Programming Guide

vRealize Automation 7.0

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Contents

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

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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-001841-01	■ Removed the section titled Logging in Programmatically. ■ Removed the section titled Using the API Explorer.
EN-001841-00	Initial 6.2 release.

Overview of the vRealize Automation REST API

<div style="text-align: right">2</div>

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 2-1. vRealize Automation REST API Services

Service	Description
Advanced Designer Service	Manage XaaS elements such as forms, endpoints, XaaS blueprints, tenants, vRealize Orchestrator imports, workflows, and work items through the Advanced Designer Service. The Advanced Designer Service service relates to XaaS in the vRealize Automation console user interface.
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.
Composition Service	Access and manage blueprints.
Content Management	Access and manage the content controller and package controller for export and import processes. This includes export and import for blueprints and software.
Event Broker Service	Provide a central location and a consistent way of recording events and querying for events.
Fabric Service	Access and manage key pairs and network profiles.
Identity Service	Manage tenants, business groups, SSO and custom groups, users, and identity stores.
Licensing Service	Retrieve permissions and post serial keys.

Table 2‑**1. vRealize Automation REST API Services (Continued)**

Service	Description
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.
Network Service	Access and manage application network and security settings for creating and configuring NAT and routed networks; creating load balancers; and adding and configuring security groups, security tags and security policies for application components.
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.
Portal Service	Retrieve, create, update, and delete a portal resource.
Properties Service	Manage custom properties, property groups, and property definitions.
Reservation Service	Retrieve, create, update, and delete a reservation or reservation policy.
Software Services	Manage software component types, software resource requests, and nodes (machines).
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	/tokens	Authenticate the user with the identity service /tokens and generate a new token.
HEAD	/tokens/*tokenID*	Validate the token *tokenID*.
DELETE	/tokens/*tokenID*	Delete the token *tokenID*.

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":"MTM5MTI1OTg5MDQwMzozNDQyZWMxZmQ5ZDliODUzMGFiMjp0ZW5hbnQ6cWV1c2VybmFtZTpmcmml0ekBjb2tlLmNvb
 TplMDViNGU0NGM2ZWU0MWQ1OWEwMTNmZGExNTQwZjNlNGM3YTBlM2I5MDhlYWZjYjY1ZjhiODI2OTg4ODU3M2UwOTUwOWRk
 MjlmYWRjNWQ4NjJkOTk1YmE3MTg1MWZhOTc2MjEyYjYxZmU3YTVhZDcwNzM3ZTg3ZDNjNDk2ZDlmNA==",
 "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
host	*host name.domain name* of the vRealize Automation server, for example, mycompany.mktg.mydomain.com.
usrname	Specifies the tenant administrator user name.
passwd	Specifies the tenant administrator password.
tenantURLtoken	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
expires	Contains the ISO 8601 timestamp indicating when the token expires.
id	Contains the HTTP bearer token to use in Authorization header in subsequent requests.
tenant	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":"usrname",
"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/MTM5MTI1OTg5MDQwMzozNDQyZWMxZmQ5ZDliODUzMGFiMjp0ZW5hbnQ6cWV1c2VybmFtZTTjYjY1ZjhiODI2OTg4O
DU3M2UwOTUwOWRkMjlmYWRjNWNQ4NjJkOTk1YmE3MTg1MWZhOTc2MjEyYjYxZmU3YTVhZDcwNzM3Tg3ZDNjNDk2ZZDlmNA==
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/MTM5MTI1OTg5MDQwMzozNDQyZWMxZmQ5ZDliODUzMGFiMjp0ZW5hbnQ6cWV1c2VybmFtZTTjYjY1ZjhiODI2OTg4O
DU3M2UwOTUwOWRkMjlmYWRjNWNQ4NjJkOTk1YmE3MTg1MWZhOTc2MjEyYjYxZmU3YTVhZDcwNzM3Tg3ZDNjNDk2ZZDlmNA==
Accept: application/json
```

The system returns one of the following status codes.

Status Code	Description
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

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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
- Request a Machine
- Approve a Machine Request
- List Provisioned Resources
- Manage Provisioned Deployments
- Working with Reservations
- Working with Reservation Policies
- Working with Key Pairs
- Working with Network Profiles
- Import and Export Content

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 thevRealize 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 3 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
Example 1 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 Specify the 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}'```

3 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
```

4 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
```

5 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
```

6 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
$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.

Parameter	Description

Links	Specifies an array of link objects, each of which contains the following parts:
	
	■ rel
	
	    Specifies the name of the link.
	
	    ■ Self refers to the object that was returned or requested.
	
	    ■ First, Previous, Next, and Last refer to corresponding pages of pageable lists.
	
	    ■ Specifies the application or service that determines the other names.
	
	■ 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. Each tenant object can contain the following information:
	
	■ Id:
	
	    Specifies the unique tenant identifier.
	
	■ urlName:
	
	    Specifies the name of the tenant as it appears in URLs.
	
	■ Name:
	
	    Specifies the name of the tenant for display purposes.
	
	■ description:
	
	    Specifies the long description of the tenant.
	
	■ contactEmail:
	
	    Specifies the primary contact email address.
	
	■ Password:
	
	    Unused
	
	■ defaultTenant:
	
	    Is set to True if the corresponding tenant is the default tenant (vsphere.local).

Metadata	Specifies the following paging-related data: ■ Size: Specifies the maximum number of rows per page. ■ totalElement: 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 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 5 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	https://*$host*/identity/api/tenants/*$tenantId* --data @ *$inputFileName*.json
$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.
$tenantURL	Specifies the URL of the tenant.
$enantName	Specifies the name of the tenant.
$description	Specifies a description of the tenant.
$emailAddress	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	Specifies an array of link objects, each of which contains the following parts:
	
	■ rel
	
	Specifies the name of the link.
	
	   ■ Self refers to the object that was returned or requested.
	   ■ First, Previous, Next, and Last refer to corresponding pages of pageable lists.
	   ■ Specifies the application or service that determines the other names.
	
	■ 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. Each tenant object can contain the following information: ■ Id: Specifies the unique tenant identifier. ■ urlName: Specifies the name of the tenant as it appears in URLs. ■ Name: Specifies the name of the tenant for display purposes. ■ description: Specifies the long description of the tenant. ■ contactEmail: Specifies the primary contact email address. ■ Password: Unused ■ defaultTenant: Is set to True if the corresponding tenant is the default tenant (vsphere.local).
Metadata	Specifies the following paging-related data: ■ Size: Specifies the maximum number of rows per page. ■ totalElement: 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

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	https://$host/identity/api/tenants/$tenantId/directories
$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.
$tenantId	Specifies the ID of the tenant.

Output

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

Parameter	Description

Links	Specifies an array of link objects, each of which contains the following parts:
	
	■ rel
	
	   Specifies the name of the link.
	
	   ■ `Self` refers to the object that was returned or requested.
	
	   ■ `First`, `Previous`, `Next`, and `Last` refer to corresponding pages of pageable lists.
	
	   ■ Specifies the application or service that determines the other names.
	
	■ 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. Each tenant object can contain the following information:
	
	■ Id:
	
	   Specifies the unique tenant identifier.
	
	■ urlName:
	
	   Specifies the name of the tenant as it appears in URLs.
	
	■ Name:
	
	   Specifies the name of the tenant for display purposes.
	
	■ description:
	
	   Specifies the long description of the tenant.
	
	■ contactEmail:
	
	   Specifies the primary contact email address.
	
	■ Password:
	
	   Unused
	
	■ defaultTenant:
	
	   Is set to True if the corresponding tenant is the default tenant (vsphere.local).

Metadata	Specifies the following paging-related data: ■ Size: Specifies the maximum number of rows per page. ■ totalElement: 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 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	https://*$host*/identity/api/tenants/*$tenantId*/directories/*$domainName* --data @*$inputFileName*.json
$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.
$tenantId	Specifies the ID of the tenant.
userId	Specifies the ID of the user in the form name@domain.
$domainAlias	Specifies the domain alias.
$domainName	Specifies the domain of the identity store.
$grpBaseSearchDn	Specifies the group search base Distinguished Name.
$identityStoreName	Specifies a description of the new tenant.
$password	Specifies the password.
$identityStoreType	Specifies the identity store type for the tenant. The following values are supported: ■ LDAP ■ AD ■ NATIVE_AD
$identityServerUrl	Specifies the URL of the identity server.
$usrBaseSearchDn	Specifies the user search base Distinguished Name.
$usrNameDn	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	Specifies an array of link objects, each of which contains the following parts:
	■ rel
	Specifies the name of the link.
	■ `Self` refers to the object that was returned or requested.
	■ `First`, `Previous`, `Next`, and `Last` refer to corresponding pages of pageable lists.
	■ Specifies the application or service that determines the other names.
	■ 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. Each tenant object can contain the following information:
	■ Id:
	Specifies the unique tenant identifier.
	■ urlName:
	Specifies the name of the tenant as it appears in URLs.
	■ Name:
	Specifies the name of the tenant for display purposes.
	■ description:
	Specifies the long description of the tenant.
	■ contactEmail:
	Specifies the primary contact email address.
	■ Password:
	Unused
	■ defaultTenant:
	Is set to True if the corresponding tenant is the default tenant (vsphere.local).
Metadata	Specifies the following paging-related data:
	■ Size: Specifies the maximum number of rows per page.
	■ totalElement: 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 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-maccentraleurope, 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-hkscs, x-ms950-hkscs-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	https://*$host*/identity/api/tenants/*$tenantId*/principals/*$userId*
$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.
$tenantId	Specifies the ID of the tenant.
$userId	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	Specifies an array of link objects, each of which contains the following parts: ■ rel Specifies the name of the link. ■ Self refers to the object that was returned or requested. ■ First, Previous, Next, and Last refer to corresponding pages of pageable lists. ■ Specifies the application or service that determines the other names. ■ href Specifies the URL that produces the result.
@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	https://*$host*/identity/api/authorization/tenants/*$tenantId*/principals/*$principalId*/roles/*roleId*
$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.
$tenantId	Specifies the ID of the tenant.
$principalId	Specifies the ID of the user in name@domain format.
$roleId	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
```

Request a Machine

You can use Rest API catalog service commands to complete a variety of tasks related to requesting a machine. This procedure provides sample command line syntax for machine request tasks. Supporting information regarding available input and output parameters, command-line entry samples, and sample JSON output samples is available in the subsequent topics that explain syntax for the various tasks.

The REST API catalog service includes Hypermedia as the Engine of Application State (HATEOAS) links that function as templates to assist users in completing common tasks that are supported by the API. They typical scenario for using a template is for the user to submit a template request for a given context.

For example, `catalog-service/api/consumer/entitledCatalogItems/ dc808d12-3786-4f7c-b5a1-d5f997c8ad66/requests/template`. Users can employ the returned template, either as is or modified, to create an appropriate request. The user then POSTs, or PUTs, the request to the target API. For example, `catalog-service/api/consumer/entitledCatalogItems/dc808d12-3786-4f7c-b5a1-d5f997c8ad66/requests`.

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 3 REST API Authentication.

Procedure

1 List all shared catalog items in the catalog.

   You can browse the API and use HATEOAS links to navigate to additional API calls that are relevant to the current context.

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

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

   Alternatively, you can also search for a catalog item by name by substituting `$catalogItemName` with `$catalogItemId`.

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

Note that the vRealize Automation API supports OData filtering.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"  https://$host/catalog-
service/api/consumer/entitledCatalogItemViews?$filter=name+eq+%27$catalogItemName%27
```

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

3   Get a template request for a catalog item.

This request uses a HATEOAS link for a template request for this catalog item.

```
curl --insecure -H "Content-Type: application/json" -H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/entitledCatalogItems/dc808d12-3786-4f7c-b5a1-
d5f997c8ad66/requests/template
Accept: application/json
```

4   Review and edit the template request.

The template request returned in preceding step is specific to the catalog item that corresponds to your template request. The fields and default values are populated based on the configuration of the underlying blueprint.

Review the contents of the template and edit the values if you want to change them from the default prior to submitting the request. For example, you can specify a value for the description field or change the values for the machine resources if the blueprint allows for a range.

5   Submit the request.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/entitledCatalogItems/dc808d12-3786-4f7c-b5a1-
d5f997c8ad66/requests --verbose --data
@C:/Temp/requestMachine.json
{
     $contentsOfTemplateFromPrecedingSections
}
```

6   (Optional) View the details of your request.

You can perform a GET on the URI in the Location header to retrieve the updated request details.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token" https://$host/catalog-service/api/consumer/requests/7aaf9baf-
aa4e-47c4-997b-edd7c7983a5b
Accept: application/json
```

The status information is particularly noteworthy in the request details. The phase field corresponds to the status that is displayed in the Requests tab in the user interface.

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 for the current user. 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.
page number	The page number. Default is 1.
limit	The number of entries per page. The default is 20.
$orderby	Multiple comma-separated properties sorted in ascending or descending order. Valid OData properties include the following: ■ name - filter based on catalog item name. ■ status - filter based on catalog item status. ■ service/id - filter based on catalog item service id. ■ service/name - filter based on catalog item service name. ■ organization/subTenant/id - filter based on catalog item business group ID, which you can find in the catalogItem payload under `organization > subtenantRef` ■ organization/subTenant/name - filter based on catalog item business group name, which you can find in catalogItem payload under `organization >subtenantLabel` ■ outputResourceType/id - filter based on catalog item output resource type ID, for example : Infrastructure.Virtual ■ outputResourceType/name - Filter based on catalog item output resource type name, for example: "VirtualMavhine". ■ catalogItemType/id - filter based on catalog item type ID, for example: "Infrastructure.Virtual". ■ catalogItemType/name - filter based on catalog item type name, for example: "VirtualMachine". ■ icon/id - filter based on catalog item icon ID.
$top	Sets the number of returned entries from the top of the response
$skip	Sets the number of entries to skip.

Parameter	Description
$filter	Boolean expression for whether a particular entry should be included in the response. Valid OData properties include the following: ■ name - filter based on catalog item name. ■ status - filter based on catalog item status. ■ service/id - filter based on catalog item service id. ■ service/name - filter based on catalog item service name. ■ organization/subTenant/id - filter based on catalog item business group ID, which you can find in the catalogItem payload under `organization > subtenantRef` ■ organization/subTenant/name - filter based on catalog item business group name, which you can find in catalogItem payload under `organization >subtenantLabel` ■ outputResourceType/id - filter based on catalog item output resource type ID, for example : Infrastructure.Virtual ■ outputResourceType/name - Filter based on catalog item output resource type name, for example: "VirtualMavhine". ■ catalogItemType/id - filter based on catalog item type ID, for example: "Infrastructure.Virtual". ■ catalogItemType/name - filter based on catalog item type name, for example: "VirtualMachine". ■ icon/id - filter based on catalog item icon ID.
serviceId	(Optional) Query parameter to filter the returned catalog items by one specific service.
onBehalfOf	(Optional) Query parameter that provides the value of the user ID when making a request on behalf of another user.

Output

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

Property	Description
outputResourceTypeRef	Specifies the type of the resource that results from requesting the catalog item.
catalogItemId	Specifies the catalog item identifier.
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.
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.
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.

Example Curl Command

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

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

Example: JSON Output

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

```
{
    "links": [],
    "content": [
        {
            "@type": "ConsumerEntitledCatalogItemView",
            "links": [
                {
                    "@type": "link",
                    "rel": "GET: Request Template",
                    "href": "https://$host/catalog-
service/api/consumer/entitledCatalogItems/7c8275d6-1bd6-452a-97c4-d6c053e4baa4/requests/template"
                },
                {
                    "@type": "link",
                    "rel": "POST: Submit Request",
                    "href": "https://$host/catalog-
service/api/consumer/entitledCatalogItems/7c8275d6-1bd6-452a-97c4-d6c053e4baa4/requests"
                }
            ],
            "entitledOrganizations": [
                {
                    "tenantRef": "mycompany",
                    "tenantLabel": "mycompany",
                    "subtenantRef": "c0683388-6db2-4cb5-9033-b24d15ad3766",
                    "subtenantLabel": "Demo Group"
                }
            ],
            "catalogItemId": "7c8275d6-1bd6-452a-97c4-d6c053e4baa4",
            "name": "Linux",
            "description": "Linux blueprint for API demo",
            "isNoteworthy": false,
            "dateCreated": "2015-07-29T03:54:28.141Z",
            "lastUpdatedDate": "2015-07-29T12:46:56.405Z",
            "iconId": "cafe_default_icon_genericCatalogItem",
            "catalogItemTypeRef": {
                "id": "com.vmware.csp.component.cafe.composition.blueprint",
                "label": "Composite Blueprint"
            },
            "serviceRef": {
                "id": "057d4095-95f1-47da-b14b-641ac9010c97",
                "label": "Infrastructure Services"
```

```
            },
            "outputResourceTypeRef": {
                "id": "composition.resource.type.deployment",
                "label": "Deployment"
            }
        }
    ],
    "metadata": {
        "size": 20,
        "totalElements": 1,
        "totalPages": 1,
        "number": 1,
        "offset": 0
    }
 }
```

Syntax for Getting Information for a Catalog Item

You can use the REST API catalog service to get information about a specific catalog item if desired.

REST API Catalog Service

The REST API supports OData filtering. For more information about supported OData filters, refer to the vRealize Automation API Reference, particularly the REST API Tips page located at `https://$host/component-registry/services/docs/odata.html`.

For specific information about catalog service filters, see the "Important Notes About catalog-service and OData Queries" topic located at `https://$host/catalog-service/api/docs/index.html`.

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.
page number	The page number. Default is 1.
limit	The number of entries per page. The default is 20.

Parameter	Description
$orderby	Multiple comma-separated properties sorted in ascending or descending order. Valid OData properties include the following: ■ name - filter based on catalog item name. ■ status - filter based on catalog item status. ■ service/id - filter based on catalog item service id. ■ service/name - filter based on catalog item service name. ■ organization/subTenant/id - filter based on catalog item business group ID, which you can find in the catalogItem payload under `organization > subtenantRef` ■ organization/subTenant/name - filter based on catalog item business group name, which you can find in catalogItem payload under `organization >subtenantLabel` ■ outputResourceType/id - filter based on catalog item output resource type ID, for example : Infrastructure.Virtual ■ outputResourceType/name - Filter based on catalog item output resource type name, for example: "VirtualMavhine". ■ catalogItemType/id - filter based on catalog item type ID, for example: "Infrastructure.Virtual". ■ catalogItemType/name - filter based on catalog item type name, for example: "VirtualMachine". ■ icon/id - filter based on catalog item icon ID.
$top	Sets the number of returned entries from the top of the response
$skip	Sets the number of entries to skip.
$filter	Boolean expression for whether a particular entry should be included in the response. Valid OData properties include the following: ■ name - filter based on catalog item name. ■ status - filter based on catalog item status. ■ service/id - filter based on catalog item service id. ■ service/name - filter based on catalog item service name. ■ organization/subTenant/id - filter based on catalog item business group ID, which you can find in the catalogItem payload under `organization > subtenantRef` ■ organization/subTenant/name - filter based on catalog item business group name, which you can find in catalogItem payload under `organization >subtenantLabel` ■ outputResourceType/id - filter based on catalog item output resource type ID, for example : Infrastructure.Virtual ■ outputResourceType/name - Filter based on catalog item output resource type name, for example: "VirtualMavhine". ■ catalogItemType/id - filter based on catalog item type ID, for example: "Infrastructure.Virtual". ■ catalogItemType/name - filter based on catalog item type name, for example: "VirtualMachine". ■ icon/id - filter based on catalog item icon ID.
serviceId	(Optional) Query parameter to filter the returned catalog items by one specific service.
onBehalfOf	(Optional) Query parameter that provides the value of the user ID when making a request on behalf of another user.

Output

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

Property	Description
outputResourceTypeRef	Specifies the type of the resource that results from requesting the catalog item.
catalogItemId	Specifies the catalog item identifier.
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.
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.
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	The list of organizations in which the current user can consume the catalog item.

Example Curl Command

The following example command retrieves information about all the available shared catalog items of the type `ConsumerEntitledCatalogItemView`.

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

Example: JSON Output

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

```
{
    "links": [],
    "content": [
        {
            "@type": "ConsumerEntitledCatalogItemView",
            "links": [
                {
                    "@type": "link",
                    "rel": "GET: Request Template",
                    "href": "https://$host/catalog-
service/api/consumer/entitledCatalogItems/7c8275d6-1bd6-452a-97c4-d6c053e4baa4/requests/template"
                },
                {
                    "@type": "link",
                    "rel": "POST: Submit Request",
                    "href": "https://$host/catalog-
service/api/consumer/entitledCatalogItems/7c8275d6-1bd6-452a-97c4-d6c053e4baa4/requests"
```

```
                }
            ],
            "entitledOrganizations": [
                {
                    "tenantRef": "mycompany",
                    "tenantLabel": "mycompany",
                    "subtenantRef": "c0683388-6db2-4cb5-9033-b24d15ad3766",
                    "subtenantLabel": "Demo Group"
                }
            ],
            "catalogItemId": "7c8275d6-1bd6-452a-97c4-d6c053e4baa4",
            "name": "Linux",
            "description": "Linux blueprint for API demo",
            "isNoteworthy": false,
            "dateCreated": "2015-07-29T03:54:28.141Z",
            "lastUpdatedDate": "2015-07-29T12:46:56.405Z",
            "iconId": "cafe_default_icon_genericCatalogItem",
            "catalogItemTypeRef": {
                "id": "com.vmware.csp.component.cafe.composition.blueprint",
                "label": "Composite Blueprint"
            },
            "serviceRef": {
                "id": "057d4095-95f1-47da-b14b-641ac9010c97",
                "label": "Infrastructure Services"
            },
            "outputResourceTypeRef": {
                "id": "composition.resource.type.deployment",
                "label": "Deployment"
            }
        }
    ],
    "metadata": {
        "size": 20,
        "totalElements": 1,
        "totalPages": 1,
        "number": 1,
        "offset": 0
    }
}
```

Syntax for Getting a Template Request for a Catalog Item

You can use the REST API catalog service to request catalog items. VMware supplies a number of templates to help you create different types of machine requests.

Overview

In the entitledCatalogItemViews response, there is a link field that contains a value similar to the
following:

```
    {
            "@type":"link",
            "href":"https://$host/catalog-service/api/consumer/entitledCatalogItems/dc808d12-3786-4f7c-
    b5a1-d5f997c8ad66/requests/template",
            "rel":"GET: Request Template"
        }
```

This URL is a HATEOAS link for a template request for this catalog item. The `rel` field provides a
description of the link (request template) and indicates the HTTP method to use with the URI in the `href`
field (GET). By using these HATEOAS links, you can make follow-on API calls without having to consult
the API documentation for the URI syntax or construct the links programmatically.

Review and Edit the Template Request

The returned template request is specific to the applicable catalog item. The fields and default values are
populated based on the configuration of the underlying blueprint.

You can review the contents of the template and optionally edit the values if you want to change them
from the default prior to submitting the request. For example, you can specify a value for the description
field or change the values for the machine resources if the blueprint allows for a range.

Input

Use the supported input parameters to control the command output.

Parameter	Description
id	The UUID of the catalog item.

Output

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

Property	Description
entitledOrganizations	The list of organizations in which the current user can consume the catalog item.
catalogItemId	Specifies the catalog item identifier.

Example Curl Command

The following example command retrieves the catalog item with an ID of `dc808d12-3786-4f7c-b5a1-d5f997c8ad66`.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"  https://$host/catalog-
service/api/consumer/entitledCatalogItems/dc808d12-3786-4f7c-b5a1-d5f997c8ad66/requests/template
```

Example: JSON Output

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

```
{
    "type": "com.vmware.vcac.catalog.domain.request.CatalogItemProvisioningRequest",
    "catalogItemId": "7c8275d6-1bd6-452a-97c4-d6c053e4baa4",
    "requestedFor": "csummers@example.com",
    "businessGroupId": "c0683388-6db2-4cb5-9033-b24d15ad3766",
    "description": null,
    "reasons": null,
    "data": {
        "Existing_Network_1": {
            "componentTypeId": "com.vmware.csp.component.cafe.composition",
            "componentId": null,
            "classId": "Blueprint.Component.Declaration",
            "typeFilter": "LinuxDemo*Existing_Network_1",
            "data": {
                "_cluster": 1,
                "_hasChildren": false,
                "description": null,
                "name": "Existing Network",
                "networkname": "Existing Network",
                "subnetmask": "255.255.255.0"
            }
        },
        "vSphere-Linux": {
            "componentTypeId": "com.vmware.csp.component.cafe.composition",
            "componentId": null,
            "classId": "Blueprint.Component.Declaration",
            "typeFilter": "LinuxDemo*vSphere-Linux",
            "data": {
                "Cafe.Shim.VirtualMachine.MaxCost": 0,
                "Cafe.Shim.VirtualMachine.MinCost": 0,
                "_cluster": 1,
                "_hasChildren": false,
                "action": "FullClone",
                "allow_storage_policies": false,
                "archive_days": 0,
                "blueprint_type": "1",
                "cpu": 1,
                "custom_properties": [],
                "daily_cost": 0,
                "datacenter_location": null,
```

```
                    "description": null,
                    "disks": [
                        {
                            "componentTypeId": "com.vmware.csp.iaas.blueprint.service",
                            "componentId": null,
                            "classId": "Infrastructure.Compute.Machine.MachineDisk",
                            "typeFilter": null,
                            "data": {
                                "capacity": 6,
                                "id": 0,
                                "initial_location": "",
                                "is_clone": false,
                                "label": "",
                                "storage_reservation_policy": "",
                                "userCreated": true,
                                "volumeId": 0
                            }
                        }
                    ],
                    "display_location": false,
                    "guest_customization_specification": null,
                    "lease_days": 0,
                    "machine_actions": [
                        "DESTROY",
                        "POWER_ON",
                        "CONNECT_RDP_SSH",
                        "REPROVISION",
                        "POWER_CYCLE",
                        "EXPIRE",
                        "SUSPEND",
                        "CONNECT_REMOTE_CONSOLE",
                        "CONNECT_USING_VDI"
                    ],
                    "machine_prefix": {
                        "componentId": null,
                        "classId": "Infrastructure.Compute.MachinePrefix",
                        "id": "Use group default"
                    },
                    "max_network_adapters": 0,
                    "max_per_user": 0,
                    "max_volumes": 60,
                    "memory": 4096,
                    "nics": [
                        {
                            "componentTypeId": "com.vmware.csp.iaas.blueprint.service",
                            "componentId": null,
                            "classId": "Infrastructure.Compute.Machine.Nic",
                            "typeFilter": null,
                            "data": {
                                "address": "",
                                "assignment_type": "DHCP",
                                "custom_properties": null,
                                "id": 0,
                                "load_balancing": "",
                                "network_profile": "Existing Network"
```

```
                }
            }
        ],
        "number_of_instances": 1,
        "os_arch": "x86_64",
        "os_distribution": null,
        "os_type": "Linux",
        "os_version": null,
        "platform_name": "vsphere",
        "platform_type": "virtual",
        "property_groups": [
            null
        ],
        "provisioning_workflow": {
            "componentId": null,
            "classId": "Infrastructure.Compute.ProvisioningWorkflow",
            "id": "CloneWorkflow"
        },
        "reservation_policy": {
            "componentId": null,
            "classId": "Infrastructure.Reservation.Policy.ComputeResource",
            "id": "None"
        },
        "security_groups": [],
        "security_tags": [],
        "source_machine": null,
        "source_machine_external_snapshot": null,
        "source_machine_name": "cbpcentos_63_x86",
        "source_machine_vmsnapshot": null,
        "storage": 6
    }
  }
 }
}
```

Syntax for Requesting a Machine

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

Prepare you Request

Going back to the entitledCatalogItemViews response, locate a link field that contains a value similar to the following:

```
    {
        "@type":"link",
        "href":"https://$host/catalog-service/api/consumer/entitledCatalogItems/dc808d12-3786-4f7c-
  b5a1-d5f997c8ad66/requests",
        "rel":"POST: Submit Request"
    }
```

Use the information in this response to edit the template construct the URI to request the desired catalog item using a POST command.

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.
catalogItemId	The identifier of a catalog item. Typically, this is provided by users via the REST URI when making an entitledCatalogItem provisioning request.
requestedFor	The user for whom this request is being made. Must be the fully qualified user ID. Typically this is provided by the REST URI when making an entitledCatalogItem provisioning request.
businessGroupId	The business group identifier associated with the request. Typically this is provided via the REST URI when making the request.
description	The catalog item description.
reasons	
data	Context-specific properties. Obtain the consumerEntitledCatalogItem template request to identify the properties available for a given context.

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	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.
components	Returns the list of components associated with the request. The provider supplies this list of components after request initialization.

Example: Curl Command

To construct your request, refer to the entitledCatalogItemViews response received when you ran the request described in Syntax for Getting a Template Request for a Catalog Item, locate a link field that contains a value similar to the following:

```
    {
        "@type":"link",
        "href":"https://$host/catalog-service/api/consumer/entitledCatalogItems/dc808d12-3786-4f7c-
  b5a1-d5f997c8ad66/requests",
        "rel":"POST: Submit Request"
    }
```

The following example command submits a machine request using appropriately edited template content from the entitledCatalogItemViews response.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/entitledCatalogItems/dc808d12-3786-4f7c-b5a1-
d5f997c8ad66/requests
{
     $contentsOfTemplateFromPrecedingSections
}
```

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://$host/catalog-service/api/consumer/requests/7aaf9baf-aa4e-47c4-997b-edd7c7983a5b
{
     $requestObjectDetails
}

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 Details of a Machine Request

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

Request Status

Typically, the request status information is the most important part of request details. The phase field corresponds to the status displayed in the Requests tab in the interface. You can rerun this command multiple times to monitor the state of a machine request.

Table 4-1. Request Phase Status

Phase	Description	End State?
UNSUBMITTED	Request was saved but not submitted.	No
PENDING_PRE_APPROVAL	Request is subject to approval - pre-provisioning approval required.	No
IN_PROGRESS	Request is in progress, machine is being provisioned.	No
PENDING_POST_APPROVAL	Request is subject to approval, post-provisioning approval required.	No
SUCCESSFUL	Request completed successfully. The machine is available under provisioned resources on the Items tab.	Yes
FAILED	Request failed.	Yes
REJECTED	Request approval was rejected and will not complete.	Yes

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 request ID. See Syntax for Displaying Your Provisioned Resources 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 –headers 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.
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.

Property	Description
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	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.
components	Returns the list of components associated with the request. The provider supplies this list of components after request initialization.

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/7aaf9baf-aa4e-47c4-997b-edd7c7983a5b
```

Example: JSON Output

The following sample output contains information about the catalog item request 7aaf9baf-aa4e-47c4-997b-edd7c7983a5b.

```
{
    "@type": "CatalogItemRequest",
    "id": "7aaf9baf-aa4e-47c4-997b-edd7c7983a5b",
    "iconId": "cafe_default_icon_genericCatalogItem",
    "version": 6,
    "requestNumber": 8,
    "state": "SUCCESSFUL",
    "description": "API test",
    "reasons": null,
    "requestedFor": "csummers@example.com",
    "requestedBy": "csummers@example.com",
    "organization": {
        "tenantRef": "mycompany",
        "tenantLabel": "mycompany",
        "subtenantRef": "c0683388-6db2-4cb5-9033-b24d15ad3766",
        "subtenantLabel": "Demo Group"
    },
    "requestorEntitlementId": "1b409157-152c-43c4-b4cc-1cdef7f6adf8",
    "preApprovalId": null,
    "postApprovalId": null,
    "dateCreated": "2015-07-29T13:50:33.689Z",
    "lastUpdated": "2015-07-29T13:55:35.951Z",
    "dateSubmitted": "2015-07-29T13:50:33.689Z",
    "dateApproved": null,
    "dateCompleted": "2015-07-29T13:55:35.949Z",
    "quote": {},
    "requestCompletion": {
        "requestCompletionState": "SUCCESSFUL",
        "completionDetails": null
    },
    "requestData": {
        $detailsOfSubmittedRequest
    },
    "retriesRemaining": 3,
    "requestedItemName": "Linux",
    "requestedItemDescription": "Linux blueprint for API demo",
    "stateName": "Successful",
    "approvalStatus": "POST_APPROVED",
    "executionStatus": "STOPPED",
    "waitingStatus": "NOT_WAITING",
    "phase": "SUCCESSFUL",
    "catalogItemRef": {
        "id": "7c8275d6-1bd6-452a-97c4-d6c053e4baa4",
        "label": "Linux"
    }
}
```

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 3 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	Specifies an array of link objects, each of which contains the following parts:
	
	■ rel
	
	  Specifies the name of the link.
	  ■ `Self` refers to the object that was returned or requested.
	  ■ `First`, `Previous`, `Next`, and `Last` refer to corresponding pages of pageable lists.
	  ■ Specifies the application or service that determines the other names.
	
	■ href
	
	  Specifies the URL that produces the result.

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.

Property	Description
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: ■ Size: Specifies the maximum number of rows per page. ■ totalElement: 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 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	https://*$host*/workitem-service/api/workitems/*workitem_ID*
$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.
workitem_ID	Specifies the unique identifier of a work item. See Syntax for Listing Work Items.

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.
	
	  ■ Self refers to the object that was returned or requested.
	
	  ■ First, Previous, Next, and Last refer to corresponding pages of pageable lists.
	
	  ■ Specifies the application or service that determines the other names.
	
	■ href
	
	Specifies the URL that produces the result.

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	Specifies the paging-related data: ■ Size: Specifies the maximum number of rows per page. ■ totalElement: 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 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-8593-107ffcf8c3a8",
        "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 4-2. 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 `com.mycompany.csp.core.approval.action.approve.`. To reject a request, include the reject statement, for example `com.mycompany.csp.core.approval.action.reject`.

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	https://*$host*/workitem-service/api/workitems/*workitem_ID*
$host	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.

Parameter	Description
$token	Specifies a valid HTTP bearer token with necessary credentials.
workitem_ID	Specifies the unique identifier of a work item. See Syntax for Listing Work Items.

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.
	  ■ `Self` refers to the object that was returned or requested.
	  ■ `First`, `Previous`, `Next`, and `Last` refer to corresponding pages of pageable lists.
	  ■ Specifies the application or service that determines the other names.
	
	■ href
	
	  Specifies the URL that produces the result.

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: ■ Size: Specifies the maximum number of rows per page. ■ totalElement: 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: 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 3 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	https://*$host*/catalog-service/api/consumer/resourceType
$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.

Filter by the following resource types:

- Infrastructure.Machine

- Infrastructure.AppServic

- 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, #getLease, with time units synchronized with #getCosts.

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://$host/catalog-service/api/consumer/resourceTypes
$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.

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	https://*$host*/catalog-service/api/consumer/resources/type
$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.

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",
```

```
          "value" : 1
        }
      }, {
        "key" : "MachineInterfaceType",
        "value" : {
          "type" : "string",
          "value" : "Test"
        }
      }, {
        "key" : "MachineReservationName",
        "value" : {
          "type" : "string",
          "value" : "Test Agent-Res-1"
        }
      }, {
        "key" : "Reconfigure",
        "value" : {
          "type" : "boolean",
          "value" : true
        }
      }, {
        "key" : "EXTERNAL_REFERENCE_ID"
      }, {
        "key" : "MachineExpirationDate"
      }, {
        "key" : "Reset",
        "value" : {
          "type" : "boolean",
          "value" : true
        }
      } ]
    }
  } ],
  "metadata" : {
    "size" : 2,
    "totalElements" : 1,
    "totalPages" : 1,
    "number" : 1,
    "offset" : 0
  }
}
```

Syntax for Viewing Machine Details

You can use the vRealize Automation REST API catalog service to display the machine details for a provisioned machine.

Using the API to Get Deployment Details

You can use the REST API to view deployed machine details by appending /resourceViews to the request details URI that you generated when you retrieved request details. So the syntax the GET statement would read as follows:

```
http://$host/catalog-service/api/consumer/requests/$requestId/resourceViews
```

See Syntax for Viewing Details of a Machine Request.

In addition to general information about the provisioned deployment--such as its name, description, and ID--the response contains additional HATEOAS links that enable you to obtain additional details and information.

Table 4-3. HATEOAS Link Functions as Defined by rel Field

Link	Description
GET: Catalog Item	URI to get the catalog item details (as described in sections 3.2.1 and 3.2.2) from which this catalog item was provisioned.
GET: Request	URI to get the request details that provisioned this item.
GET:Template {com.vmware.csp.component.cafe.composition@resource.action.deployment.$actionName	URI to get a template request for a specific action that you can perform on this resource. Typically, on a deployment the action will be Delete.
POST: {com.vmware.csp.component.cafe.composition@resource.action.deployment.$actionName	URI to which to post the request to perform an action, based on the corresponding template.
GET: Child Resources	If the deployment contains child resources (nodes specified in the composite blueprint), this is the URI to get a list of the resourceViews for the children of this deployment.

Input

Use the supported input parameters to control the command output.

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 Syntax for Displaying Your Provisioned Resources 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.

Parameter	Description
$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.
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 the provisioned machine ID is 7aaf9baf-aa4e-47c4-997b-edd7c7983a5b.

```
curl --insecure -H "Content-Type: application/json"
-H "Authorization: Bearer $token"
http://$host/catalog-service/api/consumer/requests/7aaf9baf-aa4e-47c4-997b-edd7c7983a5b/resourceViews
```

Example: JSON Output

In the following example, the provisioned machine *resourceID* value specified in the command line was 7aaf9baf-aa4e-47c4-997b-edd7c7983a5b.

```
{
    "links": [],
    "content": [
        {
            "@type": "CatalogResourceView",
            "links": [
                {
                    "@type": "link",
                    "rel": "GET: Catalog Item",
                    "href": "https://$host/catalog-
service/api/consumer/entitledCatalogItemViews/7c8275d6-1bd6-452a-97c4-d6c053e4baa4"
                },
                {
                    "@type": "link",
                    "rel": "GET: Request",
                    "href": "https://$host/catalog-service/api/consumer/requests/7aaf9baf-
aa4e-47c4-997b-edd7c7983a5b"
                },
                {
                    "@type": "link",
                    "rel": "GET Template:
{com.vmware.csp.component.cafe.composition@resource.action.deployment.destroy.name}",
                    "href": "https://$host/catalog-service/api/consumer/resources/c4d3db3e-e397-44ff-
a1c9-0ecebdba12f4/actions/416e6bb1-3357-448b-8396-e268d5f7343b/requests/template"
                },
                {
                    "@type": "link",
                    "rel": "POST:
{com.vmware.csp.component.cafe.composition@resource.action.deployment.destroy.name}",
                    "href": "https://$host/catalog-service/api/consumer/resources/c4d3db3e-e397-44ff-
a1c9-0ecebdba12f4/actions/416e6bb1-3357-448b-8396-e268d5f7343b/requests"
                },
                {
                    "@type": "link",
                    "rel": "GET: Child Resources",
                    "href": "https://$host/catalog-service/api/consumer/resourceViews?
managedOnly=false&withExtendedData=true&withOperations=true&%24filter=parentResource%20eq
%20%27c4d3db3e-e397-44ff-a1c9-0ecebdba12f4%27"
```

```
            }
        ],
        "resourceId": "c4d3db3e-e397-44ff-a1c9-0ecebdba12f4",
        "iconId": "cafe_default_icon_genericCatalogItem",
        "name": "Linux-80813151",
        "description": null,
        "status": null,
        "catalogItemId": "7c8275d6-1bd6-452a-97c4-d6c053e4baa4",
        "catalogItemLabel": "Linux",
        "requestId": "7aaf9baf-aa4e-47c4-997b-edd7c7983a5b",
        "resourceType":
"{com.vmware.csp.component.cafe.composition@resource.type.deployment.name}",
        "owners": [
            "Connie Summers"
        ],
        "businessGroupId": "c0683388-6db2-4cb5-9033-b24d15ad3766",
        "tenantId": "mycompany",
        "dateCreated": "2015-07-29T13:51:36.368Z",
        "lastUpdated": "2015-07-29T13:55:35.963Z",
        "lease": null,
        "costs": null,
        "costToDate": null,
        "totalCost": null,
        "parentResourceId": null,
        "hasChildren": true,
        "data": {}
      }
  ],
  "metadata": {
      "size": 20,
      "totalElements": 1,
      "totalPages": 1,
      "number": 1,
      "offset": 0
  }
}
```

Manage Provisioned Deployments

You can use the REST API catalog service to log in to vRealize Automation and view information about 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 3 REST API Authentication.

- Obtain the business group subtenant ID values to specify on the command line. See Syntax for Getting Deployment Details.

Procedure

1 Display a list of all provisioned resources.

```
$curl --insecure -s
           -H" Content-Type: multipart/form-data" -H "Authorization: Bearer $token"
           http://
           $host/catalog-service/api/consumer/requests/7aaf9baf-aa4e-47c4-997b-
edd7c7983a5b/resourceViews
```

The output from this command includes HATEOAS links that enable you to quickly obtain additional information about specific deployed resources.

2 Use the GET: Child Resources HATEOAS link to retrieve a list of child nodes of a deployment.

```
$curl --insecure -s
           -H" Content-Type: multipart/form-data" -H "Authorization: Bearer $token"
           https:// $host
           /catalog-service/api/consumer/resourceViews?
managedOnly=false&withExtendedData=true&withOperations=true&%24filter=parentResource%20eq
%20%27c4d3db3e-e397-44ff-a1c9-0ecebdba12f4%27
```

3 In addition, you can use the HATEOAS links to complete day 2 actions.

- You can use a command like the following to get the template for the resource action request and use it to power off a machine.

```
$curl --insecure -s
           -H" Content-Type: multipart/form-data" -H "Authorization: Bearer $token"
           https://$host/catalog-service/api/consumer/resources/dd37b7a1-829c-4773-b5be-
b229453eca4a/actions/02bad06d-f92b-4cf8-b964-37bb5d57be38/requests/template
```

Then POST the unmodified template to the corresponding URI.

```
$curl --insecure -s
           -H" Content-Type: multipart/form-data" -H "Authorization: Bearer
$token"https://$host/catalog-service/api/consumer/resources/dd37b7a1-829c-4773-b5be-
b229453eca4a/actions/02bad06d-f92b-4cf8-b964-37bb5d57be38/requests
{
  "type": "com.vmware.vcac.catalog.domain.request.CatalogResourceRequest",
  "resourceId": "dd37b7a1-829c-4773-b5be-b229453eca4a",
  "actionId": "02bad06d-f92b-4cf8-b964-37bb5d57be38",
  "description": null,
  "data": {
    "description": null,
    "reasons": null
  }
}
```

- You can modify the HATEOAS links to complete more complex day 2 actions that require user input, such as changing a lease. Use a command like the following to get the template for the resource action request.

```
$curl --insecure -s
            -H" Content-Type: multipart/form-data" -H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/resources/dd37b7a1-829c-4773-b5be-
b229453eca4a/actions/b5739e30-871d-48c7-9012-f2a7cf431dc1/requests/template
```

After you edit the template as desired, you can POST it to the corresponding URI.

```
HTTP/1.1 200 OK
Server: Apache-Coyote/1.1
Cache-Control: no-cache, no-store
Pragma: no-cache
Expires: Sat, 01 August 2015 23:04:50 GMT
Content-Type: application/json;charset=UTF-8
Date: Sat, 01 August 2015 13:04:50 GMT
{
  "type": "com.vmware.vcac.catalog.domain.request.CatalogResourceRequest",
  "resourceId": "dd37b7a1-829c-4773-b5be-b229453eca4a",
  "actionId": "b5739e30-871d-48c7-9012-f2a7cf431dc1",
  "description": null,
  "data": {
    "provider-ExpirationDate": "2015-07-29T16:44:13.846Z"
  }
}
```

Syntax for Getting Deployment Details

You can use the REST API catalog service to identify provisioned items from a given request.

Accessing Links to Provisioned Items

You can access links to provisioned items from a given request by appending `/resourceViews` to the request details URI. For instance, you can edit the example request URI from as follows:

```
http://$host/catalog-service/api/consumer/requests/$requestId/resourceViews
```

In addition to the general information about the provisioned deployment returned in the response, such as its name, description and ID, the response contains additional HATEOAS links.

Table 4-4. **HATEOAS Link Deployment Details Functions**

Link	Description
GET: Catalog Item	URI to get the catalog item details from which this catalog item was provisioned. See Syntax for Viewing Details of a Machine Request.
GET: Request	URI to get the request details that provisioned this item.

Table 4-4. HATEOAS Link Deployment Details Functions (Continued)

Link	Description
GET:Template {com.vmware.csp.component.cafe.composition@resource.action.deployment.*$actionName*	URI to get a template request for a specific action that you can perform on this resource. Typically, on a deployment, the action will be Delete.
POST: {com.vmware.csp.component.cafe.composition@resource.action.deployment.*$actionName*	URI to which to post the request to perform an action, based on the corresponding template.
GET: Child Resources	If the deployment contains child resources, such as nodes specified in the composite blueprint, this is the URI to get a list of the resourceViews for the children of this deployment.

Input

Use the supported input parameters to control the command output.

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.
id	UUID of a request.
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.

Table 4-5. Output Parameters

Property	Description
resourceId	The unique identifier of the resource.
iconId	Specifies an icon for this request based on the requested object type.
name	The user friendly name of the resource.
description	An extended user friendly description of the resource.
status	The status of the resource. For example, On, Off, etc.

Table 4-5. Output Parameters (Continued)

Property	Description
catalogItemId	The identifier of the catalog item associated with this provisioned resource.
catalogItemLabel	The label of the catalog item associated with this provisioned resource.
requestId	The unique identifier of the request that created this provisioned resource.
businessGroupId	The unique identifier of the business group that owns this resource.
tenantId	The unique identifier of the tenant that owns this resource.
owners	The owner of this resource.
resourceType	The type identifier of this resource. For example, Virtual Machine.
parentResourceId	The unique identifier of the parent resource. Used for child resources of a multi-machine resource.
hasChildren	Returns trun if this resource has child resources. Used if this is a multi-machine resource.
dateCreated	The date and time at which the resource was created.
lastUpdated	The date and time at which the resource was most recently modified.
lease	The current lease of the resource.
costs	An optional rate card of the costs and charges levied against the resource.
costToDate	An optional rate card of the existing costs and charges levied against the resource.
totalCost	An optional rate card of the costs and charges levied for the entire lease period.
data	The extended, provider defined properties of the resource.

Example Curl Command

This example retrieves all children of the resource with an ID of 7aaf9baf-aa4e-47c4-997b-edd7c7983a5b.

```
$curl --insecure -s -H" Content-Type: multipart/form-data" -H "Authorization: Bearer
$token" http:// $host/catalog-service/api/consumer/requests/7aaf9baf-aa4e-47c4-997b-
edd7c7983a5b/resourceViews
```

Example: JSON Output

```
{
    "links": [],
    "content": [
        {
            "@type": "CatalogResourceView",
            "links": [
                {
                    "@type": "link",
                    "rel": "GET: Catalog Item",
                    "href": "https://$host/catalog-
service/api/consumer/entitledCatalogItemViews/7c8275d6-1bd6-452a-97c4-d6c053e4baa4"
                },
                {
```

```
                    "@type": "link",
                    "rel": "GET: Request",
                    "href": "https://$host/catalog-service/api/consumer/requests/7aaf9baf-
aa4e-47c4-997b-edd7c7983a5b"
                },
                {
                    "@type": "link",
                    "rel": "GET Template:
{com.vmware.csp.component.cafe.composition@resource.action.deployment.destroy.name}",
                    "href": "https://$host/catalog-service/api/consumer/resources/c4d3db3e-e397-44ff-
a1c9-0ecebdba12f4/actions/416e6bb1-3357-448b-8396-e268d5f7343b/requests/template"
                },
                {
                    "@type": "link",
                    "rel": "POST:
{com.vmware.csp.component.cafe.composition@resource.action.deployment.destroy.name}",
                    "href": "https://$host/catalog-service/api/consumer/resources/c4d3db3e-e397-44ff-
a1c9-0ecebdba12f4/actions/416e6bb1-3357-448b-8396-e268d5f7343b/requests"
                },
                {
                    "@type": "link",
                    "rel": "GET: Child Resources",
                    "href": "https://$host/catalog-service/api/consumer/resourceViews?
managedOnly=false&withExtendedData=true&withOperations=true&%24filter=parentResource%20eq
%20%27c4d3db3e-e397-44ff-a1c9-0ecebdba12f4%27"
                }
            ],
            "resourceId": "c4d3db3e-e397-44ff-a1c9-0ecebdba12f4",
            "iconId": "cafe_default_icon_genericCatalogItem",
            "name": "Linux-80813151",
            "description": null,
            "status": null,
            "catalogItemId": "7c8275d6-1bd6-452a-97c4-d6c053e4baa4",
            "catalogItemLabel": "Linux",
            "requestId": "7aaf9baf-aa4e-47c4-997b-edd7c7983a5b",
            "resourceType":
"{com.vmware.csp.component.cafe.composition@resource.type.deployment.name}",
            "owners": [
                "Connie Summers"
            ],
            "businessGroupId": "c0683388-6db2-4cb5-9033-b24d15ad3766",
            "tenantId": "mycompany",
            "dateCreated": "2015-07-29T13:51:36.368Z",
            "lastUpdated": "2015-07-29T13:55:35.963Z",
            "lease": null,
            "costs": null,
            "costToDate": null,
            "totalCost": null,
            "parentResourceId": null,
            "hasChildren": true,
            "data": {}
        }
    ],
    "metadata": {
        "size": 20,
```

```
        "totalElements": 1,
        "totalPages": 1,
        "number": 1,
        "offset": 0
    }
  }
```

Syntax for Navigating to the Children of a Deployed Resource

Use the GET: Child Resources link to retrieve a list of the child nodes of a deployment, including virtual machines, networks, and other objects you may have configured on the blueprint canvas.

Using the REST API to Get Additional Deployment Information

In addition to general information about the provisioned resource, the response contains additional HATEOAS links that enable you to obtain additional details and information about each returned child resource.

Table 4-6. HATEOAS Link Functions as Defined by rel Field

Link	Description
GET: Parent Resource	URI to get the resourceView for the parent item. See Syntax for Getting Deployment Details.
GET:Template {com.vmware.csp.component.cafe.composition@resource.action.deployment.$actionName	URI to get a template request for a specific action that you can perform on this resource.
POST: {com.vmware.csp.component.cafe.composition@resource.action.deployment.$actionName	URI to which to post the request to perform an action, based on the corresponding template.

Input

Use the supported input parameters to control the command output.

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 Syntax for Getting Deployment Details 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.

Parameter	Description
$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.

Table 4-7. Output Parameters

Property	Description
resourceId	The unique identifier of the resource.
iconId	Specifies an icon for this request based on the requested object type.
name	The user friendly name of the resource.
description	An extended user friendly description of the resource.
status	The status of the resource. For example, On, Off, etc.
catalogItemId	The identifier of the catalog item associated with this provisioned resource.
catalogItemLabel	The label of the catalog item associated with this provisioned resource.
requestId	The unique identifier of the request that created this provisioned resource.
businessGroupId	The unique identifier of the business group that owns this resource.
tenantId	The unique identifier of the tenant that owns this resource.
owners	The owner of this resource.
resourceType	The type identifier of this resource. For example, Virtual Machine.
parentResourceId	The unique identifier of the parent resource. Used for child resources of a multi-machine resource.
hasChildren	Returns trun if this resource has child resources. Used if this is a multi-machine resource.
dateCreated	The date and time at which the resource was created.
lastUpdated	The date and time at which the resource was most recently modified.
lease	The current lease of the resource.
costs	An optional rate card of the costs and charges levied against the resource.
costToDate	An optional rate card of the existing costs and charges levied against the resource.
totalCost	An optional rate card of the costs and charges levied for the entire lease period.
data	The extended, provider defined properties of the resource.

Example Curl Command

This example retrieves all children of the resource with an ID of c4d3db3e-e397-44ff-a1c9-0ecebdba12f4%27.

```
$curl --insecure -s -H" Content-Type: multipart/form-data" -H "Authorization: Bearer
$token" https:// $host /catalog-service/api/consumer/resourceViews?
managedOnly=false&withExtendedData=true&withOperations=true&%24filter=parentResource
%20eq%20%27c4d3db3e-e397-44ff-a1c9-0ecebdba12f4%27
```

Example: JSON Output

The validation output displays the validation status of each content item within the package.

```
{
    "links": [],
    "content": [
        {
            "@type": "CatalogResourceView",
            "links": [
                {
                    "@type": "link",
                    "rel": "GET: Parent Resource",
                    "href": "https://$host/catalog-service/api/consumer/resourceViews/c4d3db3e-
    e397-44ff-a1c9-0ecebdba12f4"
                },
                {
                    "@type": "link",
                    "rel": "GET Template:
    {com.vmware.csp.component.iaas.proxy.provider@resource.action.name.machine.ChangeLease}",
                    "href": "https://$host/catalog-service/api/consumer/resources/dd37b7a1-829c-4773-
    b5be-b229453eca4a/actions/b5739e30-871d-48c7-9012-f2a7cf431dc1/requests/template"
                },
                {
                    "@type": "link",
                    "rel": "POST:
    {com.vmware.csp.component.iaas.proxy.provider@resource.action.name.machine.ChangeLease}",
                    "href": "https://$host/catalog-service/api/consumer/resources/dd37b7a1-829c-4773-
    b5be-b229453eca4a/actions/b5739e30-871d-48c7-9012-f2a7cf431dc1/requests"
                },
                {
                    "@type": "link",
                    "rel": "GET Template:
    {com.vmware.csp.component.iaas.proxy.provider@resource.action.name.machine.PowerOff}",
                    "href": "https://$host/catalog-service/api/consumer/resources/dd37b7a1-829c-4773-
    b5be-b229453eca4a/actions/02bad06d-f92b-4cf8-b964-37bb5d57be38/requests/template"
                },
                {
                    "@type": "link",
                    "rel": "POST:
    {com.vmware.csp.component.iaas.proxy.provider@resource.action.name.machine.PowerOff}",
                    "href": "https://$host/catalog-service/api/consumer/resources/dd37b7a1-829c-4773-
    b5be-b229453eca4a/actions/02bad06d-f92b-4cf8-b964-37bb5d57be38/requests"
                }
            ],
            "resourceId": "dd37b7a1-829c-4773-b5be-b229453eca4a",
            "iconId": "cafe_default_icon_genericCatalogItem",
            "name": "DEMO-002",
            "description": null,
```

```
            "status": "On",
            "catalogItemId": null,
            "catalogItemLabel": null,
            "requestId": null,
            "resourceType":
"{com.vmware.csp.component.iaas.proxy.provider@resource.type.registration.name.Infrastructure.Virtual}"
,
            "owners": [
                "Connie Summers"
            ],
            "businessGroupId": "c0683388-6db2-4cb5-9033-b24d15ad3766",
            "tenantId": "mycompany",
            "dateCreated": "2015-07-29T13:54:58.804Z",
            "lastUpdated": "2015-07-29T13:55:01.371Z",
            "lease": {
                "start": "2015-07-29T13:51:33.000Z"
            },
            "costs": {
                "leaseRate": {
                    "type": "moneyTimeRate",
                    "cost": {
                        "type": "money",
                        "currencyCode": "USD",
                        "amount": 0
                    },
                    "basis": {
                        "type": "timeSpan",
                        "unit": "DAYS",
                        "amount": 1
                    }
                }
            },
            "costToDate": {
                "type": "money",
                "currencyCode": "USD",
                "amount": 0
            },
            "totalCost": null,
            "parentResourceId": "c4d3db3e-e397-44ff-a1c9-0ecebdba12f4",
            "hasChildren": false,
            "data": {
                "ChangeLease": true,
                "ConnectViaRdp": true,
                "ConnectViaVmrc": true,
                "DISK_VOLUMES": [
                    {
                        "componentTypeId": "com.vmware.csp.component.iaas.proxy.provider",
                        "componentId": null,
                        "classId": "dynamicops.api.model.DiskInputModel",
                        "typeFilter": null,
                        "data": {
                            "DISK_CAPACITY": 6,
                            "DISK_INPUT_ID": "DISK_INPUT_ID1"
                        }
                    },
```

```
                    {
                        "componentTypeId": "com.vmware.csp.component.iaas.proxy.provider",
                        "componentId": null,
                        "classId": "dynamicops.api.model.DiskInputModel",
                        "typeFilter": null,
                        "data": {
                            "DISK_CAPACITY": 6,
                            "DISK_INPUT_ID": "DISK_INPUT_ID2"
                        }
                    }
                ],
                "Destroy": true,
                "EXTERNAL_REFERENCE_ID": "vm-38153",
                "Expire": true,
                "IS_COMPONENT_MACHINE": false,
                "MachineBlueprintName": "system_blueprint_vsphere",
                "MachineCPU": 1,
                "MachineDailyCost": 0,
                "MachineDestructionDate": null,
                "MachineExpirationDate": null,
                "MachineGroupName": "Demo Group",
                "MachineGuestOperatingSystem": null,
                "MachineInterfaceDisplayName": "vSphere (vCenter)",
                "MachineInterfaceType": "vSphere",
                "MachineMemory": 4096,
                "MachineName": "DEMO-002",
                "MachineReservationName": "vCenter55",
                "MachineStorage": 12,
                "MachineType": "Virtual",
                "NETWORK_LIST": [
                    {
                        "componentTypeId": "com.vmware.csp.component.iaas.proxy.provider",
                        "componentId": null,
                        "classId": "dynamicops.api.model.NetworkViewModel",
                        "typeFilter": null,
                        "data": {
                            "NETWORK_MAC_ADDRESS": "00:50:56:ba:6b:85",
                            "NETWORK_NAME": "VM Network SQA"
                        }
                    }
                ],
                "PowerOff": true,
                "Reboot": true,
                "Reconfigure": true,
                "Reprovision": true,
                "Reset": true,
                "SNAPSHOT_LIST": [],
                "Shutdown": true,
                "Suspend": true,
                "ip_address": "10.118.194.213",
                "machineId": "f3579990-a3c4-4e17-9593-1f8893636876"
            }
        },
        {
            "@type": "CatalogResourceView",
```

```
        "links": [
            {
                "@type": "link",
                "rel": "GET: Parent Resource",
                "href": "https://$host/catalog-service/api/consumer/resourceViews/c4d3db3e-
e397-44ff-a1c9-0ecebdba12f4"
            },
            {
                "@type": "link",
                "rel": "GET Template:
{com.vmware.csp.component.network.service@resource.action.destroy.name,
[{{com.vmware.csp.component.iaas.proxy.provider@network.network.type.registration.name.Infrastructure.N
etwork.Network.Existing}}]}",
                "href": "https://$host/catalog-service/api/consumer/resources/f735b57a-
fe6f-4108-876f-1c1055ca2cec/actions/ec5c522d-7b5b-4d0b-b9f2-1aedf01a2f0c/requests/template"
            },
            {
                "@type": "link",
                "rel": "POST:
{com.vmware.csp.component.network.service@resource.action.destroy.name,
[{{com.vmware.csp.component.iaas.proxy.provider@network.network.type.registration.name.Infrastructure.N
etwork.Network.Existing}}]}",
                "href": "https://$host/catalog-service/api/consumer/resources/f735b57a-
fe6f-4108-876f-1c1055ca2cec/actions/ec5c522d-7b5b-4d0b-b9f2-1aedf01a2f0c/requests"
            }
        ],
        "resourceId": "f735b57a-fe6f-4108-876f-1c1055ca2cec",
        "iconId": "cafe_default_icon_genericCatalogItem",
        "name": "Existing Network",
        "description": null,
        "status": null,
        "catalogItemId": null,
        "catalogItemLabel": null,
        "requestId": null,
        "resourceType":
"{com.vmware.csp.component.iaas.proxy.provider@network.network.type.registration.name.Infrastructure.Ne
twork.Network.Existing}",
        "owners": [
            "Connie Summers"
        ],
        "businessGroupId": "c0683388-6db2-4cb5-9033-b24d15ad3766",
        "tenantId": "mycompany",
        "dateCreated": "2015-07-29T13:55:14.095Z",
        "lastUpdated": "2015-07-29T13:55:17.315Z",
        "lease": null,
        "costs": null,
        "costToDate": null,
        "totalCost": null,
        "parentResourceId": "c4d3db3e-e397-44ff-a1c9-0ecebdba12f4",
        "hasChildren": false,
        "data": {
            "Description": " ",
            "Name": "Existing Network"
        }
    }
```

```
    ],
    "metadata": {
        "size": 20,
        "totalElements": 2,
        "totalPages": 1,
        "number": 1,
        "offset": 0
    }
}
```

Perform a Day 2 Action: Power Off

You can use the REST API catalog service to perform a power off action. For simple actions that require no user input, the process is straightforward.

This command leverages the links for the power off action from the command used in the Syntax for Navigating to the Children of a Deployed Resource example.

```
    {
        "@type": "link",
        "rel": "GET Template:
{com.vmware.csp.component.iaas.proxy.provider@resource.action.name.machine.PowerOff}",
        "href": "https://$host/api/consumer/resources/dd37b7a1-829c-4773-b5be-
b229453eca4a/actions/02bad06d-f92b-4cf8-b964-37bb5d57be38/requests/template"
    },
    {
        "@type": "link",
        "rel": "POST:
{com.vmware.csp.component.iaas.proxy.provider@resource.action.name.machine.PowerOff}",
        "href": "https://$host/api/consumer/resources/dd37b7a1-829c-4773-b5be-
b229453eca4a/actions/02bad06d-f92b-4cf8-b964-37bb5d57be38/requests"
    }
```

Procedure

1   Get the template for the resource action request.

```
$curl --insecure -s
        -H" Content-Type: multipart/form-data" -H "Authorization: Bearer $token"
        https://$host/catalog-service/api/consumer/resources/dd37b7a1-829c-4773-b5be-
b229453eca4a/actions/02bad06d-f92b-4cf8-b964-37bb5d57be38/requests/template
```

This example command returns a response.

```
HTTP/1.1 200 OK
Server: Apache-Coyote/1.1
Cache-Control: no-cache, no-store
Pragma: no-cache
Expires: Sat, 01 August 2015 23:04:50 GMT
Content-Type: application/json;charset=UTF-8
Date: Sat, 01 August 2015 13:04:50 GMT
```

```
{
  "type": "com.vmware.vcac.catalog.domain.request.CatalogResourceRequest",
  "resourceId": "dd37b7a1-829c-4773-b5be-b229453eca4a",
  "actionId": "02bad06d-f92b-4cf8-b964-37bb5d57be38",
  "description": null,
  "data": {
    "description": null,
    "reasons": null
  }
}
```

2 Use a POST command to send the template without modification to the corresponding URI.

```
$curl --insecure -s
            -H" Content-Type: multipart/form-data" -H "Authorization: Bearer
$token"https://$host/catalog-service/api/consumer/resources/dd37b7a1-829c-4773-b5be-
b229453eca4a/actions/02bad06d-f92b-4cf8-b964-37bb5d57be38/requests
{
  "type": "com.vmware.vcac.catalog.domain.request.CatalogResourceRequest",
  "resourceId": "dd37b7a1-829c-4773-b5be-b229453eca4a",
  "actionId": "02bad06d-f92b-4cf8-b964-37bb5d57be38",
  "description": null,
  "data": {
    "description": null,
    "reasons": null
  }
}
```

This POST command returns a response indicating success or failure, such as `HTTP/1.1 201 CREATED` for success.

Perform a Day 2 Action: Change Lease

You can use the REST API catalog service to change a lease. For actions that require user input, you may need to edit the template prior to submitting the request.

This command leverages the links for the change lease action from the command used in the Syntax for Navigating to the Children of a Deployed Resource example.

```
{
    "@type": "link",
    "rel": "GET Template:
 {com.vmware.csp.component.iaas.proxy.provider@resource.action.name.machine.ChangeLease}",
    "href": "https://$host/api/consumer/resources/dd37b7a1-829c-4773-b5be-
b229453eca4a/actions/b5739e30-871d-48c7-9012-f2a7cf431dc1/requests/template"
  },
  {
    "@type": "link",
    "rel": "POST:
```

```
{com.vmware.csp.component.iaas.proxy.provider@resource.action.name.machine.ChangeLease}",
        "href": "https://$host/api/consumer/resources/dd37b7a1-829c-4773-b5be-
b229453eca4a/actions/b5739e30-871d-48c7-9012-f2a7cf431dc1/requests"
    },
```

Procedure

1 Get the template for the resource action request.

```
$curl --insecure -s
            -H" Content-Type: multipart/form-data" -H "Authorization: Bearer $token"
https://$host/catalog-service/api/consumer/resources/dd37b7a1-829c-4773-b5be-
b229453eca4a/actions/b5739e30-871d-48c7-9012-f2a7cf431dc1/requests/template
```

This example command returns a response.

```
HTTP/1.1 200 OK
Server: Apache-Coyote/1.1
Cache-Control: no-cache, no-store
Pragma: no-cache
Expires: Sat, 01 August 2015 23:04:50 GMT
Content-Type: application/json;charset=UTF-8
Date: Sat, 01 August 2015 13:04:50 GMT
{
  "type": "com.vmware.vcac.catalog.domain.request.CatalogResourceRequest",
  "resourceId": "dd37b7a1-829c-4773-b5be-b229453eca4a",
  "actionId": "b5739e30-871d-48c7-9012-f2a7cf431dc1",
  "description": null,
  "data": {
    "provider-ExpirationDate": "2015-07-29T16:44:13.846Z"
  }
}
```

2 Edit the template as desired. The template is populated with default values. In this example, the value of *provider-ExpirationDate* is set to the time at which the template was requested in UTC. Edit this value (for example, to change the expiration to a month from now).

3 Use a POST command to send the template without modification to the corresponding URI.

```
$curl --insecure -s
            -H" Content-Type: multipart/form-data" -H "Authorization: Bearer $token"
https://$hosts/catalog-service/api/consumer/resources/dd37b7a1-829c-4773-b5be-
b229453eca4a/actions/b5739e30-871d-48c7-9012-f2a7cf431dc1/requests
Accept: application/json
Content-Type: application/json
Authorization: Bearer $token
{
  "type": "com.vmware.vcac.catalog.domain.request.CatalogResourceRequest",
  "resourceId": "dd37b7a1-829c-4773-b5be-b229453eca4a",
  "actionId": "b5739e30-871d-48c7-9012-f2a7cf431dc1",
  "description": null,
```

```
    "data": {
      "provider-ExpirationDate": "2015-08-29T16:44:13.846Z"
    }
}
```

This POST command returns a response indicating success or failure, such as `HTTP/1.1 201 CREATED` for success.

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 Air
- vCloud Director
- Amazon
- Hyper-V
- KVM
- Xen

The following reservation types are not supported:

- OpenStack
- Physical reservation

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.

Note   The Reservation API now returns compute resource endpoint names within parentheses. You may need to update any client code which contains logic that uses compute resource names to account for this change.

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 3 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/Infrastructure.Reservation.Virtual.vSphere/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.

```
curl --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": "memoryReservedSizeMb",
              "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",
            "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": "storageReservedSizeGB",
                  "value": {
                    "type": "integer",
                    "value": 32
                  }
                },
                {
                  "key": "storageEnabled",
                  "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": "storagePriority",
                  "value": {
                    "type": "integer",
                    "value": 1
                  }
              }]
          }
        }]
      }
    },
    {
      "key": "resourcePool",
      "value": {
        "type": "entityRef",
        "componentId": null,
        "classId": "ResourcePools",
        "id": "4e51fabc-19e8-4e79-b413-d52309b3bb62",
        "label": "CoreDev"
      }
{
  "text": "",
  "dependencyValues": {
    "entries": [{
      "key": "computeResource",
      "value": {
        "type": "entityRef",
        "componentId": null,
        "classId": "ComputeResource",
        "id": "9d1a3b5a-7162-4a5a-85b7-ec1b2824f554"
      }
    }]
  }
}"
```

Programming Guide

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",
        "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
                    }
                  }
                ]
              }
            }
          }
        }
      ]
    }
  }
}
"
```

c   Create an Amazon 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": "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"
          }
        }
      ]
    }
}"
```

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 3 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	https://*$host*/reservation-service/api/reservations/types
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.

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. ■ `Self` refers to the object that was returned or requested. ■ `First`, `Previous`, `Next`, and `Last` refer to corresponding pages of pageable lists. ■ Specifies the application or service that determines the other names.
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.

Property	Description
FormReference	Specifies the user interface form reference. This field is valid for user interface elements only. ■ type -- user interface form type ■ formId -- user interface form ID
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 *REST API Reference* in the vRealize Automation Documentation Center.
alertTypes	Contains the alert type list defined in the reservation type: ■ createdDate -- Alert type created date ■ lastUpdated -- Alert type last updated date ■ version -- Alert type version ■ id -- Unique identifier of alert type ■ name -- Name of alert type ■ description -- Long description of alert type ■ referenceResourceId -- Unique identifier of reference resource
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

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

The following command contains the example bearer token from Syntax for Requesting an HTTP Bearer Token.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer
MTQxMTY5OTkxODQyNTpkYmZmYjkzZTgzNjdmOGU0NThjZTp0ZW5hbnQ6cWV1c2VybmFtZTpmcml0ekBjb2tlLnZtd2
FyZS5jb206NDhmNGViNzQ3ZjYxY2YxMzdhNDAxOGY2MDAwOTFlZTJiZWI4MmJmZWU5ZTQ0MTI0YWI1M2U4NGNiOTk0
OTJjZjEwNjdhMzdmTQ5YWMyMzA2NTA5NzJhMzI2ZGYxZDhlYTgxYmNkNjM5ZTNiNjiYmEwYTRhOWJiMGE2ZTI="
https://myVRA.eng.mycompany.com/reservation-service/api/reservations/types
```

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 3 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/Infrastructure.Reservation.Virtual.vSphere/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",
          "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
    }]
  }
```

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 4-8. 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
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 4-9. 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 *REST API Reference* 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	Specifies the dataType field value: ■ type: Specifies the field value type: 　■ `Self` refers to the object that was returned or requested. 　■ `First`, `Previous`, `Next`, and `Last` refer to corresponding pages of a pageable list. 　■ Specifies the application or service that determines the other names. ■ componentTypeid: Specifies the type ID of the component. ■ component: Specifies the unique identifier of the component. ■ classId: Specifies the schema class of the field This property is valid for complex and ref field types only. ■ label: Specifies the label of the field data type.
displayAdvice	Contains display advice for the field. This property is valid for a user interface element only.
permissibleValues	Optional field. If this field is a permissible value list field, define the meta info for the permissible value by using the following options: ■ type: Specifies if the permissible value list is dynamic or static. ■ customAllowed: Specifies if a custom value is allowed during user input in this field. ■ dependencies: Specifies the list of fields that the current field depends on.

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 `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.
dependencies	Contains the set of field paths on which the server-side evaluation of the facets depends: ■ facets: 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. If a field is considered in need of server-side evaluation, its `facets` setting is `callback`. If a field is considered mandatory, its `facets` setting is `mandatory`. ■ isMultiValued: Specifies if the field is a multi-value field, such as a list field. 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.

Example: `curl` Command

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/data-
service/schema/Infrastructure.Reservation.Virtual.vSphere/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 3 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/Infrastructure.Reservation.Cloud.Amazon/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 4-10. 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

Table 4‑10. 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 4‑11. 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	Specifies the schema class of the reservation type. The schema class ID for an Amazon reservation is Infrastructure.Reservation.Cloud.Amazon. 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 *REST API Reference* in vRealize Automation documentation.

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	Specifies the dataType field value:
	■ type: Specifies the field value type:
	  ■ `Self` refers to the object that was returned or requested.
	  ■ `First`, `Previous`, `Next`, and `Last` refer to corresponding pages of a pageable list.
	  ■ Specifies the application or service that determines the other names.
	■ componentTypeid:
	  Specifies the type ID of the component.
	■ component:
	  Specifies the unique identifier of the component.
	■ classId:
	  Specifies the schema class of the field
	  This property is valid for complex and ref field types only.
	■ label:
	  Specifies the label of the field data type.

displayAdvice	Contains display advice for the field. This property is valid for a user interface element only.

Property	Description
permissibleValues	Optional field. If this field is a permissible value list field, define the meta info for the permissible value by using the following options: ■ type: Specifies if the permissible value list is dynamic or static. ■ customAllowed: Specifies if a custom value is allowed during user input in this field. ■ dependencies: Specifies the list of fields that the current field depends on.
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 `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.
dependencies	Contains the set of field paths on which the server-side evaluation of the facets depends: ■ facets: 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. If a field is considered in need of server-side evaluation, its `facets` setting is `callback`. If a field is considered mandatory, its `facets` setting is `mandatory`. ■ isMultiValued: Specifies if the field is a multi-value field, such as a list field. 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.

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 Air 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 Air 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 3 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",
```

```json
        "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 Air 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 Air reservation.

Overview

SomevRealize 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 4-12. 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 Air reservation types field IDs that appear in the output schema definitions.

Table 4-13. 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 Air reservation is Infrastructure.Reservation.Cloud.vCloudAir. 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 *REST API Reference* in vRealize Automation documentation.

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

dataType	Specifies the dataType field value:
	
	■ type: Specifies the field value type:
	
	  ■ `Self` refers to the object that was returned or requested.
	
	  ■ `First`, `Previous`, `Next`, and `Last` refer to corresponding pages of a pageable list.
	
	  ■ Specifies the application or service that determines the other names.
	
	■ componentTypeid:
	
	Specifies the type ID of the component.
	
	■ component:
	
	Specifies the unique identifier of the component.
	
	■ classId:
	
	Specifies the schema class of the field
	
	This property is valid for complex and ref field types only.
	
	■ label:
	
	Specifies the label of the field data type.

displayAdvice	Contains display advice for the field. This property is valid for a user interface element only.
permissibleValues	Optional field. If this field is a permissible value list field, define the meta info for the permissible value by using the following options: ■ type: Specifies if the permissible value list is dynamic or static. ■ customAllowed: Specifies if a custom value is allowed during user input in this field. ■ dependencies: Specifies the list of fields that the current field depends on.
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 `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.
dependencies	Contains the set of field paths on which the server-side evaluation of the facets depends: ■ facets: 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. If a field is considered in need of server-side evaluation, its `facets` setting is `callback`. If a field is considered mandatory, its `facets` setting is `mandatory`. ■ isMultiValued: Specifies if the field is a multi-value field, such as a list field. 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.

Example: `curl` Command

The following example command retrieves schema definition information 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
```

Example: JSON Output

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
      }
    ]
  }
}
```

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 3 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	https://*$host*/identity/api/tenants/$tenantId/subtenants
Method	Get

Parameter	Description
$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.
$tenantId	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. ■ `Self` refers to the object that was returned or requested. ■ `First`, `Previous`, `Next`, and `Last` refer to corresponding pages of pageable lists. ■ Specifies the application or service determines the other names.
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 3 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	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.

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

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
underlyingValue	Contains a JSON string representing one permissible value of field.
	▪ type
	Specifies one of the following permissible value data types.
	▪ entityRef - Indicates that the object references a vRealize Automation entity.
	▪ complexRef - Indicates that the object is a user-defined complex structure, for example `struct` in C or `Pojo` in Java.
	▪ primary - Indicates the entity type such as string, integer, and so on.
	▪ componentId
	Specifies the component ID.
	▪ classId
	Specifies the schema class ID of the current data type.
	▪ Id
	Specifies the unique compute resource identifier.
label	Contains the compute resource label. This value matches the `underlyingValue.label`.

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": " 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
    ]
}
```

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 4-14. 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	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.

Input	Description
$schemaclassid	Specifies the schema class ID.
	This example illustrates how to use the `resourcePool` field of a vSphere reservation type as an example. The schema class ID of a vSphere reservation is `Infrastructure.Reservation.Virtual.vSphere`. For this example, the input value for *$schemaclassid* is `Infrastructure.Reservation.Virtual.vSphere`.
$fieldId	Specifies the field ID of the resource.
	For example, the field ID for the resource pool is `resourcePool`. For this example, the input value for *$fieldId* 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: ■ type -- data type of `entityRef`, `complexRef`, or `primary` ■ component ID -- componentID ■ classId -- schema class ID of current data type ■ id -- unique resource pool ID ■ label -- resource pool label
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 `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 Reservation

You can use the vRealize Automation REST API reservation service to display resource schema, such as storage and network information, for 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.

- Get the required compute resource ID. See Get a Compute Resource for the Reservation.

Procedure

◆ Use the reservation service to display resource schema information for an Amazon reservation.

The following example command displays storage and network information for the compute resource with an ID of 9d1a3b5a-7162-4a5a-85b7-ec1b2824f554.

```
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"
    }
  ]
}
```

Syntax for Getting Resources Schema for an Amazon Reservation

You can use the REST API reservation service data and schema service to display resource schema information, such as storage and network data, for an Amazon reservation.

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 reservation.

Table 4-15. 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.

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
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.

Parameter	Description
$schemaclassid	Specifies the schema class ID.
	This example illustrates how to use the `securityGroups` field of an Amazon reservation type as an example. The schema class ID of an Amazon reservation is `Infrastructure.Reservation.Cloud.Amazon`. For this example, the input value for *$schemaclassid* is `Infrastructure.Reservation.Cloud.Amazon`.
$fieldId	Specifies the field ID of the resource.
	For example, the field ID for the resource pool is `securityGroups`. For this example, the input value for *$fieldId* is `securityGroups`.
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 security group objects returned in a pageable list. Each security group object contains an `underlyingValue` and `label` entry.
underlyingValue	JSON string representing one permissible value for a field:
	■ type -- data type of `entityRef`, `complexRef`, or `primary`
	■ component ID -- componentID
	■ classId -- schema class ID of current data type
	■ id -- unique security group ID
	■ label -- security group label
label	Specifies the security groups label. This value matches the `underlyingValue` value.

Example: `curl` Command

The following example command displays resource schema security group 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"
      }
```

```
      }]
    }
  }
  ”
```

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 Air Reservation

You can use the REST API reservation service to display information about available resources, such as storage and network information, for a vCloud Air 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

◆ Use the reservation service to display information about available resources.

The following example command displays 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.vCloudAir/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"
        }
      ]
    }
```

Syntax for Getting Resources Schema for a vCloud Air Reservation

You can use the vRealize Automation REST API reservation service to display information about available resources, such as storage and network information, for a vCloud Air reservation.

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 Air reservation.

Table 4-16. 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 Air 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.
$schemaclassid	Specifies the schema class ID. This example illustrates how to use the `reservationStorages` field of a reservation type as an example. The schema class ID of a vCloud Air reservation is `Infrastructure.Reservation.Cloud.vCloudAir`. For this example, the input value for *$schemaclassid* is `Infrastructure.Reservation.Cloud.vCloudAir`.
$fieldId	Specifies the field ID of the resource. For example, the field ID for the reservation storage is `reservationStorages`. For this example, the input value for *$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	key -- Specifies the field ID of dependent field. For this example, enter `computeResource`. 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 Syntax for Getting Resources Schema for a vCloud Air Reservation.

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	JSON string representing one permissible value for a field: ■ type -- data type of `entityRef`, `complexRef`, or `primary` ■ component ID -- componentID ■ classId -- schema class ID of current data type ■ id -- unique reservation storage ID ■ label --reservation storage label
label	Specifies the reservation storage label. This value matches the `underlyingValue` value.

Example: `curl` Command

The following example command returns vCloud Air reservation storage information.

```
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 "
```

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 3 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": "memoryReservedSizeMb",
        "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",
          "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": "storageReservedSizeGB",
                "value": {
                  "type": "integer",
                  "value": 32
                }
              },
              {
                "key": "storageEnabled",
                "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": "storagePriority",
            "value": {
              "type": "integer",
              "value": 1
            }
          }]
        }
      }]
    }
  },
  {
    "key": "resourcePool",
    "value": {
      "type": "entityRef",
      "componentId": null,
      "classId": "ResourcePools",
      "id": "4e51fabc-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	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.

Input	Description
$token	Specifies a valid HTTP bearer token with necessary credentials.
HTTP body	The HTTP body describes the reservation to create and calls the REST API used to create the reservation. Compose the HTTP body using one of the following methods: ■ 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. ■ Use the API commands in Syntax for Verifying a Reservation and Getting Reservation Details, remove the appropriate ID field from the HTTP response, and edit the field values to compose the HTTP body input for the command line.

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 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",
          "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": "memoryReservedSizeMb",
            "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",
        "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": "storageReservedSizeGB",
              "value": {
                "type": "integer",
                "value": 32
              }
            },
            {
              "key": "storageEnabled",
              "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": "storagePriority",
              "value": {
                "type": "integer",
                "value": 1
              }
            }]
          }
        }]
      }
    },
    {
      "key": "resourcePool",
```

```
      "value": {
        "type": "entityRef",
        "componentId": null,
        "classId": "ResourcePools",
        "id": "4e51fabc-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 Air Reservation

You can use the vRealize Automation REST API reservation service to create a vCloud Air 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 3 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 vCloud Air reservation.

```
curl --insecure -H "Accept:application/json"
-H "Authorization: Bearer $token"
https://$host/reservation-service/api/reservations -d "
{
  "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",
              "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": "storagePriority",
        "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 Air reservation ID.

```
Location:
https://$host/reservation-service/api/reservations/3289b039-2a11-4ab4-a0bc-b583e4c6d085
```

Syntax for Creating a vCloud Air Reservation

You can use the REST API reservation service to create a vCloud Air 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
$token	Specifies a valid HTTP bearer token with necessary credentials.
HTTP body	The HTTP body describes the reservation to create and calls the REST API used to create the reservation.
	Compose the HTTP body using one of the following methods:
	▪ 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.
	▪ Update the formatted reservation information to specify the new information:
	▪ remove the appropriate ID field from the HTTP response
	▪ edit the field values to compose the HTTP body input for the command line
	For information, see Syntax for Verifying a Reservation and Getting Reservation Details.

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 sample command creates a vCloud Air 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": "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",
            "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 3 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",
          "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"
        }
      }
    ]
  }
}"
```

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	The HTTP body describes the reservation to create and calls the REST API used to create the reservation. Compose the HTTP body using one of the following methods: ■ 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. ■ Use the API commands in Syntax for Verifying a Reservation and Getting Reservation Details, remove the appropriate ID field from the HTTP response, and edit the field values to compose the HTTP body input for the command line.

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 3 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",
              "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": "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": "4e51fabc-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"
                  }
                },
                {
                  "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	https://$host/reservation-service/api/reservations/$reservationId
	This is the URL that is generated when you create a reservation using the REST API. See Syntax for Creating a vSphere Reservation.
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.
$reservationId	Specifies the unique identifier of the reservation to verify. Obtain the value from the output generated when you created the reservation. See Create a Reservation.

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 location attribute, format as https://$host /reservation-service/api/reservations/$reservationId.
$reservationId	The HTTP response should contain a location attribute, formatted as https://$host /reservation-service/api/reservations/$reservationId.

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",
        "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": "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": "4e51fabc-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",
              "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"
                    }
                  },
                  {
                    "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
          }
        }
      ]
    }
  }
}
]
}
}
```

Display a List of Reservations

You can use the vRealize Automation REST API reservation service to obtain and display a list of existing reservations to obtain the required reservation ID value in preparation for updating or deleting a 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 3 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",
          "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": "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": "4e51fabc-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	https://*$host*/reservation-service/api/reservations
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.

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.
	■ Self refers to the object which was returned or requested.
	■ First, Previous, Next, and Last refer to corresponding pages of pageable lists.
	■ Specifies the application or service that determines the other names.
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",
          "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": "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": "4e51fabc-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 3 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",
              "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",
        "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": "4e51fabc-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.
$reservationId	Specifies the unique identifier of the reservation to update. For information about how to obtain the reservation ID, see Syntax for Displaying a List of Reservations.
HTTP body	Contains the JSON information for the reservation, including the updated data for the parameters that you want to update. Most of this JSON string information is obtained by displaying the existing details of the *$reservationId*. See Syntax for Verifying a Reservation and Getting Reservation Details. 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. 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.

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
"
{
  "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",
        "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": "4e51fabc-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 3 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.
$token	Specifies a valid HTTP bearer token with necessary credentials.
$reservationId	Specifies the unique identifier of the reservation to delete. For information about how to obtain the reservation ID, see Syntax for Displaying a List of Reservations.

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 3 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 Policyand 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
$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	Specifies an array of link objects, each of which contains the following parts: ■ rel Specifies the name of the link. ■ Self refers to the object which was returned or requested. ■ First, Previous, Next, and Last refer to corresponding pages of pageable lists. ■ Specifies the application or service that determines the other names. ■ 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. Each tenant object contains the following information: ■ @type. Contains the ReservationPolicy string. ■ id. Specifies the unique reservation policy ID. ■ name. Specifies the reservation policy name. ■ description. Specifies the reservation policy description.
reservationPolicyTypeId	Specifies the type of reservation policy. Supported vRealize Automation reservation policy types are Reservation.Policy.ComputeResource and Reservation.Policy.Storage.
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

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 Policyand 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 3 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.
$token	Specifies a valid HTTP bearer token with necessary credentials.
HTTP body	Describes the reservation policy to create. ■ *$name* - reservation policy name ■ *$description* - reservation policy description
$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 3 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
$id	Specifies the reservation policy ID.
$name	Specifies the reservation policy name.
$description	Specifies the reservation policy description.
$reservationPolicyTypeId	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 3 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 "
{
  "id": "94d74105-831a-4598-8f42-efd590fea15c",
  "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
$token	Specifies a valid HTTP bearer token with necessary credentials.
HTTP body	Describes the reservation policy to update.
	To obtain the value, query the reservation policy and copy the response output to an editor for use as the basis of your command input. See Syntax for Displaying a Reservation Policy by ID.
	■ *$id* - reservation policy ID
	■ *$name* - reservation policy name
	■ *$description* - reservation policy description
	■ *$reservationPolicyTypeId* - reservation policy type ID
	The supported reservation policy types are Reservation.Policy.ComputeResource and Reservation.Policy.Storage.

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 "
{
  "id": "94d74105-831a-4598-8f42-efd590fea15c",
  "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 3 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 Syntax for Listing Reservation Policies.

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 *IaaS 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 3 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":
```
"jmfhkPFLe1xF4LsgxyYDlBH65IjiKsNH3xgeUhNt6AyIcSA2eZsxH9FNFcDst1cRLQUmLYLUCN6ZlrVtD3C5CYAOEE9UplO
+YKnAcqUSyXB6PQ3I/NuebdtGrx38fkTJsEpRqxLppWPJpVlHYRO2O7GhhWnE6F3bPwwg3dWwymqWHxBZlCcuEcztovbhN8r7/h
KsXKbNSJz
+J8DVhPB7PPdHJJ4E/6a9IXkNQs/T0NknCOyc0YcFVpgrc3PMGabi8vd/7v0nEtDARyA8WwAGgtedHGtBo2gciY1Bu/0SNr2yCz
sZcqbVeg4ufkjlv0G1Ed1FfGHMh5kuVC7alk2aSI5YkWnS4d9YJYi7diYmc7GmrVW0XWNz4kEMdQBkK+CvMxiZ17jyQD
+V4NuM4ydNPJJMqpvoAHtLrAmp/hXhInuf8j/l0mbawWSvUDUA3s4ZE55cFp546MJIrVCRyoMoKfxuHquIPdANRAVs7qo9DGxBi
CzjvyBqof21y6dhGCd1q48Dkd72QCj6gGV84lHZ/zXWcz4+aKFRVolNqSZEtZ/9wzdjqYdn/ySl0S5GE2rG/xRsh6g
+giB9j4VQOMvC/uvhkYUo3WfTgxi8SeipFIVcbvkkOI0ubPU1xnWdDErjji6UwEtmjajHuiA93GtiWIdeCvyKQWmo9jkkLUmQe4
XrmRt3P09FWm8Quwe5Hw6czK0dIODwcHE0Azl0TqLKl1wA39uhGrHoXNypFiOMmRbo1YnfIW23ggEnxRACY1jUZkTewhSbVY4S
+XyzvFDcTRpSjWpRUOozYuMSsDnRzCJZQXhg4IYvwTvG+uEUu4+YR
+WCrgC6Tk60i3cLSuHnV5k00AWXWwvnPnwYRFxxyzhcSDx4jyyCaysmBo9NHGwNkJU1F94SY5Vp6O0E9EJuViMohF1gc18Q6SXH
BNlrp0L7bAMggpmystGIkBNkSRhcDAFflNoS/MTEW0uJoDfe6DczAt9B0YGtHdy3AH/U4ADOPkz5xlQ4EL/rQSSolcBfVhbejVp
bktJo4YKB7dzSDcJTSw99Uve
+BQjhigVcfxDXme3MrXPO4BeCU891DLaTJyeYYADyGUKZfKFC6iCO9SQfynwK6iE2eYKLpIMcf/C8+rLJVXcy7gkjT/17WCu7mQ
XMevlIJlaApyytN1eCJcVDsr4N5LURZofnPArromhLy3JWiEJ4dtq+17KPiMff34e/kT
+i0ns73Wdy1oblZAi5kwBFMgBjAMex5fGNR1q/wtY1beWaxVw1J5RViaXeXSKO5mttE/dzW6ONeJygjIlpgfwSLwr8JA4GanN1R
WGeqRNjfOOGgdufIvDqmBB/klnuGTVgMVWc0caQMzFq07UcXlMsgNOROHBfkzelWB+v0kXHsQ4eSeYVhjnT3CPURr5UMZ8YQ7fm
+DltRM1Nw3o9WAJjQJ5xyT2kxou4PHBzoq6JouwrCluig7GQ06lVu2C3nNpyfGKsmFyOlHMaVuRYX9/dJQyibZAg1yDqyI3sIL3
CeGr7ynhOTEEQiAOWqgIUyDvrvc2Ma4RjjI4b3eFfBMkLWqTqs33+/5QktQz
+p5JrIb192STI/PwHY51MfkbDErpeNFY479P7yKlZGbB8WVBfFpJCoVTQoZNio1ZhA7nA+rkqNbM4mcHQ
+ZaYfxCc1UKO1AYBGS9ARz5OtYQU64Ei7tpWUbsYDXIA9Ss4VRASHvA7M3s
+N61TPQ9HZuof/c6TbzOWE0ojtxEyO3sDsBWumm13/61+JT3k0rIdmV25aVvxrUv1S3JLI/o/zGgR9yTOeADIXHWsF4lQyai9Mn
mEaclHVWmK+LiVZSAfk6auEm
+13a24+UM9Mg6ninfzeIq0cjdT3OUweXgDnK0BMGX0wfSIYIrpRrDr9QdVoHGtdqZvJ62F8aITjO8urIK
+bXZzwgFQ2JE4SYxojNHPYwBjadFm0A2eVPtOivMYYYr8FCUYtfbjjIS1TyJaKIFhhqs6bA6/PH
+NvBmbozpDkH9wg3mQ1SOP5iSMAMue6fx+b/SpOZ5MPnNjRo
+VXG3qFl936AB4F1F2ObD27GyjibeYmhQkITtp/yGYCZ68PhCun0/eiEjmXiOUx/5jYGOUEZ1Ddojhc5M/PClR46vQ/3Iyv5pUG
Pno
+wkn34lk6s2PO2axrXvQqTwoiYC3f2p1gp0qYidIzKa2KHrUCOF4hnjQ3v3z93ORMCK3wN5uQ3xMFOd7+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	https://*$host*/iaas-proxy-provider/api/keyPairs
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.

Output

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

Parameter	Description

Links	Specifies an array of link objects, each of which contains the following parts:
	
	■ rel
	
	    Specifies the name of the link.
	
	    ■ `Self` refers to the object that was returned or requested.
	
	    ■ `First`, `Previous`, `Next`, and `Last` refer to corresponding pages of pageable lists.
	
	    ■ Specifies the application or service that determines the other names.
	
	■ 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. Each tenant object can contain the following information:
	
	■ *@type*:
	
	    Contains the `KeyPair` string.
	
	■ *$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.

Metadata	Specifies the following paging-related data: ■ Size: Specifies the maximum number of rows per page. ■ totalElement: 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

```
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":
```
"jmfhkPFLe1xF4LsgxyYDlBH65IjiKsNH3xgeUhNt6AyIcSA2eZsxH9FNFcDst1cRLQUmLYLUCN6ZlrVtD3C5CYAOEE9UplO
+YKnAcqUSyXB6PQ3I/NuebdtGrx38fkTJsEpRqxLppWPJpVlHYRO2O7GhhWnE6F3bPwwg3dWwymqWHxBZlCcuEcztovbhN8r7/hKsXK
bNSJz
+J8DVhPB7PPdHJJ4E/6a9IXkNQs/T0NknCOyc0YcFVpgrc3PMGabi8vd/7v0nEtDARyA8WwAGgtedHGtBo2gciY1Bu/0SNr2yCzsZcq
bVeg4ufkjlv0G1Ed1FfGHMh5kuVC7alk2aSI5YkWnS4d9YJYi7diYmc7GmrVW0XWNz4kEMdQBkK+CvMxiZ17jyQD
+V4NuM4ydNPJJMqpvoAHtLrAmp/hXhInuf8j/l0mbawWSvUDUA3s4ZE55cFp546MJIrVCRyoMoKfxuHquIPdANRAVs7qo9DGxBiCzjv
yBqof21y6dhGCd1q48Dkd72QCj6gGV84lHZ/zXWcz4+aKFRVolNqSZEtZ/9wzdjqYdn/ySl0S5GE2rG/xRsh6g
+giB9j4VQOMvC/uvhkYUo3WfTgxi8SeipFIVcbvkkOI0ubPU1xnWdDErjji6UwEtmjajHuiA93GtiWIdeCvyKQWmo9jkkLUmQe4XrmR
t3P09FWm8Quwe5Hw6czK0dIODwcHE0Azl0TqLKl1wA39uhGrHoXNypFiOMmRbo1YnfIW23ggEnxRACY1jUZkTewhSbVY4S
+XyzvFDcTRpSjWpRUOozYuMSsDnRzCJZQXhg4IYvwTvG+uEUu4+YR
+WCrgC6Tk60i3cLSuHnV5k00AWXWwvnPnwYRFxxyzhcSDx4jyyCaysmBo9NHGwNkJU1F94SY5Vp6O0E9EJuViMohF1gc18Q6SXHBNlr
p0L7bAMggpmystGIkBNkSRhcDAFflNoS/MTEW0uJoDfe6DczAt9B0YGtHdy3AH/U4ADOPkz5xlQ4EL/rQSSolcBfVhbejVpbktJo4YK
B7dzSDcJTSw99Uve
+BQjhigVcfxDXme3MrXPO4BeCU891DLaTJyeYYADyGUKZfKFC6iCO9SQfynwK6iE2eYKLpIMcf/C8+rLJVXcy7gkjT/17WCu7mQXMev
lIJlaApyytN1eCJcVDsr4N5LURZofnPArromhLy3JWiEJ4dtq+17KPiMff34e/kT
+i0ns73Wdy1oblZAi5kwBFMgBjAMex5fGNR1q/wtY1beWaxVw1J5RViaXeXSKO5mttE/dzW6ONeJygjIlpgfwSLwr8JA4GanN1RWGeq
RNjfOOGgdufIvDqmBB/klnuGTVgMVWc0caQMzFq07UcXlMsgNOROHBfkzelWB+v0kXHsQ4eSeYVhjnT3CPURr5UMZ8YQ7fm
+DltRM1Nw3o9WAJjQJ5xyT2kxou4PHBzoq6JouwrCluig7GQ06lVu2C3nNpyfGKsmFyOlHMaVuRYX9/dJQyibZAg1yDqyI3sIL3CeGr
7ynhOTEEQiAOWqgIUyDvrvc2Ma4RjjI4b3eFfBMkLWqTqs33+/5QktQz
+p5JrIb192STI/PwHY51MfkbDErpeNFY479P7yKlZGbB8WVBfFpJCoVTQoZNio1ZhA7nA+rkqNbM4mcHQ
+ZaYfxCc1UKO1AYBGS9ARz5OtYQU64Ei7tpWUbsYDXIA9Ss4VRASHvA7M3s
+N61TPQ9HZuof/c6TbzOWE0ojtxEyO3sDsBWumm13/61+JT3k0rIdmV25aVvxrUv1S3JLI/o/zGgR9yTOeADIXHWsF4lQyai9MnmEac
lHVWmK+LiVZSAfk6auEm+13a24+UM9Mg6ninfzeIq0cjdT3OUweXgDnK0BMGX0wfSIYIrpRrDr9QdVoHGtdqZvJ62F8aITjO8urIK
+bXZzwgFQ2JE4SYxojNHPYwBjadFm0A2eVPtOivMYYYr8FCUYtfbjjIS1TyJaKIFhhqs6bA6/PH
+NvBmbozpDkH9wg3mQ1SOP5iSMAMue6fx+b/SpOZ5MPnNjRo
+VXG3qFl936AB4F1F2ObD27GyjibeYmhQkITtp/yGYCZ68PhCun0/eiEjmXiOUx/5jYGOUEZ1Ddojhc5M/PClR46vQ/3Iyv5pUGPno
+wkn34lk6s2PO2axrXvQqTwoiYC3f2p1gp0qYidIzKa2KHrUCOF4hnjQ3v3z93ORMCK3wN5uQ3xMFOd7+1XpetxvG9d7L1lU/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 3 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":
"jmfhkPFLe1xF4LsgxyYDlBH65IjiKsNH3xgeUhNt6AyIcSA2eZsxH9FNFcDst1cRLQUmLYLUCN6ZlrVtD3C5CYAOEE9UplO
+YKnAcqUSyXB6PQ3I/NuebdtGrx38fkTJsEpRqxLppWPJpVlHYRO2O7GhhWnE6F3bPwwg3dWwymqWHxBZlCcuEcztovbhN8r7/h
KsXKbNSJz
+J8DVhPB7PPdHJJ4E/6a9IXkNQs/T0NknCOyc0YcFVpgrc3PMGabi8vd/7v0nEtDARyA8WwAGgtedHGtBo2gciY1Bu/0SNr2yCz
sZcqbVeg4ufkjlv0G1Ed1FfGHMh5kuVC7alk2aSI5YkWnS4d9YJYi7diYmc7GmrVW0XWNz4kEMdQBkK+CvMxiZ17jyQD
+V4NuM4ydNPJJMqpvoAHtLrAmp/hXhInuf8j/l0mbawWSvUDUA3s4ZE55cFp546MJIrVCRyoMoKfxuHquIPdANRAVs7qo9DGxBi
CzjvyBqof21y6dhGCd1q48Dkd72QCj6gGV84lHZ/zXWcz4+aKFRVolNqSZEtZ/9wzdjqYdn/ySl0S5GE2rG/xRsh6g
+giB9j4VQOMvC/uvhkYUo3WfTgxi8SeipFIVcbvkkOI0ubPU1xnWdDErjji6UwEtmjajHuiA93GtiWIdeCvyKQWmo9jkkLUmQe4
XrmRt3P09FWm8Quwe5Hw6czK0dIODwcHE0Azl0TqLKl1wA39uhGrHoXNypFiOMmRbo1YnfIW23ggEnxRACY1jUZkTewhSbVY4S
+XyzvFDcTRpSjWpRUOozYuMSsDnRzCJZQXhg4IYvwTvG+uEUu4+YR
+WCrgC6Tk60i3cLSuHnV5k00AWXWwvnPnwYRFxxyzhcSDx4jyyCaysmBo9NHGwNkJU1F94SY5Vp6O0E9EJuViMohF1gc18Q6SXH
BNlrp0L7bAMggpmystGIkBNkSRhcDAFflNoS/MTEW0uJoDfe6DczAt9B0YGtHdy3AH/U4ADOPkz5xlQ4EL/rQSSolcBfVhbejVp
bktJo4YKB7dzSDcJTSw99Uve
+BQjhigVcfxDXme3MrXPO4BeCU891DLaTJyeYYADyGUKZfKFC6iCO9SQfynwK6iE2eYKLpIMcf/C8+rLJVXcy7gkjT/17WCu7mQ
XMevlIJlaApyytN1eCJcVDsr4N5LURZofnPArromhLy3JWiEJ4dtq+17KPiMff34e/kT
+i0ns73Wdy1oblZAi5kwBFMgBjAMex5fGNR1q/wtY1beWaxVw1J5RViaXeXSKO5mttE/dzW6ONeJygjIlpgfwSLwr8JA4GanN1R
WGeqRNjfOOGgdufIvDqmBB/klnuGTVgMVWc0caQMzFq07UcXlMsgNOROHBfkzelWB+v0kXHsQ4eSeYVhjnT3CPURr5UMZ8YQ7fm
+DltRM1Nw3o9WAJjQJ5xyT2kxou4PHBzoq6JouwrCluig7GQO6lVu2C3nNpyfGKsmFyOlHMaVuRYX9/dJQyibZAg1yDqyI3sIL3
```

```
CeGr7ynhOTEEQiAOWqgIUyDvrvc2Ma4RjjI4b3eFfBMkLWqTqs33+/5QktQz
+p5JrIb192STI/PwHY51MfkbDErpeNFY479P7yKlZGbB8WVBfFpJCoVTQoZNio1ZhA7nA+rkqNbM4mcHQ
+ZaYfxCc1UKO1AYBGS9ARz5OtYQU64Ei7tpWUbsYDXIA9Ss4VRASHvA7M3s
+N61TPQ9HZuof/c6TbzOWE0ojtxEyO3sDsBWumm13/61+JT3k0rIdmV25aVvxrUv1S3JLI/o/zGgR9yTOeADIXHWsF4lQyai9Mn
mEaclHVWmK+LiVZSAfk6auEm
+13a24+UM9Mg6ninfzeIq0cjdT3OUweXgDnK0BMGX0wfSIYIrpRrDr9QdVoHGtdqZvJ62F8aITjO8urIK
+bXZzwgFQ2JE4SYxojNHPYwBjadFm0A2eVPtOivMYYYr8FCUYtfbjjIS1TyJaKIFhhqs6bA6/PH
+NvBmbozpDkH9wg3mQ1SOP5iSMAMue6fx+b/SpOZ5MPnNjRo
+VXG3qFl936AB4F1F2ObD27GyjibeYmhQkITtp/yGYCZ68PhCun0/eiEjmXiOUx/5jYGOUEZ1Ddojhc5M/PClR46vQ/3Iyv5pUG
Pno
+wkn34lk6s2PO2axrXvQqTwoiYC3f2p1gp0qYidIzKa2KHrUCOF4hnjQ3v3z93ORMCK3wN5uQ3xMFOd7+1XpetxvG9d7L1lU/sg
CVmEhdOSnhLC5Jeq70MVwixPocnJR4nyotPE=="
}
"
```

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	Contains the HTTP body of the target key pair. ■ $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.

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 `https://$host/iaas-proxy-provider/api/keyPairs/$keypairID`.
$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":
"jmfhkPFLe1xF4LsgxyYDlBH65IjiKsNH3xgeUhNt6AyIcSA2eZsxH9FNFcDst1cRLQUmLYLUCN6ZlrVtD3C5CYAOEE9UplO
+YKnAcqUSyXB6PQ3I/NuebdtGrx38fkTJsEpRqxLppWPJpVlHYRO2O7GhhWnE6F3bPwwg3dWwymqWHxBZlCcuEcztovbhN8r7/hKsXK
bNSJz
+J8DVhPB7PPdHJJ4E/6a9IXkNQs/T0NknCOyc0YcFVpgrc3PMGabi8vd/7v0nEtDARyA8WwAGgtedHGtBo2gciY1Bu/0SNr2yCzsZcq
bVeg4ufkjlv0G1Ed1FfGHMh5kuVC7alk2aSI5YkWnS4d9YJYi7diYmc7GmrVW0XWNz4kEMdQBkK+CvMxiZ17jyQD
+V4NuM4ydNPJJMqpvoAHtLrAmp/hXhInuf8j/l0mbawWSvUDUA3s4ZE55cFp546MJIrVCRyoMoKfxuHquIPdANRAVs7qo9DGxBiCzjv
yBqof21y6dhGCd1q48Dkd72QCj6gGV84lHZ/zXWcz4+aKFRVolNqSZEtZ/9wzdjqYdn/ySl0S5GE2rG/xRsh6g
+giB9j4VQOMvC/uvhkYUo3WfTgxi8SeipFIVcbvkkOI0ubPU1xnWdDErjji6UwEtmjajHuiA93GtiWIdeCvyKQWmo9jkkLUmQe4XrmR
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+XyzvFDcTRpSjWpRUOozYuMSsDnRzCJZQXhg4IYvwTvG+uEUu4+YR
+WCrgC6Tk60i3cLSuHnV5k00AWXWwvnPnwYRFxxyzhcSDx4jyyCaysmBo9NHGwNkJU1F94SY5Vp6O0E9EJuViMohF1gc18Q6SXHBNlr
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+i0ns73Wdy1oblZAi5kwBFMgBjAMex5fGNR1q/wtY1beWaxVw1J5RViaXeXSKO5mttE/dzW6ONeJygjIlpgfwSLwr8JA4GanN1RWGeq
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+DltRM1Nw3o9WAJjQJ5xyT2kxou4PHBzoq6JouwrCluig7GQ06lVu2C3nNpyfGKsmFyOlHMaVuRYX9/dJQyibZAg1yDqyI3sIL3CeGr
7ynhOTEEQiAOWqgIUyDvrvc2Ma4RjjI4b3eFfBMkLWqTqs33+/5QktQz
+p5JrIb192STI/PwHY51MfkbDErpeNFY479P7yKlZGbB8WVBfFpJCoVTQoZNio1ZhA7nA+rkqNbM4mcHQ
+ZaYfxCc1UKO1AYBGS9ARz5OtYQU64Ei7tpWUbsYDXIA9Ss4VRASHvA7M3s
+N61TPQ9HZuof/c6TbzOWE0ojtxEyO3sDsBWumm13/61+JT3k0rIdmV25aVvxrUv1S3JLI/o/zGgR9yTOeADIXHWsF4lQyai9MnmEac
lHVWmK+LiVZSAfk6auEm+13a24+UM9Mg6ninfzeIq0cjdT3OUweXgDnK0BMGX0wfSIYIrpRrDr9QdVoHGtdqZvJ62F8aITjO8urIK
+bXZzwgFQ2JE4SYxojNHPYwBjadFm0A2eVPtOivMYYYr8FCUYtfbjjIS1TyJaKIFhhqs6bA6/PH
+NvBmbozpDkH9wg3mQ1SOP5iSMAMue6fx+b/SpOZ5MPnNjRo
+VXG3qFl936AB4F1F2ObD27GyjibeYmhQkITtp/yGYCZ68PhCun0/eiEjmXiOUx/5jYGOUEZ1Ddojhc5M/PClR46vQ/3Iyv5pUGPno
+wkn34lk6s2PO2axrXvQqTwoiYC3f2p1gp0qYidIzKa2KHrUCOF4hnjQ3v3z93ORMCK3wN5uQ3xMFOd7+1XpetxvG9d7L1lU/sgCVmE
hdOSnhLC5Jeq70MVwixPocnJR4nyotPE=="
}
"
```

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 3 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 3 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":
"jmfhkPFLe1xF4LsgxyYDlBH65IjiKsNH3xgeUhNt6AyIcSA2eZsxH9FNFcDst1cRLQUmLYLUCN6ZlrVtD3C5CYAOEE9UplO
+YKnAcqUSyXB6PQ3I/NuebdtGrx38fkTJsEpRqxLppWPJpVlHYRO2O7GhhWnE6F3bPwwg3dWwymqWHxBZlCcuEcztovbhN8r7/h
KsXKbNSJz
+J8DVhPB7PPdHJJ4E/6a9IXkNQs/T0NknCOyc0YcFVpgrc3PMGabi8vd/7v0nEtDARyA8WwAGgtedHGtBo2gciY1Bu/0SNr2yCz
sZcqbVeg4ufkjlv0G1Ed1FfGHMh5kuVC7alk2aSI5YkWnS4d9YJYi7diYmc7GmrVW0XWNz4kEMdQBkK+CvMxiZ17jyQD
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+giB9j4VQOMvC/uvhkYUo3WfTgxi8SeipFIVcbvkkOI0ubPU1xnWdDErjji6UwEtmjajHuiA93GtiWIdeCvyKQWmo9jkkLUmQe4
XrmRt3P09FWm8Quwe5Hw6czK0dIODwcHE0Azl0TqLKl1wA39uhGrHoXNypFiOMmRbo1YnfIW23ggEnxRACY1jUZkTewhSbVY4S
+XyzvFDcTRpSjWpRUOozYuMSsDnRzCJZQXhg4IYvwTvG+uEUu4+YR
+WCrgC6Tk60i3cLSuHnV5k00AWXWwvnPnwYRFxxyzhcSDx4jyyCaysmBo9NHGwNkJU1F94SY5Vp6O0E9EJuViMohF1gc18Q6SXH
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bktJo4YKB7dzSDcJTSw99Uve
+BQjhigVcfxDXme3MrXPO4BeCU891DLaTJyeYYADyGUKZfKFC6iCO9SQfynwK6iE2eYKLpIMcf/C8+rLJVXcy7gkjT/17WCu7mQ
XMevlIJlaApyytN1eCJcVDsr4N5LURZofnPArromhLy3JWiEJ4dtq+17KPiMff34e/kT
+i0ns73Wdy1oblZAi5kwBFMgBjAMex5fGNR1q/wtY1beWaxVw1J5RViaXeXSKO5mttE/dzW6ONeJygjIlpgfwSLwr8JA4GanN1R
WGeqRNjfOOGgdufIvDqmBB/klnuGTVgMVWc0caQMzFq07UcXlMsgNOROHBfkzelWB+v0kXHsQ4eSeYVhjnT3CPURr5UMZ8YQ7fm
+DltRM1Nw3o9WAJjQJ5xyT2kxou4PHBzoq6JouwrCluig7GQ06lVu2C3nNpyfGKsmFyOlHMaVuRYX9/dJQyibZAg1yDqyI3sIL3
CeGr7ynhOTEEQiAOWqgIUyDvrvc2Ma4RjjI4b3eFfBMkLWqTqs33+/5QktQz
+p5JrIb192STI/PwHY51MfkbDErpeNFY479P7yKlZGbB8WVBfFpJCoVTQoZNio1ZhA7nA+rkqNbM4mcHQ
+ZaYfxCc1UKO1AYBGS9ARz5OtYQU64Ei7tpWUbsYDXIA9Ss4VRASHvA7M3s
+N61TPQ9HZuof/c6TbzOWE0ojtxEyO3sDsBWumm13/61+JT3k0rIdmV25aVvxrUv1S3JLI/o/zGgR9yTOeADIXHWsF4lQyai9Mn
mEaclHVWmK+LiVZSAfk6auEm
+13a24+UM9Mg6ninfzeIq0cjdT3OUweXgDnK0BMGX0wfSIYIrpRrDr9QdVoHGtdqZvJ62F8aITjO8urIK
+bXZzwgFQ2JE4SYxojNHPYwBjadFm0A2eVPtOivMYYYr8FCUYtfbjjIS1TyJaKIFhhqs6bA6/PH
+NvBmbozpDkH9wg3mQ1SOP5iSMAMue6fx+b/SpOZ5MPnNjRo
+VXG3qFl936AB4F1F2ObD27GyjibeYmhQkITtp/yGYCZ68PhCun0/eiEjmXiOUx/5jYGOUEZ1Ddojhc5M/PClR46vQ/3Iyv5pUG
Pno
+wkn34lk6s2PO2axrXvQqTwoiYC3f2p1gp0qYidIzKa2KHrUCOF4hnjQ3v3z93ORMCK3wN5uQ3xMFOd7+1XpetxvG9d7L1lU/sg
CVmEhdOSnhLC5Jeq70MVwixPocnJR4nyotPE=="
}
"
```

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	https://*$host*/iaas-proxy-provider/api/keyPairs/*$id*
Method	Put
$host	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.
$token	Specifies a valid HTTP bearer token with necessary credentials.
HTTP Body	Contains the HTTP body that describes the key pair to update and what to update in the identified key pair. ■ *$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.

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":
"jmfhkPFLe1xF4LsgxyYDlBH65IjiKsNH3xgeUhNt6AyIcSA2eZsxH9FNFcDst1cRLQUmLYLUCN6ZlrVtD3C5CYAOEE9UplO
+YKnAcqUSyXB6PQ3I/NuebdtGrx38fkTJsEpRqxLppWPJpVlHYRO2O7GhhWnE6F3bPwwg3dWwymqWHxBZlCcuEcztovbhN8r7/hKsXK
bNSJz
```

```
+J8DVhPB7PPdHJJ4E/6a9IXkNQs/T0NknCOyc0YcFVpgrc3PMGabi8vd/7v0nEtDARyA8WwAGgtedHGtBo2gciY1Bu/0SNr2yCzsZcq
bVeg4ufkjlv0G1Ed1FfGHMh5kuVC7alk2aSI5YkWnS4d9YJYi7diYmc7GmrVW0XWNz4kEMdQBkK+CvMxiZ17jyQD
+V4NuM4ydNPJJMqpvoAHtLrAmp/hXhInuf8j/l0mbawWSvUDUA3s4ZE55cFp546MJIrVCRyoMoKfxuHquIPdANRAVs7qo9DGxBiCzjv
yBqof21y6dhGCd1q48Dkd72QCj6gGV84lHZ/zXWcz4+aKFRVolNqSZEtZ/9wzdjqYdn/ySl0S5GE2rG/xRsh6g
+giB9j4VQOMvC/uvhkYUo3WfTgxi8SeipFIVcbvkkOI0ubPU1xnWdDErjji6UwEtmjajHuiA93GtiWIdeCvyKQWmo9jkkLUmQe4XrmR
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+XyzvFDcTRpSjWpRUOozYuMSsDnRzCJZQXhg4IYvwTvG+uEUu4+YR
+WCrgC6Tk60i3cLSuHnV5k00AWXWwvnPnwYRFxxyzhcSDx4jyyCaysmBo9NHGwNkJU1F94SY5Vp6O0E9EJuViMohF1gc18Q6SXHBNlr
p0L7bAMggpmystGIkBNkSRhcDAFlNoS/MTEW0uJoDfe6DczAt9B0YGtHdy3AH/U4ADOPkz5xlQ4EL/rQSSolcBfVhbejVpbktJo4YK
B7dzSDcJTSw99Uve
+BQjhigVcfxDXme3MrXPO4BeCU891DLaTJyeYYADyGUKZfKFC6iCO9SQfynwK6iE2eYKLpIMcf/C8+rLJVXcy7gkjT/17WCu7mQXMev
lIJlaApyytN1eCJcVDsr4N5LURZofnPArromhLy3JWiEJ4dtq+17KPiMff34e/kT
+i0ns73Wdy1oblZAi5kwBFMgBjAMex5fGNR1q/wtY1beWaxVw1J5RViaXeXSKO5mttE/dzW6ONeJygjIlpgfwSLwr8JA4GanN1RWGeq
RNjfOOGgdufIvDqmBB/klnuGTVgMVWc0caQMzFq07UcXlMsgNOROHBfkzelWB+v0kXHsQ4eSeYVhjnT3CPURr5UMZ8YQ7fm
+DltRM1Nw3o9WAJjQJ5xyT2kxou4PHBzoq6JouwrCluig7GQ06lVu2C3nNpyfGKsmFyOlHMaVuRYX9/dJQyibZAg1yDqyI3sIL3CeGr
7ynhOTEEQiAOWqgIUyDvrvc2Ma4RjjI4b3eFfBMkLWqTqs33+/5QktQz
+p5JrIb192STI/PwHY51MfkbDErpeNFY479P7yKlZGbB8WVBfFpJCoVTQoZNio1ZhA7nA+rkqNbM4mcHQ
+ZaYfxCc1UKO1AYBGS9ARz5OtYQU64Ei7tpWUbsYDXIA9Ss4VRASHvA7M3s
+N61TPQ9HZuof/c6TbzOWE0ojtxEyO3sDsBWumm13/61+JT3k0rIdmV25aVvxrUv1S3JLI/o/zGgR9yTOeADIXHWsF4lQyai9MnmEac
lHVWmK+LiVZSAfk6auEm+13a24+UM9Mg6ninfzeIq0cjdT3OUweXgDnK0BMGX0wfSIYIrpRrDr9QdVoHGtdqZvJ62F8aITjO8urIK
+bXZzwgFQ2JE4SYxojNHPYwBjadFm0A2eVPtOivMYYYr8FCUYtfbjjIS1TyJaKIFhhqs6bA6/PH
+NvBmbozpDkH9wg3mQ1SOP5iSMAMue6fx+b/SpOZ5MPnNjRo
+VXG3qFl936AB4F1F2ObD27GyjibeYmhQkITtp/yGYCZ68PhCun0/eiEjmXiOUx/5jYGOUEZ1Ddojhc5M/PClR46vQ/3Iyv5pUGPno
+wkn34lk6s2PO2axrXvQqTwoiYC3f2p1gp0qYidIzKa2KHrUCOF4hnjQ3v3z93ORMCK3wN5uQ3xMFOd7+1XpetxvG9d7L1lU/sgCVmE
hdOSnhLC5Jeq70MVwixPocnJR4nyotPE=="
}
"
```

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 3 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 3 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
$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 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

- Routed

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 3 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",
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                  "name": null,
                  "description": null,
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                  "hostName": "",
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              "lastModifiedDate": "2014-11-11T02:29:05.000Z"
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              "description": null,
              "IPv4Address": "10.118.190.110",
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              "id": "f5cfa798-3237-4891-9baf-6182c17174f2",
              "name": null,
              "description": null,
              "IPv4Address": "10.118.190.117",
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              "hostName": "",
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              "name": null,
              "description": null,
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              "hostName": "",
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              "name": null,
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              "name": null,
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            "name": null,
            "description": null,
            "IPv4Address": "10.118.190.120",
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            "hostName": "",
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            "lastModifiedDate": "2014–11–11T02:29:05.000Z"
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            "name": null,
            "description": null,
            "IPv4Address": "10.118.190.124",
            "IPSortValue": 0,
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            "name": null,
            "description": null,
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            "description": null,
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            "name": null,
            "description": null,
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            "IPSortValue": 0,
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            "hostName": "",
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                     "lastModifiedDate": "2014–11–11T02:29:05.000Z"
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                   "description": null,
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                   "IPSortValue": 0,
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                   "name": null,
                   "description": null,
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                   "name": null,
                   "description": null,
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                   "IPSortValue": 0,
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                   "hostName": "",
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                   "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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          "primaryWinsAddress": "10.0.0.1",
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          "leaseTimeInSeconds": 0
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        "@type": "PrivateNetworkProfile",
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        "name": "privateTest",
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            "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",
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                "id": "ac250933-932b-44cd-9a56-05b000221a17",
                "name": null,
                "description": null,
                "IPv4Address": "10.118.190.116",
                "IPSortValue": 0,
                "state": "UNALLOCATED",
                "hostName": "",
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                "name": null,
                "description": null,
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                "IPSortValue": 0,
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              {
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                "name": null,
                "description": null,
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        "description": null,
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        "name": null,
        "description": null,
        "IPv4Address": "10.118.190.114",
        "IPSortValue": 0,
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        "hostName": "",
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      },
      {
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        "name": null,
        "description": null,
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        "id": "7eebd0ad-0dde-4fa1-aad3-750498214caf",
        "name": null,
        "description": null,
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        "IPSortValue": 0,
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        "hostName": "",
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      {
        "id": "37ca8368-5d19-4d23-a6b8-7b233bb2320d",
        "name": null,
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        "IPSortValue": 0,
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                    "description": null,
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                    "hostName": "",
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                    "name": null,
                    "description": null,
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                    "hostName": "",
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                    "lastModifiedDate": "2014-11-11T02:25:57.000Z"
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            ]
        }
    ],
    "profileType": "PRIVATE",
    "subnetMask": "255.255.255.0",
    "gatewayAddress": "10.118.190.230",
    "dhcpStartIPAddress": null,
    "dhcpEndIPAddress": null,
    "leaseTimeInSeconds": 0
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    "id": "a3dbfc76-7eab-4c1f-8f59-8fcc0b50ec6c",
    "name": "routedTest",
    "description": "",
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    "lastModifiedDate": "2014-11-11T02:31:11.000Z",
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            "name": "Range 1",
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            "endIPv4Address": "10.118.183.254",
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            "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",
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                "name": null,
                "description": null,
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                "IPSortValue": 0,
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                "hostName": "",
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              },
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                },
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                  "name": null,
                  "description": null,
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                },
                {
                  "id": "42093f0e-7814-46cf-b3ee-2544aa79a20d",
                  "name": null,
                  "description": null,
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                  "name": null,
                  "description": null,
                  "IPv4Address": "10.110.183.213",
                  "IPSortValue": 0,
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          "IPSortValue": 0,
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          "name": null,
          "description": null,
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          "description": null,
          "IPv4Address": "10.110.183.207",
          "IPSortValue": 0,
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        },
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          "name": null,
          "description": null,
          "IPv4Address": "10.110.183.214",
          "IPSortValue": 0,
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          "name": null,
          "description": null,
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          "IPSortValue": 0,
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                      "description": null,
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                      "description": null,
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                      "state": "UNALLOCATED",
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                      "name": null,
                      "description": null,
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                      "IPSortValue": 0,
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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"
                    },
```

```json
    {
      "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	https://*$host*/iaas-proxy-provider/api/network/profiles
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.

Output

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

Parameter	Description
Links	Specifies an array of link objects, each of which contains the following parts: ■ rel Specifies the name of the link. ■ Self refers to the object that was returned or requested. ■ First, Previous, Next, and Last refer to corresponding pages of pageable lists. ■ Specifies the application or service that determines the other names. ■ 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. Each tenant object can contain the following information: ■ *@type*: Specifies one of the following network profile type values: ■ ExternalNetworkProfile ■ NATNetworkProfile ■ PrivateNetworkProfile ■ RoutedNetworkProfile ■ *$id*: Specifies the unique network profile identifier. ■ *$name*: Specifies the network profile name. ■ createdDate: Specifies the date and time that the network profile was created. ■ lastModifiedDate: Specifies the date and time that the network profile was last modified. ■ isHidden: Specifies if the network profile is hidden from the vRealize Automation user interface. ■ definedRanges: Specifies the IP range array that is defined for the network profile. ■ profileType: Specifies the network profile type as one of the following types: ■ EXTERNAL ■ NAT ■ PRIVATE

Parameter	Description
	▪ ROUTED ▪ subnetMask: Specifies the subnet mask. ▪ gatewayAddress: Specifies the IP address of the network gateway. ▪ primaryDnsAddress: Specifies the IP address of the primary DNS server. This parameter is only available for external, NAT, and routed network profiles. ▪ secondaryDnsAddress: Specifies the IP address of a secondary DNS server. This parameter is only available for external, NAT, and routed network profiles. ▪ dnsSuffix: Specifies the DNS suffix. This parameter is only available for external, NAT, and routed network profiles. ▪ dnsSearchSuffix: Specifies the DNS search suffix. This parameter is only available for external, NAT, and routed network profiles. ▪ primaryWinsAddress: Specifies the IP address of the primary Wins server. This parameter is only available for external, NAT, and routed network profiles. ▪ secondaryWinsAddress: Specifies the IP address of secondary Wins server. This parameter is only available for external, NAT, and routed network profiles. ▪ dhcpStartIPAddress: Specifies the start IP address of the DHCP server. This parameter is only supported by NAT and private network profiles. ▪ dhcpEndIPAddress: Specifies the end IP address of the DHCP server. This parameter is only supported by NAT and private network profiles. ▪ leaseTimeInSeconds: Specifies the lease time for the DHCP server. This parameter is only supported by NAT and private network profiles. ▪ baseIP: Specifies the base IP address. This parameter is only supported by routed network profiles.
Metadata	Specifies the following paging-related data: ▪ Size: Specifies the maximum number of rows per page. ▪ totalElement: Specifies the number of rows returned.

Parameter	Description
	▪ 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 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"
```

```
          },
          {
            "id": "012075d0-1c54-4792-b0ba-d4d93b002efc",
            "name": null,
            "description": null,
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            "description": null,
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            "name": null,
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            "name": null,
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          }
        ]
      }
    ],
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    "gatewayAddress": "10.118.190.230",
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    "secondaryDnsAddress": "",
    "dnsSuffix": "mycompany.com",
    "dnsSearchSuffix": "",
    "primaryWinsAddress": "10.0.0.1",
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    "dhcpStartIPAddress": null,
    "dhcpEndIPAddress": null,
    "leaseTimeInSeconds": 0
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    "name": "privateTest",
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        "name": "range",
        "description": "",
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        "endIPv4Address": "10.118.190.120",
        "state": "UNALLOCATED",
        "createdDate": "2014-11-11T02:25:57.000Z",
        "lastModifiedDate": "2014-11-11T02:25:57.000Z",
        "definedAddresses": [
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            "id": "ac250933-932b-44cd-9a56-05b000221a17",
            "name": null,
            "description": null,
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            "IPSortValue": 0,
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            "hostName": "",
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            "name": null,
            "description": null,
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            "IPSortValue": 0,
            "state": "UNALLOCATED",
            "hostName": "",
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        "name": null,
        "description": null,
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        "name": null,
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        "description": null,
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        "IPSortValue": 0,
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        "hostName": "",
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        "description": null,
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        "name": null,
        "description": null,
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        "IPSortValue": 0,
        "state": "UNALLOCATED",
        "hostName": "",
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          "description": null,
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        },
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          "name": null,
          "description": null,
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          "IPSortValue": 0,
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          "hostName": "",
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          "name": null,
          "description": null,
          "IPv4Address": "10.118.190.118",
          "IPSortValue": 0,
          "state": "UNALLOCATED",
          "hostName": "",
          "createdDate": "2014−11−11T02:25:57.000Z",
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          "id": "a39fb517−bffb−4390−8fe5−c4e9f15ed247",
          "name": null,
          "description": null,
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          "IPSortValue": 0,
          "state": "UNALLOCATED",
          "hostName": "",
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          "lastModifiedDate": "2014−11−11T02:25:57.000Z"
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"profileType": "PRIVATE",
"subnetMask": "255.255.255.0",
"gatewayAddress": "10.118.190.230",
"dhcpStartIPAddress": null,
"dhcpEndIPAddress": null,
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          "name": "routedTest",
          "description": "",
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              "name": "Range 1",
              "description": "",
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              "endIPv4Address": "10.118.183.254",
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              "createdDate": "2014-11-11T02:30:34.000Z",
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              "definedAddresses": [

              ]
            }
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          "profileType": "ROUTED",
          "subnetMask": "255.255.254.0",
          "primaryDnsAddress": "10.110.182.45",
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          "dnsSuffix": "mycompany.com",
          "dnsSearchSuffix": "",
          "primaryWinsAddress": "10.0.0.1",
          "secondaryWinsAddress": "",
          "baseIP": "10.118.183.1"
        },
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          "id": "68b6a183-fc8a-4592-af23-92f8d410ee32",
          "name": "externalTest",
          "description": "",
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          "isHidden": false,
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              "id": "3a85a049-522f-4b64-8f60-6e7b252ad204",
              "name": "range",
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          "hostName": "",
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        },
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          "name": null,
          "description": null,
          "IPv4Address": "10.110.183.201",
          "IPSortValue": 0,
          "state": "UNALLOCATED",
          "hostName": "",
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          "lastModifiedDate": "2014-11-11T02:23:38.000Z"
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          "name": null,
          "description": null,
          "IPv4Address": "10.110.183.216",
          "IPSortValue": 0,
          "state": "UNALLOCATED",
          "hostName": "",
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          "name": null,
          "description": null,
          "IPv4Address": "10.110.183.204",
          "IPSortValue": 0,
          "state": "UNALLOCATED",
          "hostName": "",
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          "name": null,
          "description": null,
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          "hostName": "",
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        {
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              "name": null,
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              "name": null,
              "description": null,
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              "IPSortValue": 0,
              "state": "UNALLOCATED",
              "hostName": "",
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              "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": "",
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          {
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              "name": null,
              "description": null,
              "IPv4Address": "10.110.183.207",
              "IPSortValue": 0,
              "state": "UNALLOCATED",
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              "lastModifiedDate": "2014-11-11T02:23:38.000Z"
          },
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              "name": null,
              "description": null,
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              "IPSortValue": 0,
              "state": "UNALLOCATED",
              "hostName": "",
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              "lastModifiedDate": "2014-11-11T02:23:38.000Z"
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          {
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              "name": null,
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              "IPSortValue": 0,
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              "hostName": "",
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          },
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              "id": "f1962c5e-6b48-4cd5-9f2d-93b706690b6b",
              "name": null,
              "description": null,
              "IPv4Address": "10.110.183.205",
              "IPSortValue": 0,
              "state": "UNALLOCATED",
              "hostName": "",
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              "lastModifiedDate": "2014-11-11T02:23:38.000Z"
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          {
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              "name": null,
              "description": null,
              "IPv4Address": "10.110.183.219",
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              "state": "UNALLOCATED",
              "hostName": "",
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              "description": null,
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              "IPSortValue": 0,
              "state": "UNALLOCATED",
              "hostName": "",
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              "lastModifiedDate": "2014-11-11T02:23:38.000Z"
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              "name": null,
              "description": null,
              "IPv4Address": "10.110.183.208",
              "IPSortValue": 0,
              "state": "UNALLOCATED",
              "hostName": "",
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              "lastModifiedDate": "2014-11-11T02:23:38.000Z"
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            "name": null,
            "description": null,
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            "IPSortValue": 0,
            "state": "UNALLOCATED",
            "hostName": "",
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            "id": "900fcc08-7713-41fe-9f3a-e5c0da3f02b7",
            "name": null,
            "description": null,
            "IPv4Address": "10.110.183.217",
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            "state": "UNALLOCATED",
            "hostName": "",
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            "lastModifiedDate": "2014-11-11T02:23:38.000Z"
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            "id": "4854b7af-13fa-48ed-a69f-e7e428699909",
            "name": null,
            "description": null,
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            "hostName": "",
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            "id": "4a1b41fe-f585-43b1-8c62-ee8a14f026cf",
            "name": null,
            "description": null,
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            "IPSortValue": 0,
            "state": "UNALLOCATED",
            "hostName": "",
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            "lastModifiedDate": "2014-11-11T02:23:38.000Z"
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            "name": null,
            "description": null,
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            "IPSortValue": 0,
            "state": "UNALLOCATED",
            "hostName": "",
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            "name": null,
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            "IPSortValue": 0,
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            "hostName": "",
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        }
      ]
    },
    {
      "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",
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          "name": null,
          "description": null,
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          "IPSortValue": 0,
          "state": "UNALLOCATED",
          "hostName": "",
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        },
        {
          "id": "d6112083-b195-4f94-9b07-0fe490d5caa8",
          "name": null,
          "description": null,
          "IPv4Address": "10.110.183.192",
          "IPSortValue": 0,
          "state": "UNALLOCATED",
          "hostName": "",
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        },
        {
          "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",
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        },
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          "description": null,
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          "IPSortValue": 0,
          "state": "UNALLOCATED",
          "hostName": "",
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        },
        {
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          "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"
        },
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          "name": null,
          "description": null,
          "IPv4Address": "10.110.183.181",
          "IPSortValue": 0,
          "state": "UNALLOCATED",
          "hostName": "",
          "createdDate": "2014-11-11T02:24:04.000Z",
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        },
        {
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          "name": null,
          "description": null,
          "IPv4Address": "10.110.183.183",
          "IPSortValue": 0,
          "state": "UNALLOCATED",
          "hostName": "",
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          "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 3 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 Syntax for Getting a Network Profile Listtopic. 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 3 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",
```

```json
      "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,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	https://*$host*/iaas-proxy-provider/api/network/profiles/*$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.
$id:	Specifies the unique network profile identifier.

Output

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

Parameter	Description

Links	Specifies an array of link objects, each of which contains the following parts:
	
	■ rel
	
	  Specifies the name of the link.
	
	  ■ Self refers to the object that was returned or requested.
	
	  ■ First, Previous, Next, and Last refer to corresponding pages of pageable lists.
	
	  ■ Specifies the application or service that determines the other names.
	
	■ 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*:
	
	  Specifies one of the following network profile type values:
	
	  ■ ExternalNetworkProfile
	
	  ■ NATNetworkProfile
	
	  ■ RoutedNetworkProfile
	
	■ *$id*:
	
	  Specifies the unique network profile identifier.
	
	■ *$name*:
	
	  Specifies the network profile name.
	
	■ createdDate:
	
	  Specifies the date and time that the network profile was created.
	
	■ lastModifiedDate:
	
	  Specifies the date and time that the network profile was last modified.
	
	■ isHidden:
	
	  Specifies if the network profile is hidden from the vRealize Automation user interface.
	
	■ definedRanges:
	
	  Specifies the IP range array that is defined for the network profile.
	
	■ profileType:
	
	  Specifies the network profile type as one of the following types:
	
	  ■ EXTERNAL
	
	  ■ NAT

Parameter	Description
	■ ROUTED
	■ subnetMask:
	Specifies the subnet mask.
	■ gatewayAddress:
	Specifies the IP address of the network gateway.
	■ primaryDnsAddress:
	Specifies the IP address of the primary DNS server. This parameter is only available for external, NAT, and routed network profiles.
	■ secondaryDnsAddress:
	Specifies the IP address of a secondary DNS server. This parameter is only available for external, NAT, and routed network profiles.
	■ dnsSuffix:
	Specifies the DNS suffix. This parameter is only available for external, NAT, and routed network profiles.
	■ dnsSearchSuffix:
	Specifies the DNS search suffix. This parameter is only available for external, NAT, and routed network profiles.
	■ primaryWinsAddress:
	Specifies the IP address of the primary Wins server. This parameter is only available for external, NAT, and routed network profiles.
	■ secondaryWinsAddress:
	Specifies the IP address of secondary Wins server. This parameter is only available for external, NAT, and routed network profiles.
	■ dhcpStartIPAddress:
	Specifies the start IP address of the DHCP server. This parameter is only supported by NAT network profiles.
	■ dhcpEndIPAddress:
	Specifies the end IP address of the DHCP server. This parameter is only supported by NAT network profiles.
	■ leaseTimeInSeconds:
	Specifies the lease time for the DHCP server. This parameter is only supported by NAT network profiles.
	■ baseIP:
	Specifies the base IP address. This parameter is only supported by routed network profiles.
Metadata	Specifies the following paging-related data:
	■ Size: Specifies the maximum number of rows per page.
	■ totalElement: Specifies the number of rows returned.
	■ totalPages: Specifies the total number of pages of data available.

Parameter	Description
	■ Number: Specifies the current page number.
	■ Offset: Specifies the number of rows skipped.

Example: `curl` **Command**

The following example command to 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 3 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	https://*$host*/iaas-proxy-provider/api/network/profiles/*$id*
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.

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 3 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	https://$host/iaas-proxy-provider/api/network/profiles/$id
Method	Delete
$host	Specifies the host name and fully qualified domain name or IP address of the vRealize Automation identity server.

Parameter	Description
$token	Specifies a valid HTTP bearer token with necessary credentials.
$id:	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
```

Import and Export Content

You can use the REST API content management service to import and export content, such as blueprints, between vRealize Automation systems.

vRealize Automation customers often experiment with system artifacts such as catalog items, XaaS services, resource actions, and IaaS blueprints in their development or staging environments. When appropriate, users need to move these artifacts to their production environments.

Note   You cannot import/export approval policies or entitlements. Also, you cannot import or export any content that is in a draft state.

The examples herein are shown as Curl commands for consistency with other similar examples, though the REST API content management service provides a convenient mechanism for moving such artifacts between systems using the CloudClient interface. With CloudClient, there is no need to set heading values, including the Authorization header. The *$host//$servicename*/api is eliminated from the URL and the service name becomes a separate parameter. For example, `consumer/entitled CatalogItems/{id}/request/template`. See Using vRealize CloudClient.

Some parameters on the API request are common to all content management service import and export commands. These parameters are listed below.

Parameter	Description
$host	The host name and fully qualified domain name or IP address of the vRealize Automation identity server.
$token	A valid HTTP bearer token that includes necessary credentials.

Note   When exporting content, values of secure strings and encrypted properties are excluded by default. You can add the `--secure false` parameter to commands to export these properties as plain text with your content. Secure strings and encrypted properties are typically used as property holders for passwords.

The following examples illustrate the types of requests that you might use in typical import export situations.

Prerequisites

- Log in to vRealize Automation with an appropriate role. For example: Software Architect, Application Architect, Infrastructure Architecture or some combination of these depending on the need.

- Verify that the host name and fully qualified domain name of the vRealize Automation instance are available.

- Verify that there is a valid HTTP bearer token that matches your login credentials. See Chapter 3 REST API Authentication.

Procedure

1   (Optional) Use the REST API content service to display a list of supported vRealize Automation content types. Typically, this step is required only if you are not familiar with the content on your system or if you need to verify the content.

   A content type describes the content that you can import or export using the content management service.

   ```
   $curl --insecure -s -H "Content-Type: application/json" -H "Authorization: Bearer $token" https://$host/content-management-service/api/provider/contenttypes
   ```

2   Display a list of available content in vRealize Automation.

   Content includes published artifacts such as blueprints, software, properties etc.

   ```
   $curl --insecure -s -H"Content-Type: application/json" -H "Authorization: Bearer $token" https://$host/content-management-service/api/contents
   ```

3   If applicable, you can also apply filtering by content type.

   This example sets the contentTypeId to composite-blueprint.

```
$curl --insecure -s -H "Content-Type: application/json" -H "Authorization: Bearer
$token" https://$host/content-management-service/api/contents?
%24filter=contentTypeId+eq+%27composite-blueprint%27
```

4   Create a package that contains the desired content.

The following command creates a package named Demo Package with a content ID of
9b348c29-88ff-4fa8-b93e-f80bc7c3e723.

```
$curl --insecure -s -H "Content-Type: application/json" -H "Authorization: Bearer
$token" https://$host/content-management-service/api/packages-d'{"name" : "Demo
Package", "description" : "Package for demo purposes", "contents" :
[ "9b348c29-88ff-4fa8-b93e-f80bc7c3e723" ]}'
```

5   (Optional) List the packages within the content service. Use this step if you need to confirm the
contents of the package you created.

```
$curl --insecure -s -H "Content-Type: application/json" -H "Authorization: Bearer
$token" https://$host/content-management-service/api/packages
```

6   Export the specified package as a .zip file.

The example specifies the Accept header as application/zip and the output file as package.zip.

```
$curl --insecure -s -H "Accept: application/zip"-H "Authorization: Bearer $token"
https://$host/content-management-
service/api/packages/54f627bb-2277-48af-9fa0-7d7366b498f3-o package.zip
```

7   Validate the package prior to importing it.

The example uses the 'DukesBankApp.zip' which is out-of-box content provided on the
vRealize Automation virtual appliance. You can copy the file from /usr/lib/vcac/tools/initial-
config/sample-oob-content/DukesBankApp.zip using WinSCP (Windows) or scp (Mac).

```
$curl --insecure -s -H "Content-Type: multipart/form-data"-H "Authorization:
Bearer $token" https://$host/content-management-service/api/packages/validate-F"
file=@DukesBankApp.zip"
```

The validation output shows the status of each content item within the package.

8   Import the package.

This example imports the DukesBankApp.zip package.

```
$curl --insecure -s -H "Content-Type: multipart/form-data"-H "Authorization:
Bearer $token" https://$host/content-management-service/api/packages-F"
file=@DukesBankApp.zip"
```

Syntax for Listing Supported Content Types

You can use the REST API content management service to display a list of supported content types.

Supported Content Types

A content type describes content that you can import or export using the content management service. Content types contain metadata about the content provider and the content itself, such as type information or service type ID. Usually the content provider supplies this information.

The REST API supports import and export of the following registered content types:

- composite-blueprint - the content type corresponding to the composite blueprint

- software-component - the content type corresponding to the software component

- property-group - the content type corresponding to the property groups

- property-definition - the content type corresponding to the property definitions

Everything as a Service (XaaS) content types:

- XaaS-blueprint

- XaaS-resource-action

- XaaS-resource-type

- XaaS-resource-mapping

Input

Use the supported input parameters with your query URL to control command output. .

Name	Description	Type
page	Page Number. Default is 1.	Query
limit	Number of entries per page. Default is 20.	Query
$orderby	Multiple comma-separated properties sorted in ascending or descending order.	Query
$top	The number of returned entries from the top of the response (total number per page in relation to skip).	Query
$skip	The number of entries to skip.	Query
$filter	Boolean expression for whether a particular entry should be included in the response.	Query

Output

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

Parameter	Description
Links	Specifies an array of link objects, each of which contains the following parts: ■ rel Specifies the name of the link. ■ Self refers to the object that was returned or requested. ■ First, Previous, Next, and Last refer to corresponding pages of pageable lists. ■ Specifies the application or service that determines the other names. ■ href Specifies the URL that produces the result.
Content	■ id: The unique identifier for the content. This is also used as a folder name to group similar content artifacts. ■ name: The name of a given content type provided in localized message key form. ■ description: Additional information describing the content type. ■ classId: The class identifier associated with a content type. ■ serviceTypeId: The service ID for the given content type.
Metadata	Specifies the following paging-related data: ■ Size: Specifies the maximum number of rows per page. ■ totalElement: 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 returns a list of supported content types.

```
$curl --insecure -s -H "Content-Type: application/json" -H "Authorization: Bearer
$token" https://$host/content-management-service/api/provider/contenttypes
```

Example: JSON Output

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

```
{
  "links": [
  ],
  "content": [
    {
      "@type": "ContentType",
      "id": "property-group",
      "name": "Property Group",
      "description": "Content type corresponding to the property groups.",
      "classId": "PropertyGroup",
```

```
      "serviceTypeId": "com.vmware.csp.core.properties.service"
    },
    {
      "@type": "ContentType",
      "id": "property-definition",
      "name": "Property Definition",
      "description": "Content type corresponding to the property definitions.",
      "classId": "PropertyDefinition",
      "serviceTypeId": "com.vmware.csp.core.properties.service"
    },
    {
      "@type": "ContentType",
      "id": "composite-blueprint",
      "name": "Composite Blueprint Content Type",
      "description": "The content type corresponding to the composite blueprint",
      "classId": "Composite.Blueprint",
      "serviceTypeId": "com.vmware.csp.component.cafe.composition"
    },
    {
      "@type": "ContentType",
      "id": "asd-blueprint",
      "name": "{com.vmware.csp.core.designer.service@service.blueprint.content.type.name}",
      "description":
 "{com.vmware.csp.core.designer.service@service.blueprint.content.type.description}",
      "classId": "asdServiceBlueprint",
      "serviceTypeId": "com.vmware.csp.core.designer.service"
    },
    {
      "@type": "ContentType",
      "id": "asd-resource-action",
      "name": "{com.vmware.csp.core.designer.service@resource.action.content.type.name}",
      "description": "{com.vmware.csp.core.designer.service@resource.action.content.type.description}",
      "classId": "asdResourceAction",
      "serviceTypeId": "com.vmware.csp.core.designer.service"
    },
    {
      "@type": "ContentType",
      "id": "asd-resource-type",
      "name": "{com.vmware.csp.core.designer.service@resource.type.content.type.name}",
      "description": "{com.vmware.csp.core.designer.service@resource.type.content.type.description}",
      "classId": "asdResourceType",
      "serviceTypeId": "com.vmware.csp.core.designer.service"
    },
    {
      "@type": "ContentType",
      "id": "asd-resource-mapping",
      "name": "{com.vmware.csp.core.designer.service@resource.mapping.content.type.name}",
      "description":
 "{com.vmware.csp.core.designer.service@resource.mapping.content.type.description}",
      "classId": "asdResourceMapping",
      "serviceTypeId": "com.vmware.csp.core.designer.service"
    },
    {
      "@type": "ContentType",
      "id": "software-component",
```

```
      "name": "Software Component Content Type",
      "description":
"{com.vmware.csp.component.software.service@software.component.content.type.description}",
      "classId": "softwareComponentType",
      "serviceTypeId": "com.vmware.csp.component.software.service"
    }
  ],
  "metadata": {
    "size": 20,
    "totalElements": 9,
    "totalPages": 1,
    "number": 1,
    "offset": 0
  }
}
```

Syntax for Listing Available Content

You can use the REST API content management service to list the content that is available for export on your vRealize Automation deployment.

Listing Available Content

Content is some artifact, entity or information that provides value to a user in a specific context. Content can be represented in a file in different formats, such as XML, JSON, or a package of files.

Input

Use the supported input parameters with your query URL to control command output.

Name	Description	Type
page	Page Number. Default is 1.	Query
limit	Number of entries per page. Default is 20.	Query
$orderby	Multiple comma-separated properties sorted in ascending or descending order.	Query
$top	The number of returned entries from the top of the response (total number per page in relation to skip).	Query
$skip	The number of entries to skip.	Query
$filter	Boolean expression for whether a particular entry should be included in the response.	Query

Output

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

Parameter	Description

Links	Specifies an array of link objects, each of which contains the following parts:
	
	■ rel
	
	   Specifies the name of the link.
	
	   ■ `Self` refers to the object that was returned or requested.
	
	   ■ `First`, `Previous`, `Next`, and `Last` refer to corresponding pages of pageable lists.
	
	   ■ Specifies the application or service that determines the other names.
	
	■ 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. ■ id: Specifies the unique identifier for the content. This is also used as a folder name to group similar content artifacts. ■ contentId: The human readable immutable user or provider supplied content ID. ■ name: Specifies the name of a given content type provided in localized message key form. ■ description: Specifies additional information describing the package. ■ contentTypeId: Identifies the nature of the content. ■ mimeType: Identifies the mime type. ■ tenantId: The ID of the tenant associated with the package. Used to enforce ownership. ■ subtenantId: (Optional) The ID of the sub tenant or business group associated with the package. ■ dependencies: Represents the dependencies of the content unit in the form of content IDs. ■ createdDate: The creation date of the content. ■ lastUpdated: The date on which the content was last updated. ■ version: The version identifier of the content.
Metadata	Specifies the following paging-related data: ■ Size: Specifies the maximum number of rows per page. ■ totalElement: 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

```
$curl --insecure -s -H "Content-Type: application/json"-H "Authorization: Bearer
$token" https://$host/content-management-service/api/contents
```

Example: JSON Output

```json
{
  "links": [],
  "content": [
    {
      "@type": "Content",
      "id": "6ba58cb4-257d-4833-b2dc-f090f92f86be",
      "contentId": "3482e3a7-c6c2-4372-b8e1-0db517b93406",
      "name": "Echo String",
      "description": null,
      "contentTypeId": "asd-blueprint",
      "mimeType": null,
      "tenantId": "qe",
      "subtenantId": null,
      "dependencies": [],
      "createdDate": "2015-08-18T19:14:54.899Z",
      "lastUpdated": "2015-08-18T19:14:54.899Z",
      "version": 0
    },
    {
      "@type": "Content",
      "id": "079cc912-b870-4f56-a1c3-91905526b09d",
      "contentId": "NicksBP",
      "name": "Nick's BP",
      "description": "Nick's BP",
      "contentTypeId": "composite-blueprint",
      "mimeType": null,
      "tenantId": "qe",
      "subtenantId": null,
      "dependencies": [],
      "createdDate": "2015-08-18T20:14:57.299Z",
      "lastUpdated": "2015-08-18T20:14:57.299Z",
      "version": 0
    },
    {
      "@type": "Content",
      "id": "9795e97f-7025-44f9-9a57-f59242a7775d",
      "contentId": "de81f329-cb72-4099-b831-309db708833b",
      "name": "TestMapping",
      "description": null,
      "contentTypeId": "asd-resource-mapping",
      "mimeType": null,
      "tenantId": "qe",
      "subtenantId": null,
      "dependencies": [],
      "createdDate": "2015-08-18T20:53:25.062Z",
      "lastUpdated": "2015-08-18T20:53:25.062Z",
      "version": 0
    },
    {
      "@type": "Content",
      "id": "3922fda1-b5fd-4c51-997d-5f803ec6fb6e",
      "contentId": "e8ae6093-18a9-4ec9-a415-1ef850f243f9",
```

```
        "name": "CustomRes",
        "description": null,
        "contentTypeId": "asd-resource-type",
        "mimeType": null,
        "tenantId": "qe",
        "subtenantId": null,
        "dependencies": [],
        "createdDate": "2015-08-18T20:56:11.052Z",
        "lastUpdated": "2015-08-18T20:56:11.052Z",
        "version": 0
    },
    {
        "@type": "Content",
        "id": "4754ad69-a6a7-447f-96de-2ed6fa260f7c",
        "contentId": "Software.Apache_LB",
        "name": "Apache_LB",
        "description": "Apache 2.2 The Apache HTTP Server is an open-source HTTP server for modern
 operating systems including UNIX, Microsoft Windows, Mac OS/X and Netware. The goal of this project is
 to provide a secure, efficient and extensible server that provides HTTP services observing the current
 HTTP standards. Apache has been the most popular web server on the Internet since April of 1996.",
        "contentTypeId": "software-component",
        "mimeType": null,
        "tenantId": "qe",
        "subtenantId": null,
        "dependencies": [],
        "createdDate": "2015-08-18T21:31:43.094Z",
        "lastUpdated": "2015-08-18T21:31:44.133Z",
        "version": 1
    },
    {
```

Syntax for Filtering Content by Content Type

You can use the REST API content management service to filter a list of returned content type items.

Input

Output

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

Example Curl Command

```
$curl --insecure -s -H "Content-Type: application/json" -H "Authorization: Bearer
$token" https://$host/content-management-service/api/contents?
%24filter=contentTypeId+eq+%27composite-blueprint%27
```

Example: JSON Output

In this example the returned IDs correspond to composite blueprints that meet the filtering criteria.

```
{
  "links": [],
  "content": [
    {
      "@type": "Content",
      "id": "9b348c29-88ff-4fa8-b93e-f80bc7c3e723",
      "contentId": "vSphere",
      "name": "vSphere",
      "description": "vSphere",
      "contentTypeId": "composite-blueprint",
      "mimeType": null,
      "tenantId": "qe",
      "subtenantId": null,
      "dependencies": [],
      "createdDate": "2015-08-04T14:46:54.201Z",
      "lastUpdated": "2015-08-04T16:59:30.488Z",
      "version": 1
    },
    {
      "@type": "Content",
      "id": "968ae331-1ef2-44f8-bdc5-dfc2be78ca2f",
      "contentId": "Amazon",
      "name": "Amazon",
      "description": "Amazon",
      "contentTypeId": "composite-blueprint",
      "mimeType": null,
      "tenantId": "qe",
      "subtenantId": null,
      "dependencies": [
        "9e2005c3-c56e-48d0-801c-be36851f2b08"
      ],
      "createdDate": "2015-08-04T20:47:20.308Z",
      "lastUpdated": "2015-08-04T20:47:20.308Z",
      "version": 0
    }
  ],
  "metadata": {
    "size": 20,
    "totalElements": 2,
    "totalPages": 1,
    "number": 1,
    "offset": 0
  }
}
```

Syntax for Creating a Package for Export

You can use the REST API content management service to create a package that contains content for export use.

Creating a Package with Content

- For import or export purposes you must create a package to contain the desired content.

- The package is a logical unit that enables you to piece together different content elements.

- You can add multiple content IDs to the package.

A package represents an entity that you can export or import via the content management service. A set of references to the content instances can be bundled together as a package.

Input

Parameter	Description
createdDate	The package creation date.
lastUpdated	The date when the package was last updated.
version	The package version identifier.
tenantId	The ID of the tenant associated with the package. Used to enforce ownership.
subTenantId	(Optional) The ID of the sub tenant or business group associated with the package
id	Specifies the unique identifier for the content. This is also used as a folder name to group similar content artifacts.
name	Specifies the name of a given content type provided in localized message key form.
description	Specifies additional information describing the package.
contents	Collection of references that form the contents of the package.

Output

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

Parameter	Description
createdDate	The package creation date.
lastUpdated	The date when the package was last updated.
version	The package version identifier.
tenantId	The ID of the tenant associated with the package. Used to enforce ownership.
subTenantId	(Optional) The ID of the sub tenant or business group associated with the package

Parameter	Description
id	Specifies the unique identifier for the content. This is also used as a folder name to group similar content artifacts.
name	Specifies the name of a given content type provided in localized message key form.
description	Specifies additional information describing the package.
contents	Collection of references that form the contents of the package.

Example Curl Command

The following command creates a package named "Demo Package" with a content ID of 9b348c29-88ff-4fa8-b93e-f80bc7c3e723.

```
$curl --insecure -s -H "Content-Type: application/json" -H "Authorization: Bearer
$token" https://$host/content-management-service/api/packages-d'{"name" : "Demo
Package", "description" : "Package for demo purposes", "contents" :
[ "9b348c29-88ff-4fa8-b93e-f80bc7c3e723" ]}'
```

Example: JSON Output

The JSON output is a URL for the created package.

Syntax for Listing Packages in the Content Service

You can use the REST API content management service to list the packages within the content service.

Input

You must provide the appropriate request parameters to list packages within the content service.

Name	Description	Type
page	Page Number. Default is 1.	Query
limit	Number of entries per page. Default is 20.	Query
$orderby	Multiple comma-separated properties sorted in ascending or descending order.	Query
$top	The number of returned entries from the top of the response (total number per page in relation to skip).	Query
$skip	The number of entries to skip.	Query
$filter	Boolean expression for whether a particular entry should be included in the response.	Query

Output

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

Parameter	Description
Links	Specifies an array of link objects, each of which contains the following parts: ■ rel Specifies the name of the link. 　■ `Self` refers to the object that was returned or requested. 　■ `First`, `Previous`, `Next`, and `Last` refer to corresponding pages of pageable lists. 　■ Specifies the application or service that determines the other names. ■ href Specifies the URL that produces the result.
Content	■ createdDate: The creation date of the content. ■ lastUpdated: The date on which the content was last updated. ■ version: The version identifier of the content. ■ id: Specifies the unique identifier for the content. This is also used as a folder name to group similar content artifacts. ■ contentId: The human readable immutable user or provider supplied content ID. ■ name: Specifies the name of a given content type provided in localized message key form. ■ description: Specifies additional information describing the package. ■ contentTypeId: The unique identifier of the contentType. ■ mimeType: The mime type file identifier. ■ tenantId: The ID of the tenant associated with the package. Used to enforce ownership. ■ subtenantId: (Optional) The ID of the sub tenant or business group associated with the package. ■ dependencies: These represent the content unit dependencies in the form of content IDs.
Metadata	Specifies the following paging-related data: ■ Size: Specifies the maximum number of rows per page. ■ totalElement: 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

```
$curl --insecure -s -H"Content-Type: application/json"-H"Authorization: Bearer
$token"https://$host/content-management-service/api/packages
```

Example: JSON Output

The following example lists all packages within the content service.

```
{
  "links": [
  ],
  "content": [
    {
      "@type": "Package",
      "createdDate": "2015-08-04T22:22:53.490Z",
      "lastUpdated": "2015-08-04T22:22:53.490Z",
      "version": 0,
      "id": "54f627bb-2277-48af-9fa0-7d7366b498f3",
      "name": "Demo Package",
      "description": "Package for demo purposes",
      "contents": [
        "9b348c29-88ff-4fa8-b93e-f80bc7c3e723"
      ],
      "tenantId": "qe",
      "subTenantId": null
    }
  ],
  "metadata": {
    "size": 20,
    "totalElements": 1,
    "totalPages": 1,
    "number": 1,
    "offset": 0
  }
}
```

Syntax for Exporting a Package

You can use the REST API content management service to export a package containing content as a .zip file.

Input

The query URL for the export command must specify the ID of the package to export.

Table 4-17. Export Query URL Parameters

Name	Description	Type
id	The identifier of the package	Path
secureValueFormat	The format in which secure values should be sent. This parameter is optional and defaults to "BLANKOUT".	Query

Output

The output of this command is a .zip file.

Example Curl Command

```
$curl --insecure -s -H "Accept: application/zip" -H "Authorization: Bearer $token"
https://$host/content-management-
service/api/packages/54f627bb-2277-48af-9fa0-7d7366b498f3-o package.zip
```

Example: Example: JSON Output

The export command returns a message that indicates whether or not the package was exported. A successful export produces a package.zip exported to the specified location. The returned message is `'200 - Successes'` with the Package or `404 - 'Not Found'` if it does not find a package with provided ID.

Syntax for Validating a Content Bundle Before Importing

You can use the REST API content management service to validate a content bundle before importing to a critical system. VMware recommends that you validate all packages before importing them to any system.

Input

You can use optional request parameters with your query URL to customize the returned content.

Table 4-18. Package Validation Parameters

Name	Description	Type
file	The name of the package file to be validated	query
resolution mode	The resolution mode to be used for performing validation when the same entity exists in the system. Valid values are SKIP, OVERWRITE. SKIP will not update the existing entity with the new content while OVERWRITE will update the old entity with the new data. In case the resolution mode is not explicitly provided the default mode OVERWRITE will be used for conflict resolution.	query

Output

The package validation response body contains the following parameters.

Table 4-19. Import and Export Response Body Parameters

Parameter	Description
contentImportStatus	Over all status of the import/validation operation, one failure in import/validation result guarantees failed status. Values are as follows: ■ Success - Denotes the successful import or validation status at a particular component or package level. ■ Failed - Denotes an import or validation failure at a particular component package level. ■ Warning - Denotes a scenario that warrants a system level warning. Alerts the user about a possible error condition that the proposed action may create.
contentImportResults	Set of collected content import/validation results populated by the provider. The Content import operation result collection is the set of content that passed or failed. If failed the errors are populated in ContentImportError. Properties are as follows: ■ contentId - (string) Unique content ID within the file system. ■ contentName - (anyType) Name of the content being imported. ■ contentTypeId - (string) The ID for the content type being exported. This matches the folder structure in the exported zip. ■ contentImportStatus - Track the failed or succeeded status of an entity. ■ messages - Information returned by the provider. ■ contentImportErrors - Set of errors returned by the provider.

Example Curl Command

This example uses the 'DukesBankApp.zip' - which is out-of-the-box content provided on the vRealize Automation virtual appliance. You can copy the file from `/usr/lib/vcac/tools/initial-config/sample-oob-content/DukesBankApp.zip` using WinSCP (Windows) or scp (Mac).

`$curl --insecure -s -H" Content-Type: multipart/form-data" -H "Authorization: Bearer $token" https://$host/content-management-service/api/packages/validate -F "file=@DukesBankApp.zip"`

Example: JSON Output

The validation output displays the validation status of each content item within the bundle.

```
{
  "contentImportStatus": "SUCCESS",
  "contentImportResults": [
    {
      "contentId": "Apache_LB",
      "contentName": "Apache_LB",
      "contentTypeId": "software-component",
      "contentImportStatus": "SUCCESS",
      "contentImportErrors": null
    },
    {
      "contentId": "MySql",
      "contentName": "MySql",
      "contentTypeId": "software-component",
      "contentImportStatus": "SUCCESS",
      "contentImportErrors": null
```

```
    },
    {
      "contentId": "JBossAppServer",
      "contentName": "JBossAppServer",
      "contentTypeId": "software-component",
      "contentImportStatus": "SUCCESS",
      "contentImportErrors": null
    },
    {
      "contentId": "Dukes-Bank-DB-setup",
      "contentName": "Dukes-Bank-DB-setup",
      "contentTypeId": "software-component",
      "contentImportStatus": "SUCCESS",
      "contentImportErrors": null
    },
    {
      "contentId": "Dukes_Bank_App",
      "contentName": "Dukes_Bank_App",
      "contentTypeId": "software-component",
      "contentImportStatus": "SUCCESS",
      "contentImportErrors": null
    },
    {
      "contentId": "DukesBankApplication",
      "contentName": "DukesBankApplication",
      "contentTypeId": "composite-blueprint",
      "contentImportStatus": "SUCCESS",
      "contentImportErrors": null
    }
  ]
}
```

Syntax for Importing a Package

You can use the REST API content management service to import a package containing content as a .zip file.

Import a Package

To verify success of a package import, use vRealize Automation to view the imported items on the target system.

Output

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

Table 4-20. Import and Export Response Body Parameters

Parameter	Description
contentImportStatus	Over all status of the import/validation operation, one failure in import/validation result guarantees failed status. Values are as follows: ■ Success - Denotes the successful import or validation status at a particular component or package level. ■ Failed - Denotes an import or validation failure at a particular component package level. ■ Warning - Denotes a scenario that warrants a system level warning. Alerts the user about a possible error condition that the proposed action may create.
contentImportResults	Set of collected content import/validation results populated by the provider. The Content import operation result collection is the set of content that passed or failed. If failed the errors are populated in ContentImportError. Properties are as follows: ■ contentId - (string) Unique content ID within the file system. ■ contentName - (anyType) Name of the content being imported. ■ contentTypeId - (string) The ID for the content type being exported. This matches the folder structure in the exported zip. ■ contentImportStatus - Track the failed or succeeded status of an entity. ■ messages - Information returned by the provider. ■ contentImportErrors - Set of errors returned by the provider.

Example Curl Command

```
$curl --insecure -s -H "Content-Type: multipart/form-data" -H "Authorization: Bearer
$token" https://$host/content-management-service/api/packages -F
"file=@DukesBankApp.zip"
```

Example: JSON Output

```
{
  "contentImportStatus": "SUCCESS",
  "contentImportResults": [
    {
      "contentId": "Apache_LB",
      "contentName": "Apache_LB",
      "contentTypeId": "software-component",
      "contentImportStatus": "SUCCESS",
      "contentImportErrors": null
    },
    {
      "contentId": "MySql",
      "contentName": "MySql",
      "contentTypeId": "software-component",
      "contentImportStatus": "SUCCESS",
      "contentImportErrors": null
    },
    {
      "contentId": "JBossAppServer",
      "contentName": "JBossAppServer",
      "contentTypeId": "software-component",
      "contentImportStatus": "SUCCESS",
```

```
          "contentImportErrors": null
        },
        {
          "contentId": "Dukes-Bank-DB-setup",
          "contentName": "Dukes-Bank-DB-setup",
          "contentTypeId": "software-component",
          "contentImportStatus": "SUCCESS",
          "contentImportErrors": null
        },
        {
          "contentId": "Dukes_Bank_App",
          "contentName": "Dukes_Bank_App",
          "contentTypeId": "software-component",
          "contentImportStatus": "SUCCESS",
          "contentImportErrors": null
        },
        {
          "contentId": "DukesBankApplication",
          "contentName": "DukesBankApplication",
          "contentTypeId": "composite-blueprint",
          "contentImportStatus": "SUCCESS",
          "contentImportErrors": null
        }
      ]
    }
```

Understanding Blueprint Schema

Users who wish to edit blueprints when exporting them to a deployment may need to understand the blueprint schema.

Simple Blueprint Structure

The following is an example of a simple blueprint. Note that this example includes line number that are referenced later in this topic.

```
1    id: Blueprint.CentOSAndApache
2.   name: CentOSAndApache
3.   status: PUBLISHED
4.   components:
5.     web:
6.       type: Infrastructure.CatalogItem.Machine.Virtual.vSphere
7.       data:
8.         cpu: 1
9.         memory:
10.          min: 512
11.          max: 8192
12.        os_type: Linux
13.        os_distribution: rhel
14.        action: LinkedClone
15.        archive_days: 1
16.        provisioning_workflow: {id: CloneWorkflow}
17.        lease_days: 3
```

```
18.          source_machine_name: cbp_centos_63_x86
19.          cost_center: sales
20.          _cluster: 2
21.     apache:
22.       type: Software.Apache
23.        data:
24.          host: '${_resource~web}'
25.          http_port: 8080
```

Each of these lines plays an important role in the blueprint structure.

- Lines 1 - 4 represent possible top level blueprint fields that provide identifying information. The only other possible field is `description`. The semantics of these fields is straightforward, but you can refer to java.classBlueprintDocument for more information.

- Line 4 represents the blueprint components. Each key under components is the ID of the component that must be unique under the current blueprint.

- Lines 5 - 19 correspond to the Web component. The following appear under any component data:

  - The key `type` is mandatory and must refer to the component type on which the current component is based.

  - The key `dependsOn` is optional and contains the list of component IDs current component depends on. Component dependencies are extracted automatically based on property binding expressions. In most cases, you do not need to explicitly specify component dependencies.

  - The key `data` defines the component configuration and appears under all component data.

    - Key is the name of the property or field of that component. This can be a property defined in the corresponding component type.

Property or field option	Example
A property defined in the corresponding component type	cpu
A reserved property	_cluster
Custom property	cost_center

    - The value of the field can be directly defined as in `cpu: 2`, or you can defines its constraints, as done for the `memory` field in the example.

- Line 16 shows how to specify and entity reference field. The available sub-keys are `id` and `label`.

- Line 24 depicts several things.

  - `${<field_path>}` provides a way to express the value of a field to come from another field.

  - `_resource` is a reserved field ID that captures the output of entire blueprint. Output from each component is exposed under the same key as component ID. So in this case, `host` value is set to the output of the `web` component thus saying the `apache` component needs to be hosted on machine provisioned from the `web` component.

  - Whenever a property binding refers to output of some other component, it creates an implicit dependency between components.

Available Constraints

To define constraints in any blueprint field. create a new hierarchy or level in YAML, and use any of the keys below to define constraints and their values.

Table 4-21. Blueprint Constraints

ID or Key	Corresponding CAFE Constraint	Description
default	com.vmware.vcac.platform.content.facets.DefaultValueBehavior	Specifies the value for a field.
fixed	com.vmware.vcac.platform.content.facets.FixedValueConstraint	Specifies the value for a field that cannot be overridden at request or reuse time.
mandatory	com.vmware.vcac.platform.content.facets.MandatoryConstraint	Indicates that the field is mandatory.
min	com.vmware.vcac.platform.content.facets.MinValueConstraint	Indicates the minimum value for a numeric field.
max	com.vmware.vcac.platform.content.facets.MaxValueConstraint	Indicates the maximum value for a numeric field.
minLength	com.vmware.vcac.platform.content.facets.MinLengthConstraint	Indicates the minimum length for a string field.
maxLength	com.vmware.vcac.platform.content.facets.MaxLengthConstraint	Indicates the maximum length for a string field.
minCardinality	com.vmware.vcac.platform.content.facets.MinLengthConstraint	Indicates the minimum cardinality for an array field.
maxCardinality	com.vmware.vcac.platform.content.facets.MaxCardinalityConstraint	Indicates the maximum cardinality for an array field.
increment	com.vmware.vcac.platform.content.facets.IncrementBehavior	Indicates the step or increment for a numeric field.
regex	com.vmware.vcac.platform.content.facets.RegexpConstraint	Indicates the valid regex for a string field.
secured	com.vmware.vcac.platform.content.facets.EncryptedBehavior	Indicates whether the field is to be treated securely.
valid_values	com.vmware.vcac.platform.content.fields.PermissibleValueList	Defines the valid values for a field.

Manage XaaS Content with Import and Export

You can use the content management service to import and export everything as a service (XaaS) content.

XaaS is integrated with the API content management service, and all commands that work with other content types also work with XaaS content. Though the XaaS functionality is being deprecated in the vRealize Automation 7.0 release, it is still available for users to migrate XaaS content into vRealize Automation 7.0.

Prerequisites

- Log in to vRealize Automation with an appropriate role. For example: Software Architect, Application Architect, Infrastructure Architecture or some combination of these depending on the need.

- Verify that the host name and fully qualified domain name of the vRealize Automation instance are available.

- Verify that there is a valid HTTP bearer token that matches your login credentials. See Chapter 3 REST API Authentication.

Procedure

1   Use the following command to import a 6.2.x package into vRealize Automation 7.0.

```
curl --insecure -X POST -H"Authorization: Bearer $token"-H"Content-Type:
multipart/form-data"-F"file=@XaaSContent.zip"-F"prefix=prefix_"-
F"prefixOnlyConflicting=true"' https://$host/advanced-designer-
service/api/content/bundles'
```

2   Use the following command to export an XaaS package as a .zip file.

```
curl -X PUT -H"Authorization: Bearer $token"-H"Content-Type: application/json"-
d'{"jsonAccepted" : true, "tenantId" : "qe", "data" : [] }''
https://$host/advanced-designer-service/api/content/bundles/filters'
```

Export XaaS Content

You can use the REST API content management service to export a package containing content as a .zip file.

Input

Table 4-22. XaaS Import Input Parameters

Name	Parameter
tenantId	Identifies the tenant associated with the export package.
data	Information about the export package. Includes the following: - entityType - id
jsonAccepted	Valid values are true or false.

Output

Example Curl Command

The following command exports a package containing content as a .zip file at the specified location.

```
curl -X PUT -H "Authorization: Bearer $token"-H"Content-Type: application/json"-
d'{"jsonAccepted" : true, "tenantId" : "qe", "data" : [] }'' https://$host/advanced-
designer-service/api/content/bundles/filters'
```

Example: JSON Output

The output of a successful export command is a .zip file at the specified location.

Import XaaS Content

You can use the content management service to import an XaaS content bundle.

Input

Table 4-23. XaaS Import Input Parameters

Name	Parameter
file	Identifies the .zip file that is the content bundle to import.
prefix	The prefix to use with imported objects. Ensures avoidance of a duplicate name failure.
prefixOnlyConflicting	Set to true to rename or prefix conflicting objects.

Output

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

Table 4-24. Import and Export Response Body Parameters

Parameter	Description
importStatus	Over all status of the import/validation operation, one failure in import/validation result guarantees failed status. Values are as follows: ■ Successful - Denotes the successful import or validation status at a particular component or package level. ■ Partial - Denotes a scenario that warrants a system level warning. Alerts the user about a possible error condition that the proposed action may create. ■ Failed - Denotes an import or validation failure at a particular component package level.
data	Set of collected content import/validation results populated by the provider. The Content import operation result collection is the set of content that passed or failed: ■ entityType - (string) The ID for the entity being imported. ■ entitytId - (string) Unique content ID within the file system. ■ messageKey - (string) ■ logLevel - The logging level to use for any errors that occur. ■ message - Information returned by the provider. ■ entityName - (anyType) Name of the entity being imported.

Example Curl Command

The following command imports a file called X*aaS*Content.zip.

```
curl --insecure -X POST -H"Authorization: Bearer $token"-H"Content-Type:
multipart/form-data"-F"file=@XaaSContent.zip"-F"prefix=prefix_"-
F"prefixOnlyConflicting=true"' https://$host/advanced-designer-
service/api/content/bundles'
```

Example: JSON Output

The output of the command is a message indicating the status and details of the import operation.

```
{
  "importStatus" : "SUCCESSFUL",
  "data" : [ {
    "logLevel" : "INFO",
    "entityType" : "com.vmware.vcac.designer.service.domain.ServiceBlueprint",
    "entityId" : "4740aa54-61e6-47d7-945f-0bb50ff153c8",
    "entityName" : "XaaSBlueprint",
    "messageKey" : "import.blueprint.success",
    "message" : "Success"
  } ]
}
```

Filtering and Formatting REST API Information

5

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 Getting Information for a Catalog Item.

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

6

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 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 2 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 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.