "entries": [{
      "key": "computeResource",
      "value": {
        "type": "entityRef",
        "componentId": null,
        "classId": "ComputeResource",
        "id": " cc254a84-95b8-434a-874d-bdfef8e8ad2c "
```

```

    }
  }]
}
}”

```

### Example: JSON Output

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

In the following example output, the CoreDev resource pool is shown. Copy the output under `underlyingValue` section into an XML editor and use it as input to create or update a reservation. Note that other REST calls can be used such as `reservationNetworks` and `reservationStorages` to get other resources for the reservation.

```

{
  "values": [{
    "underlyingValue": {
      "type": "entityRef",
      "componentId": null,
      "classId": "ResourcePools",
      "id": " 4e51fabc-19e8-4e79-b413-d52309b3bb62",
      "label": " CoreDev"
    },
    "label": " CoreDev"
  },
  {
    "underlyingValue": {
      "type": "entityRef",
      "componentId": null,
      "classId": "ResourcePools",
      "id": "1186b5cc-cdef-4afb-8653-0ad41a36c194",
      "label": "Documentation"
    },
    "label": "Documentation"
  },
  //Omit other resource pool list
  ]
}

```

### Get Resources Schema for an Amazon EC2 Reservation

You can display resource schema, such as storage and network information, for an Amazon EC2 reservation by using the data and schema service.

#### Prerequisites

- Log in to vRealize Automation as a **fabric group administrator**.
- Verify that the host name and fully qualified domain name of the vRealize Automation instance are available.
- Get the required compute resource ID. See [Syntax for Getting a Compute Resource for a Reservation](#).

**Procedure**

- ◆ Display resource schema, such as storage and network information.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/data-
service/schema/Infrastructure.Reservation.Cloud.Amazon/default/securityGroups/values -d "
{
  "text": "",
  "dependencyValues": {
    "entries": [{
      "key": "computeResource",
      "value": {
        "type": "entityRef",
        "componentId": null,
        "classId": "ComputeResource",
        "id": "9d1a3b5a-7162-4a5a-85b7-ec1b2824f554"
      }
    }]
  }
}
```

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

```
{
  "values": [
    {
      "underlyingValue": {
        "type": "entityRef",
        "componentId": null,
        "classId": "AmazonSecurityGroup",
        "id": "9",
        "label": "test1"
      },
      "label": "test1"
    },
    {
      "underlyingValue": {
        "type": "entityRef",
        "componentId": null,
        "classId": "AmazonSecurityGroup",
        "id": "10",
        "label": "default"
      },
      "label": "default"
    }
  ]
}
```

## Get Resources Schema for an Amazon EC2 Reservation Syntax

You can display resource schema, such as storage and network information, for an Amazon EC2 reservation by using the data and schema service.

### Overview

This example illustrates how to get a permissible value list for the `securityGroups` field. You can use the generated output as input for creating or updating an Amazon EC2 reservation.

**Table 3-13. Extension Fields Supported in Amazon Reservations**

Field ID	Data Type	Type Class	Permissible Value	Depends on Field
<code>securityGroups</code>	Entity Reference	<code>AmazonSecurityGroup</code>	Yes	<code>computeResource</code>
<code>locations</code>	Entity Reference	<code>AvailabilityZone</code>	Yes	<code>computeResource</code>
<code>loadBalancers</code>	Entity Reference	<code>ElasticLoadBalancer</code>	Yes	<code>computeResource</code> and <code>locations</code>
<code>specificKeyPairs</code>	Entity Reference	<code>KeyPair</code>	Yes	<code>computeResource</code> and <code>keyPairs</code>
<code>computeResource</code>	Entity Reference	<code>ComputeResource</code>	Yes	NA
<code>VPC</code>	Complex Type	<code>Infrastructure.Reservation.Cloud.Amazon.VPC</code>	Yes	<code>computeResource</code>
<code>machineQuota</code>	Integer	NA	No	NA
<code>keyPairs</code>	String	<code>ResourcePools</code>	Yes	<code>computeResource</code>

**Note** The information in the table is subject to change. Call the data and schema service to retrieve the latest field information.

For related information, see [Syntax for Displaying a Schema Definition for an Amazon Reservation](#).

### Input

Use the supported input parameters to control the command output.

Parameter	Description
<code>URL</code>	<code>https://\$host/reservation-service/api/data-service/schema/\$schemaclassid/default/\$fieldid/values</code>
<code>Method</code>	Post
<code>\$host</code>	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
<code>\$token</code>	Specifies a valid HTTP bearer token with necessary credentials.

Parameter	Description
<i>\$schemaClassid</i>	Specifies the schema class ID.  This example illustrates how to use the <code>securityGroups</code> field of an Amazon EC2 reservation type as an example. The schema class ID of a Amazon EC2 reservation is <code>Infrastructure.Reservation.Cloud.Amazon</code> . For this example, the input value for <i>\$schemaClassid</i> is <code>Infrastructure.Reservation.Cloud.Amazon</code> .
<i>\$fieldId</i>	Specifies the field ID of the resource.  For example, the field ID for the resource pool is <code>securityGroups</code> . For this example, the input value for <i>\$fieldId</i> is <code>securityGroups</code> .
HTTP body	Contains information about dependencies.  Because the dependency of this permissible value field is <code>computeResource</code> , you must provide a dependency definition in the HTTP body.

## Output

The command output contains property names and values based on the command input parameters.

Property	Description
values	An array of data rows, each of which represents one of the security group objects returned in a pageable list. Each security group object contains an <code>underlyingValue</code> and <code>label</code> entry.
underlyingValue	JSON string representing one permissible value for a field: <ul style="list-style-type: none"> <li>▪ <code>type</code> -- data type of <code>entityRef</code>, <code>complexRef</code>, or <code>primary</code></li> <li>▪ <code>componentID</code> -- <code>componentID</code></li> <li>▪ <code>classId</code> -- schema class ID of current data type</li> <li>▪ <code>id</code> -- unique security group ID</li> <li>▪ <code>label</code> -- security group label</li> </ul>
label	Specifies the security groups label. This value matches the <code>underlyingValue</code> value.

## Example: curl Command

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/data-
service/schema/Infrastructure.Reservation.Cloud.Amazon/default/securityGroups/values -d "
{
  "text": "",
  "dependencyValues": {
    "entries": [{
      "key": "computeResource",
      "value": {
        "type": "entityRef",
        "componentId": null,
        "classId": "ComputeResource",
        "id": "9d1a3b5a-7162-4a5a-85b7-ec1b2824f554"
      }
    }
  ]
}
```

```

    }]
  }
}
"

```

### Example: JSON Output

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

Copy the output from an `underlyingValue` section into an XML editor and use it as input to create or update a reservation.

```

{
  "values": [
    {
      "underlyingValue": {
        "type": "entityRef",
        "componentId": null,
        "classId": "AmazonSecurityGroup",
        "id": "9",
        "label": "test1"
      },
      "label": "test1"
    },
    {
      "underlyingValue": {
        "type": "entityRef",
        "componentId": null,
        "classId": "AmazonSecurityGroup",
        "id": "10",
        "label": "default"
      },
      "label": "default"
    }
  ]
}

```

### Get Resources Schema for a vCloud Reservation

You can display information about available resources, such as storage and network information, for a vCloud reservation by using the reservation service.

#### Prerequisites

- Log in to vRealize Automation as a **fabric group administrator**.
- Verify that the host name and fully qualified domain name of the vRealize Automation instance are available.
- Get the required compute resource ID. See [Syntax for Getting a Compute Resource for a Reservation](#).

**Procedure**

- ◆ Display information about available resources, such as storage and network information.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/data-
service/schema/Infrastructure.Reservation.Cloud.vCloud/default/reservationStorages/values -d "
```

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

```
{
  "values": [
    {
      "underlyingValue": {
        "type": "complex",
        "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
        "componentId": null,
        "classId": "Infrastructure.Reservation.Storage",
        "typeFilter": null,
        "values": {
          "entries": [
            {
              "key": "computeResourceStorageTotalSizeGB",
              "value": {
                "type": "integer",
                "value": 1000
              }
            },
            {
              "key": "storagePath",
              "value": {
                "type": "entityRef",
                "componentId": null,
                "classId": "Storage",
                "id": "f4df029b-d475-4f85-ab42-05bddde3f667",
                "label": "Low Performance Storage"
              }
            },
            {
              "key": "computeResourceStorageFreeSizeGB",
              "value": {
                "type": "integer",
                "value": 954
              }
            }
          ]
        }
      },
      "label": "Low Performance Storage"
    },
    {
      "underlyingValue": {
        "type": "complex",
```

```

"componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
"componentId": null,
"classId": "Infrastructure.Reservation.Storage",
"typeFilter": null,
"values": {
  "entries": [
    {
      "key": "computeResourceStorageTotalSizeGB",
      "value": {
        "type": "integer",
        "value": 1000
      }
    },
    {
      "key": "storagePath",
      "value": {
        "type": "entityRef",
        "componentId": null,
        "classId": "Storage",
        "id": "e655aa78-e5fb-4722-9e8a-0cd4139248cf",
        "label": "High Performance Storage"
      }
    },
    {
      "key": "computeResourceStorageFreeSizeGB",
      "value": {
        "type": "integer",
        "value": 691
      }
    }
  ]
},
"label": "High Performance Storage"
}
]
}

```

### Get Resources Schema for a vCloud Reservation Syntax

You can display information about available resources, such as storage and network information, for a vCloud reservation by using the reservation service.

#### Overview

This example illustrates how to get a permissible value list for the `reservationStorages` field. Use the generated output as input for creating or updating a vCloud reservation.

**Table 3-14. Extension Fields Supported in vCloud Reservations**

Field ID	Data Type	Type Class	Permissible Value	Depends on Field
reservationNetworks	Complex Type	Infrastructure.Reservation.Network	Yes	computeResource
allocationModel	Integer	NA	No	NA
reservationMemory	Complex Type	Infrastructure.Reservation.Memory	No	NA
computeResource	Entity Reference	ComputeResource	Yes	NA
machineQuota	Integer	NA	No	NA
reservationStorages	Complex Type	Infrastructure.Reservation.Storage	Yes	computeResource

**Note** The information in the table is subject to change. Call the data and schema service to retrieve the latest field information.

For related information, see [Syntax for Displaying a Schema Definition for a vCloud Reservation](#).

### Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	https://\$host/reservation-service/api/data-service/schema/\$schemaclassid/default/\$fieldid/values
Method	Post
\$host	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
\$token	Specifies a valid HTTP bearer token with necessary credentials.
\$schemaclassid	Specifies the schema class ID. This example illustrates how to use the reservationStorages field of a vCloud reservation type as an example. The schema class ID of a vCloud reservation is Infrastructure.Reservation.Cloud.vCloud. For this example, the input value for \$schemaclassid is Infrastructure.Reservation.Cloud.vCloud.
\$fieldid	Specifies the field ID of the resource. For example, the field ID for the reservation storage is reservationStorages. For this example, the input value for \$fieldid is reservationStorages.
HTTP body	Contains information about dependencies. Because the dependency of the permissible value field reservationStorages is computeResource, you must include a dependency definition in the HTTP body.
text	Empty

Parameter	Description
dependencyValues	JSON string that defines the dependency values
entries	<p>key -- Specifies the field ID of dependent field. For this example, enter computeResource.</p> <p>value -- Specifies the value of the dependent field. For this example, copy and paste the vCloud HTTP response obtained by using the Get Compute Resource task. See <a href="#">Get Resources Schema for a vCloud Reservation Syntax</a>.</p>

## Output

The command output contains property names and values based on the command input parameters.

Property	Description
values	An array of data rows, each of which represents one of the reservation storage objects returned in a pageable list. Each reservation storage object contains an underlyingValue and label entry.
underlyingValue	<p>JSON string representing one permissible value for a field:</p> <ul style="list-style-type: none"> <li>■ type -- data type of entityRef, complexRef, or primary</li> <li>■ component ID -- componentID</li> <li>■ classId -- schema class ID of current data type</li> <li>■ id -- unique reservation storage ID</li> <li>■ label --reservation storage label</li> </ul>
label	Specifies the reservation storage label. This value matches the underlyingValue value.

### Example: curl Command

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/data-
service/schema/Infrastructure.Reservation.Cloud.vCloud/default/reservationStorages/values -d "
```

### Example: JSON Output

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

Copy the output from an underlyingValue section into an XML editor and use it as input to create or update a reservation.

```
{
  "values": [
    {
      "underlyingValue": {
        "type": "complex",
        "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
        "componentId": null,
        "classId": "Infrastructure.Reservation.Storage",
        "typeFilter": null,
        "values": {
          "entries": [
```

```

    {
      "key": "computeResourceStorageTotalSizeGB",
      "value": {
        "type": "integer",
        "value": 1000
      }
    },
    {
      "key": "storagePath",
      "value": {
        "type": "entityRef",
        "componentId": null,
        "classId": "Storage",
        "id": "f4df029b-d475-4f85-ab42-05bddde3f667",
        "label": "Low Performance Storage"
      }
    },
    {
      "key": "computeResourceStorageFreeSizeGB",
      "value": {
        "type": "integer",
        "value": 954
      }
    }
  ]
},
"label": "Low Performance Storage"
},
{
  "underlyingValue": {
    "type": "complex",
    "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
    "componentId": null,
    "classId": "Infrastructure.Reservation.Storage",
    "typeFilter": null,
    "values": {
      "entries": [
        {
          "key": "computeResourceStorageTotalSizeGB",
          "value": {
            "type": "integer",
            "value": 1000
          }
        }
      ],
      "key": "storagePath",
      "value": {
        "type": "entityRef",
        "componentId": null,
        "classId": "Storage",
        "id": "e655aa78-e5fb-4722-9e8a-0cd4139248cf",
        "label": "High Performance Storage"
      }
    }
  }
},

```

```

        {
            "key": "computeResourceStorageFreeSizeGB",
            "value": {
                "type": "integer",
                "value": 691
            }
        }
    ]
}
},
"label": "High Performance Storage"
}
]
}

```

## Creating a Reservation By Type

You can use the vRealize Automation REST API to create any supported reservation type, including a vSphere, Amazon EC2, or vCloud reservation.

### Create a vSphere Reservation

You can use the vRealize Automation REST API reservation service to create a vSphere reservation.

#### Prerequisites

- Log in to vRealize Automation as a **fabric group administrator**.
- Verify that the host name and fully qualified domain name of the vRealize Automation instance are available.
- If you are not using the API Explorer, verify that you have a valid HTTP bearer token that matches your login credentials. See [Chapter 2 REST API Authentication](#).
- Display a list of the reservation types that are supported in the vRealize Automation server. See [Display a List of Supported Reservation Types](#).
- Obtain the permissible value field information required to create a new reservation. After you retrieve all permissible value field information, you have the input information required to create a reservation. See [Get Resources Schema for a vSphere Reservation](#).

For the full list of tasks that you can perform before you create a reservation, see [Create a Reservation](#).

#### Procedure

- ◆ Create a vSphere reservation.

```

curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/reservations -d
"
{
  "name": "TestCreateReservation",
  "reservationTypeId": "Infrastructure.Reservation.Virtual.vSphere",

```

```

"tenantId": "qe",
"subTenantId": "ef58f604-528d-4441-a219-4725bead629b",
"enabled": true,
"priority": 3,
"reservationPolicyId": "b71c3a5f-087a-4d9e-9a56-fab785a3d128",
>alertPolicy": {
  "enabled": true,
  "frequencyReminder": 20,
  "emailBgMgr": false,
  "recipients": ["test1@mycompany.com",
    "test2@mycompany.com"],
  "alerts": [{
    "alertPercentLevel": 10,
    "referenceResourceId": "storage",
    "id": "storage"
  },
  {
    "alertPercentLevel": 20,
    "referenceResourceId": "memory",
    "id": "memory"
  },
  {
    "alertPercentLevel": 30,
    "referenceResourceId": "cpu",
    "id": "cpu"
  },
  {
    "alertPercentLevel": 40,
    "referenceResourceId": "machine",
    "id": "machine"
  }
  ]
},
"extensionData": {
  "entries": [{
    "key": "reservationNetworks",
    "value": {
      "type": "multiple",
      "elementTypeId": "COMPLEX",
      "items": [{
        "type": "complex",
        "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
        "componentId": null,
        "classId": "reservationNetwork",
        "typeFilter": null,
        "values": {
          "entries": [{
            "key": "reservationNetworkPath",
            "value": {
              "type": "entityRef",
              "componentId": null,
              "classId": "Network",
              "id": "44cb65d5-b321-43dd-a2ab-8ecf387bff8f",
              "label": "VM Network SQA"
            }
          ]
        }
      }
    ]
  }
}

```

```

    }
  ]
}
},
{
  "key": "custom-Properties-key0",
  "value": {
    "type": "string",
    "value": "custom-property-value0"
  }
},
{
  "key": "custom-Properties-key2",
  "value": {
    "type": "string",
    "value": "custom-property-value2"
  }
},
{
  "key": "reservationMemory",
  "value": {
    "type": "complex",
    "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
    "componentId": null,
    "classId": "reservationMemory",
    "typeFilter": null,
    "values": {
      "entries": [{
        "key": "hostMemoryTotalSizeMB",
        "value": {
          "type": "integer",
          "value": 57187
        }
      },
      {
        "key": "reservationMemoryReservedSizeMb",
        "value": {
          "type": "integer",
          "value": 15872
        }
      }
    ]
  }
}
},
{
  "key": "computeResource",
  "value": {
    "type": "entityRef",
    "componentId": null,
    "classId": "ComputeResource",
    "id": "cc254a84-95b8-434a-874d-bdfef8e8ad2c",
    "label": "NSX61-RC-ComputeClusterA"
  }
},
{

```

```

    "key": "machineQuota",
    "value": {
      "type": "integer",
      "value": 2
    }
  },
  {
    "key": "reservationStorages",
    "value": {
      "type": "multiple",
      "elementType": "COMPLEX",
      "items": [{
        "type": "complex",
        "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
        "componentId": null,
        "classId": "reservationStorage",
        "typeFilter": null,
        "values": {
          "entries": [{
            "key": "storageTotalSizeGB",
            "value": {
              "type": "integer",
              "value": 394
            }
          }
        ],
        "key": "reservationStorageReservedSizeGB",
        "value": {
          "type": "integer",
          "value": 32
        }
      }
    ],
    {
      "key": "reservationStorageEnabled",
      "value": {
        "type": "boolean",
        "value": true
      }
    },
    {
      "key": "reservationStoragePath",
      "value": {
        "type": "entityRef",
        "componentId": null,
        "classId": "StoragePath",
        "id": "f48a527b-30a6-4d54-8829-f549bc195b69",
        "label": "VNXe:qe-vnxe-nfs-1"
      }
    },
    {
      "key": "storageFreeSizeGB",
      "value": {
        "type": "integer",
        "value": 120
      }
    }
  }
}

```

```

    },
    {
      "key": "reservationStorageReservationPriority",
      "value": {
        "type": "integer",
        "value": 1
      }
    }
  ]
}
}],
{
  "key": "resourcePool",
  "value": {
    "type": "entityRef",
    "componentId": null,
    "classId": "ResourcePools",
    "id": "4e51fab3-19e8-4e79-b413-d52309b3bb62",
    "label": "CoreDev"
  }
}
}],
}
}
"

```

The command output is a URL that includes the new reservation ID, for example `https://$host/reservation-service/api/reservations/94d74105-831a-4598-8f42-efd590fea15c`.

### Syntax for Creating a vSphere Reservation

You can use the REST API reservation service to create a vSphere reservation.

#### Input

Use the supported input parameters to control the command output.

Input	Description
URL	<code>https://\$host/reservation-service/api/reservations</code>
Method	Post
<i>\$host</i>	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.

Input	Description
<i>\$token</i>	Specifies a valid HTTP bearer token with necessary credentials.
HTTP body	<p>The HTTP body describes the reservation to create and calls the REST API used to create the reservation.</p> <p>Compose the HTTP body using one of the following methods:</p> <ul style="list-style-type: none"> <li>Copy the HTTP body from the JSON output from this example and edit the applicable field values to compose the HTTP body input for the command line.</li> <li>Use the API commands in <a href="#">Syntax for Verifying a Reservation and Getting Reservation Details</a>, remove the appropriate ID field from the HTTP response, and edit the field values to compose the HTTP body input for the command line.</li> </ul>

## Output

The output URL contains the new reservation ID.

Property	Description
status	When the reservation is successfully created, the HTTP response status is 201 <code>created</code> .
Header.Location	The HTTP response contains a <code>Location</code> attribute that is formatted as <code>https://\$host/reservation-service/api/reservations/\$reservationId</code> .
<i>\$reservationId</i>	Specifies the new reservation ID.

## Example: curl Command

The following sample command creates a vSphere reservation. The HTTP body is included as part of the command line input.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/reservations -d
"
{
  "name": "TestCreateReservation",
  "reservationTypeId": "Infrastructure.Reservation.Virtual.vSphere",
  "tenantId": "qe",
  "subTenantId": "ef58f604-528d-4441-a219-4725bead629b",
  "enabled": true,
  "priority": 3,
  "reservationPolicyId": "b71c3a5f-087a-4d9e-9a56-fab785a3d128",
  "alertPolicy": {
    "enabled": true,
    "frequencyReminder": 20,
    "emailBgMgr": false,
    "recipients": ["test1@mycompany.com",
"test2@mycompany.com"],
    "alerts": [{
      "alertPercentLevel": 10,
      "referenceResourceId": "storage",
```

```

    "id": "storage"
  },
  {
    "alertPercentLevel": 20,
    "referenceResourceId": "memory",
    "id": "memory"
  },
  {
    "alertPercentLevel": 30,
    "referenceResourceId": "cpu",
    "id": "cpu"
  },
  {
    "alertPercentLevel": 40,
    "referenceResourceId": "machine",
    "id": "machine"
  }
]
},
"extensionData": {
  "entries": [{
    "key": "reservationNetworks",
    "value": {
      "type": "multiple",
      "elementType": "COMPLEX",
      "items": [{
        "type": "complex",
        "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
        "componentId": null,
        "classId": "reservationNetwork",
        "typeFilter": null,
        "values": {
          "entries": [{
            "key": "reservationNetworkPath",
            "value": {
              "type": "entityRef",
              "componentId": null,
              "classId": "Network",
              "id": "44cb65d5-b321-43dd-a2ab-8ecf387bff8f",
              "label": "VM Network SQA"
            }
          ]
        }
      }
    ]
  }
}
},
{
  "key": "custom-Properties-key0",
  "value": {
    "type": "string",
    "value": "custom-property-value0"
  }
},
{
  "key": "custom-Properties-key2",
  "value": {

```

```

    "type": "string",
    "value": "custom-property-value2"
  }
},
{
  "key": "reservationMemory",
  "value": {
    "type": "complex",
    "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
    "componentId": null,
    "classId": "reservationMemory",
    "typeFilter": null,
    "values": {
      "entries": [{
        "key": "hostMemoryTotalSizeMB",
        "value": {
          "type": "integer",
          "value": 57187
        }
      },
      {
        "key": "reservationMemoryReservedSizeMb",
        "value": {
          "type": "integer",
          "value": 15872
        }
      }
    ]
  }
}
},
{
  "key": "computeResource",
  "value": {
    "type": "entityRef",
    "componentId": null,
    "classId": "ComputeResource",
    "id": "cc254a84-95b8-434a-874d-bdfef8e8ad2c",
    "label": "NSX61-RC-ComputeClusterA"
  }
},
{
  "key": "machineQuota",
  "value": {
    "type": "integer",
    "value": 2
  }
},
{
  "key": "reservationStorages",
  "value": {
    "type": "multiple",
    "elementType": "COMPLEX",
    "items": [{
      "type": "complex",
      "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",

```

```

"componentId": null,
"classId": "reservationStorage",
"typeFilter": null,
"values": {
  "entries": [{
    "key": "storageTotalSizeGB",
    "value": {
      "type": "integer",
      "value": 394
    }
  },
  {
    "key": "reservationStorageReservedSizeGB",
    "value": {
      "type": "integer",
      "value": 32
    }
  },
  {
    "key": "reservationStorageEnabled",
    "value": {
      "type": "boolean",
      "value": true
    }
  },
  {
    "key": "reservationStoragePath",
    "value": {
      "type": "entityRef",
      "componentId": null,
      "classId": "StoragePath",
      "id": "f48a527b-30a6-4d54-8829-f549bc195b69",
      "label": "VNXe:qe-vnxe-nfs-1"
    }
  },
  {
    "key": "storageFreeSizeGB",
    "value": {
      "type": "integer",
      "value": 120
    }
  },
  {
    "key": "reservationStorageReservationPriority",
    "value": {
      "type": "integer",
      "value": 1
    }
  }
  ]
}
},
{
  "key": "resourcePool",

```

```

    "value": {
      "type": "entityRef",
      "componentId": null,
      "classId": "ResourcePools",
      "id": "4e51fab3-19e8-4e79-b413-d52309b3bb62",
      "label": "CoreDev"
    }
  ]
}
}
"

```

### Example: JSON Output

The following sample location URL is displayed, including the new vSphere reservation ID.

```

Location:
https://$host/reservation-service/api/reservations/94d74105-831a-4598-8f42-efd590fea15c

```

Copy the output response into an XML editor for use in a future procedure, such as updating or deleting the reservation.

### Create a vCloud Reservation

You can create a vCloud reservation by using the vRealize Automation reservation service.

#### Prerequisites

- Log in to vRealize Automation as a **fabric group administrator**.
- Verify that the host name and fully qualified domain name of the vRealize Automation instance are available.
- If you are not using the API Explorer, verify that you have a valid HTTP bearer token that matches your login credentials. See [Chapter 2 REST API Authentication](#).
- Display a list of the reservation types that are supported in the vRealize Automation server. See [Syntax for Displaying a List of Supported Reservation Types](#).
- Obtain the permissible value field information required to create a new reservation. After you retrieve all permissible value field information, you have the input information required to create a reservation. See [Get Resources Schema for a vCloud Reservation Syntax](#).

For the full list of tasks that you can perform before you create a reservation, see [Create a Reservation](#).

#### Procedure

- ◆ Create a vCloud reservation.

```

curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/reservations -d "
{
  "id": "bf922450-d495-460d-9dbf-1c09b0692db2",

```

```

"name": "TestvAppReservation",
"reservationTypeId": "Infrastructure.Reservation.Cloud.vCloud",
"tenantId": "qe",
"subTenantId": "a5d056be-3aa2-4fdd-ba1e-a3805f26f0e0",
"enabled": true,
"priority": 1,
"reservationPolicyId": null,
>alertPolicy": {
  "enabled": false,
  "frequencyReminder": 0,
  "emailBgMgr": true,
  "recipients": [
],
>alerts": [
  {
    "alertPercentLevel": 80,
    "referenceResourceId": "storage",
    "id": "storage"
  },
  {
    "alertPercentLevel": 80,
    "referenceResourceId": "memory",
    "id": "memory"
  },
  {
    "alertPercentLevel": 80,
    "referenceResourceId": "cpu",
    "id": "cpu"
  },
  {
    "alertPercentLevel": 80,
    "referenceResourceId": "machine",
    "id": "machine"
  }
]
},
"extensionData": {
  "entries": [
    {
      "key": "computeResource",
      "value": {
        "type": "entityRef",
        "componentId": null,
        "classId": "ComputeResource",
        "id": "c527a0f5-b1ae-4b61-8145-ad9d5c434dc7",
        "label": "Engineering Allocation VDC"
      }
    },
    {
      "key": "machineQuota",
      "value": {
        "type": "integer",
        "value": 0
      }
    }
  ]
}

```

```

},
{
  "key": "allocationModel",
  "value": {
    "type": "integer",
    "value": 0
  }
},
{
  "key": "reservationNetworks",
  "value": {
    "type": "multiple",
    "elementTypeId": "COMPLEX",
    "items": [
      {
        "type": "complex",
        "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
        "componentId": null,
        "classId": "Infrastructure.Reservation.Network",
        "typeFilter": null,
        "values": {
          "entries": [
            {
              "key": "networkPath",
              "value": {
                "type": "entityRef",
                "componentId": null,
                "classId": "Network",
                "id": "42c5063c-5422-448f-aac7-22ebe941ac8e",
                "label": "VM Network SQA"
              }
            }
          ]
        }
      }
    ]
  }
},
{
  "key": "reservationStorages",
  "value": {
    "type": "multiple",
    "elementTypeId": "COMPLEX",
    "items": [
      {
        "type": "complex",
        "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
        "componentId": null,
        "classId": "Infrastructure.Reservation.Storage",
        "typeFilter": null,
        "values": {
          "entries": [
            {
              "key": "computeResourceStorageTotalSizeGB",
              "value": {

```

```

        "type": "integer",
        "value": 1000
    }
},
{
    "key": "storagePath",
    "value": {
        "type": "entityRef",
        "componentId": null,
        "classId": "Storage",
        "id": "e655aa78-e5fb-4722-9e8a-0cd4139248cf",
        "label": "High Performance Storage"
    }
},
{
    "key": "storageReservationPriority",
    "value": {
        "type": "integer",
        "value": 1
    }
},
{
    "key": "storageReservedSizeGB",
    "value": {
        "type": "integer",
        "value": 100
    }
},
{
    "key": "storageEnabled",
    "value": {
        "type": "boolean",
        "value": true
    }
},
{
    "key": "computeResourceStorageFreeSizeGB",
    "value": {
        "type": "integer",
        "value": 691
    }
}
]
}
}
],
{
    "key": "reservationMemory",
    "value": {
        "type": "complex",
        "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
        "componentId": null,
        "classId": "Infrastructure.Reservation.Memory",

```

```

"typeFilter": null,
"values": {
  "entries": [
    {
      "key": "computeResourceMemoryTotalSizeMB",
      "value": {
        "type": "integer",
        "value": 13312
      }
    },
    {
      "key": "memoryReservedSizeMb",
      "value": {
        "type": "integer",
        "value": 4096
      }
    }
  ]
}
}
]
}
}

```

The output is a location URL, including the new vCloud reservation ID.

```

Location:
https://$host/reservation-service/api/reservations/3289b039-2a11-4ab4-a0bc-b583e4c6d085

```

### Syntax for Creating a vCloud Reservation

You can use the REST API reservation service to create a vCloud reservation.

#### Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	https://\$host/reservation-service/api/reservations
Method	Post
\$host	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.

Parameter	Description
<i>\$token</i>	Specifies a valid HTTP bearer token with necessary credentials.
HTTP body	<p>The HTTP body describes the reservation to create and calls the REST API used to create the reservation.</p> <p>Compose the HTTP body using one of the following methods:</p> <ul style="list-style-type: none"> <li>■ Copy the HTTP body from the JSON output from this example and edit the applicable field values to compose the HTTP body input for the command line.</li> <li>■ Update the formatted reservation information to specify the new information: <ul style="list-style-type: none"> <li>■ remove the appropriate ID field from the HTTP response</li> <li>■ edit the field values to compose the HTTP body input for the command line</li> </ul> </li> </ul> <p>For information, see <a href="#">Syntax for Verifying a Reservation and Getting Reservation Details</a>.</p>

## Output

The output URL contains the new reservation ID.

Property	Description
status	When the reservation is successfully created, the HTTP response status is 201 created.
Header.Location	The HTTP response contains a Location attribute that is formatted as <code>https://\$host/reservation-service/api/reservations/\$reservationId</code> .
<i>\$reservationId</i>	Specifies the new reservation ID.

## Example: curl Command

The following sample command creates a vCloud reservation. The HTTP body is included as part of the command line input.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/reservations -d "
{
  "id": "bf922450-d495-460d-9dbf-1c09b0692db2",
  "name": "TestvAppReservation",
  "reservationTypeId": "Infrastructure.Reservation.Cloud.vCloud",
  "tenantId": "qe",
  "subTenantId": "a5d056be-3aa2-4fdd-ba1e-a3805f26f0e0",
  "enabled": true,
  "priority": 1,
  "reservationPolicyId": null,
  "alertPolicy": {
    "enabled": false,
    "frequencyReminder": 0,
    "emailBgMgr": true,
    "recipients": [
```

```

],
"alerts": [
  {
    "alertPercentLevel": 80,
    "referenceResourceId": "storage",
    "id": "storage"
  },
  {
    "alertPercentLevel": 80,
    "referenceResourceId": "memory",
    "id": "memory"
  },
  {
    "alertPercentLevel": 80,
    "referenceResourceId": "cpu",
    "id": "cpu"
  },
  {
    "alertPercentLevel": 80,
    "referenceResourceId": "machine",
    "id": "machine"
  }
]
},
"extensionData": {
  "entries": [
    {
      "key": "computeResource",
      "value": {
        "type": "entityRef",
        "componentId": null,
        "classId": "ComputeResource",
        "id": "c527a0f5-b1ae-4b61-8145-ad9d5c434dc7",
        "label": "Engineering Allocation VDC"
      }
    },
    {
      "key": "machineQuota",
      "value": {
        "type": "integer",
        "value": 0
      }
    },
    {
      "key": "allocationModel",
      "value": {
        "type": "integer",
        "value": 0
      }
    },
    {
      "key": "reservationNetworks",
      "value": {
        "type": "multiple",

```

```

"elementTypeId": "COMPLEX",
"items": [
  {
    "type": "complex",
    "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
    "componentId": null,
    "classId": "Infrastructure.Reservation.Network",
    "typeFilter": null,
    "values": {
      "entries": [
        {
          "key": "networkPath",
          "value": {
            "type": "entityRef",
            "componentId": null,
            "classId": "Network",
            "id": "42c5063c-5422-448f-aac7-22ebe941ac8e",
            "label": "VM Network SQA"
          }
        }
      ]
    }
  }
],
{
  "key": "reservationStorages",
  "value": {
    "type": "multiple",
    "elementTypeId": "COMPLEX",
    "items": [
      {
        "type": "complex",
        "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
        "componentId": null,
        "classId": "Infrastructure.Reservation.Storage",
        "typeFilter": null,
        "values": {
          "entries": [
            {
              "key": "computeResourceStorageTotalSizeGB",
              "value": {
                "type": "integer",
                "value": 1000
              }
            },
            {
              "key": "storagePath",
              "value": {
                "type": "entityRef",
                "componentId": null,
                "classId": "Storage",
                "id": "e655aa78-e5fb-4722-9e8a-0cd4139248cf",
                "label": "High Performance Storage"
              }
            }
          ]
        }
      }
    ]
  }
}

```

```

    }
  },
  {
    "key": "storageReservationPriority",
    "value": {
      "type": "integer",
      "value": 1
    }
  },
  {
    "key": "storageReservedSizeGB",
    "value": {
      "type": "integer",
      "value": 100
    }
  },
  {
    "key": "storageEnabled",
    "value": {
      "type": "boolean",
      "value": true
    }
  },
  {
    "key": "computeResourceStorageFreeSizeGB",
    "value": {
      "type": "integer",
      "value": 691
    }
  }
]
}
}
},
{
  "key": "reservationMemory",
  "value": {
    "type": "complex",
    "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
    "componentId": null,
    "classId": "Infrastructure.Reservation.Memory",
    "typeFilter": null,
    "values": {
      "entries": [
        {
          "key": "computeResourceMemoryTotalSizeMB",
          "value": {
            "type": "integer",
            "value": 13312
          }
        }
      ],
    },
  },
  {
    "key": "memoryReservedSizeMb",

```

```

    "value": {
      "type": "integer",
      "value": 4096
    }
  ]
}
}
]
}
}
"

```

### Example: JSON Output

The output response displays the location URL, including the new vCloud reservation ID.

```
Location: https://$host/reservation-service/api/reservations/3289b039-2a11-4ab4-a0bc-b583e4c6d085
```

Copy the output response into an XML editor for use in a future procedure, such as updating or deleting the reservation.

### Create an Amazon Reservation

You can use the vRealize Automation REST API reservation service to create an Amazon reservation.

#### Prerequisites

- Log in to vRealize Automation as a **fabric group administrator**.
- Verify that the host name and fully qualified domain name of the vRealize Automation instance are available.
- If you are not using the API Explorer, verify that you have a valid HTTP bearer token that matches your login credentials. See [Chapter 2 REST API Authentication](#).
- Display a list of the reservation types that are supported in the vRealize Automation server. See [Display a List of Supported Reservation Types](#).
- Obtain the permissible value field information required to create a new reservation. After you retrieve all permissible value field information, you have the input information required to create a reservation. See [Get Resources Schema for a vSphere Reservation](#).

For the full list of tasks that you can perform before you create a reservation, see [Create a Reservation](#).

#### Procedure

- ◆ Create an Amazon reservation.

```

curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/reservations -d "
{

```

```

"name": "TestEC2Reservation",
"reservationTypeId": "Infrastructure.Reservation.Cloud.Amazon",
"tenantId": "qe",
"subTenantId": "a5d056be-3aa2-4fdd-ba1e-a3805f26f0e0",
"enabled": true,
"priority": 1,
"reservationPolicyId": "34d2a612-718e-4814-96c5-225f7f5615a6",
>alertPolicy": {
  "enabled": false,
  "frequencyReminder": 0,
  "emailBgMgr": true,
  "recipients": [
],
>alerts": [
  {
    "alertPercentLevel": 80,
    "referenceResourceId": "machine",
    "id": "machine"
  }
]
},
"extensionData": {
  "entries": [
    {
      "key": "computeResource",
      "value": {
        "type": "entityRef",
        "componentId": null,
        "classId": "ComputeResource",
        "id": "9d1a3b5a-7162-4a5a-85b7-ec1b2824f554",
        "label": "EC2 841 Endpoint-us-east-1"
      }
    },
    {
      "key": "machineQuota",
      "value": {
        "type": "integer",
        "value": 0
      }
    },
    {
      "key": "securityGroups",
      "value": {
        "type": "multiple",
        "elementTypeId": "ENTITY_REFERENCE",
        "items": [
          {
            "type": "entityRef",
            "componentId": null,
            "classId": "AmazonSecurityGroup",
            "id": "10",
            "label": "default"
          }
        ]
      }
    }
  ]
}

```

```

    }
  },
  {
    "key": "loadBalancers",
    "value": {
      "type": "multiple",
      "elementType": "ENTITY_REFERENCE",
      "items": [
        {
          "type": "entityRef",
          "componentId": null,
          "classId": "ElasticLoadBalancer",
          "id": "3",
          "label": "test1"
        }
      ]
    }
  },
  {
    "key": "locations",
    "value": {
      "type": "multiple",
      "elementType": "ENTITY_REFERENCE",
      "items": [
        {
          "type": "entityRef",
          "componentId": null,
          "classId": "AvailabilityZone",
          "id": "10",
          "label": "us-east-1a"
        }
      ]
    }
  },
  {
    "key": "keyPairs",
    "value": {
      "type": "string",
      "value": "Per Provisioning Group"
    }
  }
]
}
}”

```

The output is a sample location URL, including the new Amazon reservation ID.

```
Location: https://$host/reservation-service/api/reservations/3289b039-2a11-4ab4-a0bc-b583e4c6d085
```

### Syntax for Creating an Amazon Reservation

You can use the REST API reservation service to create an Amazon reservation.

## Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	https://\$host/reservation-service/api/reservations
Method	Post
\$host	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
\$token	Specifies a valid HTTP bearer token with necessary credentials.
HTTP body	<p>The HTTP body describes the reservation to create and calls the REST API used to create the reservation.</p> <p>Compose the HTTP body using one of the following methods:</p> <ul style="list-style-type: none"> <li>Copy the HTTP body from the JSON output from this example and edit the applicable field values to compose the HTTP body input for the command line.</li> <li>Use the API commands in <a href="#">Syntax for Verifying a Reservation and Getting Reservation Details</a>, remove the appropriate ID field from the HTTP response, and edit the field values to compose the HTTP body input for the command line.</li> </ul>

## Output

The output URL contains the new reservation ID.

Property	Description
status	When the reservation is successfully created, the HTTP response status is 201 created.
Header.Location	The HTTP response contains a Location attribute that is formatted as https://\$host/reservation-service/api/reservations/\$reservationId.
\$reservationId	Specifies the new reservation ID.

### Example: curl Command

The following example command creates an Amazon reservation. The HTTP body is included as part of the command line input.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/reservations -d "
{
  "name": "TestEC2Reservation",
  "reservationTypeId": "Infrastructure.Reservation.Cloud.Amazon",
  "tenantId": "qe",
  "subTenantId": "a5d056be-3aa2-4fdd-ba1e-a3805f26f0e0",
  "enabled": true,
  "priority": 1,
  "reservationPolicyId": "34d2a612-718e-4814-96c5-225f7f5615a6",
  "alertPolicy": {
```

```

"enabled": false,
"frequencyReminder": 0,
"emailBgMgr": true,
"recipients": [

],
"alerts": [
  {
    "alertPercentLevel": 80,
    "referenceResourceId": "machine",
    "id": "machine"
  }
]
},
"extensionData": {
  "entries": [
    {
      "key": "computeResource",
      "value": {
        "type": "entityRef",
        "componentId": null,
        "classId": "ComputeResource",
        "id": "9d1a3b5a-7162-4a5a-85b7-ec1b2824f554",
        "label": "EC2 841 Endpoint-us-east-1"
      }
    },
    {
      "key": "machineQuota",
      "value": {
        "type": "integer",
        "value": 0
      }
    },
    {
      "key": "securityGroups",
      "value": {
        "type": "multiple",
        "elementTypeId": "ENTITY_REFERENCE",
        "items": [
          {
            "type": "entityRef",
            "componentId": null,
            "classId": "AmazonSecurityGroup",
            "id": "10",
            "label": "default"
          }
        ]
      }
    },
    {
      "key": "loadBalancers",
      "value": {
        "type": "multiple",
        "elementTypeId": "ENTITY_REFERENCE",
        "items": [

```

```

        {
            "type": "entityRef",
            "componentId": null,
            "classId": "ElasticLoadBalancer",
            "id": "3",
            "label": "test1"
        }
    ]
}
},
{
    "key": "locations",
    "value": {
        "type": "multiple",
        "elementTypeId": "ENTITY_REFERENCE",
        "items": [
            {
                "type": "entityRef",
                "componentId": null,
                "classId": "AvailabilityZone",
                "id": "10",
                "label": "us-east-1a"
            }
        ]
    }
},
{
    "key": "keyPairs",
    "value": {
        "type": "string",
        "value": "Per Provisioning Group"
    }
}
]
}
}”

```

### Example: JSON Output

The following sample location URL is displayed, including the new Amazon reservation ID.

```
Location: https://$host/reservation-service/api/reservations/3289b039-2a11-4ab4-a0bc-b583e4c6d085
```

Copy the output response into an XML editor for use in a future procedure, such as updating or deleting the reservation.

### Verify a Reservation and Get Reservation Details

After you create a vRealize Automation reservation, you can use the REST API reservation service along with reservation ID to verify that the reservation exists. You can also use the ID to get information about the reservation in preparation for updating or deleting it.

## Prerequisites

- Log in to vRealize Automation as a **fabric group administrator**.
- Verify that the host name and fully qualified domain name of the vRealize Automation instance are available.
- If you are not using the API Explorer, verify that you have a valid HTTP bearer token that matches your login credentials. See [Chapter 2 REST API Authentication](#).
- Finish creating a new reservation. Obtain the reservation ID from the output URL. See [Syntax for Creating a vSphere Reservation](#).
- Get the reservation ID if you do not already know it. See [Display a List of Reservations](#).

## Procedure

- ◆ Use the reservation service to verify that a reservation exists by using the verification ID.

The following example command verifies the existence of a reservation with an ID of 94d74105-831a-4598-8f42-efd590fea15c and returns reservation details.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/reservations/94d74105-831a-4598-8f42-efd590fea15c
```

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

```
{
  "id": "94d74105-831a-4598-8f42-efd590fea15c ",
  "name": "TestReservation",
  "reservationTypeId": "Infrastructure.Reservation.Virtual.vSphere",
  "tenantId": "qe",
  "subTenantId": "ef58f604-528d-4441-a219-4725bead629b",
  "enabled": true,
  "priority": 3,
  "reservationPolicyId": "b71c3a5f-087a-4d9e-9a56-fab785a3d128",
  "alertPolicy": {
    "enabled": true,
    "frequencyReminder": 20,
    "emailBgMgr": false,
    "recipients": ["user1@mycompany.com",
    "user2@mycompany.com"],
    "alerts": [{
      "alertPercentLevel": 10,
      "referenceResourceId": "storage",
      "id": "storage"
    },
    {
      "alertPercentLevel": 20,
      "referenceResourceId": "memory",
      "id": "memory"
    },
    {
      "alertPercentLevel": 30,
```

```

    "referenceResourceId": "cpu",
    "id": "cpu"
  },
  {
    "alertPercentLevel": 40,
    "referenceResourceId": "machine",
    "id": "machine"
  }
],
"extensionData": {
  "entries": [{
    "key": "key4",
    "value": {
      "type": "string",
      "value": "custom-property-value4"
    }
  },
  {
    "key": "key3",
    "value": {
      "type": "string",
      "value": "custom-property-value3"
    }
  },
  {
    "key": "reservationNetworks",
    "value": {
      "type": "multiple",
      "elementType": "COMPLEX",
      "items": [{
        "type": "complex",
        "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
        "componentId": null,
        "classId": "reservationNetwork",
        "typeFilter": null,
        "values": {
          "entries": [{
            "key": "reservationNetworkProfile",
            "value": {
              "type": "entityRef",
              "componentId": null,
              "classId": "NetworkProfile",
              "id": "ed5d1503-08ac-42ca-804d-9167834a63a5",
              "label": "ETEDoNotDelete2014-10-13 13:10:56"
            }
          ]
        }
      },
      {
        "key": "reservationNetworkPath",
        "value": {
          "type": "entityRef",
          "componentId": null,
          "classId": "Network",
          "id": "44cb65d5-b321-43dd-a2ab-8ecf387bff8f",
          "label": "VM Network SQA"
        }
      }
    ]
  }
}

```

```

        }]
    }
    }]
}
},
{
    "key": "key0",
    "value": {
        "type": "string",
        "value": "custom-property-value0"
    }
},
{
    "key": "key2",
    "value": {
        "type": "string",
        "value": "custom-property-value2"
    }
},
{
    "key": "reservationMemory",
    "value": {
        "type": "complex",
        "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
        "componentId": null,
        "classId": "reservationMemory",
        "typeFilter": null,
        "values": {
            "entries": [{
                "key": "hostMemoryTotalSizeMB",
                "value": {
                    "type": "integer",
                    "value": 57187
                }
            },
            {
                "key": "reservationMemoryReservedSizeMb",
                "value": {
                    "type": "integer",
                    "value": 15888
                }
            }
        ]
    }
}
},
{
    "key": "key1",
    "value": {
        "type": "string",
        "value": "custom-property-value-Updated"
    }
},
{
    "key": "computeResource",
    "value": {

```

```

    "type": "entityRef",
    "componentId": null,
    "classId": "ComputeResource",
    "id": "047e00f5-5424-4ed2-a751-4a334aeaff54",
    "label": "VC51-Cluster"
  }
},
{
  "key": "machineQuota",
  "value": {
    "type": "integer",
    "value": 2
  }
},
{
  "key": "reservationStorages",
  "value": {
    "type": "multiple",
    "elementType": "COMPLEX",
    "items": [{
      "type": "complex",
      "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
      "componentId": null,
      "classId": "reservationStorage",
      "typeFilter": null,
      "values": {
        "entries": [{
          "key": "storageTotalSizeGB",
          "value": {
            "type": "integer",
            "value": 394
          }
        }
      ],
      "type": "integer",
      "value": 31
    }
  ],
  "key": "reservationStorageReservedSizeGB",
  "value": {
    "type": "integer",
    "value": 31
  }
},
{
  "key": "reservationStorageEnabled",
  "value": {
    "type": "boolean",
    "value": true
  }
},
{
  "key": "reservationStoragePath",
  "value": {
    "type": "entityRef",
    "componentId": null,
    "classId": "StoragePath",
    "id": "f48a527b-30a6-4d54-8829-f549bc195b69",
    "label": "VNXe:qe-vnxe-nfs-1"
  }
}

```

```

    }
  },
  {
    "key": "storageFreeSizeGB",
    "value": {
      "type": "integer",
      "value": 120
    }
  },
  {
    "key": "reservationStorageReservationPriority",
    "value": {
      "type": "integer",
      "value": 1
    }
  }
}]
}
}]
}
},
{
  "key": "resourcePool",
  "value": {
    "type": "entityRef",
    "componentId": null,
    "classId": "ResourcePools",
    "id": "4e51fab3-19e8-4e79-b413-d52309b3bb62",
    "label": "CoreDev"
  }
}
}]
}
}

```

Example Output for a vCloud Reservation

```

{
  "id": "bf922450-d495-460d-9dbf-1c09b0692db2",
  "name": "TestvAppReservation",
  "reservationTypeId": "Infrastructure.Reservation.Cloud.vCloud",
  "tenantId": "qe",
  "subTenantId": "a5d056be-3aa2-4fdd-ba1e-a3805f26f0e0",
  "enabled": true,
  "priority": 1,
  "reservationPolicyId": null,
  "alertPolicy": {
    "enabled": false,
    "frequencyReminder": 0,
    "emailBgMgr": true,
    "recipients": [
  ],
  "alerts": [
    {
      "alertPercentLevel": 80,
      "referenceResourceId": "storage",
      "id": "storage"
    }
  ],
}

```

```

    {
      "alertPercentLevel": 80,
      "referenceResourceId": "memory",
      "id": "memory"
    },
    {
      "alertPercentLevel": 80,
      "referenceResourceId": "cpu",
      "id": "cpu"
    },
    {
      "alertPercentLevel": 80,
      "referenceResourceId": "machine",
      "id": "machine"
    }
  ]
},
"extensionData": {
  "entries": [
    {
      "key": "computeResource",
      "value": {
        "type": "entityRef",
        "componentId": null,
        "classId": "ComputeResource",
        "id": "c527a0f5-b1ae-4b61-8145-ad9d5c434dc7",
        "label": "Engineering Allocation VDC"
      }
    },
    {
      "key": "machineQuota",
      "value": {
        "type": "integer",
        "value": 0
      }
    },
    {
      "key": "allocationModel",
      "value": {
        "type": "integer",
        "value": 0
      }
    },
    {
      "key": "reservationNetworks",
      "value": {
        "type": "multiple",
        "elementTypeId": "COMPLEX",
        "items": [
          {
            "type": "complex",
            "componentTypeId": "com.vmware.csp.iaas.blueprint.service",
            "componentId": null,
            "classId": "Infrastructure.Reservation.Network",
            "typeFilter": null,

```

```

    "values": {
      "entries": [
        {
          "key": "networkPath",
          "value": {
            "type": "entityRef",
            "componentId": null,
            "classId": "Network",
            "id": "42c5063c-5422-448f-aac7-22ebe941ac8e",
            "label": "VM Network SQA"
          }
        }
      ]
    }
  ],
  {
    "key": "reservationStorages",
    "value": {
      "type": "multiple",
      "elementTypeId": "COMPLEX",
      "items": [
        {
          "type": "complex",
          "componentTypeId": "com.vmware.csp.iaas.blueprint.service",
          "componentId": null,
          "classId": "Infrastructure.Reservation.Storage",
          "typeFilter": null,
          "values": {
            "entries": [
              {
                "key": "computeResourceStorageTotalSizeGB",
                "value": {
                  "type": "integer",
                  "value": 1000
                }
              },
              {
                "key": "storagePath",
                "value": {
                  "type": "entityRef",
                  "componentId": null,
                  "classId": "Storage",
                  "id": "e655aa78-e5fb-4722-9e8a-0cd4139248cf",
                  "label": "High Performance Storage"
                }
              }
            ],
            "type": "multiple",
            "elementTypeId": "COMPLEX",
            "items": [
              {
                "type": "complex",
                "componentTypeId": "com.vmware.csp.iaas.blueprint.service",
                "componentId": null,
                "classId": "Infrastructure.Reservation.Storage",
                "typeFilter": null,
                "values": {
                  "entries": [
                    {
                      "key": "storageReservationPriority",
                      "value": {
                        "type": "integer",
                        "value": 1
                      }
                    }
                  ]
                }
              }
            ]
          }
        }
      ]
    }
  }
}

```

```

    },
    {
      "key": "storageReservedSizeGB",
      "value": {
        "type": "integer",
        "value": 100
      }
    },
    {
      "key": "storageEnabled",
      "value": {
        "type": "boolean",
        "value": true
      }
    },
    {
      "key": "computeResourceStorageFreeSizeGB",
      "value": {
        "type": "integer",
        "value": 691
      }
    }
  ]
}
]
}
},
{
  "key": "reservationMemory",
  "value": {
    "type": "complex",
    "componentTypeId": "com.vmware.csp.iaas.blueprint.service",
    "componentId": null,
    "classId": "Infrastructure.Reservation.Memory",
    "typeFilter": null,
    "values": {
      "entries": [
        {
          "key": "computeResourceMemoryTotalSizeMB",
          "value": {
            "type": "integer",
            "value": 13312
          }
        },
        {
          "key": "memoryReservedSizeMb",
          "value": {
            "type": "integer",
            "value": 4096
          }
        }
      ]
    }
  }
}
}

```

```

    }
  ]
}
}

```

## Syntax for Verifying a Reservation and Getting Reservation Details

After you create a vRealize Automation reservation, you can use the REST API reservation service and the reservation ID to verify that the reservation exists. You can also use the ID to get information about the reservation in preparation for updating or deleting it.

### Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	<code>https://\$host/reservation-service/api/reservations/\$reservationId</code> This is the URL that is generated when you create a reservation using the REST API. See <a href="#">Syntax for Creating a vSphere Reservation</a> .
Method	Get
<i>\$host</i>	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
<i>\$token</i>	Specifies a valid HTTP bearer token with necessary credentials.
<i>\$reservationId</i>	Specifies the unique identifier of the reservation to verify. Obtain the value from the output generated when you created the reservation. See <a href="#">Create a Reservation</a> .

### Output

The command output contains property names and values based on the command input parameters.

Property	Description
status	The HTTP response status is 201 created to indicate that the reservation exists.
Header.Location	The HTTP response should contain a <code>location</code> attribute, format as <code>https://\$host/reservation-service/api/reservations/\$reservationId</code> .
<i>\$reservationId</i>	The HTTP response should contain a <code>location</code> attribute, formatted as <code>https://\$host/reservation-service/api/reservations/\$reservationId</code> .

### Example: curl Command

In the following example, the reservation ID of 94d74105-831a-4598-8f42-efd590fea15c is the value you obtained when you created the reservation.

```

curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/reservations/94d74105-831a-4598-8f42-efd590fea15c

```

**Example: JSON Output for a vSphere Reservation**

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

Copy the output response into an XML editor for future step usage.

```
{
  "id": "94d74105-831a-4598-8f42-efd590fea15c ",
  "name": "TestReservation",
  "reservationTypeId": "Infrastructure.Reservation.Virtual.vSphere",
  "tenantId": "qe",
  "subTenantId": "ef58f604-528d-4441-a219-4725bead629b",
  "enabled": true,
  "priority": 3,
  "reservationPolicyId": "b71c3a5f-087a-4d9e-9a56-fab785a3d128",
  "alertPolicy": {
    "enabled": true,
    "frequencyReminder": 20,
    "emailBgMgr": false,
    "recipients": ["user1@mycompany.com",
      "user2@mycompany.com"],
    "alerts": [{
      "alertPercentLevel": 10,
      "referenceResourceId": "storage",
      "id": "storage"
    },
    {
      "alertPercentLevel": 20,
      "referenceResourceId": "memory",
      "id": "memory"
    },
    {
      "alertPercentLevel": 30,
      "referenceResourceId": "cpu",
      "id": "cpu"
    },
    {
      "alertPercentLevel": 40,
      "referenceResourceId": "machine",
      "id": "machine"
    }
  ]
},
  "extensionData": {
    "entries": [{
      "key": "key4",
      "value": {
        "type": "string",
        "value": "custom-property-value4"
      }
    },
    {
      "key": "key3",
      "value": {
        "type": "string",
        "value": "custom-property-value3"
      }
    }
  ]
}
```

```

    }
  },
  {
    "key": "reservationNetworks",
    "value": {
      "type": "multiple",
      "elementType": "COMPLEX",
      "items": [{
        "type": "complex",
        "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
        "componentId": null,
        "classId": "reservationNetwork",
        "typeFilter": null,
        "values": {
          "entries": [{
            "key": "reservationNetworkProfile",
            "value": {
              "type": "entityRef",
              "componentId": null,
              "classId": "NetworkProfile",
              "id": "ed5d1503-08ac-42ca-804d-9167834a63a5",
              "label": "ETEDoNotDelete2014-10-13 13:10:56"
            }
          ]
        }
      ]
    },
    {
      "key": "reservationNetworkPath",
      "value": {
        "type": "entityRef",
        "componentId": null,
        "classId": "Network",
        "id": "44cb65d5-b321-43dd-a2ab-8ecf387bff8f",
        "label": "VM Network SQA"
      }
    }
  ]
}
},
{
  "key": "key0",
  "value": {
    "type": "string",
    "value": "custom-property-value0"
  }
},
{
  "key": "key2",
  "value": {
    "type": "string",
    "value": "custom-property-value2"
  }
},
{
  "key": "reservationMemory",
  "value": {

```

```

    "type": "complex",
    "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
    "componentId": null,
    "classId": "reservationMemory",
    "typeFilter": null,
    "values": {
      "entries": [{
        "key": "hostMemoryTotalSizeMB",
        "value": {
          "type": "integer",
          "value": 57187
        }
      },
      {
        "key": "reservationMemoryReservedSizeMb",
        "value": {
          "type": "integer",
          "value": 15888
        }
      }
    ]
  }
},
{
  "key": "key1",
  "value": {
    "type": "string",
    "value": "custom-property-value-Updated"
  }
},
{
  "key": "computeResource",
  "value": {
    "type": "entityRef",
    "componentId": null,
    "classId": "ComputeResource",
    "id": "047e00f5-5424-4ed2-a751-4a334aeaff54",
    "label": "VC51-Cluster"
  }
},
{
  "key": "machineQuota",
  "value": {
    "type": "integer",
    "value": 2
  }
},
{
  "key": "reservationStorages",
  "value": {
    "type": "multiple",
    "elementTypeId": "COMPLEX",
    "items": [{
      "type": "complex",
      "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",

```

```

"componentId": null,
"classId": "reservationStorage",
"typeFilter": null,
"values": {
  "entries": [{
    "key": "storageTotalSizeGB",
    "value": {
      "type": "integer",
      "value": 394
    }
  },
  {
    "key": "reservationStorageReservedSizeGB",
    "value": {
      "type": "integer",
      "value": 31
    }
  },
  {
    "key": "reservationStorageEnabled",
    "value": {
      "type": "boolean",
      "value": true
    }
  },
  {
    "key": "reservationStoragePath",
    "value": {
      "type": "entityRef",
      "componentId": null,
      "classId": "StoragePath",
      "id": "f48a527b-30a6-4d54-8829-f549bc195b69",
      "label": "VNXe:qe-vnxe-nfs-1"
    }
  },
  {
    "key": "storageFreeSizeGB",
    "value": {
      "type": "integer",
      "value": 120
    }
  },
  {
    "key": "reservationStorageReservationPriority",
    "value": {
      "type": "integer",
      "value": 1
    }
  }
  ]
}
},
{
  "key": "resourcePool",

```

```

    "value": {
      "type": "entityRef",
      "componentId": null,
      "classId": "ResourcePools",
      "id": "4e51fab3-19e8-4e79-b413-d52309b3bb62",
      "label": "CoreDev"
    }
  ]
}
}

```

### Example: Example Output for a vCloud Reservation

```

{
  "id": "bf922450-d495-460d-9dbf-1c09b0692db2",
  "name": "TestvAppReservation",
  "reservationTypeId": "Infrastructure.Reservation.Cloud.vCloud",
  "tenantId": "qe",
  "subTenantId": "a5d056be-3aa2-4fdd-ba1e-a3805f26f0e0",
  "enabled": true,
  "priority": 1,
  "reservationPolicyId": null,
  "alertPolicy": {
    "enabled": false,
    "frequencyReminder": 0,
    "emailBgMgr": true,
    "recipients": [
    ],
  },
  "alerts": [
    {
      "alertPercentLevel": 80,
      "referenceResourceId": "storage",
      "id": "storage"
    },
    {
      "alertPercentLevel": 80,
      "referenceResourceId": "memory",
      "id": "memory"
    },
    {
      "alertPercentLevel": 80,
      "referenceResourceId": "cpu",
      "id": "cpu"
    },
    {
      "alertPercentLevel": 80,
      "referenceResourceId": "machine",
      "id": "machine"
    }
  ]
},
  "extensionData": {
    "entries": [

```

```

{
  "key": "computeResource",
  "value": {
    "type": "entityRef",
    "componentId": null,
    "classId": "ComputeResource",
    "id": "c527a0f5-b1ae-4b61-8145-ad9d5c434dc7",
    "label": "Engineering Allocation VDC"
  }
},
{
  "key": "machineQuota",
  "value": {
    "type": "integer",
    "value": 0
  }
},
{
  "key": "allocationModel",
  "value": {
    "type": "integer",
    "value": 0
  }
},
{
  "key": "reservationNetworks",
  "value": {
    "type": "multiple",
    "elementType": "COMPLEX",
    "items": [
      {
        "type": "complex",
        "componentTypeId": "com.vmware.csp.iaas.blueprint.service",
        "componentId": null,
        "classId": "Infrastructure.Reservation.Network",
        "typeFilter": null,
        "values": {
          "entries": [
            {
              "key": "networkPath",
              "value": {
                "type": "entityRef",
                "componentId": null,
                "classId": "Network",
                "id": "42c5063c-5422-448f-aac7-22ebe941ac8e",
                "label": "VM Network SQA"
              }
            }
          ]
        }
      }
    ]
  }
},
{

```

```

"key": "reservationStorages",
"value": {
  "type": "multiple",
  "elementType": "COMPLEX",
  "items": [
    {
      "type": "complex",
      "componentTypeId": "com.vmware.csp.iaas.blueprint.service",
      "componentId": null,
      "classId": "Infrastructure.Reservation.Storage",
      "typeFilter": null,
      "values": {
        "entries": [
          {
            "key": "computeResourceStorageTotalSizeGB",
            "value": {
              "type": "integer",
              "value": 1000
            }
          },
          {
            "key": "storagePath",
            "value": {
              "type": "entityRef",
              "componentId": null,
              "classId": "Storage",
              "id": "e655aa78-e5fb-4722-9e8a-0cd4139248cf",
              "label": "High Performance Storage"
            }
          },
          {
            "key": "storageReservationPriority",
            "value": {
              "type": "integer",
              "value": 1
            }
          },
          {
            "key": "storageReservedSizeGB",
            "value": {
              "type": "integer",
              "value": 100
            }
          },
          {
            "key": "storageEnabled",
            "value": {
              "type": "boolean",
              "value": true
            }
          },
          {
            "key": "computeResourceStorageFreeSizeGB",
            "value": {
              "type": "integer",

```



- If you are not using the API Explorer, verify that you have a valid HTTP bearer token that matches your login credentials. See [Chapter 2 REST API Authentication](#).

### Procedure

- ◆ Display a list of existing vRealize Automation reservations.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/reservations
```

The following sample output lists two vSphere reservations, named MyTestReservation1 and MyTestReservation2 .

```
{
  "links": [],
  "content": [{
    "id": "94d74105-831a-4598-8f42-efd590fea15c ",
    "name": "TestReservation",
    "reservationTypeId": "Infrastructure.Reservation.Virtual.vSphere",
    "tenantId": "qe",
    "subTenantId": "ef58f604-528d-4441-a219-4725bead629b",
    "enabled": true,
    "priority": 3,
    "reservationPolicyId": "b71c3a5f-087a-4d9e-9a56-fab785a3d128",
    "alertPolicy": {
      "enabled": true,
      "frequencyReminder": 20,
      "emailBgMgr": false,
      "recipients": ["user1@mycompany.com",
        "user2@mycompany.com"],
      "alerts": [{
        "alertPercentLevel": 10,
        "referenceResourceId": "storage",
        "id": "storage"
      },
      {
        "alertPercentLevel": 20,
        "referenceResourceId": "memory",
        "id": "memory"
      },
      {
        "alertPercentLevel": 30,
        "referenceResourceId": "cpu",
        "id": "cpu"
      },
      {
        "alertPercentLevel": 40,
        "referenceResourceId": "machine",
        "id": "machine"
      }
    ]
    },
    "extensionData": {
      "entries": [{
```

```

    "key": "key4",
    "value": {
      "type": "string",
      "value": "custom-property-value4"
    }
  },
  {
    "key": "key3",
    "value": {
      "type": "string",
      "value": "custom-property-value3"
    }
  },
  {
    "key": "reservationNetworks",
    "value": {
      "type": "multiple",
      "elementType": "COMPLEX",
      "items": [{
        "type": "complex",
        "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
        "componentId": null,
        "classId": "reservationNetwork",
        "typeFilter": null,
        "values": {
          "entries": [{
            "key": "reservationNetworkProfile",
            "value": {
              "type": "entityRef",
              "componentId": null,
              "classId": "NetworkProfile",
              "id": "ed5d1503-08ac-42ca-804d-9167834a63a5",
              "label": "ETEDoNotDelete2014-10-13 13:10:56"
            }
          ]
        }
      }],
      "key": "reservationNetworkPath",
      "value": {
        "type": "entityRef",
        "componentId": null,
        "classId": "Network",
        "id": "44cb65d5-b321-43dd-a2ab-8ecf387bff8f",
        "label": "VM Network SQA"
      }
    }
  }
]
}
},
{
  "key": "key0",
  "value": {
    "type": "string",
    "value": "custom-property-value0"
  }
}

```

```

},
{
  "key": "key2",
  "value": {
    "type": "string",
    "value": "custom-property-value2"
  }
},
{
  "key": "reservationMemory",
  "value": {
    "type": "complex",
    "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
    "componentId": null,
    "classId": "reservationMemory",
    "typeFilter": null,
    "values": {
      "entries": [{
        "key": "hostMemoryTotalSizeMB",
        "value": {
          "type": "integer",
          "value": 57187
        }
      },
      {
        "key": "reservationMemoryReservedSizeMb",
        "value": {
          "type": "integer",
          "value": 15888
        }
      }
    ]
  }
},
{
  "key": "key1",
  "value": {
    "type": "string",
    "value": "custom-property-value-Updated"
  }
},
{
  "key": "computeResource",
  "value": {
    "type": "entityRef",
    "componentId": null,
    "classId": "ComputeResource",
    "id": "047e00f5-5424-4ed2-a751-4a334aeaff54",
    "label": "VC51-Cluster"
  }
},
{
  "key": "machineQuota",
  "value": {
    "type": "integer",

```

```

    "value": 2
  }
},
{
  "key": "reservationStorages",
  "value": {
    "type": "multiple",
    "elementType": "COMPLEX",
    "items": [{
      "type": "complex",
      "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
      "componentId": null,
      "classId": "reservationStorage",
      "typeFilter": null,
      "values": {
        "entries": [{
          "key": "storageTotalSizeGB",
          "value": {
            "type": "integer",
            "value": 394
          }
        }
      ],
      "key": "reservationStorageReservedSizeGB",
      "value": {
        "type": "integer",
        "value": 31
      }
    },
    {
      "key": "reservationStorageEnabled",
      "value": {
        "type": "boolean",
        "value": true
      }
    },
    {
      "key": "reservationStoragePath",
      "value": {
        "type": "entityRef",
        "componentId": null,
        "classId": "StoragePath",
        "id": "f48a527b-30a6-4d54-8829-f549bc195b69",
        "label": "VNXe:qe-vnxe-nfs-1"
      }
    },
    {
      "key": "storageFreeSizeGB",
      "value": {
        "type": "integer",
        "value": 120
      }
    },
    {
      "key": "reservationStorageReservationPriority",

```

```

        "value": {
            "type": "integer",
            "value": 1
        }
    }
}
}],
{
    "key": "resourcePool",
    "value": {
        "type": "entityRef",
        "componentId": null,
        "classId": "ResourcePools",
        "id": "4e51fab3-19e8-4e79-b413-d52309b3bb62",
        "label": "CoreDev"
    }
}],
"metadata": {
    "size": 0,
    "totalElements": 1,
    "totalPages": 1,
    "number": 1,
    "offset": 0
}
}

```

## Syntax for Displaying a List of Reservations

You can use the REST API reservation service to display a list of existing vRealize Automation reservations. You can use this list to obtain the required reservation ID value in preparation for updating or deleting a reservation.

### Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	<code>https://\$host/reservation-service/api/reservations</code>
Method	Get
<i>\$host</i>	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
<i>\$token</i>	Specifies a valid HTTP bearer token with necessary credentials.

### Output

The command output contains property names and values based on the command input parameters.

Property	Description
Links	Specifies an array of link objects, each of which contains the following parts:
rel	Specifies the name of the link. <ul style="list-style-type: none"> <li>■ Self refers to the object which was returned or requested.</li> <li>■ First, Previous, Next, and Last refer to corresponding pages of pageable lists.</li> <li>■ Specifies the application or service that determines the other names.</li> </ul>
href	Specifies the URL that produces the result.
Content	Specifies an array of data rows, each of which represents one of the tenant objects returned in a pageable list.
Metadata	Specifies the paging-related data.
Size	Specifies the maximum number of rows per page.
totalElements	Specifies the number of rows returned.
totalPages	Specifies the total number of pages of data available.
Number	Specifies the current page number.
Offset	Specifies the number of rows skipped.

### Example: curl Command

The following example command displays a list of reservations.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/reservations
```

### Example: JSON Output

The following sample output lists two vSphere reservations, named MyTestReservation1 and MyTestReservation2. For related information, see [Syntax for Verifying a Reservation and Getting Reservation Details](#).

You can use the `id` value for each reservation to update or delete them. For related information, see [Syntax for Updating a Reservation](#) or [Syntax for Deleting a Reservation](#).

```
{
  "links": [],
  "content": [{
    "id": "94d74105-831a-4598-8f42-efd590fea15c ",
    "name": "TestReservation",
    "reservationTypeId": "Infrastructure.Reservation.Virtual.vSphere",
    "tenantId": "qe",
    "subTenantId": "ef58f604-528d-4441-a219-4725bead629b",
    "enabled": true,
    "priority": 3,
    "reservationPolicyId": "b71c3a5f-087a-4d9e-9a56-fab785a3d128",
    "alertPolicy": {
      "enabled": true,
      "frequencyReminder": 20,
```

```

"emailBgMgr": false,
"recipients": ["user1@mycompany.com",
"user2@mycompany.com"],
"alerts": [{
  "alertPercentLevel": 10,
  "referenceResourceId": "storage",
  "id": "storage"
},
{
  "alertPercentLevel": 20,
  "referenceResourceId": "memory",
  "id": "memory"
},
{
  "alertPercentLevel": 30,
  "referenceResourceId": "cpu",
  "id": "cpu"
},
{
  "alertPercentLevel": 40,
  "referenceResourceId": "machine",
  "id": "machine"
}]
},
"extensionData": {
  "entries": [{
    "key": "key4",
    "value": {
      "type": "string",
      "value": "custom-property-value4"
    }
  },
  {
    "key": "key3",
    "value": {
      "type": "string",
      "value": "custom-property-value3"
    }
  },
  {
    "key": "reservationNetworks",
    "value": {
      "type": "multiple",
      "elementType": "COMPLEX",
      "items": [{
        "type": "complex",
        "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
        "componentId": null,
        "classId": "reservationNetwork",
        "typeFilter": null,
        "values": {
          "entries": [{
            "key": "reservationNetworkProfile",
            "value": {
              "type": "entityRef",

```



```

    }
  }]
}
},
{
  "key": "key1",
  "value": {
    "type": "string",
    "value": "custom-property-value-Updated"
  }
},
{
  "key": "computeResource",
  "value": {
    "type": "entityRef",
    "componentId": null,
    "classId": "ComputeResource",
    "id": "047e00f5-5424-4ed2-a751-4a334aeaff54",
    "label": "VC51-Cluster"
  }
},
{
  "key": "machineQuota",
  "value": {
    "type": "integer",
    "value": 2
  }
},
{
  "key": "reservationStorages",
  "value": {
    "type": "multiple",
    "elementType": "COMPLEX",
    "items": [{
      "type": "complex",
      "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
      "componentId": null,
      "classId": "reservationStorage",
      "typeFilter": null,
      "values": {
        "entries": [{
          "key": "storageTotalSizeGB",
          "value": {
            "type": "integer",
            "value": 394
          }
        }
      ],
    },
    {
      "key": "reservationStorageReservedSizeGB",
      "value": {
        "type": "integer",
        "value": 31
      }
    }
  ],
},

```

```

    {
      "key": "reservationStorageEnabled",
      "value": {
        "type": "boolean",
        "value": true
      }
    },
    {
      "key": "reservationStoragePath",
      "value": {
        "type": "entityRef",
        "componentId": null,
        "classId": "StoragePath",
        "id": "f48a527b-30a6-4d54-8829-f549bc195b69",
        "label": "VNXe:qe-vnxe-nfs-1"
      }
    },
    {
      "key": "storageFreeSizeGB",
      "value": {
        "type": "integer",
        "value": 120
      }
    },
    {
      "key": "reservationStorageReservationPriority",
      "value": {
        "type": "integer",
        "value": 1
      }
    }
  ]
}
}],
{
  "key": "resourcePool",
  "value": {
    "type": "entityRef",
    "componentId": null,
    "classId": "ResourcePools",
    "id": "4e51fab3-19e8-4e79-b413-d52309b3bb62",
    "label": "CoreDev"
  }
}],
"metadata": {
  "size": 0,
  "totalElements": 1,
  "totalPages": 1,
  "number": 1,
  "offset": 0
}
}

```

## Update a Reservation

You can use the REST API reservation service to update an existing vRealize Automation reservation.

### Prerequisites

- Log in to vRealize Automation as a **fabric group administrator**.
- Verify that the host name and fully qualified domain name of the vRealize Automation instance are available.
- If you are not using the API Explorer, verify that you have a valid HTTP bearer token that matches your login credentials. See [Chapter 2 REST API Authentication](#).
- Obtain the reservation ID of the reservation that you want to update. This information is required API command input. See [Syntax for Displaying a List of Reservations](#).
- Obtain the reservation field information for the reservation that you want to update. For example, if you want to change from one compute resource to another, you must obtain the new compute resource ID and its associated JSON section output. This information is required API command input. See [Syntax for Getting a Compute Resource for a Reservation](#).

### Procedure

- ◆ Use the reservation service to update an existing reservation.

The following example command updates a reservation with an ID of 94d74105-831a-4598-8f42-efd590fea15c.

```
curl -X PUT--insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/reservations/94d74105-831a-4598-8f42-efd590fea15c -d
"
{
  "id": "94d74105-831a-4598-8f42-efd590fea15c",
  "name": "TestReservation",
  "reservationTypeId": "Infrastructure.Reservation.Virtual.vSphere",
  "tenantId": "qe",
  "subTenantId": "ef58f604-528d-4441-a219-4725bead629b",
  "enabled": true,
  "priority": 3,
  "reservationPolicyId": "b71c3a5f-087a-4d9e-9a56-fab785a3d128",
  "alertPolicy": {
    "enabled": true,
    "frequencyReminder": 20,
    "emailBgMgr": false,
    "recipients": ["user1@mycompany.com",
    "user2@mycompany.com"],
    "alerts": [{
      "alertPercentLevel": 10,
      "referenceResourceId": "storage",
      "id": "storage"
    }],
  },
}
```

```

{
  "alertPercentLevel": 20,
  "referenceResourceId": "memory",
  "id": "memory"
},
{
  "alertPercentLevel": 30,
  "referenceResourceId": "cpu",
  "id": "cpu"
},
{
  "alertPercentLevel": 40,
  "referenceResourceId": "machine",
  "id": "machine"
}]
},
"extensionData": {
  "entries": [{
    "key": "key4",
    "value": {
      "type": "string",
      "value": "custom-property-value4"
    }
  },
  {
    "key": "key3",
    "value": {
      "type": "string",
      "value": "custom-property-value3"
    }
  },
  {
    "key": "reservationNetworks",
    "value": {
      "type": "multiple",
      "elementType": "COMPLEX",
      "items": [{
        "type": "complex",
        "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
        "componentId": null,
        "classId": "reservationNetwork",
        "typeFilter": null,
        "values": {
          "entries": [{
            "key": "reservationNetworkProfile",
            "value": {
              "type": "entityRef",
              "componentId": null,
              "classId": "NetworkProfile",
              "id": "ed5d1503-08ac-42ca-804d-9167834a63a5",
              "label": "TestNetworkProfile"
            }
          ]
        }
      },
      {
        "key": "reservationNetworkPath",

```

```

        "value": {
            "type": "entityRef",
            "componentId": null,
            "classId": "Network",
            "id": "44cb65d5-b321-43dd-a2ab-8ecf387bff8f",
            "label": "VM Network SQA"
        }
    }
}
}],
{
    "key": "key0",
    "value": {
        "type": "string",
        "value": "custom-property-value0"
    }
},
{
    "key": "key2",
    "value": {
        "type": "string",
        "value": "custom-property-value2"
    }
},
{
    "key": "reservationMemory",
    "value": {
        "type": "complex",
        "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
        "componentId": null,
        "classId": "reservationMemory",

        "typeFilter": null,
        "values": {
            "entries": [{
                "key": "hostMemoryTotalSizeMB",
                "value": {
                    "type": "integer",
                    "value": 57187
                }
            },
            {
                "key": "reservationMemoryReservedSizeMb",
                "value": {
                    "type": "integer",
                    "value": 15888
                }
            }
        ]
    }
}
},
{
    "key": "key1",

```

```

"value": {
  "type": "string",
  "value": "custom-property-value-Updated"
}
},
{
  "key": "computeResource",
  "value": {
    "type": "entityRef",
    "componentId": null,
    "classId": "ComputeResource",
    "id": "047e00f5-5424-4ed2-a751-4a334aeaff54",
    "label": "VC51-Cluster"
  }
},
{
  "key": "machineQuota",
  "value": {
    "type": "integer",
    "value": 2
  }
},
{
  "key": "reservationStorages",
  "value": {
    "type": "multiple",
    "elementType": "COMPLEX",
    "items": [{
      "type": "complex",
      "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
      "componentId": null,
      "classId": "reservationStorage",
      "typeFilter": null,
      "values": {
        "entries": [{
          "key": "storageTotalSizeGB",
          "value": {
            "type": "integer",
            "value": 394
          }
        }
      ],
      "key": "reservationStorageReservedSizeGB",
      "value": {
        "type": "integer",
        "value": 31
      }
    }
  ],
  "key": "reservationStorageEnabled",
  "value": {
    "type": "boolean",
    "value": true
  }
},

```

```

    {
      "key": "reservationStoragePath",
      "value": {
        "type": "entityRef",
        "componentId": null,
        "classId": "StoragePath",
        "id": "f48a527b-30a6-4d54-8829-f549bc195b69",
        "label": "VNXe:qe-vnxe-nfs-1"
      }
    },
    {
      "key": "storageFreeSizeGB",
      "value": {
        "type": "integer",
        "value": 120
      }
    },
    {
      "key": "reservationStorageReservationPriority",
      "value": {
        "type": "integer",
        "value": 1
      }
    }
  ]
}
]]
}
},
{
  "key": "resourcePool",
  "value": {
    "type": "entityRef",
    "componentId": null,
    "classId": "ResourcePools",
    "id": "4e51fab3-19e8-4e79-b413-d52309b3bb62",
    "label": "CoreDev"
  }
}
]]
}
}
"

```

The following output is returned based on the command input.

If the command is successful, the HTTP response body is empty except for a 204 No Content status statement.

## Syntax for Updating a Reservation

You can use the vRealize Automation REST API reservation service to update an existing reservation.

### Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	https://\$host/reservation-service/api/reservations/\$reservationId
Method	Put
\$host	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
\$token	Specifies a valid HTTP bearer token with necessary credentials.
\$reservationId	Specifies the unique identifier of the reservation to update. For information about how to obtain the reservation ID, see <a href="#">Syntax for Displaying a List of Reservations</a> .
HTTP body	<p>Contains the JSON information for the reservation, including the updated data for the parameters that you want to update.</p> <p>Most of this JSON string information is obtained by displaying the existing details of the \$reservationId. See <a href="#">Syntax for Verifying a Reservation and Getting Reservation Details</a>. The rest of the JSON string information is obtained by using an API command to get the ID of the parameter you want to update.</p> <p>For example, to update the reservation to use a different compute resource than the one currently specified, replace the computeResource value of the exiting reservation with a new computeResource value in the command's HTTP input.</p>

## Output

If the command is successful, the HTTP response body is empty except for a 204 No Content status statement.

## Example: curl Command

The following example command updates the reservation with an ID of 94d74105-831a-4598-8f42-efd590fea15c to use compute resource ID 047e00f5-5424-4ed2-a751-4a334aeaff54.

```
curl -X PUT--insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/reservations/94d74105-831a-4598-8f42-efd590fea15c -d
"
{
  "id": "94d74105-831a-4598-8f42-efd590fea15c",
  "name": "TestReservation",
  "reservationTypeId": "Infrastructure.Reservation.Virtual.vSphere",
  "tenantId": "qe",
  "subTenantId": "ef58f604-528d-4441-a219-4725bead629b",
  "enabled": true,
  "priority": 3,
  "reservationPolicyId": "b71c3a5f-087a-4d9e-9a56-fab785a3d128",
  "alertPolicy": {
    "enabled": true,
    "frequencyReminder": 20,
    "emailBgMgr": false,
    "recipients": ["user1@mycompany.com",
    "user2@mycompany.com"],
```

```

"alerts": [{
  "alertPercentLevel": 10,
  "referenceResourceId": "storage",
  "id": "storage"
},
{
  "alertPercentLevel": 20,
  "referenceResourceId": "memory",
  "id": "memory"
},
{
  "alertPercentLevel": 30,
  "referenceResourceId": "cpu",
  "id": "cpu"
},
{
  "alertPercentLevel": 40,
  "referenceResourceId": "machine",
  "id": "machine"
}]
},
"extensionData": {
  "entries": [{
    "key": "key4",
    "value": {
      "type": "string",
      "value": "custom-property-value4"
    }
  },
  {
    "key": "key3",
    "value": {
      "type": "string",
      "value": "custom-property-value3"
    }
  },
  {
    "key": "reservationNetworks",
    "value": {
      "type": "multiple",
      "elementTypeId": "COMPLEX",
      "items": [{
        "type": "complex",
        "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
        "componentId": null,
        "classId": "reservationNetwork",
        "typeFilter": null,
        "values": {
          "entries": [{
            "key": "reservationNetworkProfile",
            "value": {
              "type": "entityRef",
              "componentId": null,
              "classId": "NetworkProfile",
              "id": "ed5d1503-08ac-42ca-804d-9167834a63a5",

```

```

        "label": "TestNetworkProfile"
    }
},
{
    "key": "reservationNetworkPath",
    "value": {
        "type": "entityRef",
        "componentId": null,
        "classId": "Network",
        "id": "44cb65d5-b321-43dd-a2ab-8ecf387bff8f",
        "label": "VM Network SQA"
    }
}]
}
}]
},
{
    "key": "key0",
    "value": {
        "type": "string",
        "value": "custom-property-value0"
    }
},
{
    "key": "key2",
    "value": {
        "type": "string",
        "value": "custom-property-value2"
    }
},
{
    "key": "reservationMemory",
    "value": {
        "type": "complex",
        "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
        "componentId": null,
        "classId": "reservationMemory",

        "typeFilter": null,
        "values": {
            "entries": [{
                "key": "hostMemoryTotalSizeMB",
                "value": {
                    "type": "integer",
                    "value": 57187
                }
            }
        ],
        {
            "key": "reservationMemoryReservedSizeMb",
            "value": {
                "type": "integer",
                "value": 15888
            }
        }
    }
}]

```

```

    }
  },
  {
    "key": "key1",
    "value": {
      "type": "string",
      "value": "custom-property-value-Updated"
    }
  },
  {
    "key": "computeResource",
    "value": {
      "type": "entityRef",
      "componentId": null,
      "classId": "ComputeResource",
      "id": "047e00f5-5424-4ed2-a751-4a334aeaff54",
      "label": "VC51-Cluster"
    }
  },
  {
    "key": "machineQuota",
    "value": {
      "type": "integer",
      "value": 2
    }
  },
  {
    "key": "reservationStorages",
    "value": {
      "type": "multiple",
      "elementType": "COMPLEX",
      "items": [{
        "type": "complex",
        "componentTypeId": "com.mycompany.csp.iaas.blueprint.service",
        "componentId": null,
        "classId": "reservationStorage",
        "typeFilter": null,
        "values": {
          "entries": [{
            "key": "storageTotalSizeGB",
            "value": {
              "type": "integer",
              "value": 394
            }
          }
        ]
      }
    ],
    {
      "key": "reservationStorageReservedSizeGB",
      "value": {
        "type": "integer",
        "value": 31
      }
    }
  },
  {
    "key": "reservationStorageEnabled",

```

```

        "value": {
            "type": "boolean",
            "value": true
        }
    },
    {
        "key": "reservationStoragePath",
        "value": {
            "type": "entityRef",
            "componentId": null,
            "classId": "StoragePath",
            "id": "f48a527b-30a6-4d54-8829-f549bc195b69",
            "label": "VNXe:qe-vnxe-nfs-1"
        }
    },
    {
        "key": "storageFreeSizeGB",
        "value": {
            "type": "integer",
            "value": 120
        }
    },
    {
        "key": "reservationStorageReservationPriority",
        "value": {
            "type": "integer",
            "value": 1
        }
    }
]
}
}]
}
},
{
    "key": "resourcePool",
    "value": {
        "type": "entityRef",
        "componentId": null,
        "classId": "ResourcePools",
        "id": "4e51fab3-19e8-4e79-b413-d52309b3bb62",
        "label": "CoreDev"
    }
}
}]
}
}
"

```

### Example: JSON Output

If the command is successful, the HTTP response body is empty except for a 204 No Content status statement.

## Delete a Reservation

You can use the vRealize Automation REST API reservation service to delete an existing reservation.

### Prerequisites

- Log in to vRealize Automation as a **fabric group administrator**.
- Verify that the host name and fully qualified domain name of the vRealize Automation instance are available.
- If you are not using the API Explorer, verify that you have a valid HTTP bearer token that matches your login credentials. See [Chapter 2 REST API Authentication](#).
- Obtain the reservation ID of the reservation that you want to delete. This information is required API command input. See [Syntax for Displaying a List of Reservations](#).

### Procedure

- ◆ Use the reservation service to delete the existing reservation.

The following example command deletes a reservation with the ID of 94d74105-831a-4598-8f42-efd590fea15c.

```
curl -X "Delete" --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/reservations/94d74105-831a-4598-8f42-efd590fea15c
```

The following output is returned based on the command input.

If the command is successful, the HTTP response body is empty except for a 204 No Content status statement.

## Syntax for Deleting a Reservation

You can use the vRealize Automation REST API reservation service to delete an existing reservation.

### Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	https://\$host/reservation-service/api/reservations/\$reservationId
Method	Delete
\$host	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.

Parameter	Description
<i>\$token</i>	Specifies a valid HTTP bearer token with necessary credentials.
<i>\$reservationId</i>	Specifies the unique identifier of the reservation to delete. For information about how to obtain the reservation ID, see <a href="#">Syntax for Displaying a List of Reservations</a> .

## Output

If the command is successful, the HTTP response body is empty except for a 204 No Content status statement.

### Example: curl Command

The following example command deletes a reservation with an ID of 94d74105-831a-4598-8f42-efd590fea15c.

```
curl -X "Delete" --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/reservations/94d74105-831a-4598-8f42-efd590fea15c
```

### Example: JSON Output

If the command is successful, the HTTP response body is empty except for a 204 No Content status statement.

## Working with Reservation Policies

You can use the vRealize Automation REST API to work with the reservation service to perform a variety of functions, such as creating and updating reservation policies.

While many functions are stand-alone, some functions rely on the output of others. For example, to delete a reservation ID, you must first obtain the ID of the reservation to delete.

## List Reservation Policies

You can use the REST API reservation service to list existing reservation policies. Use this information to obtain a reservation policy ID in preparation for updating or deleting the reservation policy.

For information about available command input and output parameters, see [Syntax for Listing Reservation Policies](#).

### Prerequisites

- Log in to vRealize Automation as a **fabric group administrator**.
- Verify that the host name and fully qualified domain name of the vRealize Automation instance are available.
- If you are not using the API Explorer, verify that you have a valid HTTP bearer token that matches your login credentials. See [Chapter 2 REST API Authentication](#).

## Procedure

- ◆ Run the following example command to list all available reservation policies.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/reservations/policies
```

The following example output lists two reservation policies, named `reservationPolicyTest` and `reservationPolicyTest2`. You can use the ID value for each reservation policy to update or delete them. See [Syntax for Updating a Reservation Policy](#) and [Syntax for Deleting a Reservation Policy](#) [Syntax](#).

```
{
  "links": [],
  "content": [{
    "@type": "ReservationPolicy",
    "id": "8adafb54-4c85-4478-86f0-b6ae80ab5ca4",
    "name": "reservationPolicyTest",
    "description": "reservationPolicyDescTest",
    "reservationPolicyTypeId": "Infrastructure.Reservation.Policy.ComputeResource"
  },
  {
    "@type": "reservationPolicy",
    "id": "fdd9854b-012e-41d7-ad17-fc73d4395714",
    "name": "reservationPolicyTest2",
    "description": "reservationPolicyDescTest2",
    "reservationPolicyTypeId": "Infrastructure.Reservation.Policy.Storage"
  }
  ],
  "metadata": {
    "size": 0,
    "totalElements": 2,
    "totalPages": 1,
    "number": 1,
    "offset": 0
  }
}
```

## Syntax for Listing Reservation Policies

You can use the vRealize Automation REST API to list existing reservation policies. Use this information to obtain a reservation policy ID in preparation for updating or deleting the reservation policy.

### Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	https://\$host/reservation-service/api/reservations/policies
Method	Get

Parameter	Description
<i>\$host</i>	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
<i>\$token</i>	Specifies a valid HTTP bearer token with necessary credentials.

## Output

The command output contains property names and values based on the command input parameters.

Property	Description
Links	<p>Specifies an array of link objects, each of which contains the following parts:</p> <ul style="list-style-type: none"> <li>■ rel <ul style="list-style-type: none"> <li>Specifies the name of the link.</li> <li>■ Self refers to the object which was returned or requested.</li> <li>■ First, Previous, Next, and Last refer to corresponding pages of pageable lists.</li> <li>■ Specifies the application or service that determines the other names.</li> </ul> </li> <li>■ href <ul style="list-style-type: none"> <li>Specifies the URL that produces the result.</li> </ul> </li> </ul>
Content	<p>Specifies an array of data rows, each of which represents one of the tenant objects returned in a pageable list. Each tenant object contains the following information:</p> <ul style="list-style-type: none"> <li>■ @type. Contains the ReservationPolicy string.</li> <li>■ id. Specifies the unique reservation policy ID.</li> <li>■ name. Specifies the reservation policy name.</li> <li>■ description. Specifies the reservation policy description.</li> </ul>
reservationPolicyTypeId	Specifies the type of reservation policy. Supported vRealize Automation reservation policy types are Reservation.Policy.ComputeResource and Reservation.Policy.Storage.
Metadata	<p>Specifies the paging-related data:</p> <ul style="list-style-type: none"> <li>■ Size. Specifies the maximum number of rows per page.</li> <li>■ totalElements. Specifies the number of rows returned.</li> <li>■ totalPages. Specifies the total number of pages of data available.</li> <li>■ Number. Specifies the current page number.</li> <li>■ Offset. Specifies the number of rows skipped.</li> </ul>

## Example: curl Command

List all available reservation policies.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/reservations/policies
```

## Example: JSON Output

The following example output lists two reservation policies, named `reservationPolicyTest` and `reservationPolicyTest2`. Use the `id` value for each reservation policy to update or delete them. See [Syntax for Updating a Reservation Policy](#) and [Syntax for Deleting a Reservation Policy Syntax](#).

```
{
  "links": [],
  "content": [{
    "@type": "ReservationPolicy",
    "id": "8adafb54-4c85-4478-86f0-b6ae80ab5ca4",
    "name": "reservationPolicyTest",
    "description": "reservationPolicyDescTest",
    "reservationPolicyTypeId": "Infrastructure.Reservation.Policy.ComputeResource"
  },
  {
    "@type": "reservationPolicy",
    "id": "fdd9854b-012e-41d7-ad17-fc73d4395714",
    "name": "reservationPolicyTest2",
    "description": "reservationPolicyDescTest2",
    "reservationPolicyTypeId": "Infrastructure.Reservation.Policy.Storage"
  }
  ],
  "metadata": {
    "size": 0,
    "totalElements": 2,
    "totalPages": 1,
    "number": 1,
    "offset": 0
  }
}
```

## Create a Reservation Policy

You can use the REST API reservation service to create a reservation policy.

For information about available command input and output parameters, see [Syntax for Creating a Reservation Policy](#).

### Prerequisites

- Log in to vRealize Automation as a **fabric group administrator**.
- Verify that the host name and fully qualified domain name of the vRealize Automation instance are available.
- If you are not using the API Explorer, verify that you have a valid HTTP bearer token that matches your login credentials. See [Chapter 2 REST API Authentication](#).
- List existing reservation policies to create the sample output required for creating a new reservation policy. See [List Reservation Policies](#).

## Procedure

- ◆ Use the reservation service to create a reservation policy as shown in the following sample command.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/reservations/policies -d "
{
  "name": "ABXReservationPolicyTest",
  "description": "ABXReservationPolicyDescTest",
  "reservationPolicyTypeId": "Infrastructure.Reservation.Policy.ComputeResource"
}
"
```

The command output contains the new reservation policy ID, for example 5fd2de36-659f-4beb-97af-77d683feb697.

```
Location:
https://$host/reservation-service/api/reservations/policies/5fd2de36-659f-4beb-97af-77d683feb697
```

## Syntax for Creating a Reservation Policy

You can use the REST API reservation service to create a reservation policy.

### Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	https://\$host/reservation-service/api/reservations/policies
Method	Post
\$host	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
\$token	Specifies a valid HTTP bearer token with necessary credentials.
HTTP body	Describes the reservation policy to create. <ul style="list-style-type: none"> <li>■ \$name - reservation policy name</li> <li>■ \$description - reservation policy description</li> </ul>
\$reservationPolicyTypeId	Specifies the reservation policy type ID. The supported reservation policy types are Reservation.Policy.ComputeResource and Reservation.Policy.Storage.

### Output

The command output contains property names and values based on the command input parameters.

The output URL contains the new reservation policy ID.

Property	Description
status	When the reservation policy is successfully created, the HTTP response status is 201 created.
Header.Location	The HTTP response contains a Location attribute that is format as https://\$host /reservation-service/api/reservations/policies/\$reservationPolicyId.
\$reservationPolicyId	Specifies the new reservation policy ID. Obtain this ID by listing your available reservation policies.

### Example: curl Command

The following example command uses the reservation service to create a new reservation policy.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/reservations/policies -d "
{
  "name": "ABXReservationPolicyTest",
  "description": "ABXReservationPolicyDescTest",
  "reservationPolicyTypeId": "Infrastructure.Reservation.Policy.ComputeResource"
}
"
```

### Example: JSON Output

The following example output contains the HTTP body and a location URL. The output URL contains the new reservation policy ID, for example 5fd2de36-659f-4beb-97af-77d683feb697.

```
Location:
https://$host/reservation-service/api/reservations/policies/5fd2de36-659f-4beb-97af-77d683feb697
```

Copy the location URL from this output to an editor for future use, for example for updating or deleting the reservation policy.

## Display a Reservation Policy by ID

You can use the REST API reservation service with a reservation policy ID to display information about a specific reservation policy.

For information about available command input and output parameters, see [Syntax for Displaying a Reservation Policy by ID](#).

### Prerequisites

- Log in to vRealize Automation as a **fabric group administrator**.
- Verify that the host name and fully qualified domain name of the vRealize Automation instance are available.

- If you are not using the API Explorer, verify that you have a valid HTTP bearer token that matches your login credentials. See [Chapter 2 REST API Authentication](#).
- Obtain the reservation policy ID of the reservation policy to query. See [Syntax for Listing Reservation Policies](#).

### Procedure

- ◆ Display information about the reservation policy ID.

The following example displays information about reservation policy 8adafb54-4c85-4478-86f0-b6ae80ab5ca4.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/reservations/policies/8adafb54-4c85-4478-86f0-b6ae80ab5ca4
```

The following sample output is generated.

```
{
  "id": "8adafb54-4c85-4478-86f0-b6ae80ab5ca4",
  "name": "reservationPolicyTest",
  "description": "reservationPolicyDescTest",
  "reservationPolicyTypeId": "Infrastructure.Reservation.Policy.ComputeResource"
}
```

Use the command output to make updates to the reservation policy. See [Syntax for Updating a Reservation Policy](#).

## Syntax for Displaying a Reservation Policy by ID

You can use the REST API reservation service with a reservation policy ID to display information about a specific reservation policy.

### Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	https://\$host/reservation-service/api/reservations/policies/\$id
Method	Get
\$host	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
\$token	Specifies a valid HTTP bearer token with necessary credentials.

### Example: Output

The command output contains property names and values based on the command input parameters.

Parameter	Description
<i>\$id</i>	Specifies the reservation policy ID.
<i>\$name</i>	Specifies the reservation policy name.
<i>\$description</i>	Specifies the reservation policy description.
<i>\$reservationPolicyTypeId</i>	Specifies the reservation policy type ID.

### Example: Example: curl Command

The following example command retrieves information for the reservation policy with an ID of 8adafb54-4c85-4478-86f0-b6ae80ab5ca4.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/reservations/policies/8adafb54-4c85-4478-86f0-b6ae80ab5ca4
```

### Example: Example: JSON Output

The following sample output displays information for the specified reservation policy ID 8adafb54-4c85-4478-86f0-b6ae80ab5ca4.

```
{
  "id": "8adafb54-4c85-4478-86f0-b6ae80ab5ca4",
  "name": "reservationPolicyTest",
  "description": "reservationPolicyDescTest",
  "reservationPolicyTypeId": "Infrastructure.Reservation.Policy.ComputeResource"
}
```

## Update a Reservation Policy

You can use the REST API reservation service to update a vRealize Automation reservation policy.

For information about available command input and output parameters, see [Syntax for Updating a Reservation Policy](#).

### Prerequisites

- Log in to vRealize Automation as a **fabric group administrator**.
- Verify that the host name and fully qualified domain name of the vRealize Automation instance are available.
- If you are not using the API Explorer, verify that you have a valid HTTP bearer token that matches your login credentials. See [Chapter 2 REST API Authentication](#).
- Get the required reservation policy ID. See [Syntax for Listing Reservation Policies](#).
- Query the reservation policy and copy the response output to an XML editor for use as the basis of your command input for this task. See [Syntax for Displaying a Reservation Policy by ID](#).

## Procedure

- 1 Query the reservation policy and copy the response output to an editor.
- 2 Change the following information to use as the basis of the command input for this task.
  - Reservation policy name
  - Reservation policy description
  - Reservation policy type ID
- 3 Update the name and description values for the reservation policy ID.

The following example syntax updates the information for reservation policy ID 94d74105-831a-4598-8f42-efd590fea15c.

```
curl -X PUT --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/reservations/policies/94d74105-831a-4598-8f42-efd590fea15c -
d "
{
  "name": "ReservationPolicyTestRename",
  "description": "ReservationPolicyDescTestRename",
  "reservationPolicyTypeId": "Infrastructure.Reservation.Policy.ComputeResource"
}
"
```

If the command is successful, the HTTP response body is empty except for a 204 No Content status statement.

## Syntax for Updating a Reservation Policy

You can use the vRealize Automation REST API reservation service to update a reservation policy.

### Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	https://\$host/reservation-service/api/reservations/policies/\$id
Method	Put
\$host	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.

Parameter	Description
<i>\$token</i>	Specifies a valid HTTP bearer token with necessary credentials.
HTTP body	<p>Describes the reservation policy to update.</p> <p>To obtain the value, query the reservation policy and copy the response output to an editor for use as the basis of your command input. See <a href="#">Syntax for Displaying a Reservation Policy by ID</a>.</p> <ul style="list-style-type: none"> <li>■ <i>\$id</i> - reservation policy ID</li> <li>■ <i>\$name</i> - reservation policy name</li> <li>■ <i>\$description</i> - reservation policy description</li> <li>■ <i>\$reservationPolicyTypeId</i> - reservation policy type ID</li> </ul> <p>The supported reservation policy types are Reservation.Policy.ComputeResource and Reservation.Policy.Storage.</p>

## Output

If the command is successful, the HTTP response body is empty except for a 204 No Content status statement.

### Example: curl Command

The following example command updates the name and description values for the reservation policy with an ID of 94d74105-831a-4598-8f42-efd590fea15c.

```
curl -X PUT --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/reservations/policies/94d74105-831a-4598-8f42-efd590fea15c -d "{
  "name": "ReservationPolicyTestRename",
  "description": "ReservationPolicyDescTestRename",
  "reservationPolicyTypeId": "Infrastructure.Reservation.Policy.ComputeResource"
}"
```

### Example: JSON Output

If the command is successful, the HTTP response body is empty except for a 204 No Content status statement.

## Delete a Reservation Policy

You can use the REST API reservation service to delete a vRealize Automation reservation policy.

For information about available command input and output parameters, see [Syntax for Deleting a Reservation Policy Syntax](#).

### Prerequisites

- Log in to vRealize Automation as a **fabric group administrator**.

- Verify that the host name and fully qualified domain name of the vRealize Automation instance are available.
- If you are not using the API Explorer, verify that you have a valid HTTP bearer token that matches your login credentials. See [Chapter 2 REST API Authentication](#).
- Get the required reservation policy ID. See [Syntax for Listing Reservation Policies](#).

### Procedure

- ◆ Delete the reservation policy ID.

The following example syntax updates the information for reservation policy ID8adafb54-4c85-4478-86f0-b6ae80ab5ca4.

```
curl -X "Delete" --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/reservations/policies/8adafb54-4c85-4478-86f0-b6ae80ab5ca4
```

If the command is successful, the HTTP response body is empty except for a 204 No Content status statement.

## Syntax for Deleting a Reservation Policy Syntax

You can use the REST API reservation service to delete a vRealize Automation reservation policy.

### Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	https://\$host/reservation-service/api/reservations/policies/\$id
Method	Delete
\$host	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
\$token	Specifies a valid HTTP bearer token with necessary credentials.
\$id	Specifies the reservation policy ID. To obtain the reservation policy ID to delete, see <a href="#">Syntax for Listing Reservation Policies</a> .

### Output

If the command is successful, the HTTP response body is empty except for a 204 No Content status statement.

**Example: Example: curl Command**

The following example command deletes a reservation policy with an ID of 8adafb54-4c85-4478-86f0-b6ae80ab5ca4.

```
curl -X "Delete" --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/reservations/policies/8adafb54-4c85-4478-86f0-b6ae80ab5ca4
```

**Example: Example: JSON Output**

If the command is successful, the HTTP response body is empty except for a 204 No Content status statement.

## Working with Key Pairs

You can work with the `keyValuePair` data element of the REST API `workitem` service to list, create, and update key pairs.

For information about using the vRealize Automation application user interface to work with key pairs, see the *laaS Configuration* documentation.

### Get a Key Pair List

You can use the vRealize Automation REST API to get a list of valid key pairs.

**Prerequisites**

- Log in to vRealize Automation as a **tenant administrator**.
- Verify that the host name and fully qualified domain name of the vRealize Automation instance are available.
- If you are not using the API Explorer, verify that you have a valid HTTP bearer token that matches your login credentials. See [Chapter 2 REST API Authentication](#).

**Procedure**

- ◆ Use the following sample command to list all available reservation policies.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/iaas-proxy-provider/api/keyPairs
```

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

```
{
  "links": [
  ],
  "content": [
    {
```

```

    "@type": "KeyPair",
    "id": 26,
    "name": "TestKeyPair",
    "computeResourceId": "ca4dcca0-85ce-49dd-8371-4ce7c8e2d5e6",
    "secretKey": ""
  },
  {
    "@type": "KeyPair",
    "id": 27,
    "name": "EC2KeyPair",
    "computeResourceId": "ca4dcca0-85ce-49dd-8371-4ce7c8e2d5e6",
    "secretKey":
"jmfhkPFLe1xF4LsgxyYD1BH65IjiKsNH3xgeUhnT6AyIcSA2eZsxH9FNFCdst1cRLQUmLYLUCN6Z1rVtD3C5CYA0EE9Up10
+YknAcqUSyXB6PQ3I/NuebdTGrx38fkTJsEPRqxLppWPJpVLHYR0207GhhWnE6F3bPwwg3dWwymqWHxBZ1CcuEcztovbhN8r7/h
KsXKbNSJz
+J8DVhPB7PPdHJ4E/6a9IXkNqs/T0NknC0yc0YcFVpgrc3PMGabi8vd/7v0nEtDARyA8WwAGgtedHGtBo2gciY1Bu/0SNr2yCz
sZcqbVeg4ufkjlV0G1Ed1FFGHMh5kuVC7a1k2aSI5YkwnS4d9YJYi7diYmc7GmrVW0XWNz4kEMdQBkK+CvMxiZ17jyQD
+V4NuM4ydNPJjMqpvoAHTLrAmp/hXhInuf8j/10mbawWSVUDUA3s4ZE55cFp546MJrVCRyoMoKfxuHquIPdANRAVs7qo9DGxBi
CzjvyBqof21y6dhGcd1q48Dkd72QCj6gGV84LHZ/zXwcz4+aKFRVo1NqSZEtZ/9wzdjqYdn/yS10S5GE2rG/xRsh6g
+giB9j4VQOMvc/uvhkYUo3WfTgxi8SeipFIVcbvkk0I0ubPU1xnWdERjji6UwEtmjajHuiA93GtiWIdeCvyKQWmo9jkkLUmQe4
XrmRt3P09Fwm8Quwe5Hw6czK0dI0DwcHE0Azl0TqLk1wA39uhGrHoXNypFi0MmRbo1YnfIW23ggEnxRACY1jUZkTewhSbVY4S
+XyzvFDcTRpSjWpRU0ozYuMSSdnRzCJZQXhg4IYvwTvG+uEUu4+YR
+WrcG6Tk60i3cLSuHnV5k00AWXwvvnPnwYRFxyzhcSDx4jyCaysmBo9NHGwNkJU1F94SY5Vp600E9EJuViMohF1gc18Q6SXH
BNlRp0L7bAMggpmystGIkBNkSRhcDAFFlNoS/MTEW0uJoDfe6DczAt9B0YgThdy3AH/U4AD0Pkz5x1Q4EL/rQSSolcBfVhbejVp
bktJo4YKB7dzSDcJTSw99Uve
+BQjhigVcfDXme3MrXP04BeCU891DLatJyeYYADyGUKZFKFC6iC09SQfynwK6iE2eYKLPImcf/C8+rLJVXcy7gkjt/17Wcu7mQ
XMevlIJlaApyytN1eCjCvDs4N5LURZofnPARromhLy3JWiEJ4dtq+17KPiMff34e/kt
+i0ns73Wdy1ob1Zai5kwBFMBjAMex5fGNR1q/wtY1beWaxVw1J5RViaXeXSK05mttE/dzW60NeJyggI1pgfwSLwr8JA4GanN1R
WGeqRNjF00GgdufIvDqmBB/klnuGTVgMVwc0caQMzFq07UcX1MgNOR0HBFkzeLWB+v0kXhS4eSeYVhjnT3CPURr5UMZ8YQ7fm
+DlTRM1Nw3o9WAJjQJ5xyT2kxou4PHBzoq6JouwrCluig7GQ061Vu2C3nNpyfGKsmFy0LHMavURYX9/dJQyibZAg1yDqyI3sIL3
CeGr7ynh0TEEQiA0WqgIUYDvrvc2Ma4RjjI4b3eFfBMkLWqTqs33+/5QktQz
+p5JrIb192STI/PwHY51MfkbDERpeNFY479P7yKlZGbB8WVBFpJCoVTQoZnio1Zha7nA+rKqNBm4mchQ
+ZaYfxCc1UK01AYBGS9ARz50tYQU64Ei7tpWUbsYDXIA9Ss4VRASHvA7M3s
+N61TPQ9HZuof/c6Tbz0WE0oJtxEyO3sDsBWumm13/61+JT3k0rIdmV25aVvXrUv1S3JLI/o/zGgR9yT0eADIXHwsF4lQyai9Mn
mEacLHVWmK+LiVZSAfk6auEm
+13a24+UM9Mg6ninfzeIq0cjdT30UweXgDnK0BMGX0wfSIYIrpRrDr9QdVoHGtdqZvJ62F8aITj08urIK
+bXZzwgFQ2JE4SYxojNHPYwBjadFm0A2eVPt0ivMYYYr8FCUYtfbjjIS1TyJaKIFhhs6bA6/PH
+NvBmbozpdK9wg3mQ1SOP5iSMAMue6fx+b/Sp0Z5MPnNjRo
+VXG3qF1936AB4F1F20bD27GyjibeYmhQkITtp/yGYCZ68PhCun0/eiEjmXi0Ux/5jYG0UEZ1Ddojhc5M/PClR46vQ/3Iyv5pUG
Pno
+wkn341k6s2P02axrXvQqTwoiYC3f2p1gp0qYidIzKa2KhrUCOF4hnjQ3v3z930RMCK3wn5uQ3xMF0d7+1XpetxvG9d7L1lU/sg
CvmEhdOSnhLC5Jeq70MVwixPocnJR4nyotPE=="
  },//Omit 18 more key pairs
],
"metadata": {
  "size": 0,
  "totalElements": 20,
  "totalPages": 1,
  "number": 1,
  "offset": 0
}
}

```

## What to do next

## Syntax for Getting a Key Pair List

You can use the vRealize Automation REST API to get a list of valid key pairs.

### Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	<code>https://\$host/iaas-proxy-provider/api/keyPairs</code>
Method	Get
<i>\$host</i>	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
<i>\$token</i>	Specifies a valid HTTP bearer token with necessary credentials.

### Output

The command output contains property names and values based on the command input parameters.

Parameter	Description
Links	<p>Specifies an array of link objects, each of which contains the following parts:</p> <ul style="list-style-type: none"> <li>■ rel <ul style="list-style-type: none"> <li>Specifies the name of the link.</li> <li>■ self refers to the object that was returned or requested.</li> <li>■ First, Previous, Next, and Last refer to corresponding pages of pageable lists.</li> <li>■ Specifies the application or service that determines the other names.</li> </ul> </li> <li>■ href <ul style="list-style-type: none"> <li>Specifies the URL that produces the result.</li> </ul> </li> </ul>
Content	<p>Specifies an array of data rows, each of which represents one of the tenant objects returned in a pageable list. Each tenant object can contain the following information:</p> <ul style="list-style-type: none"> <li>■ @type: <ul style="list-style-type: none"> <li>Contains the KeyPair string.</li> </ul> </li> <li>■ \$id: <ul style="list-style-type: none"> <li>Specifies the unique identifier of the key pair.</li> </ul> </li> <li>■ \$name: <ul style="list-style-type: none"> <li>Specifies the name of the key pair.</li> </ul> </li> <li>■ \$computeresourceid: <ul style="list-style-type: none"> <li>Specifies the compute resource ID that is binded to the key pair.</li> </ul> </li> <li>■ \$secretKey: <ul style="list-style-type: none"> <li>Specifies the secret key for the key pair.</li> </ul> </li> </ul>
Metadata	<p>Specifies the following paging-related data:</p> <ul style="list-style-type: none"> <li>■ Size: Specifies the maximum number of rows per page.</li> <li>■ totalElement: Specifies the number of rows returned.</li> <li>■ totalPages: Specifies the total number of pages of data available.</li> <li>■ Number: Specifies the current page number.</li> <li>■ Offset: Specifies the number of rows skipped.</li> </ul>

### Example: curl Command

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/iaas-proxy-provider/api/keyPairs
```

**Example: JSON Output**

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

```
{
  "links": [
  ],
  "content": [
    {
      "@type": "KeyPair",
      "id": 26,
      "name": "TestKeyPair",
      "computeResourceId": "ca4dcca0-85ce-49dd-8371-4ce7c8e2d5e6",
      "secretKey": ""
    },
    {
      "@type": "KeyPair",
      "id": 27,
      "name": "EC2KeyPair",
      "computeResourceId": "ca4dcca0-85ce-49dd-8371-4ce7c8e2d5e6",
      "secretKey":
"jmfhkPFLe1x4LsgxyYD1BH65IjiksNH3xgeUht6AyIcSA2eZsxH9FNcDst1cRLQumLYLUCN6Z1rVtD3C5CYAOEE9Up10
+YKnAcqUSyXB6PQ3I/NuebdTGrx38fkTJsEpRqxLppWJpVlHYR0207GhhWnE6F3bPwWg3dWwymqWHzBZLCcuEcztovbhN8r7/hKsXK
bNSJz
+J8DVhPB7PPdHJ4E/6a9IXkNqs/T0NknCOyc0YcFVpgrc3PMGabi8vd/7v0nEtDARyA8WwAGgtedHGtBo2gciY1Bu/0SNr2yCzsZcq
bVeg4ufkjlV0G1Ed1FfGHMh5kuVC7a1k2aSI5YkwnS4d9YJYi7diYmc7GmrVW0XWnz4kEMdQBkK+CvMxiZ17jyQD
+V4NuM4ydNPJJMqpvOAHtLrAmp/hXhInuf8j/l0mbawWSvUDUA3s4ZE55cFp546MJrVCRyoMoKfxuHquIPdANRAVs7qo9DGxBiCzjv
yBqof21y6dhGcd1q48Dkd72QCj6gGV84LHZ/zXWcz4+aKFRVo1NqSZEtZ/9wzdjqYdn/yS10S5GE2rG/xRsh6g
+giB9j4VQOMvC/uvhkYUo3WftGxi8SeipFIVcbvkkOI0ubPU1xnWdDErjji6UwEtmjajHuiA93GtiWIdCvyKQWmo9jkkLUMQe4XrmR
t3P09FwM8Quwe5Hw6czK0dIODwche0Azl0TqLkL1wA39uhGrHoXNypFiOMmRbo1YnfIW23ggEnXRACY1jUZkTewhSbVY4S
+XyzvFdcTRpSjWpRU0ozYumSsDnRzCJZQXhg4IYvwTvG+uEUu4+YR
+WcrgC6Tk60i3cLSuHnV5k00AWXWvvnPnwYRFxyzhcSDx4jyyCaYsBo9NHGwNkJU1F94SY5Vp600E9EJuViMohF1gc18Q6SXHBN1r
p0L7bAMggpmystGIkBNkSRhcDAFFlNoS/MTEW0uJoDfe6DczAt9B0YgtHdy3AH/U4AD0Pkz5x1Q4EL/rQSSo1cBfVhbejVpbktJo4YK
B7dzSDcJTSw99Uve
+BQjhiGvCfxDXme3MrXP04BeCU891DLatJyEYADyGUKZFKFC6iC09SQfynwK6iE2eYKlpIMcf/C8+rLJVXcy7gkjT/17Wcu7mQXMeV
lIJlApyytN1eCJcVDSr4N5LURZofnPARromhLy3JWiEJ4dtq+17KPiMff34e/kt
+i0ns73Wdy1oblZAI5kwBFmgBjAMex5fGNR1q/wtY1beWaxVw1J5RViaXeXSK05mttE/dzW60NeJygjI1pgfwSLwr8JA4GanN1RWGeq
RNjF00GgdufIvDqmBB/klnuGTvgMVwc0caQMzFq07UcXlMsgNOR0HBFkzeLWB+v0kXHsQ4eSeYVhjnT3CPURr5UMZ8YQ7fm
+D1tRM1Nw3o9WAJjQJ5xyT2kxou4PHBzoq6JouwrCluig7GQ061Vu2C3nNpyfGKsmFy0LHMaVuRYX9/dJQyibZAg1yDqyI3sIL3CeGr
7ynhOTEEQiAOwqgIUyDvrvc2Ma4RjjI4b3eFfBmKlWqTqs33+/5QktQz
+p5JrIb192STI/PwHY51MfkbDErpeNFY479P7yKlZGb8WVbFfPJCoVTQoZnio1ZhA7nA+rKqNbM4mchQ
+ZaYfxCc1UK01AYBGS9ARz50tYQU64Ei7tpWUbsYDXIA9Ss4VRASHvA7M3s
+N61TPQ9HZuof/c6TbZ0WE0ajtEyO3sDsBWumm13/61+JT3k0rIdmV25aVvXrUv1S3JLI/o/zGgR9yToeADIXHwsF4lQyai9MnmEac
lHVWmk+LiVZSAfk6auEm+13a24+UM9Mg6ninfzeIq0cjdT30UweXgDnK0BMGX0wfSIYIrpRrDr9QdVoHGtdqZvJ62F8aITj08urIK
+bXZzwgFQ2JE4SYxojNHPYwBjadFm0A2eVPt0ivMYYYr8FCUYtfbjJIS1TyJaKIFhhs6bA6/PH
+NvBmbozpDkH9wg3mQ1S0P5iSMAMue6fx+b/SpOZ5MPnNjRo
+VXG3qfL936AB4F1F20bD27GyjiBeYmhQkITtp/yGYZ68PhCun0/eiEjmXiOUx/5jYGOUEZ1Ddojhc5M/PC1R46vQ/3IYv5pUGPno
+wkn341k6s2P02axrXvQqTweiYC3f2p1gp0YidIzKa2KhrUCOF4hnjQ3v3z93ORMCK3wN5uQ3xMF0d7+1XpetxvG9d7L11U/sgCvME
hdOSnhLC5Jeq70MVwixPocnJR4nyotPE=="
    },//Omit 18 more key pairs
  ],
  "metadata": {
    "size": 0,
    "totalElements": 20,
  }
}
```

```

    "totalPages": 1,
    "number": 1,
    "offset": 0
  }
}

```

## Create a Key Pair

You can use the vRealize Automation REST API to create a key pair.

### Prerequisites

- Log in to vRealize Automation as a **tenant administrator**.
- Verify that the host name and fully qualified domain name of the vRealize Automation instance are available.
- If you are not using the API Explorer, verify that you have a valid HTTP bearer token that matches your login credentials. See [Chapter 2 REST API Authentication](#).
- Get the required compute resource ID. See [Get a Compute Resource for the Reservation](#).

### Procedure

- 1 Obtain the compute resource ID of the target key pair that you want to create.
- 2 Use the following sample command to create a key pair.

```

curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/iaas-proxy-provider/api/keyPairs -d
"
{
  "name": "TestKeyPair",
  "computeResourceId": "ca4dcca0-85ce-49dd-8371-4ce7c8e2d5e6",
  "secretKey":
"jmfhkPFLe1xF4LsgxyYD1BH65IjKiSNH3xgeUht6AyIcSA2eZsxH9FNFCdst1cRLQumLYLUCN6Z1rVtD3C5CYA0EE9Up10
+YKnAcqUSyXB6PQ3I/NuebdTGrx38fkTJsEpRqxLppWPJpVLHYR0207GhhWnE6F3bPwmg3dWwymqWHxBZ1CcuEcztovbhN8r7/h
KsXKbNSJz
+J8DVhPB7PPdHJJ4E/6a9IXknQs/T0NknC0yc0YcFVpgrc3PMGabi8vd/7v0nEtDARyA8WwAGtedHGtBo2gciY1Bu/0SNr2yCz
sZcqbVeg4ufkjlV0G1Ed1FfGHMh5kuVC7a1k2aSI5YkwnS4d9YJYi7diYmc7GmrVW0XWNz4kEMdQBkK+CvMxiZ17jyQD
+V4NuM4ydNPJJMqpv0AhtLrAmp/hXhInuf8j/10mbawSvUDUA3s4ZE55cFp546MJIRVCRyoMoKfxuHquIPdANRAVs7qo9DGxBi
CzjvyBqof21y6dhGCd1q48Dkd72QCj6gGV84LHZ/zXWcz4+aKFRVo1NqSZEtZ/9wzdjqYdn/yS10S5GE2rG/xRsh6g
+giB9j4VQ0MvC/uvhKYUo3WftGxi8SeipFIVcbvkkOI0ubPU1xnWdDERjji6UwEtmjajHuiA93GtiWIdeCvyKQWmo9jkkLUMQe4
XrmRt3P09Fwm8Quwe5Hw6czK0dI0DwcHE0Azl0TqLK11wA39uhGrHoXNypFiOMmRbo1YnfiW23ggEnxRACY1jUZkTewhSbVY4S
+XyzvFDcTRpSjWpRU0ozYuMSsDnRzCJZQXhg4IYvwTvG+uEUu4+YR
+WrcG6T6k6i3cLSuHnV5k00AWXWvwnPnwYRFxyzhcSDx4jyyCaysmBo9NHGwNkJU1F94SY5Vp600E9EJuViMohF1gc18Q6SXH
BNlRp0L7bAMggpmystGIkBNKSRhcDAFf1NoS/MTEW0uJoDfe6DczAt9B0YGtHdy3AH/U4AD0Pkz5x1Q4EL/rQSSoLcBfVhbejVp
bktJo4YKB7dzSDcJTSw99Uve
+BQjhgVcfxDXme3MrXP04BeCU891DLatJyeYYADyGUKZfKFC6iC09SQfywnK6iE2eYKLpIMcf/C8+rLJVXcy7gkjT/17Wcu7mQ
XMevlIjlaApyytN1eCJcVdSr4N5LURZofnPARromhLy3JWiEJ4dtq+17KPiMff34e/kT
+i0ns73Wdy1ob1ZAI5kwBFMgBjAMex5fGNR1q/wtY1beWaxVw1J5RViaXeXSK05mttE/dzW60NeJyggI1pgfWslwr8JA4GanN1R
WGeqRNjF00GgdufIvDqmBB/klnuGTVgMVWc0caQMzFq07UcX1MsgNOR0HBfkze1WB+v0kXHsQ4eSeYVhjnT3CPURr5UMZ8YQ7fm
+D1tRM1Nw3o9WAJjQJ5xyT2kxou4PHBzoq6JouwrCluig7GQ061Vu2C3nNpyfGKsmFy0lHMaVuRYX9/dJQyibZAg1yDqyI3sIL3

```

```

CeGr7ynh0TEEQiA0WqgIUyDvrvc2Ma4RjjI4b3eFfBMkLWqTqs33+/5QktQz
+p5JrIb192STI/PwHY51MfkbDErpeNFY479P7yKlZGbB8WBfFpJCoVTQoZnio1ZhA7nA+rkqNbM4mchQ
+ZaYfxCc1UK01AYBGS9ARz50tYQU64Ei7tpWUbsYDXIA9Ss4VRASHvA7M3s
+N61TPQ9HZuof/c6Tbz0WE0ojtxEyO3sDsBWumm13/61+JT3k0rIdmV25aVvXrUv1S3JLI/o/zGgR9yTOeADIXHwsF4lQyai9Mn
mEaclHVWmK+LiVZSAfk6auEm
+13a24+UM9Mg6ninfzeIq0cjdT30UweXgDnK0BMGX0wfSIYIrpRrDr9QdVoHGtdqZvJ62F8aITj08urIK
+bXZzwgFQ2JE4SYxojNHPYwBjadFm0A2eVPt0ivMYYYr8FCUYtfbjjIS1TyJaKIFhhqs6bA6/PH
+NvBmbozpDkH9wg3mQ1SOP5iSMAMue6fx+b/Sp0Z5MPnNjRo
+VXG3qF1936AB4F1F20bD27GyjibeYmhQkITtp/yGYCZ68PhCun0/eiEjmXi0Ux/5jYG0UEZ1Ddojhc5M/PClR46vQ/3Iyv5pUG
Pno
+wkn34lk6s2P02axrXvQqTwoiYC3f2p1gp0qYidIzKa2KhrUCOF4hnjQ3v3z930RMCK3wn5uQ3xMF0d7+1XpetxvG9d7L11U/sg
CvMEhd0SnhLC5Jeq70MVwixPocnJR4nyotPE=="
}
"

```

## Syntax for Creating a Key Pair

You can use the vRealize Automation REST API to create a key pair.

### Input

Use the supported input parameters to control the command output.

Input	Description
URL	https://\$host/iaas-proxy-provider/api/keyPairs
Method	Post
\$host	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
\$token	Specifies a valid HTTP bearer token with necessary credentials.
HTTP Body	<p>Contains the HTTP body of the target key pair.</p> <ul style="list-style-type: none"> <li>■ <i>\$id</i>: Specifies the unique identifier of the key pair.</li> <li>■ <i>\$name</i>: Specifies the name of the key pair.</li> <li>■ <i>\$computeResourceId</i>: Specifies the compute resource ID that is binded to the key pair.</li> <li>■ <i>\$secretKey</i>: Specifies the secret key for the key pair.</li> </ul>

### Output

The command output contains property names and values based on the command input parameters.

Parameter	Description
status	If the command is successful, the HTTP status is 201 Created.
Header.Location	The http response should contain a Location attribute that is formatted as <code>https://\$host/iaas-proxy-provider/api/keyPairs/\$keypairID</code> .
\$keypairID	Specifies the unique identifier of the new key pair.

### Example: curl Command

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/iaas-proxy-provider/api/keyPairs -d
“
{
  "name": "TestKeyPair",
  "computeResourceId": "ca4dcca0-85ce-49dd-8371-4ce7c8e2d5e6",
  "secretKey":
"jmfhkPFLe1xF4LsgxyYD1BH65IjiKsNH3xgeUht6AyIcSA2eZsxH9FNFcDst1cRLQumLYLUCN6Z1rVtD3C5CYA0EE9Up10
+YKnAcqUSyXB6PQ3I/NuebdTGrx38fkTJsEPqXlppWPJpVlHYR0207GhhWnE6F3bPwwg3dWwymqWHxBZ1CcuEcztovbhN8r7/hKsXX
bNSJz
+J8DVhPB7PPdHJJ4E/6a9IXkNqs/T0NknC0yc0YcFVpgrc3PMGabi8vd/7v0nEtDARyA8WwAGgtedHGtBo2gciY1Bu/0SNr2yCzsZcq
bVeg4ufkjlV0G1Ed1FfGHMh5kuVC7a1k2aSI5YkwnS4d9YJYi7diYmc7GmrVW0XWNz4kEMdQBkK+CvMxiZ17jyQD
+V4NuM4ydNPJJmqpv0AhtLrAmp/hXhInuf8j/10mbawWSvUDUA3s4ZE55cFp546MJIVCRyoMoKfxuHquIPdANRAVs7qo9DGxBiCzjv
yBqof21y6dhGcd1q48Dkd72QCj6gGV84LHZ/zXWcz4+aKFRVo1nqSZEtZ/9wzdjqYdn/yS10S5GE2rG/xRsh6g
+giB9j4VQ0MvC/uvhkYUo3WfTgxi8SeipFIVcbvkkOI0ubPU1xnWdDERjji6UwEtmjajHuiA93GtiWIdeCvyKQWmo9jkkLUmQe4XrmR
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+p5JrIb192STI/PwHY51MfkbDErpeNFY479P7yKlZGbB8WVBFpJCoVTQoZNio1ZhA7nA+rKqNbM4mCHQ
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+N61TPQ9HZuof/c6Tbz0WE0ojtxEy03sDsBWumm13/61+JT3k0rIdmV25aVvxrUv1S3JLI/o/zGgR9yT0eADIXHwF4lQyai9MnmEac
lHVWmK+LiVZSAfk6auEm+13a24+UM9Mg6ninfzeIq0cjdT30UweXgDnK0BMGX0wfSIYIrpRrDr9QdVoHGtdqZvJ62F8aITj08urIK
+bXZzwgFQ2JE4SYxojNHPYwBjadFm0A2eVPt0ivMYYYr8FCUYtfbjjIS1TyJaKIFhhqs6bA6/PH
+NvBmbozpdKH9wg3mQ1SOP5iSMAMue6fx+b/SpOZ5MPnNjRo
+VXG3qfL936AB4F1F20bD27GyjibeYmhQkITtp/yGYCZ68PhCun0/eiEjmXi0Ux/5jYG0UEZ1Ddojhc5M/PC1R46vQ/3Iyv5pUGPno
+wkn341k6s2P02axrXvQqTweiYC3f2p1gp0qYidZKa2KHrUCOF4hnjQ3v3z930RMCK3wN5uQ3xMF0d7+1XpetxvG9d7L1lU/sgCvME
hd0SnhLC5Jeq70MVwixPocnJR4nyotPE=="
}
“
```

## Example: JSON Output

The output returns an empty HTTP response body and the host information and key pair ID in the header statement.

```
Location:
https://vcac148-084-241.eng.mycompany.com/iaas-proxy-provider/api/keyPairs/56
```

Copy the location URL into a text editor for future use.

## Query a Key Pair

You can use the REST API to query a key pair that is available for the vRealize Automation tenant administrator.

### Prerequisites

- Log in to vRealize Automation as a **tenant administrator**.
- Verify that the host name and fully qualified domain name of the vRealize Automation instance are available.
- If you are not using the API Explorer, verify that you have a valid HTTP bearer token that matches your login credentials. See [Chapter 2 REST API Authentication](#).

### Procedure

- ◆ Use the following sample command to query a key pair.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/iaas-proxy-provider/api/keyPairs/26
```

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

```
{
  "id": 26,
  "name": "TestKeyPair",
  "computeResourceId": "ca4dcca0-85ce-49dd-8371-4ce7c8e2d5e6",
  "secretKey": ""
}
```

## Syntax for Querying a Key Pair

You can use the REST API to query a key pair that is available for the vRealize Automation tenant administrator.

### Input

Use the supported input parameters to control the command output.

Parameters	Description
URL	https://\$host/iaas-proxy-provider/api/keyPairs/\$ids
Method	Get
\$host	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
\$token	Specifies a valid HTTP bearer token with necessary credentials.
\$id:	Specifies the unique identifier of the key pair.

## Output

The command output contains property names and values based on the command input parameters.

Parameters	Description
\$id:	Specifies the unique identifier of the key pair.
\$name:	Specifies the name of the key pair.
\$computeResourceId:	Specifies the compute resource ID that is binded to the key pair.
\$secretKey:	Specifies the secret key for the key pair.

## Example: curl Command

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/iaas-proxy-provider/api/keyPairs/26
```

## Example: JSON Output

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

```
{
  "id": 26,
  "name": "TestKeyPair",
  "computeResourceId": "ca4dcca0-85ce-49dd-8371-4ce7c8e2d5e6",
  "secretKey": ""
}
```

## Update a Key Pair

You can use the vRealize Automation REST API to update an existing key pair.

### Prerequisites

- Log in to vRealize Automation as a **tenant administrator**.
- Verify that the host name and fully qualified domain name of the vRealize Automation instance are available.

- If you are not using the API Explorer, verify that you have a valid HTTP bearer token that matches your login credentials. See [Chapter 2 REST API Authentication](#).

## Procedure

- ◆ Use the following sample command to update a key pair.

```
curl -X PUT --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/iaas-proxy-provider/api/keyPairs/26 -d "
{
  "id": 26,
  "name": "TestKeyPair",
  "computeResourceId": "ca4dcca0-85ce-49dd-8371-4ce7c8e2d5e6",
  "secretKey":
"jmfhkPFLe1xF4LsgxyYD1BH65IjiKsNH3xgeUht6AyIcSA2eZsxH9FNFCdst1cRLQUMLYLUCN6Z1rVtD3C5CYA0EE9Up10
+YKnAcqUSyXB6PQ3I/NuebdTGrx38fkTJsEPqXlppWPJpVlHYR0207GhhWnE6F3bPwWg3dWwmyqWHxBZ1CcuEcztovbhN8r7/h
KsXKbNSJz
+J8DVhPB7PPdHJJ4E/6a9IXkNqs/T0NknC0yc0YcFVpgrc3PMGabi8vd/7v0nEtDARyA8WwAGtedHGtBo2gciY1Bu/0SNr2yCz
sZcqbVeg4ufkjlV0G1Ed1FFGHMh5kuVC7a1k2aSI5YkwnS4d9YJYi7diYmc7GmrVW0XWNz4kEMdQBkK+CvMxiZ17jyQD
+V4NuM4ydNPJJMqpv0AhtLrAmp/hXhInuf8j/10mbawWSvUDUA3s4ZE55cFp546MJIRVCRyoMoKfxuHquIPdANRAVs7qo9DGxBi
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+WCRgC6Tk60i3cLSuHnV5k00AWXWvvnPnwYRFxyzhcSDx4jyyCaysmBo9NHGwNkJU1F94SY5Vp600E9EJuViMohF1gc18Q6SXH
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bktJo4YKB7dzSDcJTSw99Uve
+BQjhigVcfDXme3MrXPO4BeCU891DLatJyeYYADyGUKZfKFC6iC09SQfynwK6iE2eYKLpIMcf/C8+rLJVXcy7gkjT/17Wcu7mQ
XMeVlIJlaApyytN1eCjCvDsR4N5LURZofnPAromhly3JWiEJ4dtq+17KPiMff34e/kT
+i0ns73Wdy1ob1ZAI5kwBFMBjAMex5fGNR1q/wtY1beWaxVw1J5RViaXeXSK05mttE/dzW60NeJyggjI1pgfwSLwr8JA4GanN1R
WGeqRNjF00GgdufIvDqmBB/kLnuGTvgMVwc0caQMzFq07UcXlMsgNOR0HBfkzeLWB+v0kXHsQ4eSeYVhjnT3CPURr5UMZ8YQ7fm
+D1tRM1Nw3o9WAJjQJ5xyT2kxou4PHBzoq6JouwrCluig7GQ061Vu2C3nNpyfGKsmFy0LHMAVuRYX9/dJQyibZAg1yDqYI3sIL3
CeGr7ynh0TEEQiA0WgqIUyDvrvc2Ma4RjjI4b3eFFBmKLWqTqs33+/5QktQz
+p5JrIb192STI/PwHY51MfkbDErpeNFY479P7yKlZGbB8WVBFpJCoVTQoZnio1ZhA7nA+rkqNbM4mchQ
+ZaYfxCc1UK01AYBGS9ARz50tYQU64Ei7tpWUbsYDXIA9Ss4VRASHvA7M3s
+N61TPQ9HZuof/c6Tbz0WE0oJtxEyO3sDsBWumm13/61+JT3k0rIdmV25aVvxrUv1S3JLI/o/zGgR9yT0eADIXHwsF4lQyAi9Mn
mEacLHVWmK+LiVZSAfk6auEm
+13a24+UM9Mg6ninfzeIaqcjdT30UweXgDnK0BMGX0wfSIYIrpRDr9QdVoHGtdqZvJ62F8aITj08urIK
+bXZzwgFQ2JE4SYxojNHPYwBjadFm0A2eVpT0ivMYYYr8FCUYtfbjjIS1TyJaKIFhhs6bA6/PH
+NvBmbozpdKH9wg3mQ1SOP5iSMAMue6fx+b/SpOZ5MPnNjRo
+VXG3qF1936AB4F1F20bD27GyjibeYmhQkITtp/yGYCZ68PhCun0/eiEjmxioUx/5jYG0UEZ1Ddojhc5M/PC1R46vQ/3Iyv5pUG
Pno
+wkn341k6s2P02axrXvQqTwoiYC3f2p1gp0qYidIzKa2KHrUCOF4hnjQ3v3z930RMCK3wN5uQ3xMF0d7+1XpetxvG9d7L1lU/sg
CVmEhd0SnhLC5Jeq70MVwixPocnJR4nyotPE=="
}
```

The output contains an empty HTTP response body and the following status code.

```
204 No Content
```

## Syntax for Updating a Key Pair

You can update an existing key pair by using the vRealize Automation REST API.

### Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	<code>https://\$host/iaas-proxy-provider/api/keyPairs/\$id</code>
Method	Put
<i>\$host</i>	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
<i>\$token</i>	Specifies a valid HTTP bearer token with necessary credentials.
HTTP Body	<p>Contains the HTTP body that describes the key pair to update and what to update in the identified key pair.</p> <ul style="list-style-type: none"> <li>■ <i>\$id</i>: Specifies the unique identifier of the key pair.</li> <li>■ <i>\$name</i>: Specifies the name of the key pair.</li> <li>■ <i>\$computeResourceId</i>: Specifies the compute resource ID that is binded to the key pair.</li> <li>■ <i>\$secretKey</i>: Specifies the secret key for the key pair.</li> </ul>

### Output

The command output contains a status statement.

Parameter	Description
status	If the command is not successful, the HTTP status is 204 No Content.

### Example: curl Command

```
curl -X PUT --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/iaas-proxy-provider/api/keyPairs/26 -d "
{
  "id": 26,
  "name": "TestKeyPair",
  "computeResourceId": "ca4dcca0-85ce-49dd-8371-4ce7c8e2d5e6",
  "secretKey":
  "jmfhkPFLe1xF4LsgxyYD1BH65IjiKsNH3xgeUhnT6AyIcSA2eZsxH9FNfCdSt1cRLQumLYLUCN6Z1rVtD3C5CYA0EE9Up10
+YKnAcqUSyXB6PQ3I/NuebdTGrx38fkTJsEpRqxLppWPJpVLHYRO207GhhWnE6F3bPwwg3dWwymqWxhBZ1CcuEcztovbhN8r7/hKsXK
bNSJz
```

```
+J8DVhPB7PPdHJ4E/6a9IXknQs/T0NknC0yc0YcFVpgrc3PMGabi8vd/7v0nEtDARyA8WwAGgtedHGtBo2gciY1Bu/0SNr2yCzsZcq
bVeg4ufkjlV0G1Ed1FFGHMh5kuVC7a1k2aSI5YkwnS4d9YJYi7diYmc7GmrVW0XWNz4kEMdQBkK+CvMxiZ17jyQD
+V4NuM4ydnPJJMqpvoAhtLrAmp/hXhInuf8j/10mbawWSvUDUA3s4ZE55cFp546MJIrVCRyoMoKfxuHquIPdANRAVs7qo9DGxBiCzjv
yBqof21y6dhGcd1q48Dkd72QCj6gGV84LHZ/zXwcz4+aKFRVo1NqSZEtZ/9wzdjqYdn/yS10S5GE2rG/xRsh6g
+giB9j4VQOMvC/uvhkYUo3WFTgxi8SeipFIVcbvkkOI0ubPU1xnWdERjji6UwEtmjajHuiA93GtiWIdeCvyKQWmo9jkkLUMqe4XrmR
t3P09Fwm8Quwe5Hw6czK0dI0DwcHE0Azl0TqLKl1wA39uhGrHoXNypFi0MmRbo1YnfIW23ggEnXRACY1jUZkTewhSbVY4S
+XyzvFDcTRpSjWpRU0ozYuMSsDnRzCJZQXhg4IYvvtvG+uEUu4+YR
+WCRgC6Tk60i3cLSuHnV5k00AWXWvvnPnwYRFxyzhcSDx4jyyCaYSmBo9NHGwNkJU1F94SY5Vp600E9EJuViMohF1gc18Q6SXHBNlr
p0L7bAMggpmystGIkBNkSRhcDAFFlNoS/MTEW0uJoDfe6DczAt9B0YgTHy3AH/U4AD0Pkz5x1Q4EL/rQSSoLcBfVhbejVpbktJo4YK
B7dzSDcJTSw99Uve
+BQjhigVcfxDXme3MrXP04BeCU891DLatJyeYYADYGUKZfKFC6iC09SQfynwK6iE2eYKlpIMcf/C8+rLJVXcy7gkjT/17WCu7mQXMeV
LIJlaApyytN1eCJCVDsr4N5LURZofnPArrromhLy3JWiEJ4dtq+17KPiMff34e/kt
+i0ns73Wdy1ob1ZAI5kWBfMgBJAMex5fGNR1q/wtY1bewaxVw1J5RViaXeXSK05mttE/dzW60NeJyggjI1pgfwSLwr8JA4GanN1RWGeq
RNjF00GgdufIvDqmBB/kLnuGTVgMVWc0caQMzFq07UcX1MsgNOR0HBfkze1WB+v0kXHSQ4eSeYVhjnT3CPURr5UMZ8YQ7fm
+DlTRM1Nw3o9WAjJQJ5xyT2kxou4PHBzoq6JouwrCluig7GQ061Vu2C3nNpyfGKsmFy0lHMAvuRYX9/dJQyibZAg1yDqyI3sIL3CeGr
7ynh0TEEQiA0WqgIUYDvrvc2Ma4RjjI4b3eFfBMkLWqTqs33+/5QktQz
+p5JrIb192STI/PwHY51MfkbDErpeNFY479P7yKlZGbB8WVbFfPjCoVTQoZnio1ZhA7nA+rKqNbM4mchQ
+ZaYfxCc1UK01AYBGS9ARz50tYQU64Ei7tpWUbsYDXIA9Ss4VRASHvA7M3s
+N61TPQ9HZuof/c6Tbz0WE0ojtxEyo3sDsBWumm13/61+JT3k0rIdmV25aVvxrUv1S3JLI/o/zGgR9yT0eADIXHwsF4lQyai9MnmEac
lHVWmK+LiVZSAfk6auEm+13a24+UM9Mg6ninfzeIq0cjdT30UweXgDnK0BGMX0wfsIYIrpRrDr9QdVoHGtdqZvJ62F8aITj08urIK
+bXZzwgFQ2JE4SYxojNHPYwBjadFm0A2eVPt0ivMYYYr8FCUYtfbjjIS1TyJaKIFhhs6bA6/PH
+NvBmbozpdKH9wg3mQ1SOP5iSMAMue6fx+b/Sp0Z5MPnNjRo
+VXG3qF1936AB4F1F20bD27GyjibeYmhQkITtp/yGYCZ68PhCun0/eiEjmXi0Ux/5jYG0UEZ1Ddojhc5M/PC1R46vQ/3Iyv5pUGPno
+wkn341k6s2P02axrXvQqTweiYC3f2p1gp0qYidIzKa2KHrUCOF4hnjQ3v3z930RMCK3wn5uQ3xMF0d7+1XpetxvG9d7L11U/sgCvMe
hd0SnhLC5Jeq70MVwixPocnJR4nyotPE=="
}
"
```

### Example: JSON Output

The output contains an empty HTTP response body and the following status code.

```
204 No Content
```

## Delete a Key Pair

You can use the vRealize Automation REST API to delete a key pair.

### Prerequisites

- Log in to vRealize Automation as a **tenant administrator**.
- Verify that the host name and fully qualified domain name of the vRealize Automation instance are available.
- If you are not using the API Explorer, verify that you have a valid HTTP bearer token that matches your login credentials. See [Chapter 2 REST API Authentication](#).

## Procedure

- ◆ Use the following sample command to delete a key pair.

```
curl -X "Delete" --insecure -H "Accept:application/json"
-H "Authorization: Bearere $token"
https://$host/iaas-proxy-provider/api/keyPairs/26
```

The output contains an empty HTTP response body and the following status code.

```
204 No Content
```

## Syntax for Deleting a Key Pair

You can use the vRealize Automation REST API to delete a key pair.

### Prerequisites

- Log in to vRealize Automation as a **tenant administrator**.
- Verify that the host name and fully qualified domain name of the vRealize Automation instance are available.
- If you are not using the API Explorer, verify that you have a valid HTTP bearer token that matches your login credentials. See [Chapter 2 REST API Authentication](#).

### Input

Use the supported input parameters to control the command output.

Input	Description
URL	https://\$host/iaas-proxy-provider/api/keyPairs/\$id
Method	Delete
<i>\$host</i>	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
<i>\$token</i>	Specifies a valid HTTP bearer token with necessary credentials.
<i>\$id</i> :	Specifies the unique identifier of the key pair.

### Output

The command output contains a status statement.

Parameter	Description
status	If the command is not successful, the HTTP status is 204 No Content.

### Example: curl Command

The following example command deletes a key pair.

```
curl -X "Delete" --insecure -H "Accept:application/json"  
-H "Authorization: Bearere $token"  
https://$host/iaas-proxy-provider/api/keyPairs/26
```

### Example: JSON Output

The output contains an empty HTTP response body and the following status code.

```
204 No Content
```

## Working with Network Profiles

You can work use the vRealize Automation REST API iaas-proxy-provider service to list, create, and update network profiles.

You can access the following network profiles by using the same programming calls. Different types of network profiles contain different fields.

- External
- NAT
- Private
- Routed

For information about using the vRealize Automation application user interface to create and work with network profiles, see the *laaS Configuration* documentation.

## Get a Network Profile List

You can use the vRealize Automation REST API to get a list of current network profiles.

### Prerequisites

- Log in to vRealize Automation as a **tenant administrator**.
- Verify that the host name and fully qualified domain name of the vRealize Automation instance are available.
- If you are not using the API Explorer, verify that you have a valid HTTP bearer token that matches your login credentials. See [Chapter 2 REST API Authentication](#).

**Procedure**

- ◆ Use the following sample command to list all available network profiles.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/ iaas-proxy-provider/api/network/profiles
```

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

```
{
  "links": [
  ],
  "content": [
    {
      "@type": "NATNetworkProfile",
      "id": "599541aa-ffb0-4a37-9483-4353f3fc6be3",
      "name": "NATTest",
      "description": "",
      "createdDate": "2014-11-11T02:29:09.000Z",
      "lastModifiedDate": "2014-11-11T02:29:09.000Z",
      "isHidden": false,
      "definedRanges": [
        {
          "id": "9f7d8025-bd4c-4560-9b41-9ce455ee49ae",
          "name": "range",
          "description": "",
          "beginIPv4Address": "10.118.190.110",
          "endIPv4Address": "10.118.190.130",
          "state": "UNALLOCATED",
          "createdDate": "2014-11-11T02:29:05.000Z",
          "lastModifiedDate": "2014-11-11T02:29:05.000Z",
          "definedAddresses": [
            {
              "id": "6e7dc8c3-dc64-4ebd-a282-05852010310f",
              "name": null,
              "description": null,
              "IPv4Address": "10.118.190.111",
              "IPSortValue": 0,
              "state": "UNALLOCATED",
              "hostName": "",
              "createdDate": "2014-11-11T02:29:05.000Z",
              "lastModifiedDate": "2014-11-11T02:29:05.000Z"
            },
            {
              "id": "f6802100-1d7e-4f31-bdeb-1b27f7e77766",
              "name": null,
              "description": null,
              "IPv4Address": "10.118.190.115",
              "IPSortValue": 0,
              "state": "UNALLOCATED",
              "hostName": "",
              "createdDate": "2014-11-11T02:29:05.000Z",
```

```

    "lastModifiedDate": "2014-11-11T02:29:05.000Z"
  },
  {
    "id": "f21dcbef-037c-48bb-bee9-2c736376ef14",
    "name": null,
    "description": null,
    "IPv4Address": "10.118.190.122",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:29:05.000Z",
    "lastModifiedDate": "2014-11-11T02:29:05.000Z"
  },
  {
    "id": "ce79de13-91da-4269-9ea2-2de416019ee9",
    "name": null,
    "description": null,
    "IPv4Address": "10.118.190.125",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:29:05.000Z",
    "lastModifiedDate": "2014-11-11T02:29:05.000Z"
  },
  {
    "id": "f6deba8c-fbf4-4ea0-9d9c-325e9db2f13e",
    "name": null,
    "description": null,
    "IPv4Address": "10.118.190.114",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:29:05.000Z",
    "lastModifiedDate": "2014-11-11T02:29:05.000Z"
  },
  {
    "id": "db4383b3-fbbf-42cc-b319-3e52bed49ec0",
    "name": null,
    "description": null,
    "IPv4Address": "10.118.190.116",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:29:05.000Z",
    "lastModifiedDate": "2014-11-11T02:29:05.000Z"
  },
  {
    "id": "b8f012a1-ea4a-403c-9eef-5d000f2a270f",
    "name": null,
    "description": null,
    "IPv4Address": "10.118.190.123",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:29:05.000Z",

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    "lastModifiedDate": "2014-11-11T02:29:05.000Z"
  },
  {
    "id": "9d5a9d25-26d7-4ce3-93a2-61242a88c5b2",
    "name": null,
    "description": null,
    "IPv4Address": "10.118.190.110",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:29:05.000Z",
    "lastModifiedDate": "2014-11-11T02:29:05.000Z"
  },
  {
    "id": "f5cfa798-3237-4891-9baf-6182c17174f2",
    "name": null,
    "description": null,
    "IPv4Address": "10.118.190.117",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:29:05.000Z",
    "lastModifiedDate": "2014-11-11T02:29:05.000Z"
  },
  {
    "id": "2b616f1a-dc35-4caa-8ee7-6494ca50db57",
    "name": null,
    "description": null,
    "IPv4Address": "10.118.190.113",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:29:05.000Z",
    "lastModifiedDate": "2014-11-11T02:29:05.000Z"
  },
  {
    "id": "9dd5d265-ec23-42be-9bdb-734c11b1e315",
    "name": null,
    "description": null,
    "IPv4Address": "10.118.190.112",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:29:05.000Z",
    "lastModifiedDate": "2014-11-11T02:29:05.000Z"
  },
  {
    "id": "f6db18f6-f4ca-4f33-95c8-86e4c1ce4722",
    "name": null,
    "description": null,
    "IPv4Address": "10.118.190.121",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:29:05.000Z",

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    "lastModifiedDate": "2014-11-11T02:29:05.000Z"
  },
  {
    "id": "5ce0b34c-2e72-42e4-8f1f-91ddb08753c8",
    "name": null,
    "description": null,
    "IPv4Address": "10.118.190.120",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:29:05.000Z",
    "lastModifiedDate": "2014-11-11T02:29:05.000Z"
  },
  {
    "id": "bea637f2-1e22-4e6a-b646-a21e979c7750",
    "name": null,
    "description": null,
    "IPv4Address": "10.118.190.124",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:29:05.000Z",
    "lastModifiedDate": "2014-11-11T02:29:05.000Z"
  },
  {
    "id": "376bf3bf-5e00-4b72-9bf4-a2a3bcceacf3",
    "name": null,
    "description": null,
    "IPv4Address": "10.118.190.119",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:29:05.000Z",
    "lastModifiedDate": "2014-11-11T02:29:05.000Z"
  },
  {
    "id": "4763f6d2-c37a-4f21-b36d-a3a6a0b789da",
    "name": null,
    "description": null,
    "IPv4Address": "10.118.190.126",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:29:05.000Z",
    "lastModifiedDate": "2014-11-11T02:29:05.000Z"
  },
  {
    "id": "012075d0-1c54-4792-b0ba-d4d93b002efc",
    "name": null,
    "description": null,
    "IPv4Address": "10.118.190.118",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:29:05.000Z",

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        "lastModifiedDate": "2014-11-11T02:29:05.000Z"
    },
    {
        "id": "a17bd3b3-fca1-4248-afed-e509bb1a1b56",
        "name": null,
        "description": null,
        "IPv4Address": "10.118.190.130",
        "IPSortValue": 0,
        "state": "UNALLOCATED",
        "hostName": "",
        "createdDate": "2014-11-11T02:29:05.000Z",
        "lastModifiedDate": "2014-11-11T02:29:05.000Z"
    },
    {
        "id": "e8116b71-9864-4dd6-a0f3-f6c1c0de3d23",
        "name": null,
        "description": null,
        "IPv4Address": "10.118.190.127",
        "IPSortValue": 0,
        "state": "UNALLOCATED",
        "hostName": "",
        "createdDate": "2014-11-11T02:29:05.000Z",
        "lastModifiedDate": "2014-11-11T02:29:05.000Z"
    },
    {
        "id": "3a970419-1ca8-4d30-aaf0-f8ca8f4df403",
        "name": null,
        "description": null,
        "IPv4Address": "10.118.190.128",
        "IPSortValue": 0,
        "state": "UNALLOCATED",
        "hostName": "",
        "createdDate": "2014-11-11T02:29:05.000Z",
        "lastModifiedDate": "2014-11-11T02:29:05.000Z"
    },
    {
        "id": "3de01f67-02e3-4fce-9c43-fd53d52177c2",
        "name": null,
        "description": null,
        "IPv4Address": "10.118.190.129",
        "IPSortValue": 0,
        "state": "UNALLOCATED",
        "hostName": "",
        "createdDate": "2014-11-11T02:29:05.000Z",
        "lastModifiedDate": "2014-11-11T02:29:05.000Z"
    }
    ]
}
],
"profileType": "NAT",
"subnetMask": "255.255.255.0",
"gatewayAddress": "10.118.190.230",
"primaryDnsAddress": "10.110.182.45",
"secondaryDnsAddress": "",
"dnsSuffix": "mycompany.com",

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"dnsSearchSuffix": "",
"primaryWinsAddress": "10.0.0.1",
"secondaryWinsAddress": "",
"dhcpStartIPAddress": null,
"dhcpEndIPAddress": null,
"leaseTimeInSeconds": 0
},
{
"@type": "PrivateNetworkProfile",
"id": "594e4016-b067-4d19-aa81-63502675f925",
"name": "privateTest",
"description": "",
"createdDate": "2014-11-11T02:26:44.000Z",
"lastModifiedDate": "2014-11-11T02:26:44.000Z",
"isHidden": false,
"definedRanges": [
  {
    "id": "8827193e-f1c3-493e-8bcd-1b153f2a5e74",
    "name": "range",
    "description": "",
    "beginIPv4Address": "10.118.190.110",
    "endIPv4Address": "10.118.190.120",
    "state": "UNALLOCATED",
    "createdDate": "2014-11-11T02:25:57.000Z",
    "lastModifiedDate": "2014-11-11T02:25:57.000Z",
    "definedAddresses": [
      {
        "id": "ac250933-932b-44cd-9a56-05b000221a17",
        "name": null,
        "description": null,
        "IPv4Address": "10.118.190.116",
        "IPSortValue": 0,
        "state": "UNALLOCATED",
        "hostName": "",
        "createdDate": "2014-11-11T02:25:57.000Z",
        "lastModifiedDate": "2014-11-11T02:25:57.000Z"
      },
      {
        "id": "262a4273-1e75-4c23-8fb8-088473521b19",
        "name": null,
        "description": null,
        "IPv4Address": "10.118.190.111",
        "IPSortValue": 0,
        "state": "UNALLOCATED",
        "hostName": "",
        "createdDate": "2014-11-11T02:25:57.000Z",
        "lastModifiedDate": "2014-11-11T02:25:57.000Z"
      }
    ],
    "createdDate": "2014-11-11T02:25:57.000Z",
    "lastModifiedDate": "2014-11-11T02:25:57.000Z"
  },
  {
    "id": "da85ad6b-840c-4aab-92fe-21200e7e05f6",
    "name": null,
    "description": null,
    "IPv4Address": "10.118.190.120",
    "IPSortValue": 0,
    "state": "UNALLOCATED",

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    "hostName": "",
    "createdDate": "2014-11-11T02:25:57.000Z",
    "lastModifiedDate": "2014-11-11T02:25:57.000Z"
  },
  {
    "id": "f1cc8ce0-97d9-4405-bf23-3cb258ab1c59",
    "name": null,
    "description": null,
    "IPv4Address": "10.118.190.113",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:25:57.000Z",
    "lastModifiedDate": "2014-11-11T02:25:57.000Z"
  },
  {
    "id": "d517ede8-ddd6-4a67-bb26-4bbbfd3c5c1b",
    "name": null,
    "description": null,
    "IPv4Address": "10.118.190.114",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:25:57.000Z",
    "lastModifiedDate": "2014-11-11T02:25:57.000Z"
  },
  {
    "id": "f9893a3e-6b4b-4d4e-82ed-5ca1970e20d6",
    "name": null,
    "description": null,
    "IPv4Address": "10.118.190.115",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:25:57.000Z",
    "lastModifiedDate": "2014-11-11T02:25:57.000Z"
  },
  {
    "id": "7eebd0ad-0dde-4fa1-aad3-750498214caf",
    "name": null,
    "description": null,
    "IPv4Address": "10.118.190.110",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:25:57.000Z",
    "lastModifiedDate": "2014-11-11T02:25:57.000Z"
  },
  {
    "id": "37ca8368-5d19-4d23-a6b8-7b233bb2320d",
    "name": null,
    "description": null,
    "IPv4Address": "10.118.190.112",
    "IPSortValue": 0,
    "state": "UNALLOCATED",

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        "hostName": "",
        "createdDate": "2014-11-11T02:25:57.000Z",
        "lastModifiedDate": "2014-11-11T02:25:57.000Z"
    },
    {
        "id": "7675008f-289b-40de-8282-922b0e031314",
        "name": null,
        "description": null,
        "IPv4Address": "10.118.190.117",
        "IPSortValue": 0,
        "state": "UNALLOCATED",
        "hostName": "",
        "createdDate": "2014-11-11T02:25:57.000Z",
        "lastModifiedDate": "2014-11-11T02:25:57.000Z"
    },
    {
        "id": "d585d795-8aa0-439c-8977-bde44fbff675",
        "name": null,
        "description": null,
        "IPv4Address": "10.118.190.118",
        "IPSortValue": 0,
        "state": "UNALLOCATED",
        "hostName": "",
        "createdDate": "2014-11-11T02:25:57.000Z",
        "lastModifiedDate": "2014-11-11T02:25:57.000Z"
    },
    {
        "id": "a39fb517-bffb-4390-8fe5-c4e9f15ed247",
        "name": null,
        "description": null,
        "IPv4Address": "10.118.190.119",
        "IPSortValue": 0,
        "state": "UNALLOCATED",
        "hostName": "",
        "createdDate": "2014-11-11T02:25:57.000Z",
        "lastModifiedDate": "2014-11-11T02:25:57.000Z"
    }
]
}
],
"profileType": "PRIVATE",
"subnetMask": "255.255.255.0",
"gatewayAddress": "10.118.190.230",
"dhcpStartIPAddress": null,
"dhcpEndIPAddress": null,
"leaseTimeInSeconds": 0
},
{
    "@type": "RoutedNetworkProfile",
    "id": "a3dbfc76-7eab-4c1f-8f59-8fcc0b50ec6c",
    "name": "routedTest",
    "description": "",
    "createdDate": "2014-11-11T02:31:11.000Z",
    "lastModifiedDate": "2014-11-11T02:31:11.000Z",
    "isHidden": false,

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"definedRanges": [
  {
    "id": "4d9b291a-841f-4f62-b03e-83781133024c",
    "name": "Range 1",
    "description": "",
    "beginIPv4Address": "10.118.183.1",
    "endIPv4Address": "10.118.183.254",
    "state": "UNALLOCATED",
    "createdDate": "2014-11-11T02:30:34.000Z",
    "lastModifiedDate": "2014-11-11T02:30:34.000Z",
    "definedAddresses": [

    ]
  }
],
"profileType": "ROUTED",
"subnetMask": "255.255.254.0",
"primaryDnsAddress": "10.110.182.45",
"secondaryDnsAddress": "",
"dnsSuffix": "mycompany.com",
"dnsSearchSuffix": "",
"primaryWinsAddress": "10.0.0.1",
"secondaryWinsAddress": "",
"baseIP": "10.118.183.1"
},
{
  "@type": "ExternalNetworkProfile",
  "id": "68b6a183-fc8a-4592-af23-92f8d410ee32",
  "name": "externalTest",
  "description": "",
  "createdDate": "2014-11-11T02:24:07.000Z",
  "lastModifiedDate": "2014-11-11T02:24:07.000Z",
  "isHidden": false,
  "definedRanges": [
    {
      "id": "3a85a049-522f-4b64-8f60-6e7b252ad204",
      "name": "range",
      "description": "",
      "beginIPv4Address": "10.110.183.200",
      "endIPv4Address": "10.110.183.220",
      "state": "UNALLOCATED",
      "createdDate": "2014-11-11T02:23:38.000Z",
      "lastModifiedDate": "2014-11-11T02:23:38.000Z",
      "definedAddresses": [
        {
          "id": "16ab9e24-7c30-4d6d-85fc-04a6fb72919b",
          "name": null,
          "description": null,
          "IPv4Address": "10.110.183.211",
          "IPSortValue": 0,
          "state": "UNALLOCATED",
          "hostName": "",
          "createdDate": "2014-11-11T02:23:38.000Z",
          "lastModifiedDate": "2014-11-11T02:23:38.000Z"
        }
      ],
    },
  ],
}

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{
  "id": "f229ea1a-18de-4dae-ae7b-0cec7feaa99b",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.201",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:23:38.000Z",
  "lastModifiedDate": "2014-11-11T02:23:38.000Z"
},
{
  "id": "22ed8c63-f34f-454b-9e05-245b65c8dea",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.216",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:23:38.000Z",
  "lastModifiedDate": "2014-11-11T02:23:38.000Z"
},
{
  "id": "42093f0e-7814-46cf-b3ee-2544aa79a20d",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.204",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:23:38.000Z",
  "lastModifiedDate": "2014-11-11T02:23:38.000Z"
},
{
  "id": "a194316e-0d92-4f23-ba16-2fa8dbb5c695",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.215",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:23:38.000Z",
  "lastModifiedDate": "2014-11-11T02:23:38.000Z"
},
{
  "id": "7cbe2d40-986d-429a-a91c-30067fff3d94",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.213",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:23:38.000Z",
  "lastModifiedDate": "2014-11-11T02:23:38.000Z"
},

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{
  "id": "3ba70e64-84c6-42bf-a20d-3229de74544a",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.220",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:23:38.000Z",
  "lastModifiedDate": "2014-11-11T02:23:38.000Z"
},
{
  "id": "a1777d45-b2d0-4ecd-9d0a-3db499756f0f",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.206",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:23:38.000Z",
  "lastModifiedDate": "2014-11-11T02:23:38.000Z"
},
{
  "id": "8349e9bf-33ff-4382-9d9f-5b05efcf7f9c",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.207",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:23:38.000Z",
  "lastModifiedDate": "2014-11-11T02:23:38.000Z"
},
{
  "id": "bf96c279-4ea7-4b34-8b08-7a13f156d6c9",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.214",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:23:38.000Z",
  "lastModifiedDate": "2014-11-11T02:23:38.000Z"
},
{
  "id": "10e85576-95c6-4df3-bff7-7ba590286e1a",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.210",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:23:38.000Z",
  "lastModifiedDate": "2014-11-11T02:23:38.000Z"
},

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{
  "id": "f1962c5e-6b48-4cd5-9f2d-93b706690b6b",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.205",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:23:38.000Z",
  "lastModifiedDate": "2014-11-11T02:23:38.000Z"
},
{
  "id": "cdfc5bcc-1db7-46e7-b8e7-a40d67c92763",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.219",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:23:38.000Z",
  "lastModifiedDate": "2014-11-11T02:23:38.000Z"
},
{
  "id": "b846b73d-950d-4a96-a335-b67d8bf8022b",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.202",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:23:38.000Z",
  "lastModifiedDate": "2014-11-11T02:23:38.000Z"
},
{
  "id": "fc7c445f-5efe-4c1e-941e-c78a2682d3f0",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.208",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:23:38.000Z",
  "lastModifiedDate": "2014-11-11T02:23:38.000Z"
},
{
  "id": "cd39e786-6490-4c95-8cf7-d6e3b6a0ba67",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.200",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:23:38.000Z",
  "lastModifiedDate": "2014-11-11T02:23:38.000Z"
},

```

```

{
  "id": "900fcc08-7713-41fe-9f3a-e5c0da3f02b7",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.217",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:23:38.000Z",
  "lastModifiedDate": "2014-11-11T02:23:38.000Z"
},
{
  "id": "4854b7af-13fa-48ed-a69f-e7e428699909",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.212",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:23:38.000Z",
  "lastModifiedDate": "2014-11-11T02:23:38.000Z"
},
{
  "id": "4a1b41fe-f585-43b1-8c62-ee8a14f026cf",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.203",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:23:38.000Z",
  "lastModifiedDate": "2014-11-11T02:23:38.000Z"
},
{
  "id": "451ab99c-c6df-4ecd-8b48-f14d7afa4c48",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.209",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:23:38.000Z",
  "lastModifiedDate": "2014-11-11T02:23:38.000Z"
},
{
  "id": "db9b41af-4f7b-41f3-b14e-f373df6dd128",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.218",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:23:38.000Z",
  "lastModifiedDate": "2014-11-11T02:23:38.000Z"
}

```

```

]
},
{
  "id": "67acdc6f-d0b9-4f47-a74b-ea58ff9ce074",
  "name": "range2",
  "description": "",
  "beginIPv4Address": "10.110.183.180",
  "endIPv4Address": "10.110.183.199",
  "state": "UNALLOCATED",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z",
  "definedAddresses": [
    {
      "id": "37b5c7d1-b82f-4961-a7cc-0117d3610ed7",
      "name": null,
      "description": null,
      "IPv4Address": "10.110.183.182",
      "IPSortValue": 0,
      "state": "UNALLOCATED",
      "hostName": "",
      "createdDate": "2014-11-11T02:24:04.000Z",
      "lastModifiedDate": "2014-11-11T02:24:04.000Z"
    },
    {
      "id": "d6112083-b195-4f94-9b07-0fe490d5caa8",
      "name": null,
      "description": null,
      "IPv4Address": "10.110.183.192",
      "IPSortValue": 0,
      "state": "UNALLOCATED",
      "hostName": "",
      "createdDate": "2014-11-11T02:24:04.000Z",
      "lastModifiedDate": "2014-11-11T02:24:04.000Z"
    },
    {
      "id": "b0032edf-c5c9-4809-9481-2427a1878936",
      "name": null,
      "description": null,
      "IPv4Address": "10.110.183.186",
      "IPSortValue": 0,
      "state": "UNALLOCATED",
      "hostName": "",
      "createdDate": "2014-11-11T02:24:04.000Z",
      "lastModifiedDate": "2014-11-11T02:24:04.000Z"
    },
    {
      "id": "e13b52fb-7375-4397-a054-24e29c843e6e",
      "name": null,
      "description": null,
      "IPv4Address": "10.110.183.185",
      "IPSortValue": 0,
      "state": "UNALLOCATED",
      "hostName": "",
      "createdDate": "2014-11-11T02:24:04.000Z",
      "lastModifiedDate": "2014-11-11T02:24:04.000Z"
    }
  ]
}

```

```

},
{
  "id": "43d8bae4-7b78-40d2-a9ef-350d28901c24",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.180",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "c270ce8e-a418-4d02-89db-3b84f6816a75",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.181",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "684bbe43-29ce-4113-92c7-43921c943099",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.183",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "f7177c16-de44-4db6-bbee-47e0ef219478",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.188",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "0f6dc355-5c71-4c6a-b607-4916804feecc",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.190",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
}

```

```

},
{
  "id": "9eb818c0-4174-4dbf-99be-4c9e6e83c90f",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.189",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "7f2a2483-1562-4e88-9ebd-5c61e75f2d79",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.195",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "0e7a8d8d-1bf7-4008-a3ec-634218049722",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.196",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "2d5f3e43-5899-46b6-a0ca-73dfbd57dd5f",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.193",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "67d43b6f-98f7-442a-a00e-761f2b462118",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.198",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
}

```

```

},
{
  "id": "f64f36d8-076b-4d74-87d7-78b156b7764e",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.199",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "4b03c95a-ebb8-4382-ac10-7bb39173b718",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.197",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "636f224c-8ec4-4b58-9c9f-a847dbff4572",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.191",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "5d40b63e-523e-44d1-b0db-b6ecb3fed325",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.184",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "add1df2a-14ec-49d9-832e-d55c3a386926",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.187",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
}

```

```

    },
    {
      "id": "ce67f8a7-c5ca-44d5-bd17-f944f2d3748e",
      "name": null,
      "description": null,
      "IPv4Address": "10.110.183.194",
      "IPSortValue": 0,
      "state": "UNALLOCATED",
      "hostName": "",
      "createdDate": "2014-11-11T02:24:04.000Z",
      "lastModifiedDate": "2014-11-11T02:24:04.000Z"
    }
  ]
},
{
  "profileType": "EXTERNAL",
  "subnetMask": "255.255.255.0",
  "gatewayAddress": "10.110.183.253",
  "primaryDnsAddress": "10.110.182.45",
  "secondaryDnsAddress": "",
  "dnsSuffix": "mycompany.com",
  "dnsSearchSuffix": "",
  "primaryWinsAddress": "10.0.0.1",
  "secondaryWinsAddress": ""
}
],
"metadata": {
  "size": 0,
  "totalElements": 4,
  "totalPages": 1,
  "number": 1,
  "offset": 0
}
}

```

## Syntax for Getting a Network Profile List

You can use the vRealize Automation REST API to get a list of current network profiles.

### Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	<code>https://\$host/iaas-proxy-provider/api/network/profiles</code>
Method	Get
<i>\$host</i>	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
<i>\$token</i>	Specifies a valid HTTP bearer token with necessary credentials.

## **Output**

The command output contains property names and values based on the command input parameters.

Parameter	Description
Links	<p>Specifies an array of link objects, each of which contains the following parts:</p> <ul style="list-style-type: none"> <li>■ rel           <p>Specifies the name of the link.</p> <ul style="list-style-type: none"> <li>■ self refers to the object that was returned or requested.</li> <li>■ First, Previous, Next, and Last refer to corresponding pages of pageable lists.</li> <li>■ Specifies the application or service that determines the other names.</li> </ul> </li> <li>■ href           <p>Specifies the URL that produces the result.</p> </li> </ul>
Content	<p>Specifies an array of data rows, each of which represents one of the tenant objects returned in a pageable list. Each tenant object can contain the following information:</p> <ul style="list-style-type: none"> <li>■ @type:           <p>Specifies one of the following network profile type values:</p> <ul style="list-style-type: none"> <li>■ ExternalNetworkProfile</li> <li>■ NATNetworkProfile</li> <li>■ PrivateNetworkProfile</li> <li>■ RoutedNetworkProfile</li> </ul> </li> <li>■ \$id:           <p>Specifies the unique network profile identifier.</p> </li> <li>■ \$name:           <p>Specifies the network profile name.</p> </li> <li>■ createDate:           <p>Specifies the date and time that the network profile was created.</p> </li> <li>■ lastModifiedDate:           <p>Specifies the date and time that the network profile was last modified.</p> </li> <li>■ isHidden:           <p>Specifies if the network profile is hidden from the vRealize Automation user interface.</p> </li> <li>■ definedRanges:           <p>Specifies the IP range array that is defined for the network profile.</p> </li> <li>■ profileType:           <p>Specifies the network profile type as one of the following types:</p> <ul style="list-style-type: none"> <li>■ EXTERNAL</li> <li>■ NAT</li> <li>■ PRIVATE</li> </ul> </li> </ul>

Parameter	Description
	<ul style="list-style-type: none"> <li>■ ROUTED</li> <li>■ subnetMask: Specifies the subnet mask.</li> <li>■ gatewayAddress: Specifies the IP address of the network gateway.</li> <li>■ primaryDnsAddress: Specifies the IP address of the primary DNS server. This parameter is only available for external, NAT, and routed network profiles.</li> <li>■ secondaryDnsAddress: Specifies the IP address of a secondary DNS server. This parameter is only available for external, NAT, and routed network profiles.</li> <li>■ dnsSuffix: Specifies the DNS suffix. This parameter is only available for external, NAT, and routed network profiles.</li> <li>■ dnsSearchSuffix: Specifies the DNS search suffix. This parameter is only available for external, NAT, and routed network profiles.</li> <li>■ primaryWinsAddress: Specifies the IP address of the primary Wins server. This parameter is only available for external, NAT, and routed network profiles.</li> <li>■ secondaryWinsAddress: Specifies the IP address of secondary Wins server. This parameter is only available for external, NAT, and routed network profiles.</li> <li>■ dhcpStartIPAddress: Specifies the start IP address of the DHCP server. This parameter is only supported by NAT and private network profiles.</li> <li>■ dhcpEndIPAddress: Specifies the end IP address of the DHCP server. This parameter is only supported by NAT and private network profiles.</li> <li>■ leaseTimeInSeconds: Specifies the lease time for the DHCP server. This parameter is only supported by NAT and private network profiles.</li> <li>■ baseIP: Specifies the base IP address. This parameter is only supported by routed network profiles.</li> </ul>
Metadata	<p>Specifies the following paging-related data:</p> <ul style="list-style-type: none"> <li>■ Size: Specifies the maximum number of rows per page.</li> <li>■ totalElement: Specifies the number of rows returned.</li> </ul>

Parameter	Description
	<ul style="list-style-type: none"> <li>■ totalPages: Specifies the total number of pages of data available.</li> <li>■ Number: Specifies the current page number.</li> <li>■ Offset: Specifies the number of rows skipped.</li> </ul>

### Example: curl Command

The following example command returns a list of network profiles.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/ iaas-proxy-provider/api/network/profiles
```

### Example: JSON Output

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

```
{
  "links": [
  ],
  "content": [
    {
      "@type": "NATNetworkProfile",
      "id": "599541aa-ffb0-4a37-9483-4353f3fc6be3",
      "name": "NATTest",
      "description": "",
      "createdDate": "2014-11-11T02:29:09.000Z",
      "lastModifiedDate": "2014-11-11T02:29:09.000Z",
      "isHidden": false,
      "definedRanges": [
        {
          "id": "9f7d8025-bd4c-4560-9b41-9ce455ee49ae",
          "name": "range",
          "description": "",
          "beginIPv4Address": "10.118.190.110",
          "endIPv4Address": "10.118.190.130",
          "state": "UNALLOCATED",
          "createdDate": "2014-11-11T02:29:05.000Z",
          "lastModifiedDate": "2014-11-11T02:29:05.000Z",
          "definedAddresses": [
            {
              "id": "6e7dc8c3-dc64-4ebd-a282-05852010310f",
              "name": null,
              "description": null,
              "IPv4Address": "10.118.190.111",
              "IPSortValue": 0,
              "state": "UNALLOCATED",
              "hostName": "",
              "createdDate": "2014-11-11T02:29:05.000Z",
              "lastModifiedDate": "2014-11-11T02:29:05.000Z"
            }
          ]
        }
      ]
    }
  ]
}
```

```
},
{
  "id": "f6802100-1d7e-4f31-bdeb-1b27f7e77766",
  "name": null,
  "description": null,
  "IPv4Address": "10.118.190.115",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:29:05.000Z",
  "lastModifiedDate": "2014-11-11T02:29:05.000Z"
},
{
  "id": "f21dcbef-037c-48bb-bee9-2c736376ef14",
  "name": null,
  "description": null,
  "IPv4Address": "10.118.190.122",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:29:05.000Z",
  "lastModifiedDate": "2014-11-11T02:29:05.000Z"
},
{
  "id": "ce79de13-91da-4269-9ea2-2de416019ee9",
  "name": null,
  "description": null,
  "IPv4Address": "10.118.190.125",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:29:05.000Z",
  "lastModifiedDate": "2014-11-11T02:29:05.000Z"
},
{
  "id": "f6deba8c-fbf4-4ea0-9d9c-325e9db2f13e",
  "name": null,
  "description": null,
  "IPv4Address": "10.118.190.114",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:29:05.000Z",
  "lastModifiedDate": "2014-11-11T02:29:05.000Z"
},
{
  "id": "db4383b3-fbbf-42cc-b319-3e52bed49ec0",
  "name": null,
  "description": null,
  "IPv4Address": "10.118.190.116",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:29:05.000Z",
  "lastModifiedDate": "2014-11-11T02:29:05.000Z"
}
```

```

},
{
  "id": "b8f012a1-ea4a-403c-9eef-5d000f2a270f",
  "name": null,
  "description": null,
  "IPv4Address": "10.118.190.123",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:29:05.000Z",
  "lastModifiedDate": "2014-11-11T02:29:05.000Z"
},
{
  "id": "9d5a9d25-26d7-4ce3-93a2-61242a88c5b2",
  "name": null,
  "description": null,
  "IPv4Address": "10.118.190.110",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:29:05.000Z",
  "lastModifiedDate": "2014-11-11T02:29:05.000Z"
},
{
  "id": "f5cfa798-3237-4891-9baf-6182c17174f2",
  "name": null,
  "description": null,
  "IPv4Address": "10.118.190.117",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:29:05.000Z",
  "lastModifiedDate": "2014-11-11T02:29:05.000Z"
},
{
  "id": "2b616f1a-dc35-4caa-8ee7-6494ca50db57",
  "name": null,
  "description": null,
  "IPv4Address": "10.118.190.113",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:29:05.000Z",
  "lastModifiedDate": "2014-11-11T02:29:05.000Z"
},
{
  "id": "9dd5d265-ec23-42be-9bdb-734c11b1e315",
  "name": null,
  "description": null,
  "IPv4Address": "10.118.190.112",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:29:05.000Z",
  "lastModifiedDate": "2014-11-11T02:29:05.000Z"
}

```

```

},
{
  "id": "f6db18f6-f4ca-4f33-95c8-86e4c1ce4722",
  "name": null,
  "description": null,
  "IPv4Address": "10.118.190.121",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:29:05.000Z",
  "lastModifiedDate": "2014-11-11T02:29:05.000Z"
},
{
  "id": "5ce0b34c-2e72-42e4-8f1f-91ddb08753c8",
  "name": null,
  "description": null,
  "IPv4Address": "10.118.190.120",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:29:05.000Z",
  "lastModifiedDate": "2014-11-11T02:29:05.000Z"
},
{
  "id": "bea637f2-1e22-4e6a-b646-a21e979c7750",
  "name": null,
  "description": null,
  "IPv4Address": "10.118.190.124",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:29:05.000Z",
  "lastModifiedDate": "2014-11-11T02:29:05.000Z"
},
{
  "id": "376bf3bf-5e00-4b72-9bf4-a2a3bcceacf3",
  "name": null,
  "description": null,
  "IPv4Address": "10.118.190.119",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:29:05.000Z",
  "lastModifiedDate": "2014-11-11T02:29:05.000Z"
},
{
  "id": "4763f6d2-c37a-4f21-b36d-a3a6a0b789da",
  "name": null,
  "description": null,
  "IPv4Address": "10.118.190.126",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:29:05.000Z",
  "lastModifiedDate": "2014-11-11T02:29:05.000Z"
}

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},
{
  "id": "012075d0-1c54-4792-b0ba-d4d93b002efc",
  "name": null,
  "description": null,
  "IPv4Address": "10.118.190.118",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:29:05.000Z",
  "lastModifiedDate": "2014-11-11T02:29:05.000Z"
},
{
  "id": "a17bd3b3-fca1-4248-afed-e509bb1a1b56",
  "name": null,
  "description": null,
  "IPv4Address": "10.118.190.130",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:29:05.000Z",
  "lastModifiedDate": "2014-11-11T02:29:05.000Z"
},
{
  "id": "e8116b71-9864-4dd6-a0f3-f6c1c0de3d23",
  "name": null,
  "description": null,
  "IPv4Address": "10.118.190.127",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:29:05.000Z",
  "lastModifiedDate": "2014-11-11T02:29:05.000Z"
},
{
  "id": "3a970419-1ca8-4d30-aaf0-f8ca8f4df403",
  "name": null,
  "description": null,
  "IPv4Address": "10.118.190.128",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:29:05.000Z",
  "lastModifiedDate": "2014-11-11T02:29:05.000Z"
},
{
  "id": "3de01f67-02e3-4fce-9c43-fd53d52177c2",
  "name": null,
  "description": null,
  "IPv4Address": "10.118.190.129",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:29:05.000Z",
  "lastModifiedDate": "2014-11-11T02:29:05.000Z"
}

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    }
  ]
}
],
"profileType": "NAT",
"subnetMask": "255.255.255.0",
"gatewayAddress": "10.118.190.230",
"primaryDnsAddress": "10.110.182.45",
"secondaryDnsAddress": "",
"dnsSuffix": "mycompany.com",
"dnsSearchSuffix": "",
"primaryWinsAddress": "10.0.0.1",
"secondaryWinsAddress": "",
"dhcpStartIPAddress": null,
"dhcpEndIPAddress": null,
"leaseTimeInSeconds": 0
},
{
"@type": "PrivateNetworkProfile",
"id": "594e4016-b067-4d19-aa81-63502675f925",
"name": "privateTest",
"description": "",
"createdDate": "2014-11-11T02:26:44.000Z",
"lastModifiedDate": "2014-11-11T02:26:44.000Z",
"isHidden": false,
"definedRanges": [
  {
    "id": "8827193e-f1c3-493e-8bcd-1b153f2a5e74",
    "name": "range",
    "description": "",
    "beginIPv4Address": "10.118.190.110",
    "endIPv4Address": "10.118.190.120",
    "state": "UNALLOCATED",
    "createdDate": "2014-11-11T02:25:57.000Z",
    "lastModifiedDate": "2014-11-11T02:25:57.000Z",
    "definedAddresses": [
      {
        "id": "ac250933-932b-44cd-9a56-05b000221a17",
        "name": null,
        "description": null,
        "IPv4Address": "10.118.190.116",
        "IPSortValue": 0,
        "state": "UNALLOCATED",
        "hostName": "",
        "createdDate": "2014-11-11T02:25:57.000Z",
        "lastModifiedDate": "2014-11-11T02:25:57.000Z"
      },
      {
        "id": "262a4273-1e75-4c23-8fb8-088473521b19",
        "name": null,
        "description": null,
        "IPv4Address": "10.118.190.111",
        "IPSortValue": 0,
        "state": "UNALLOCATED",
        "hostName": ""
      }
    ]
  }
],
{
  "id": "262a4273-1e75-4c23-8fb8-088473521b19",
  "name": null,
  "description": null,
  "IPv4Address": "10.118.190.111",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": ""
}

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        "createdDate": "2014-11-11T02:25:57.000Z",
        "lastModifiedDate": "2014-11-11T02:25:57.000Z"
    },
    {
        "id": "da85ad6b-840c-4aab-92fe-21200e7e05f6",
        "name": null,
        "description": null,
        "IPv4Address": "10.118.190.120",
        "IPSortValue": 0,
        "state": "UNALLOCATED",
        "hostName": "",
        "createdDate": "2014-11-11T02:25:57.000Z",
        "lastModifiedDate": "2014-11-11T02:25:57.000Z"
    },
    {
        "id": "f1cc8ce0-97d9-4405-bf23-3cb258ab1c59",
        "name": null,
        "description": null,
        "IPv4Address": "10.118.190.113",
        "IPSortValue": 0,
        "state": "UNALLOCATED",
        "hostName": "",
        "createdDate": "2014-11-11T02:25:57.000Z",
        "lastModifiedDate": "2014-11-11T02:25:57.000Z"
    },
    {
        "id": "d517ede8-ddd6-4a67-bb26-4bbbfd3c5c1b",
        "name": null,
        "description": null,
        "IPv4Address": "10.118.190.114",
        "IPSortValue": 0,
        "state": "UNALLOCATED",
        "hostName": "",
        "createdDate": "2014-11-11T02:25:57.000Z",
        "lastModifiedDate": "2014-11-11T02:25:57.000Z"
    },
    {
        "id": "f9893a3e-6b4b-4d4e-82ed-5ca1970e20d6",
        "name": null,
        "description": null,
        "IPv4Address": "10.118.190.115",
        "IPSortValue": 0,
        "state": "UNALLOCATED",
        "hostName": "",
        "createdDate": "2014-11-11T02:25:57.000Z",
        "lastModifiedDate": "2014-11-11T02:25:57.000Z"
    },
    {
        "id": "7eebd0ad-0dde-4fa1-aad3-750498214caf",
        "name": null,
        "description": null,
        "IPv4Address": "10.118.190.110",
        "IPSortValue": 0,
        "state": "UNALLOCATED",
        "hostName": "",

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    "createdDate": "2014-11-11T02:25:57.000Z",
    "lastModifiedDate": "2014-11-11T02:25:57.000Z"
  },
  {
    "id": "37ca8368-5d19-4d23-a6b8-7b233bb2320d",
    "name": null,
    "description": null,
    "IPv4Address": "10.118.190.112",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:25:57.000Z",
    "lastModifiedDate": "2014-11-11T02:25:57.000Z"
  },
  {
    "id": "7675008f-289b-40de-8282-922b0e031314",
    "name": null,
    "description": null,
    "IPv4Address": "10.118.190.117",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:25:57.000Z",
    "lastModifiedDate": "2014-11-11T02:25:57.000Z"
  },
  {
    "id": "d585d795-8aa0-439c-8977-bde44fbff675",
    "name": null,
    "description": null,
    "IPv4Address": "10.118.190.118",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:25:57.000Z",
    "lastModifiedDate": "2014-11-11T02:25:57.000Z"
  },
  {
    "id": "a39fb517-bffb-4390-8fe5-c4e9f15ed247",
    "name": null,
    "description": null,
    "IPv4Address": "10.118.190.119",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:25:57.000Z",
    "lastModifiedDate": "2014-11-11T02:25:57.000Z"
  }
]
},
"profileType": "PRIVATE",
"subnetMask": "255.255.255.0",
"gatewayAddress": "10.118.190.230",
"dhcpStartIPAddress": null,
"dhcpEndIPAddress": null,

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    "leaseTimeInSeconds": 0
  },
  {
    "@type": "RoutedNetworkProfile",
    "id": "a3dbfc76-7eab-4c1f-8f59-8fcc0b50ec6c",
    "name": "routedTest",
    "description": "",
    "createdDate": "2014-11-11T02:31:11.000Z",
    "lastModifiedDate": "2014-11-11T02:31:11.000Z",
    "isHidden": false,
    "definedRanges": [
      {
        "id": "4d9b291a-841f-4f62-b03e-83781133024c",
        "name": "Range 1",
        "description": "",
        "beginIPv4Address": "10.118.183.1",
        "endIPv4Address": "10.118.183.254",
        "state": "UNALLOCATED",
        "createdDate": "2014-11-11T02:30:34.000Z",
        "lastModifiedDate": "2014-11-11T02:30:34.000Z",
        "definedAddresses": [
          ]
        }
      ]
    },
    "profileType": "ROUTED",
    "subnetMask": "255.255.254.0",
    "primaryDnsAddress": "10.110.182.45",
    "secondaryDnsAddress": "",
    "dnsSuffix": "mycompany.com",
    "dnsSearchSuffix": "",
    "primaryWinsAddress": "10.0.0.1",
    "secondaryWinsAddress": "",
    "baseIP": "10.118.183.1"
  },
  {
    "@type": "ExternalNetworkProfile",
    "id": "68b6a183-fc8a-4592-af23-92f8d410ee32",
    "name": "externalTest",
    "description": "",
    "createdDate": "2014-11-11T02:24:07.000Z",
    "lastModifiedDate": "2014-11-11T02:24:07.000Z",
    "isHidden": false,
    "definedRanges": [
      {
        "id": "3a85a049-522f-4b64-8f60-6e7b252ad204",
        "name": "range",
        "description": "",
        "beginIPv4Address": "10.110.183.200",
        "endIPv4Address": "10.110.183.220",
        "state": "UNALLOCATED",
        "createdDate": "2014-11-11T02:23:38.000Z",
        "lastModifiedDate": "2014-11-11T02:23:38.000Z",
        "definedAddresses": [
          {

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    "id": "16ab9e24-7c30-4d6d-85fc-04a6fb72919b",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.211",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "f229ea1a-18de-4dae-ae7b-0cec7feaa99b",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.201",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "22ed8c63-f34f-454b-9e05-245b65c8deaa",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.216",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "42093f0e-7814-46cf-b3ee-2544aa79a20d",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.204",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "a194316e-0d92-4f23-ba16-2fa8dbb5c695",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.215",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {

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    "id": "7cbe2d40-986d-429a-a91c-30067fff3d94",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.213",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "3ba70e64-84c6-42bf-a20d-3229de74544a",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.220",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "a1777d45-b2d0-4ecd-9d0a-3db499756f0f",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.206",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "8349e9bf-33ff-4382-9d9f-5b05efcf7f9c",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.207",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "bf96c279-4ea7-4b34-8b08-7a13f156d6c9",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.214",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {

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    "id": "10e85576-95c6-4df3-bfff-7ba590286e1a",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.210",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "f1962c5e-6b48-4cd5-9f2d-93b706690b6b",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.205",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "cdfc5bcc-1db7-46e7-b8e7-a40d67c92763",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.219",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "b846b73d-950d-4a96-a335-b67d8bf8022b",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.202",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "fc7c445f-5efe-4c1e-941e-c78a2682d3f0",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.208",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {

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    "id": "cd39e786-6490-4c95-8cf7-d6e3b6a0ba67",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.200",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "900fcc08-7713-41fe-9f3a-e5c0da3f02b7",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.217",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "4854b7af-13fa-48ed-a69f-e7e428699909",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.212",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "4a1b41fe-f585-43b1-8c62-ee8a14f026cf",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.203",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "451ab99c-c6df-4ecd-8b48-f14d7afa4c48",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.209",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {

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        "id": "db9b41af-4f7b-41f3-b14e-f373df6dd128",
        "name": null,
        "description": null,
        "IPv4Address": "10.110.183.218",
        "IPSortValue": 0,
        "state": "UNALLOCATED",
        "hostName": "",
        "createdDate": "2014-11-11T02:23:38.000Z",
        "lastModifiedDate": "2014-11-11T02:23:38.000Z"
    }
]
},
{
    "id": "67acdc6f-d0b9-4f47-a74b-ea58ff9ce074",
    "name": "range2",
    "description": "",
    "beginIPv4Address": "10.110.183.180",
    "endIPv4Address": "10.110.183.199",
    "state": "UNALLOCATED",
    "createdDate": "2014-11-11T02:24:04.000Z",
    "lastModifiedDate": "2014-11-11T02:24:04.000Z",
    "definedAddresses": [
        {
            "id": "37b5c7d1-b82f-4961-a7cc-0117d3610ed7",
            "name": null,
            "description": null,
            "IPv4Address": "10.110.183.182",
            "IPSortValue": 0,
            "state": "UNALLOCATED",
            "hostName": "",
            "createdDate": "2014-11-11T02:24:04.000Z",
            "lastModifiedDate": "2014-11-11T02:24:04.000Z"
        },
        {
            "id": "d6112083-b195-4f94-9b07-0fe490d5caa8",
            "name": null,
            "description": null,
            "IPv4Address": "10.110.183.192",
            "IPSortValue": 0,
            "state": "UNALLOCATED",
            "hostName": "",
            "createdDate": "2014-11-11T02:24:04.000Z",
            "lastModifiedDate": "2014-11-11T02:24:04.000Z"
        },
        {
            "id": "b0032edf-c5c9-4809-9481-2427a1878936",
            "name": null,
            "description": null,
            "IPv4Address": "10.110.183.186",
            "IPSortValue": 0,
            "state": "UNALLOCATED",
            "hostName": "",
            "createdDate": "2014-11-11T02:24:04.000Z",
            "lastModifiedDate": "2014-11-11T02:24:04.000Z"
        }
    ],
}

```

```

{
  "id": "e13b52fb-7375-4397-a054-24e29c843e6e",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.185",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "43d8bae4-7b78-40d2-a9ef-350d28901c24",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.180",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "c270ce8e-a418-4d02-89db-3b84f6816a75",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.181",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "684bbe43-29ce-4113-92c7-43921c943099",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.183",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "f7177c16-de44-4db6-bbee-47e0ef219478",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.188",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},

```

```

    {
      "id": "0f6dc355-5c71-4c6a-b607-4916804feecc",
      "name": null,
      "description": null,
      "IPv4Address": "10.110.183.190",
      "IPSortValue": 0,
      "state": "UNALLOCATED",
      "hostName": "",
      "createdDate": "2014-11-11T02:24:04.000Z",
      "lastModifiedDate": "2014-11-11T02:24:04.000Z"
    },
    {
      "id": "9eb818c0-4174-4dbf-99be-4c9e6e83c90f",
      "name": null,
      "description": null,
      "IPv4Address": "10.110.183.189",
      "IPSortValue": 0,
      "state": "UNALLOCATED",
      "hostName": "",
      "createdDate": "2014-11-11T02:24:04.000Z",
      "lastModifiedDate": "2014-11-11T02:24:04.000Z"
    },
    {
      "id": "7f2a2483-1562-4e88-9ebd-5c61e75f2d79",
      "name": null,
      "description": null,
      "IPv4Address": "10.110.183.195",
      "IPSortValue": 0,
      "state": "UNALLOCATED",
      "hostName": "",
      "createdDate": "2014-11-11T02:24:04.000Z",
      "lastModifiedDate": "2014-11-11T02:24:04.000Z"
    },
    {
      "id": "0e7a8d8d-1bf7-4008-a3ec-634218049722",
      "name": null,
      "description": null,
      "IPv4Address": "10.110.183.196",
      "IPSortValue": 0,
      "state": "UNALLOCATED",
      "hostName": "",
      "createdDate": "2014-11-11T02:24:04.000Z",
      "lastModifiedDate": "2014-11-11T02:24:04.000Z"
    },
    {
      "id": "2d5f3e43-5899-46b6-a0ca-73dfbd57dd5f",
      "name": null,
      "description": null,
      "IPv4Address": "10.110.183.193",
      "IPSortValue": 0,
      "state": "UNALLOCATED",
      "hostName": "",
      "createdDate": "2014-11-11T02:24:04.000Z",
      "lastModifiedDate": "2014-11-11T02:24:04.000Z"
    },
  ],

```

```

{
  "id": "67d43b6f-98f7-442a-a00e-761f2b462118",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.198",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "f64f36d8-076b-4d74-87d7-78b156b7764e",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.199",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "4b03c95a-ebb8-4382-ac10-7bb39173b718",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.197",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "636f224c-8ec4-4b58-9c9f-a847dbff4572",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.191",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "5d40b63e-523e-44d1-b0db-b6ecb3fed325",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.184",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
}

```

```

    {
      "id": "add1df2a-14ec-49d9-832e-d55c3a386926",
      "name": null,
      "description": null,
      "IPv4Address": "10.110.183.187",
      "IPSortValue": 0,
      "state": "UNALLOCATED",
      "hostName": "",
      "createdDate": "2014-11-11T02:24:04.000Z",
      "lastModifiedDate": "2014-11-11T02:24:04.000Z"
    },
    {
      "id": "ce67f8a7-c5ca-44d5-bd17-f944f2d3748e",
      "name": null,
      "description": null,
      "IPv4Address": "10.110.183.194",
      "IPSortValue": 0,
      "state": "UNALLOCATED",
      "hostName": "",
      "createdDate": "2014-11-11T02:24:04.000Z",
      "lastModifiedDate": "2014-11-11T02:24:04.000Z"
    }
  ]
}
],
"profileType": "EXTERNAL",
"subnetMask": "255.255.255.0",
"gatewayAddress": "10.110.183.253",
"primaryDnsAddress": "10.110.182.45",
"secondaryDnsAddress": "",
"dnsSuffix": "mycompany.com",
"dnsSearchSuffix": "",
"primaryWinsAddress": "10.0.0.1",
"secondaryWinsAddress": ""
}
],
"metadata": {
  "size": 0,
  "totalElements": 4,
  "totalPages": 1,
  "number": 1,
  "offset": 0
}
}

```

## Create a Network Profile

You can use the vRealize Automation REST API to create an external, NAT, private, or routed network profile.

### Prerequisites

- Log in to vRealize Automation as a **tenant administrator**.

- Verify that the host name and fully qualified domain name of the vRealize Automation instance are available.
- If you are not using the API Explorer, verify that you have a valid HTTP bearer token that matches your login credentials. See [Chapter 2 REST API Authentication](#).

### Procedure

- ◆ Use the following sample command to create an external, NAT, private, or routed network profile.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/iaas-proxy-provider/api/$networkProfileID -d “
{
  "@type": "ExternalNetworkProfile",
  "name": "externalTestCreate",
  "description": "",
  "isHidden": false,
  "definedRanges": [
    {
      "name": "range",
      "description": "",
      "beginIPv4Address": "10.110.183.221",
      "endIPv4Address": "10.110.183.240",
      "state": "UNALLOCATED"
    }
  ],
  "profileType": "EXTERNAL",
  "subnetMask": "255.255.255.0",
  "gatewayAddress": "10.110.183.253",
  "primaryDnsAddress": "10.110.182.45",
  "secondaryDnsAddress": "",
  "dnsSuffix": "mycompany.com",
  "dnsSearchSuffix": "",
  "primaryWinsAddress": "10.0.0.1",
  "secondaryWinsAddress": ""
}
“
```

The following JSON output is returned based on the command input. The output contains an empty HTTP response body and the following or similar header statement. Copy the location URL into a text editor for future use.

```
Location:
https://vcac148-084-241.eng.mycompany.com/iaas-proxy-provider/api/network/profiles/263b80f5-
d34f-47f2-b0b1-5a3db991c2e9
```

## Syntax for Creating a Network Profile

You can use the vRealize Automation REST API to create an external, NAT, private, or routed network profile.

## Input

Use the supported input parameters to control the command output.

Input	Description
URL	https://\$host/iaas-proxy-provider/api/network/profiles
Method	Post
\$host	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
\$token	Specifies a valid HTTP bearer token with necessary credentials.
HTTP Body	The HTTP body describes the network profile to create. Sample HTTP body field values are presented in the JSON Output section of the <a href="#">Syntax for Getting a Network Profile List</a> topic. Format your HTTP body using this content as reference.

## Output

The command output contains property names and values based on the command input parameters.

Property	Description
status	If the command is successful, the HTTP status is 201 Created.
Header.Location	The HTTP response should contain a Location attribute that is formatted as https://\$host/iaas-proxy-provider/api/network/profiles/\$networkProfileID.
\$networkProfileID	Specifies the unique identifier of the new network profile.

## Example: curl Command

The following example command creates a network profile.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/iaas-proxy-provider/api/$networkProfileID -d "
{
  "@type": "ExternalNetworkProfile",
  "name": "externalTestCreate",
  "description": "",
  "isHidden": false,
  "definedRanges": [
    {
      "name": "range",
      "description": "",
      "beginIPv4Address": "10.110.183.221",
      "endIPv4Address": "10.110.183.240",
      "state": "UNALLOCATED"
    }
  ],
  "profileType": "EXTERNAL",
}
```

```

"subnetMask": "255.255.255.0",
"gatewayAddress": "10.110.183.253",
"primaryDnsAddress": "10.110.182.45",
"secondaryDnsAddress": "",
"dnsSuffix": "mycompany.com",
"dnsSearchSuffix": "",
"primaryWinsAddress": "10.0.0.1",
"secondaryWinsAddress": ""
}
"

```

### Example: JSON Output

The output contains an empty HTTP response body and the location and network profile ID in the header statement.

```

Location:
https://vcac148-084-241.eng.mycompany.com/iaas-proxy-provider/api/network/profiles/263b80f5-d34f-47f2-
b0b1-5a3db991c2e9

```

Copy the location URL into a text editor for future use.

## Query a Network Profile

You can use the REST API to query and display an external, NAT, private, or routed network profile. For example, you can query an external network profile and use it as the basis for creating a different type of network profile.

### Prerequisites

- Log in to vRealize Automation as a **tenant administrator**.
- Verify that the host name and fully qualified domain name of the vRealize Automation instance are available.
- If you are not using the API Explorer, verify that you have a valid HTTP bearer token that matches your login credentials. See [Chapter 2 REST API Authentication](#).
- Obtain the network profile ID to query. See [Get a Network Profile List](#).

**Procedure**

- ◆ Use the following command to query the existing network profile ID 68b6a183-fc8a-4592-af23-92f8d410ee32.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/ iaas-proxy-provider/api/network/profiles/68b6a183-fc8a-4592-af23-92f8d410ee32
```

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

```
{
  "@type": "ExternalNetworkProfile",
  "id": "68b6a183-fc8a-4592-af23-92f8d410ee32",
  "name": "externalTest",
  "description": "",
  "createdDate": "2014-11-11T02:24:07.000Z",
  "lastModifiedDate": "2014-11-11T02:24:07.000Z",
  "isHidden": false,
  "definedRanges": [
    {
      "id": "3a85a049-522f-4b64-8f60-6e7b252ad204",
      "name": "range",
      "description": "",
      "beginIPv4Address": "10.110.183.200",
      "endIPv4Address": "10.110.183.220",
      "state": "UNALLOCATED",
      "createdDate": "2014-11-11T02:23:38.000Z",
      "lastModifiedDate": "2014-11-11T02:23:38.000Z",
      "definedAddresses": [
        {
          "id": "16ab9e24-7c30-4d6d-85fc-04a6fb72919b",
          "name": null,
          "description": null,
          "IPv4Address": "10.110.183.211",
          "IPSortValue": 0,
          "state": "UNALLOCATED",
          "hostName": "",
          "createdDate": "2014-11-11T02:23:38.000Z",
          "lastModifiedDate": "2014-11-11T02:23:38.000Z"
        },
        {
          "id": "f229ea1a-18de-4dae-ae7b-0cec7feaa99b",
          "name": null,
          "description": null,
          "IPv4Address": "10.110.183.201",
          "IPSortValue": 0,
          "state": "UNALLOCATED",
          "hostName": "",
          "createdDate": "2014-11-11T02:23:38.000Z",
          "lastModifiedDate": "2014-11-11T02:23:38.000Z"
        }
      ]
    },
    {
      "id": "22ed8c63-f34f-454b-9e05-245b65c8deaa",
```

```

    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.216",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "42093f0e-7814-46cf-b3ee-2544aa79a20d",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.204",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "a194316e-0d92-4f23-ba16-2fa8dbb5c695",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.215",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "7cbe2d40-986d-429a-a91c-30067fff3d94",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.213",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "3ba70e64-84c6-42bf-a20d-3229de74544a",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.220",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "a1777d45-b2d0-4ecd-9d0a-3db499756f0f",

```

```

    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.206",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "8349e9bf-33ff-4382-9d9f-5b05efcf7f9c",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.207",
    "IPSortValue": 0,
    "state": "UNALLOCATED",

    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "bf96c279-4ea7-4b34-8b08-7a13f156d6c9",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.214",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "10e85576-95c6-4df3-bff7-7ba590286e1a",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.210",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "f1962c5e-6b48-4cd5-9f2d-93b706690b6b",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.205",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {

```

```

    "id": "cdfc5bcc-1db7-46e7-b8e7-a40d67c92763",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.219",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "b846b73d-950d-4a96-a335-b67d8bf8022b",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.202",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "fc7c445f-5efe-4c1e-941e-c78a2682d3f0",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.208",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "cd39e786-6490-4c95-8cf7-d6e3b6a0ba67",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.200",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "900fcc08-7713-41fe-9f3a-e5c0da3f02b7",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.217",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {

```

```

    "id": "4854b7af-13fa-48ed-a69f-e7e428699909",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.212",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "4a1b41fe-f585-43b1-8c62-ee8a14f026cf",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.203",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "451ab99c-c6df-4ecd-8b48-f14d7afa4c48",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.209",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "db9b41af-4f7b-41f3-b14e-f373df6dd128",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.218",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  }
]
},
{
  "id": "67acdc6f-d0b9-4f47-a74b-ea58ff9ce074",
  "name": "range2",
  "description": "",
  "beginIPv4Address": "10.110.183.180",
  "endIPv4Address": "10.110.183.199",
  "state": "UNALLOCATED",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z",
  "definedAddresses": [

```

```

{
  "id": "37b5c7d1-b82f-4961-a7cc-0117d3610ed7",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.182",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "d6112083-b195-4f94-9b07-0fe490d5caa8",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.192",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "b0032edf-c5c9-4809-9481-2427a1878936",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.186",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "e13b52fb-7375-4397-a054-24e29c843e6e",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.185",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "43d8bae4-7b78-40d2-a9ef-350d28901c24",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.180",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
}

```

```

},
{
  "id": "c270ce8e-a418-4d02-89db-3b84f6816a75",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.181",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "684bbe43-29ce-4113-92c7-43921c943099",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.183",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "f7177c16-de44-4db6-bbee-47e0ef219478",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.188",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "0f6dc355-5c71-4c6a-b607-4916804feecc",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.190",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "9eb818c0-4174-4dbf-99be-4c9e6e83c90f",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.189",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
}

```

```

},
{
  "id": "7f2a2483-1562-4e88-9ebd-5c61e75f2d79",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.195",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "0e7a8d8d-1bf7-4008-a3ec-634218049722",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.196",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "2d5f3e43-5899-46b6-a0ca-73dfbd57dd5f",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.193",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "67d43b6f-98f7-442a-a00e-761f2b462118",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.198",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "f64f36d8-076b-4d74-87d7-78b156b7764e",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.199",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
}

```

```

},
{
  "id": "4b03c95a-ebb8-4382-ac10-7bb39173b718",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.197",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "636f224c-8ec4-4b58-9c9f-a847dbff4572",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.191",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "5d40b63e-523e-44d1-b0db-b6ecb3fed325",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.184",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "add1df2a-14ec-49d9-832e-d55c3a386926",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.187",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "ce67f8a7-c5ca-44d5-bd17-f944f2d3748e",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.194",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
}

```

```

    }
  ]
}
],
"profileType": "EXTERNAL",
"subnetMask": "255.255.255.0",
"gatewayAddress": "10.110.183.253",
"primaryDnsAddress": "10.110.182.45",
"secondaryDnsAddress": "",
"dnsSuffix": "mycompany.com",
"dnsSearchSuffix": "",
"primaryWinsAddress": "10.0.0.1",
"secondaryWinsAddress": ""
}

```

## Syntax for Querying a Network Profile

You can use the vRealize Automation REST API to query and display an external, NAT, private, or routed network profile. For example, you can query an external network profile and use it as the basis for creating a different type of network profile.

### Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	<code>https://\$host/iaas-proxy-provider/api/network/profiles/\$id</code>
Method	Get
<i>\$host</i>	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
<i>\$token</i>	Specifies a valid HTTP bearer token with necessary credentials.
<i>\$id:</i>	Specifies the unique network profile identifier.

### Output

The command output contains property names and values based on the command input parameters.

Parameter	Description
Links	<p>Specifies an array of link objects, each of which contains the following parts:</p> <ul style="list-style-type: none"> <li>■ rel                     <p>Specifies the name of the link.</p> <ul style="list-style-type: none"> <li>■ Self refers to the object that was returned or requested.</li> <li>■ First, Previous, Next, and Last refer to corresponding pages of pageable lists.</li> <li>■ Specifies the application or service that determines the other names.</li> </ul> </li> <li>■ href                     <p>Specifies the URL that produces the result.</p> </li> </ul>
Content	<p>Specifies an array of data rows, each of which represents one of the objects returned in a pageable list. Each object contains the following information:</p> <ul style="list-style-type: none"> <li>■ @type:                     <p>Specifies one of the following network profile type values:</p> <ul style="list-style-type: none"> <li>■ ExternalNetworkProfile</li> <li>■ NATNetworkProfile</li> <li>■ PrivateNetworkProfile</li> <li>■ RoutedNetworkProfile</li> </ul> </li> <li>■ \$id:                     <p>Specifies the unique network profile identifier.</p> </li> <li>■ \$name:                     <p>Specifies the network profile name.</p> </li> <li>■ createDate:                     <p>Specifies the date and time that the network profile was created.</p> </li> <li>■ lastModifiedDate:                     <p>Specifies the date and time that the network profile was last modified.</p> </li> <li>■ isHidden:                     <p>Specifies if the network profile is hidden from the vRealize Automation user interface.</p> </li> <li>■ definedRanges:                     <p>Specifies the IP range array that is defined for the network profile.</p> </li> <li>■ profileType:                     <p>Specifies the network profile type as one of the following types:</p> <ul style="list-style-type: none"> <li>■ EXTERNAL</li> <li>■ NAT</li> <li>■ PRIVATE</li> </ul> </li> </ul>

Parameter	Description
	<ul style="list-style-type: none"> <li>■ ROUTED</li> <li>■ subnetMask: Specifies the subnet mask.</li> <li>■ gatewayAddress: Specifies the IP address of the network gateway.</li> <li>■ primaryDnsAddress: Specifies the IP address of the primary DNS server. This parameter is only available for external, NAT, and routed network profiles.</li> <li>■ secondaryDnsAddress: Specifies the IP address of a secondary DNS server. This parameter is only available for external, NAT, and routed network profiles.</li> <li>■ dnsSuffix: Specifies the DNS suffix. This parameter is only available for external, NAT, and routed network profiles.</li> <li>■ dnsSearchSuffix: Specifies the DNS search suffix. This parameter is only available for external, NAT, and routed network profiles.</li> <li>■ primaryWinsAddress: Specifies the IP address of the primary Wins server. This parameter is only available for external, NAT, and routed network profiles.</li> <li>■ secondaryWinsAddress: Specifies the IP address of secondary Wins server. This parameter is only available for external, NAT, and routed network profiles.</li> <li>■ dhcpStartIPAddress: Specifies the start IP address of the DHCP server. This parameter is only supported by NAT and private network profiles.</li> <li>■ dhcpEndIPAddress: Specifies the end IP address of the DHCP server. This parameter is only supported by NAT and private network profiles.</li> <li>■ leaseTimeInSeconds: Specifies the lease time for the DHCP server. This parameter is only supported by NAT and private network profiles.</li> <li>■ baseIP: Specifies the base IP address. This parameter is only supported by routed network profiles.</li> </ul>
Metadata	<p>Specifies the following paging-related data:</p> <ul style="list-style-type: none"> <li>■ Size: Specifies the maximum number of rows per page.</li> <li>■ totalElement: Specifies the number of rows returned.</li> </ul>

Parameter	Description
	<ul style="list-style-type: none"> <li>■ totalPages: Specifies the total number of pages of data available.</li> <li>■ Number: Specifies the current page number.</li> <li>■ Offset: Specifies the number of rows skipped.</li> </ul>

### Example: curl Command

The following example command queries the existing network profile ID 68b6a183-fc8a-4592-af23-92f8d410ee32.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/ iaas-proxy-provider/api/network/profiles/68b6a183-fc8a-4592-af23-92f8d410ee32
```

### Example: JSON Output

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

```
{
  "@type": "ExternalNetworkProfile",
  "id": "68b6a183-fc8a-4592-af23-92f8d410ee32",
  "name": "externalTest",
  "description": "",
  "createdDate": "2014-11-11T02:24:07.000Z",
  "lastModifiedDate": "2014-11-11T02:24:07.000Z",
  "isHidden": false,
  "definedRanges": [
    {
      "id": "3a85a049-522f-4b64-8f60-6e7b252ad204",
      "name": "range",
      "description": "",
      "beginIPv4Address": "10.110.183.200",
      "endIPv4Address": "10.110.183.220",
      "state": "UNALLOCATED",
      "createdDate": "2014-11-11T02:23:38.000Z",
      "lastModifiedDate": "2014-11-11T02:23:38.000Z",
      "definedAddresses": [
        {
          "id": "16ab9e24-7c30-4d6d-85fc-04a6fb72919b",
          "name": null,
          "description": null,
          "IPv4Address": "10.110.183.211",
          "IPSortValue": 0,
          "state": "UNALLOCATED",
          "hostName": "",
          "createdDate": "2014-11-11T02:23:38.000Z",
          "lastModifiedDate": "2014-11-11T02:23:38.000Z"
        },
        {
          "id": "f229ea1a-18de-4dae-ae7b-0cec7feaa99b",
          "name": null,

```

```

    "description": null,
    "IPv4Address": "10.110.183.201",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "22ed8c63-f34f-454b-9e05-245b65c8deaa",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.216",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "42093f0e-7814-46cf-b3ee-2544aa79a20d",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.204",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "a194316e-0d92-4f23-ba16-2fa8dbb5c695",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.215",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "7cbe2d40-986d-429a-a91c-30067fff3d94",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.213",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "3ba70e64-84c6-42bf-a20d-3229de74544a",
    "name": null,

```

```

    "description": null,
    "IPv4Address": "10.110.183.220",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "a1777d45-b2d0-4ecd-9d0a-3db499756f0f",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.206",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "8349e9bf-33ff-4382-9d9f-5b05efcf7f9c",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.207",
    "IPSortValue": 0,
    "state": "UNALLOCATED",

    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "bf96c279-4ea7-4b34-8b08-7a13f156d6c9",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.214",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "10e85576-95c6-4df3-bff7-7ba590286e1a",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.210",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "f1962c5e-6b48-4cd5-9f2d-93b706690b6b",

```

```

    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.205",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "cdfc5bcc-1db7-46e7-b8e7-a40d67c92763",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.219",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "b846b73d-950d-4a96-a335-b67d8bf8022b",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.202",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "fc7c445f-5efe-4c1e-941e-c78a2682d3f0",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.208",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "cd39e786-6490-4c95-8cf7-d6e3b6a0ba67",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.200",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "900fcc08-7713-41fe-9f3a-e5c0da3f02b7",

```

```

    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.217",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "4854b7af-13fa-48ed-a69f-e7e428699909",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.212",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "4a1b41fe-f585-43b1-8c62-ee8a14f026cf",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.203",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "451ab99c-c6df-4ecd-8b48-f14d7afa4c48",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.209",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  },
  {
    "id": "db9b41af-4f7b-41f3-b14e-f373df6dd128",
    "name": null,
    "description": null,
    "IPv4Address": "10.110.183.218",
    "IPSortValue": 0,
    "state": "UNALLOCATED",
    "hostName": "",
    "createdDate": "2014-11-11T02:23:38.000Z",
    "lastModifiedDate": "2014-11-11T02:23:38.000Z"
  }
]
},

```

```

{
  "id": "67acdc6f-d0b9-4f47-a74b-ea58ff9ce074",
  "name": "range2",
  "description": "",
  "beginIPv4Address": "10.110.183.180",
  "endIPv4Address": "10.110.183.199",
  "state": "UNALLOCATED",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z",
  "definedAddresses": [
    {
      "id": "37b5c7d1-b82f-4961-a7cc-0117d3610ed7",

      "name": null,
      "description": null,
      "IPv4Address": "10.110.183.182",
      "IPSortValue": 0,
      "state": "UNALLOCATED",
      "hostName": "",
      "createdDate": "2014-11-11T02:24:04.000Z",
      "lastModifiedDate": "2014-11-11T02:24:04.000Z"
    },
    {
      "id": "d6112083-b195-4f94-9b07-0fe490d5caa8",
      "name": null,
      "description": null,
      "IPv4Address": "10.110.183.192",
      "IPSortValue": 0,
      "state": "UNALLOCATED",
      "hostName": "",
      "createdDate": "2014-11-11T02:24:04.000Z",
      "lastModifiedDate": "2014-11-11T02:24:04.000Z"
    },
    {
      "id": "b0032edf-c5c9-4809-9481-2427a1878936",
      "name": null,
      "description": null,
      "IPv4Address": "10.110.183.186",
      "IPSortValue": 0,
      "state": "UNALLOCATED",
      "hostName": "",
      "createdDate": "2014-11-11T02:24:04.000Z",
      "lastModifiedDate": "2014-11-11T02:24:04.000Z"
    },
    {
      "id": "e13b52fb-7375-4397-a054-24e29c843e6e",
      "name": null,
      "description": null,
      "IPv4Address": "10.110.183.185",
      "IPSortValue": 0,
      "state": "UNALLOCATED",
      "hostName": "",
      "createdDate": "2014-11-11T02:24:04.000Z",
      "lastModifiedDate": "2014-11-11T02:24:04.000Z"
    }
  ],
}

```

```

{
  "id": "43d8bae4-7b78-40d2-a9ef-350d28901c24",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.180",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "c270ce8e-a418-4d02-89db-3b84f6816a75",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.181",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "684bbe43-29ce-4113-92c7-43921c943099",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.183",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "f7177c16-de44-4db6-bbee-47e0ef219478",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.188",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "0f6dc355-5c71-4c6a-b607-4916804feecc",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.190",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
}

```

```

{
  "id": "9eb818c0-4174-4dbf-99be-4c9e6e83c90f",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.189",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "7f2a2483-1562-4e88-9ebd-5c61e75f2d79",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.195",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "0e7a8d8d-1bf7-4008-a3ec-634218049722",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.196",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "2d5f3e43-5899-46b6-a0ca-73dfbd57dd5f",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.193",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "67d43b6f-98f7-442a-a00e-761f2b462118",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.198",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},

```

```

{
  "id": "f64f36d8-076b-4d74-87d7-78b156b7764e",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.199",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "4b03c95a-ebb8-4382-ac10-7bb39173b718",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.197",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "636f224c-8ec4-4b58-9c9f-a847dbff4572",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.191",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "5d40b63e-523e-44d1-b0db-b6ecb3fed325",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.184",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},
{
  "id": "add1df2a-14ec-49d9-832e-d55c3a386926",
  "name": null,
  "description": null,
  "IPv4Address": "10.110.183.187",
  "IPSortValue": 0,
  "state": "UNALLOCATED",
  "hostName": "",
  "createdDate": "2014-11-11T02:24:04.000Z",
  "lastModifiedDate": "2014-11-11T02:24:04.000Z"
},

```

```

    {
      "id": "ce67f8a7-c5ca-44d5-bd17-f944f2d3748e",
      "name": null,
      "description": null,
      "IPv4Address": "10.110.183.194",
      "IPSortValue": 0,
      "state": "UNALLOCATED",
      "hostName": "",
      "createdDate": "2014-11-11T02:24:04.000Z",
      "lastModifiedDate": "2014-11-11T02:24:04.000Z"
    }
  ],
  "profileType": "EXTERNAL",
  "subnetMask": "255.255.255.0",
  "gatewayAddress": "10.110.183.253",
  "primaryDnsAddress": "10.110.182.45",
  "secondaryDnsAddress": "",
  "dnsSuffix": "mycompany.com",
  "dnsSearchSuffix": "",
  "primaryWinsAddress": "10.0.0.1",
  "secondaryWinsAddress": ""
}

```

## Update a Network Profile

You can use the vRealize Automation REST API to update an existing network profile.

### Prerequisites

- Log in to vRealize Automation as a **tenant administrator**.
- Verify that the host name and fully qualified domain name of the vRealize Automation instance are available.
- If you are not using the API Explorer, verify that you have a valid HTTP bearer token that matches your login credentials. See [Chapter 2 REST API Authentication](#).
- Obtain the network profile ID to query. See [Get a Network Profile List](#).

### Procedure

- ◆ Update the network profile.

The following example command updates the network profile 263b80f5-d34f-47f2-b0b1-5a3db991c2e9.

```

curl -X PUT --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/iaas-proxy-provider/api/network/profiles/263b80f5-d34f-47f2-b0b1-5a3db991c2e9 -d "
{
  "@type": "ExternalNetworkProfile",
  "id": "263b80f5-d34f-47f2-b0b1-5a3db991c2e9",

```

```

"name": "externalTestEdit",
"description": "",
"createdDate": "2014-11-16T09:11:55.000Z",
"lastModifiedDate": "2014-11-16T09:11:55.000Z",
"isHidden": false,
"definedRanges": [
  {
    "id": "ce266d4c-5fbb-47a9-a391-c77444c20b09",
    "name": "range",
    "description": "",
    "beginIPv4Address": "10.110.183.239",
    "endIPv4Address": "10.110.183.240",
    "state": "UNALLOCATED",
    "createdDate": "2014-11-16T09:11:55.000Z",
    "lastModifiedDate": "2014-11-16T09:11:55.000Z",
    "definedAddresses": [
      ]
    }
  ],
"profileType": "EXTERNAL",
"subnetMask": "255.255.255.0",
"gatewayAddress": "10.110.183.253",
"primaryDnsAddress": "10.110.182.45",
"secondaryDnsAddress": "",
"dnsSuffix": "mycompany.com",
"dnsSearchSuffix": "",
"primaryWinsAddress": "10.0.0.1",
"secondaryWinsAddress": ""
}

```

The output contains an empty HTTP response body and the following status code.

```
204 No Content
```

## Syntax for Updating a Network Profile

You can use the vRealize Automation REST API to update an existing network profile.

### Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	<code>https://\$host/iaas-proxy-provider/api/network/profiles/\$id</code>
Method	Put
<i>\$host</i>	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
<i>\$token</i>	Specifies a valid HTTP bearer token with necessary credentials.

## Output

The command output contains a status statement.

Parameter	Description
status	If the command is not successful, the HTTP status is 204 No Content.

### Example: curl Command

The following example command updates the network profile with an ID of 263b80f5-d34f-47f2-b0b1-5a3db991c2e9.

```
curl -X PUT --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/iaas-proxy-provider/api/network/profiles/263b80f5-d34f-47f2-b0b1-5a3db991c2e9 -d "
{
  "@type": "ExternalNetworkProfile",
  "id": "263b80f5-d34f-47f2-b0b1-5a3db991c2e9",
  "name": "externalTestEdit",
  "description": "",
  "createdDate": "2014-11-16T09:11:55.000Z",
  "lastModifiedDate": "2014-11-16T09:11:55.000Z",
  "isHidden": false,
  "definedRanges": [
    {
      "id": "ce266d4c-5fbb-47a9-a391-c77444c20b09",
      "name": "range",
      "description": "",
      "beginIPv4Address": "10.110.183.239",
      "endIPv4Address": "10.110.183.240",
      "state": "UNALLOCATED",
      "createdDate": "2014-11-16T09:11:55.000Z",
      "lastModifiedDate": "2014-11-16T09:11:55.000Z",
      "definedAddresses": [

    ]
  ]
},
"profileType": "EXTERNAL",
"subnetMask": "255.255.255.0",
"gatewayAddress": "10.110.183.253",
"primaryDnsAddress": "10.110.182.45",
"secondaryDnsAddress": "",
"dnsSuffix": "mycompany.com",
"dnsSearchSuffix": "",
"primaryWinsAddress": "10.0.0.1",
"secondaryWinsAddress": ""
}
"
```

## Example: JSON Output

The output contains an empty HTTP response body and the following status code.

```
204 No Content
```

## Delete a Network Profile

You can use the vRealize Automation REST API network service to delete an existing network profile.

### Prerequisites

- Log in to vRealize Automation as a **tenant administrator**.
- Verify that the host name and fully qualified domain name of the vRealize Automation instance are available.
- If you are not using the API Explorer, verify that you have a valid HTTP bearer token that matches your login credentials. See [Chapter 2 REST API Authentication](#).
- Obtain the network profile ID to delete. See [Get a Network Profile List](#).

### Procedure

- ◆ Delete the network profile.

The following example command deletes the network profile 263b80f5-d34f-47f2-b0b1-5a3db991c2e9.

```
curl -X "Delete" --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/network/profiles/263b80f5-d34f-47f2-b0b1-5a3db991c2e9
```

The output contains an empty HTTP response body and the following status code.

```
204 No Content
```

## Syntax for Deleting a Network Profile

You can use the vRealize Automation REST API to delete an existing network profile.

### Input

Use the supported input parameters to control the command output.

Parameter	Description
URL	<code>https://\$host/iaas-proxy-provider/api/network/profiles/\$id</code>
Method	Delete
<i>\$host</i>	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.

Parameter	Description
<i>\$token</i>	Specifies a valid HTTP bearer token with necessary credentials.
<i>\$id:</i>	Specifies the unique network profile identifier.

## Output

The command output contains a status statement.

Parameter	Description
status	If the command is not successful, the HTTP status is 204 No Content.

## Example: curl Command

The following example command deletes a network profile with an ID of 263b80f5-d34f-47f2-b0b1-5a3db991c2e9.

```
curl -X "Delete" --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/network/profiles/263b80f5-d34f-47f2-b0b1-5a3db991c2e9
```

## Example: JSON Output

The output contains an empty HTTP response body and the following status code.

```
204 No Content
```

# Filtering and Formatting REST API Information

# 4

You can filter and format your vRealize Automation REST API command line and command line output.

You can use filters in your command line to limit JSON output to specific conditions. For example, you can use a filter in a catalog item request to display only catalog items that contain a specific catalog ID. Or you can use the requestID resource call to format the output of a command that displays request status. You can also use an Odata equivalent to format that same information. For details, see [Syntax for Finding a Catalog Item by Name](#).

---

**Note** You must URL encode all filter parameters when using Curl commands.

---

You can also reduce command line errors by using a JSON formatter to validate the JSON data and present it in an easy-to-read format.

You can use command line options or JSON formatting tools, such as Open Data Protocol (OData), to control the JSON results of your vRealize Automation REST API commands.

To simplify your JSON output, consider using command line options or a to filter out unnecessary data and display only the information that you are interested in, such as the following information categories:

- Published catalog items
- Request status
- Provisioned machine identifiers

For information about available pagination, sorting, and filtering options for any given command, see the Tips option on the *REST API Reference* landing page.

# Related Tools and Documentation

# 5

In addition to the provided use case code snippets, you can expand your options for working with the vRealize Automation REST API by using related tools and documentation.

You can use the vRealize CloudClient to simplify your interaction with the vRealize Automation REST API. You can also use third party tools such as Chrome Developer Tools or Firebug to further expand your vRealize Automation REST API programming options.

For a complete list and description of available vRealize Automation REST API service calls and their usage, see *REST API Reference*, also referred to as the enunciate documentation.

This chapter includes the following topics:

- [Using the vRealize Automation REST API Reference](#)
- [Using vRealize CloudClient](#)
- [Using the API Explorer](#)
- [Using Third Party Tools](#)

## Using the vRealize Automation REST API Reference

The *REST API Reference* documentation describes all the available vRealize Automation REST API services calls that you can use to configure and manage vRealize Automation programmatically.

To use the vRealize Automation REST API service reference documentation effectively, you must know which service and resource to use. See [Chapter 1 Overview of the vRealize Automation REST API](#) for a complete list of services and their descriptions. If you need more information, click one of the linked service topics for a detailed description of the service and a list of the tasks that you can perform with it.

While the *Programming Guide* contains frequently used use cases, it does not document all the available service calls and tasks. For a complete description of all the available vRealize Automation REST API services, see the *REST API Reference*, which is a collection of zipped resource files located on the VMware vRealize™ Automation Documentation page at <https://www.vmware.com/support/pubs/vcac-pubs.html>.

The *REST API Reference* is available for viewing and can also be downloaded as a zip file. After you download the .zip file from the vRealize Automation Documentation page, you can unzip it and use the `index.html` file to display the vRealize Automation REST API service topics.

For information about requesting a bearer token, see the Identity option on the *REST API Reference* landing page.

For information about available pagination, sorting, and filtering options for any given command, see the Tips option on the *REST API Reference* landing page.

## Using vRealize CloudClient

vRealize CloudClient is a separate command-line utility that provides a unified interface for working with the vRealize Automation APIs.

For information about vRealize CloudClient, see the VMware Developer site at <https://developercenter.vmware.com/tools>.

## Using the API Explorer

The API Explorer is a command line interface that you can use to explore the vRealize Automation REST API services test methods

The API Explorer is one of several command line interfaces that are available for using the vRealize Automation REST API services. While command line syntax varies, the API Explorer uses the same input and output parameters as described in [Chapter 3 REST API Use Cases](#).

## Install the API Explorer

You can download the REST API Explorer from the vRealize Appliance management console and install it on your machine.

You can run `java -version` in a UNIX shell or Windows Command Prompt window to verify the version.

You can request verbose help for a specific command with `help command_name`.

### Prerequisites

- Verify that your machine has Java SE Development Kit (JDK) 7 installed and running.
- Verify your PATH environment variable includes the location of the correct version of Java.

### Procedure

- 1 Open a Web browser.
- 2 Navigate to the vRealize Appliance management console by using its fully qualified domain name, `https://vra-va-hostname.domain.name:5480`.
- 3 Download the REST API Explorer (vcac-cli) distribution package.
- 4 Unzip the distribution package to a local folder.  
The local folder now contains the bin, repo, and etc folders.
- 5 (UNIX only) Use `chmod` to grant execute privileges to the `vcac-cli` script.

```
%chmod +x bin/vcac-cli
```

- 6 (UNIX only) Determine which version of java the script uses.

```
%sh -x bin/vcac-cli
```

- 7 Update your PATH environment variable to include the location of the bin folder.

**What to do next**

## Choosing Your Mode of Operation

The REST API Explorer has three modes of operation to accommodate new and experienced users.

- [Use the Interactive Mode](#)

The easiest way to use and learn the vRealize Automation API Explorer is with the interactive mode.

- [Use the Command Line Mode](#)

The command line mode lets you incorporate vcac-cli commands in other scripts and programs.

- [Use the Script Mode](#)

The script mode is similar to the command line mode, except that you can invoke multiple commands in sequence.

### Use the Interactive Mode

The easiest way to use and learn the vRealize Automation API Explorer is with the interactive mode.

Every command you type in interactive mode is appended to the `spring-shell.log` file in your current folder. This file retains a history of commands you have issued. It also serves as an example of what a CLI Script File looks like. While using this mode, you can navigate your command history by pressing the up-arrow and down-arrow keys on your keyboard.

The vcac-cli supports tab auto-completion and context-sensitive help on both Windows and UNIX. For example, if you enter `rest g` and then press the Tab key, the command expands to `rest get`. If you press the Tab key again, vcac-cli displays all options for the command. See the following examples.

```
vcac-cli>rest
Rest delete   rest get     rest post    rest put

vcac-cli>rest get --
Rest get --service  rest get --u  rest get --uri

vcac-cli>rest get --f
rest get --f      rest get --format

vcac-cli>rest get --format
rest get --format
optional - format: format (JSON, table row, ...); default: 'JSON'

vcac-cli>rest get --format
JSON    compactTable  raw    solidBorderTable  table
```

## Prerequisites

- [Install the API Explorer](#), if necessary.
- Your PATH environment variable must contain the location of the `vcac-cli` (UNIX) or `vcac_cli.bat` (Windows) script.

## Procedure

- 1 (UNIX) In a shell, enter `vcac-cli` or `sh bin/vcac-cli`.
- 2 (Windows) In a Command Prompt window, enter `vcac-cli.bat`.  
The `vcac-cli` banner appears.
- 3 (Optional) Enter the `help` command for a list of supported commands.

```
vcac-cli>help
* ! - Allows execution of operating system (OS) commands.
* */ - End of block comment
* /* - Start of block comment
* // - Inline comment markers (start of line only)
* ; - Inline comment markers (start of line only)
* date - Displays the local date and time
* exit - Exits the shell
* help - list all commands usage
* login - Open a secure session to a VCAC server
* output - Set the command output parameters
* quit - Exits the shell
* rest delete - Invoke a DELETE http request
* rest get - Invoke a GET http request
* rest post - Invoke a POST http request
* rest put - Invoke a PUT http request
* script - Parses the specified resource file and executes its commands
* services - Displays a list of available services
* system properties - Shows the shell's properties
vcac-cli>
```

- 4 (Optional) Enter `help command_name` for verbose help on the command.

```
vcac-cli>help rest get
Keyword:          rest get
Description:      Invoke a GET http request
Keyword:          s
Keyword:          sessionid
Help:             Session identifier
Mandatory:       false
Default if specified: '__NULL__'
Default if unspecified: '__NULL__'

Keyword:          ** default **
Keyword:          service
Help:             Name of the Service hosting the URI. e.g. catalog-service
Mandatory:       true
Default if specified: '__NULL__'
```

```

Default if unspecified: '__NULL__'

Keyword:          u
Keyword:          uri
Help:             URI of resource. e.g. consumer/catalogItems
Mandatory:       true
Default if specified: '__NULL__'
Default if unspecified: '__NULL__'

Keyword:          h
Keyword:          headers
Help:             Show request and response headers
Mandatory:       false
Default if specified: 'true'
Default if unspecified: 'false'

* rest get – Invoke a GET http request

```

## Use the Command Line Mode

The command line mode lets you incorporate vcac-cli commands in other scripts and programs.

You can invoke any supported vcac-cli command and option, including help.

### Prerequisites

- [Install the API Explorer](#), if necessary.
- Your PATH environment variable must contain the location of the vcac-cli (UNIX) or vcac\_cli.bat (Windows) script.

### Procedure

- 1 Enter the command string on the vcac-cli command line.

```
$ vcac-cli command_string
```

The output is displayed on the stderr stream.

- 2 (Optional) You can redirect the output to a file in Linux or Windows.

```
$ vcac-cli system properties 2> output.txt
```

### Example: Run vcac-cli commands in the command line

```

$ vcac-cli system properties
app.home = /Users/myusername/vcac/cli/shell/target/appassembler
app.name = vcac-cli
app.pid = 12444
app.repo = /Users/myusername/vcac/cli/shell/target/appassembler/repo
. . .

```

## Use the Script Mode

The script mode is similar to the command line mode, except that you can invoke multiple commands in sequence.

In script mode, you must first create a text file which contains a series of `vcac-cli` interactive-mode commands. `Vcac-cli` executes the commands in sequence.

### Prerequisites

- [Install the API Explorer](#), if necessary.
- Your `PATH` environment variable must contain the location of the `vcac-cli` (UNIX) or `vcac_cli.bat` (Windows) script.

### Procedure

- 1 Create a text file containing a series of `vcac-cli` interactive-mode commands.

For example, enter the following commands in a file named `script.txt`.

```
login --url https://vcac152-009-067.eng.vmware.com --user tanteater@example.com --password
password --tenant MYCOMPANY
rest get --service workitem-service --u workitems
```

- 2 Run the script and redirect the output.

```
$ vcac-cli script script.txt 2> script.out
```

## Log in with the API Explorer

You can log in securely to a vRealize Automation server with the API Explorer.

When running a script in UNIX, you can prevent the plaintext password from appearing in the `spring-shell.log` file by storing the password in a file and redirecting standard input from that file.

This procedure uses interactive mode. See [Use the Interactive Mode](#) for more information.

### Prerequisites

- [Install the API Explorer](#), if necessary.
- Your `PATH` environment variable must contain the location of the `vcac-cli` (UNIX) or `vcac_cli.bat` (Windows) script.

## Procedure

- 1 Enter the login command string in a Command Prompt window.

Option	Description
<i>vcac_url</i>	vRealize Automation URL
<i>username@fqdn</i>	vRealize Automation username with fully qualified domain name
<i>tname</i>	Tenant name

```
login --url vcac_url --user username@fqdn --tenant tname
```

- 2 Enter the password, when prompted.
- 3 If running in script mode, enter the password by redirecting standard input.

A successful login returns the `vcac-cli>` prompt without an error message.

If you omit the `--tenant` option, the command logs you in to the default tenant.

An error returns an explicit message. The following are possible error messages.

Error Message	Reason
Command failed java.lang.RuntimeException: java.net.UnknownHostException: vcac152-009-067a.eng.vmware.com	The hostname specified in the <code>--url</code> parameter is not a known host name. Check your spelling.
Command failed com.vmware.vcac.authentication. sts.AuthenticationFailedException: n: com.vmware.vim.sso.client.exception.AuthenticationFailedException: Provided credentials are not valid.	The specified <code>-user</code> or <code>-password</code> value(s) are incorrect. Check spelling, check to make sure you have specified the correct tenant.
Command failed org.springframework.web.client.HttpClientErrorException: 400 Bad Request	The specified <code>-tenant</code> value is unknown. Check your spelling.

## Example: Logging in

Log in to API Explorer.

```
Welcome to vCAC CLI. For assistance press or type "hint" then hit ENTER.
vcac-cli>login --url https://vcac110-062-143.eng.vmware.com --user administrator@vsphere.local
Please enter your password: *****
```

The password is masked for security purposes and does not appear in `spring-shell.log`.

```
vcac-cli>login --url https://vcac148-084-173.eng.vmware.com
--user administrator@vsphere.local < /tmp/password.txt
```

## Suppress Log Files

The API Explorer updates the `spring-shell` history file `spring-shell.log` and the message file `vcac-cli.log` in the `vcac-cli_install/bin` folder by default. You can suppress output to both of these files.

### Prerequisites

- [Install the API Explorer](#), if necessary.
- Your `PATH` environment variable must contain the location of the `vcac-cli` (UNIX) or `vcac_cli.bat` (Windows) script.

### Procedure

- ◆ Run the following command.
 

```
$ vcac-cli --profiles nologging
```

## Creating an API Explorer Command Using Supplied curl Examples

The command line syntax provided in the supplied use cases is for `curl`. You can use the supplied `curl` command line syntax to create equivalent API Explorer command line syntax.

This document contains sample `curl` command statements to illustrate how to use various vRealize Automation REST API service calls. The API Explorer is one of several command line interfaces that are also available for using the vRealize Automation REST API services. While command line syntax varies, the API Explorer uses the same input and output parameters as described in [Chapter 3 REST API Use Cases](#).

The following example illustrates a sample `curl` command and its equivalent API Explorer command. In this example, the command is used to display machine details for a provisioned machine, where *resourceID* is the ID of the provisioned machine .

---

### Note Sample curl Command

---

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/resources/resourceID
```

---

### Note Equivalent API Explorer Command

---

```
rest get --service catalog-service --u /consumer/resources/resourceID
```

## Using Third Party Tools

You can use third party tools such as Chrome Developer Tools or Firebug to reveal the data that you can then use to construct a vRealize Automation REST API service call.

You can adapt these steps to perform a different action, such as adding a tenant.

### Prerequisites

This example shows how you might use the Chrome Developer Tools to perform a catalog service query. This option is not available for all vRealize Automation functions.

- Open a Chrome browser session and log in to the vRealize Automation console as a business group user with access to catalog items.
- Open a command prompt or a shell and log in to the vRealize Automation command line interface.

### Procedure

- 1 Click the **Catalog** tab in the vRealize Automation console.
- 2 Click the catalog Item you want to request.
- 3 Enter the request information for the catalog item, but do not submit your changes.
- 4 Press the Ctrl-Shift-I keys simultaneously to open the Chrome Developer Tools. For example:
  - a Click the **Network** tab.
  - b Click **Record Network Log**.
  - c Click **Submit** in the console.
- 5 Verify that the network logs in the Chrome Developer Tools contain the relevant data. For example:
  - a Locate a `makeRequest POST` in the network recordings.
  - b Click **makeRequest POST** to view its details.
  - c Scroll to view the `Form Data url` and `postData` sections.

The `url` section shows the vRealize Automation service and URI for you to use. This example uses the `catalog-service`, under the `uri consumer/requests`.

The `postData` section shows the JSON data passed in the HTTP POST call. You can insert the JSON data in a JSON file, for example `request.json`, and submit it with the POST method in the command line.

---

**Note** Click **Clear** to purge the network logs if they become too large to navigate easily.

---

- 6 Enter the following call in the vRealize Automation shell, where the `request.json` text file contains the JSON data from the `postData` section.

```
rest post --headers --service catalog-service --uri consumer/requests --data request.json
```

This call makes the same request that was submitted by using the console.