vCloud API Specification

vCloud API Version 0.9

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Changes in This Release

Changes since version 0.8 are denoted by the appearance of one of the following keywords in the Description column:

- CHANGED – The request prototype has changed in version 0.9 of the vCloud API Specification

- NEW – The operation is new as of version 0.9 of the vCloud API Specification

- REMOVED – The operation has been removed from the vCloud API Specification as of version 0.9. Rows listing REMOVED operations are shaded

vCloud API Functions

This document provides a summary of all operations that are supported in version 0.9 of the API. For more information and detailed examples, see the *vCloud API Programming Guide*.

Inventory Listing

Table 1 summarizes inventory listing requests supported in this release.

Table 1. Inventory Listing

Request Prototype	Description
GET *Org-URI*	Retrieve information about an Org and its contents.
GET *vDC-URI*	Retrieve information about the vDC, its infrastructure services, and resources, such as networks, CPU, and memory.
GET *vAppTemplate-URI*	Get a summary of a vApp Template, including name, size, description, state, and links.
GET *media-URI*	Get a summary of a virtual media resource.
GET *net-URI*	Get summary of the networks in an Organization
GET *vApp-URI*	Get a summary of a vApp
DELETE *vApp-element-URI*	REMOVED Delete a specific element from a vApp.
GET *OrgList-URI*	NEW Retrieve a list of Organizations to which you have access.
GET *vAppTemplate-URI*/ovf	Get a vAppTemplate's OVF descriptor.

Catalog Management

Table 2 summarizes the catalog management requests supported in this release.

Table 2. Catalog Management

Request Prototype	Description
GET *Catalog-URI*	Retrieve a Catalog entity and lists the CatalogItems in it
POST *Catalog-URI*/catalogItems	Add an item to the catalog
GET *CatalogItem-URI*	Retrieve a catalog item
PUT *CatalogItem-URI*	Update (modify) a catalog item
DELETE *CatalogItem-URI*	Remove an item from the catalog
GET *Catalog-URI*/controlAccess	NEW Retrieve access control information for a catalog
POST *Catalog-URI*/action/controlAccess	NEW Modify access control information for a catalog

Upload, Download, and Provisioning

Table 3 summarizes the upload, download, and provisioning requests supported in this release.

Table 3. Upload, Download, and Provisioning

Request Prototype	Description
POST *vDC-URI*/action/composeVApp	Create a new vApp in the specified vDC from the specified sources.
POST *vDC-URI*/action/instantiateVAppTemplate	Instantiate a vApp template
PUT *upload-URI*	Upload a file to a vDC.
GET *download-URI*	Download a file.
POST *vDC-URI*/action/annotate	REMOVED Annotate an OVF descriptor with candidate vDC resources (for example, a list of vDC networks that can meet the vApp's network requirements).
POST *vDC-URI*/action/cloneVApp	Clone a vApp.

Table 3. Upload, Download, and Provisioning

Request Prototype	Description
POST *vDC-URI*/action/uploadVAppTemplate	Create a new vApp template resource and initiate transfer (upload) of the OVF package to the vDC
POST *vDC-URI*/media	Create a new media resource (CDROM or Floppy Disk) and initiate transfer (upload) of the media content to the vDC.
PUT *vDC-URI*/media	NEW Update the description of a media resource.
POST *vDC-URI*/action/instantiateOvf	REMOVED Instantiate a vApp in the specified vDC based on an OVF Package
POST *vApp-URL*/action/enableDownload	NEW Enable a vAppTemplate for download
POST *vApp-URL*/action/disableDownload	NEW Disable a vAppTemplate for download
POST *vDC-URL*/action/cloneVAppTemplate	NEW Clone a vAppTemplate
POST *vDC-URL*/action/cloneMedia	NEW Clone a Media image
POST *vDC-URL*/action/captureVApp	NEW Capture a vApp to a vAppTemplate
PUT *vAppTemplate-URL*	NEW Modify the description of a vAppTemplate

vApp Configuration

Table 4 summarizes the vApp configuration operations supported in this release.

Table 4. vApp Configuration

Request Prototype	Description
POST *vApp-parent-element-URI*	REMOVED Add a specific config element
DELETE *vApp-element-URI*	REMOVED Delete a specific config element
PUT *vApp-element-URI*	REMOVED Modify a specific config element
GET *vApp-URI*/leaseSettingsSection	NEW Retrieve the LeaseSettingsSection of a vApp
POST *vApp-URI*/leaseSettingsSection	NEW Create a LeaseSettingsSection in a vApp
PUT *vApp-URI*/leaseSettingsSection	NEW Modify the LeaseSettingsSection of a vApp
DELETE *vApp-URI*/leaseSettingsSection	NEW Delete the LeaseSettingsSection of a vApp
GET *vApp-URI*/startupSection	NEW Retrieve the StartupSection of a vApp
POST *vApp-URI*/startupSection	NEW Create a StartupSection in a vApp
PUT *vApp-URI*/startupSection	NEW Modify the StartupSection of a vApp
DELETE *vApp-URI*/startupSection	NEW Delete the StartupSection of a vApp

Table 4. vApp Configuration

Request Prototype	Description
GET *vApp-URI*/networkSection	NEW Retrieve the NetworkSection of a vApp
GET *vApp-URI*/networkConfigSection	NEW Retrieve the NetworkConfigSection of a vApp
PUT *vApp-URI*/networkConfigSection	NEW Modify the NetworkConfigSection of a vApp
GET *vApp-URI*/networkConnectionSection	NEW Retrieve the NetworkConnectionSection of a vApp
GET *vApp-URI*/virtualHardwareSection	NEW Retrieve the VirtualHardwareSection of a vApp
PUT *vApp-URI*/virtualHardwareSection	NEW Modify the VirtualHardwareSection of a vApp
GET *vApp-URI*/virtualHardwareSection/cpu	NEW Retrieve the cpu item from the VirtualHardwareSection of a vApp
PUT *vApp-URI*/virtualHardwareSection/cpu	NEW Modify the cpu item in the VirtualHardwareSection of a vApp
GET *vApp-URI*/virtualHardwareSection/memory	NEW Retrieve the memory item from the VirtualHardwareSection of a vApp
PUT *vApp-URI*/virtualHardwareSection/memory	NEW Modify the memory item in the VirtualHardwareSection of a vApp
GET *vApp-URI*/virtualHardwareSection/disks	NEW Retrieve the disk items from the VirtualHardwareSection of a vApp
PUT *vApp-URI*/virtualHardwareSection/disks	NEW Modify the disk items in the VirtualHardwareSection of a vApp
GET *vApp-URI*/virtualHardwareSection/networkCards	NEW Retrieve the network card items from the VirtualHardwareSection of a vApp
PUT *vApp-URI*/virtualHardwareSection/networkCards	NEW Modify the network card items in the VirtualHardwareSection of a vApp
GET *vApp-URI*/virtualHardwareSection/media	NEW Retrieve the media devices from the VirtualHardwareSection of a vApp
GET *vApp-URI*/operatingSystemSection	NEW Retrieve the OperatingSystemSection from the VirtualHardwareSection of a vApp
PUT *vApp-URI*/operatingSystemSection	NEW Modify the OperatingSystemSection in the VirtualHardwareSection of a vApp

Resource Entities

Table 5 summarizes the Resource Entities operations supported in this release.

Table 5. Resource Entities

Request Prototype	Description
PUT *resourceEntity-URI*	REMOVED Modify an existing resource entity.
DELETE *resourceEntity-URI*	REMOVED Delete an existing resource entity.

vApp Operations

Table 6 summarizes the vApp operations requests supported in this release.

Table 6. vApp Operations

Request Prototype	Description
POST *vApp-URI*//action/deploy	Deploy a vApp. This reserves all the resources requested by the vApp. This is a long running operation and returns a new Task that tracks the progress of the operation.
POST *vApp-URI*/undeploy	Undeploy a vApp. This frees all the resources used by the vApp. This is a long running operation and returns a new Task that tracks the progress of the operation.
POST *vApp-URI*/power/action/powerOn	CHANGED Power on vApp. This is a long running operation and returns a new Task that tracks the progress of the operation.
POST *vApp-URI*/power/action/powerOff	CHANGED Power off vApp. This is a long running operation and returns a new Task that tracks the progress of the operation.
POST *vApp-URI*/power/action/reset	CHANGED Reset vApp.
POST *vApp-URI*/power/action/suspend	CHANGED Suspend vApp. This is a long running operation and returns a new Task that tracks the progress of the operation
POST *vApp-URI*/power/action/shutdown	CHANGED Shutdown vApp gracefully. This is done synchronously and no task is created for this operation
POST *vApp-URI*/power/action/reboot	CHANGED Reboot vApp gracefully. This is done synchronously and no task is created for this operation
GET *vApp-URI*/action/screen	CHANGED Return a screen thumbnail if one is available
POST *vApp-URI*/action/screenTicket	CHANGED Return ticket that client can use to open a screen connection to a child vApp.
POST *vApp-URI*/action/insertMedia	NEW Insert virtual media in a virtual drive
POST *vApp-URI*/action/ejectMedia	NEW Eject virtual media from a virtual drive
POST *vApp-URI*/action/discardSuspendedState	NEW Discard saved state of a suspended vApp
GET *vApp-URI*/question	NEW Get an XML representation of a vApp request for user input
POST *vApp-URI*/question/action/answer	NEW Provide user input in response to a vApp request

Table 6. vApp Operations

Request Prototype	Description
GET *vApp-URI*/controlAccess	NEW Retrieve access control information for a vApp
POST *vApp-URI*/action/controlAccess	NEW Modify access control information for a vApp

Miscellaneous Operations

Table 7 summarizes the operations related to tasks, versioning, and authentication that are supported in this release.

Table 7. Miscellaneous Operations

Request Prototype	Description
Tasks	
GET *TasksList-URI*	Retrieve a list of tasks
GET *Task-URI*	Retrieve the contents of an individual task.
POST *Task-URI*/action/cancel	REMOVED Cancel a task
Versioning	
GET *vCloud-URI*/versions	Retrieve information about supported API versions
Login	
POST *vCloud-URI*/api/login	Log into the system using basic HTTP authentication. Returns a list of organizations accessible to the logged-in user.

vCloud API Administrative Extensions

The vCloud API supports a number of provider-specific extensions that enable the automation of common tasks associated with the administration of clouds and the entities they contain and with the administration of users, groups, roles. Administrative operations also follow a RESTful workflow. The administrative functions are available only to the vCloud Administrator.

Cloud Administration

Table 8 summarizes the cloud administration requests supported in this release.

Table 8. Cloud Administration

Request Prototype	Description
GET *vCloud-URI*	Get the representation of the vCloud. The response is an XML instance document with a VCloud root element and media type application/vnd.vmware.vcloud.vcloud+xml
GET *vCloud-URI*/admin/right	NEW Retrieve the XML description of a right

Org Administration

Table 9 summarizes the Org administration requests supported in this release.

Table 9. Org Administration

Request Prototype	Description
POST *vCloud-URI*/admin/orgs	Create a new organization. The request body is an XML document with an Organization root element and media type application/vnd.vmware.vcloud.organization+xml
GET *Organization-URI*	Get the representation of the organization. The response body is an XML document with an Organization root element and media type application/vnd.vmware.vcloud.organization+xml
PUT *Organization-URI*	Edit an existing Organization's properties. The request body is an XML document with an Organization root element and media type application/vnd.vmware.vcloud.organization+xml
DELETE *Organization-URI*	Remove an Organization. The response is an HTTP 200 OK status.
POST *vCloud-URI*/admin/org/networks	NEW Create an organization network
GET *vCloud-URI*/admin/network	NEW Retrieve information about a network
PUT *vCloud-URI*/admin/network	NEW Modify information about a network
DELETE *vCloud-URI*/admin/network	NEW Delete a network

vDC Administration

Table 10 summarizes the vDC Administration requests supported in this release.

Table 10. vDC Administration

Request Prototype	Description
GET *providerVdc-URI*	Get the representation of the Provider VDC. (Creation, modification, or deletion of a Provider vDC is a provider-specific operation. The vCloud API does not support provider-specific operations.)
POST *Organization-URI*/vdcs	Allocate (to an Organization) a new vDC from an existing Provider vDC. The request body is an XML document with root element VdcAllocation and media type application/vnd.vmware.vcloud.vDCAllocation+xml
GET *vDC-URI*	Get the vDC representation. The response body is an XML document with a Vdc root element and media type application/vnd.vmware.vcloud.vdc+xml
PUT *vDC-URI*	Update the vDC properties. The request body is an XML document with a Vdc root element and media type application/vnd.vmware.vcloud.vdc+xml
DELETE *vDC-URI*	Remove the vDC. The response is an HTTP 200 OK status

Catalog Administration

Table 11 summarizes the Catalog administration requests supported in this release.

Table 11. Catalog Administration

Request Prototype	Description
POST *Organization-URI*/catalogs	Create a new catalog. The request body is an XML document with a Catalog root element with media type application/vnd.vmware.vcloud.catalog+xml.
GET *Catalog-URI*	Get the representation of the catalog resource. The result is an XML document with a Catalog root element and media type application/vnd.vmware.vcloud.catalog+xml

Table 11. Catalog Administration

Request Prototype	Description
POST *Catalog-URI*/catalogItems	Add a new Catalog item. The request body is an XML document with a CatalogItem root element and media type application/vnd.vmware.vcloud.catalogItem+xml
PUT *Catalog-URI*	Edit an existing catalog's properties. The PUT entity is an XML instance document with a Catalog root element with media type application/vnd.vmware.vcloud.catalog+xml
DELETE *Catalog-URI*	Remove the catalog. The response is an HTTP 200 OK status.
DELETE *CatalogItem-URI*	Remove the catalog item. The response is an HTTP 200 OK status.

User Administration

Table 12 summarizes the user administration requests supported in this release.

Table 12. User Administration

Request Prototype	Description
POST *Organization-URI*/users	Create a new user or import a user from an external source. The request body is an XML document with a User root element and media type application/vnd.vmware.vcloud.user+xml.
GET *user-URI*	Get the representation of the user. The response body is an XML document with a User root element and media type application/vnd.vmware.vcloud.user+xml
PUT *user-URI*	Edit an existing user's properties. The request body is an XML document with a User root element and media type application/vnd.vmware.vcloud.user+xml
DELETE *user-URI*	Remove the user. The response is an HTTP 200 OK status.

Group Administration

Table 13 summarizes the group administration requests supported in this release.

Table 13. Group Administration

Request Prototype	Description
POST *Organization-URI*/groups	Import a group from an external source. The request body entity is an XML document with a Group root element and media type application/vnd.vmware.vcloud.group+xml
GET *group-URI*	Get the representation of the group. The response body is an XML document with a Group root element and media type application/vnd.vmware.vcloud.group+xml
PUT *group-URI*	Edit an existing group's properties. The request body is an XML document with a User root element and media type application/vnd.vmware.vcloud.group+xml
DELETE *group-URI*	Remove the group. The response is an HTTP 200 OK status.

Role Administration

Table 14 summarizes the role administration requests supported in this release.

Table 14. Role Administration

Request Prototype	Description
GET *role-URI*	Get the representation of the role. The response body is an XML document with a Role root element and media type application/vnd.vmware.vcloud.role+xml
POST *vCloud-URI*/roles	Create a new role. The request body is an XML document with a Role root element and media type application/vnd.vmware.vcloud.role+xml Example

Table 14. Role Administration

Request Prototype	Description
PUT *role-URI*	Edit an existing role's properties. The request body is an XML document with a Role root element and media type application/vnd.vmware.vcloud.role+xml
DELETE *role-URI*	Remove the role. The response is an HTTP 200 OK status.