



Cloud API Guide



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Part number: 166556

Date: July 15, 2015

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Overview

Introduction

This guide describes the Vantage Cloud API, an Application Programming Interface that allows you to write your own control program to manage the functions of Vantage Cloud Subscriptions. You can automate specific features or program your own Windows or Web client user interface using any programming language you prefer.

Reference documentation, code examples, and other resources are available on the Telestream Vantage Cloud Subscriptions Support web page:

<http://www.telestream.net/telestream-support/vantage-cloud/support.htm>

The guide chapters cover these topics:

- [Overview](#)—an introduction to the API
- [Use Cases](#)—examples
- [Glossary](#)—a glossary of terms you'll need to know

This chapter introduces and provides an overview of the Vantage Cloud API. These topics are included:

- [Who Needs This Guide?](#)
- [What Can You Do with the Vantage Cloud API?](#)
- [What Languages Can You Use?](#)
- [Vantage Cloud API Overview](#)
- [State Diagram and Description](#)

Who Needs This Guide?

This guide is written for programmers who are tasked with writing a custom interface to Vantage Cloud Subscriptions. You must be a programmer capable of writing client applications in a common programming language. Examples are presented in a later chapter to help you get started.

Note: Early versions of the API included a SOAP interface, which has been replaced by REST. The SOAP interface is still included in Vantage Cloud but is deprecated.

What Can You Do with the Vantage Cloud API?

The Vantage Cloud service exposes a REST API to allow interaction with Vantage Virtual Domains from a client that you develop.

REST clients can be implemented in a wide variety of languages, making it very easy to acquire and modify a client to send API commands to the Vantage Cloud API. The Postman REST API client for Google Chrome is recommended for testing and exploring the API.

For more information about REST and Postman, refer to the following resources:

- General information:
https://en.wikipedia.org/wiki/Representational_state_transfer
- REST client by Google, Postman:
<https://chrome.google.com/webstore/detail/postman/fhbjgbiflinjbdgggehcdcb-ncdddomop>

The following information presents an overview of how to fully integrate the application you write with Vantage Cloud.

Overview of Vantage Cloud Subscriptions

These are the components of Vantage Cloud Subscriptions:

1. Vantage Virtual Domains—instances of Vantage Software running at AWS.
2. Vantage SDK—an SDK interface to the Vantage Domain for the automation of job submission and task management of transcoding operations.
3. Vantage Cloud Service—the windows service that communicates with AWS to provision, monitor, and manage Vantage Virtual Domains.
4. Vantage Cloud Manager—the application software that is the graphical user interface to the Vantage Cloud Service.
5. Vantage Cloud API—the application programming interface to the Vantage Cloud Service to enable the programmed control of Vantage Virtual Domains.

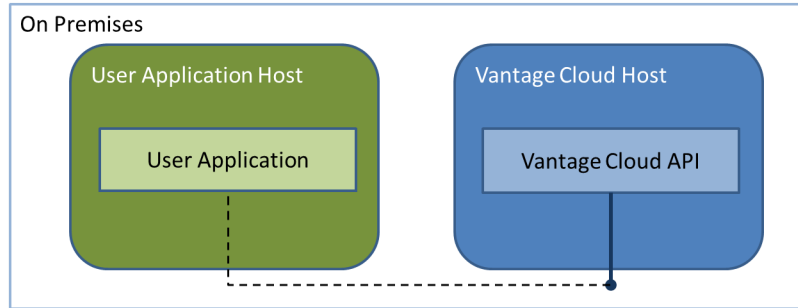
Steps to Integrate with Vantage Cloud Using the API

These are the general steps you will follow to integrate with Vantage Cloud:

1. Install Vantage Cloud on a local machine, called the Vantage Cloud Host. See the *Vantage Cloud Manager User's Guide* provided in the Help menu of Vantage Cloud Manager for installation details.
2. Download and install a REST test application, such as Postman, onto a User Application Host. Test clients are readily available from many different sites. The Application Host machine can be the same as the Vantage Cloud Host. Later you

will use this machine to host your client application, which acts as a client to the Vantage Cloud API running on the Vantage Cloud Host.

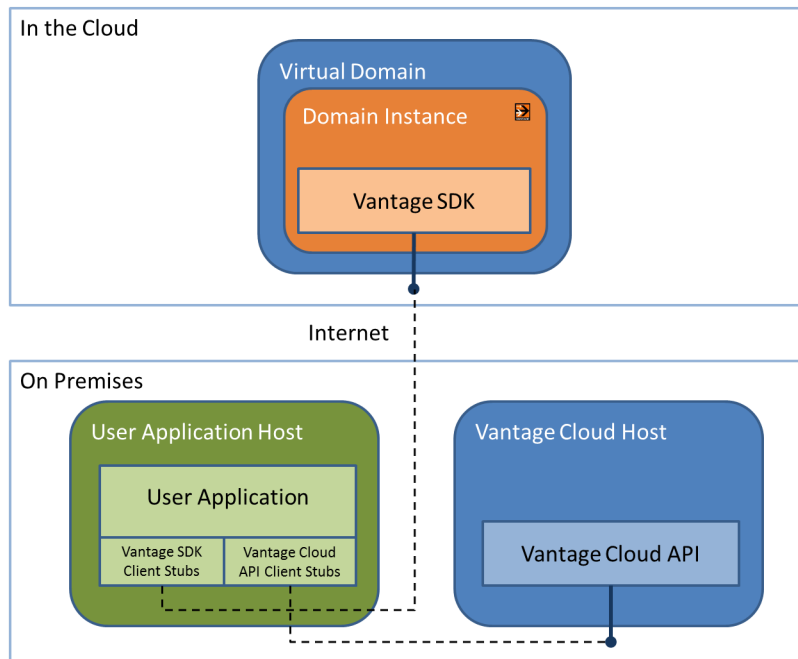
See the [Use Cases](#) chapter, and also see the *Vantage Cloud API Reference* document for API command definitions and code examples.



3. Provision a Virtual Domain using the Vantage Cloud API.
4. Optionally, extend your application on the User Application Host to act as a client to the Vantage SDK running on the Domain Instance in the Virtual Domain created in step 3. This will give you control of Vantage from your client application.

You will need this information for accessing the Vantage SDK:

- a. The Domain Instance IP, available through the Vantage Cloud API.
- b. The Vantage SDK API documentation.



See the examples in the [Use Cases](#) chapter, and also see the *Vantage Cloud API Reference* document for API commands, syntax, and details.

What Languages Can You Use?

You can use any programming language suited to the task of programming a client for Vantage Cloud Subscriptions using the Vantage Cloud API. However, using a current common language is recommended so you can get support from Telestream. If you choose an unusual language, the support available to you may be limited.

Vantage Cloud API Overview

The Vantage Cloud REST API exposes the complete set of features available in Vantage Cloud. The API adheres generally to REST principles but does not claim to be RESTful in its strict definition. For example; the API does not in general support HATEOAS and uses some query parameters to add verbs not supported in the standard HTTP methods.

API Versions

As new API versions are released, integrators can choose to target a specific past version or the latest one.

Endpoints

The API is available on any host where Vantage Cloud Manager is installed and running. These are the base endpoint URIs:

- Latest version (currently version 1): [http://\[HOST\]:43000/VantageCloudRest/](http://[HOST]:43000/VantageCloudRest/)
- Version 1: [http://\[HOST\]:43000/VantageCloudRest/v1/](http://[HOST]:43000/VantageCloudRest/v1/)

Help

The API exposes a dynamic help endpoint at this location:

- [http://\[HOST\]:43000/VantageCloudRest/Help](http://[HOST]:43000/VantageCloudRest/Help)

The help endpoint returns an HTML formatted document with information about all supported endpoints and HTTP methods together with a short description.

- For more information about the request and response format, follow the HTTP method link in the help listing.
- For more information about operations, see the referenced Vantage Cloud API Reference operation (this is the API documentation for the SOAP interface). Here you will find more detailed descriptions of the operations together with data contract information (notice that the data contracts differ slightly between the REST and the SOAP interfaces).

Request and Response Formatting

The API expects and returns JSON formatted data. Make sure that the HTTP header Content-Type is set to *application/json* when sending requests to the API.

Errors

Error messages of the following types may be returned.

Endpoint Errors

Incorrectly formatted endpoint URIs or unknown endpoint URIs return an HTTP status code *404 (Not Found)* together with an HTML formatted document with a general "Service" message including a link to the API help endpoint.

Request Formatting Errors

Incorrectly formatted requests (usually incorrectly formatted JSON request data) returns an HTTP status code *400 (Bad Request)* together with an HTML formatted document with a general "Request Error" message.

Vantage Cloud Operation Errors

Errors in specific Vantage Cloud operations return an HTTP status code and JSON formatted error information.

The API responds with one of the following HTTP status codes:

- **Client Error - 400 Bad Request:** Indicating that there was a problem with the request data, for example a data validation error.
- **Client Error - 401 Unauthorized:** Indicating that the request did not pass authorization test, for example error validating an AWS account.
- **Client Error - 403 Forbidden:** Indicating that the request was forbidden in the current state, for example when trying to create an account with the same name as an already existing account.
- **Client Error - 404 Not Found:** Indicating that the resource could not be found, for example when requesting a resource with an unknown identifier.
- **Server Error - 502 Bad Gateway:** Indicating that there was an unexpected error in the communication with a remote service, for example a problem commuting with a remote Vantage system.
- **Server Error - 500 Internal Server Error:** Indicating an unexpected error in the Vantage Cloud service.

The API responds with the following error information:

- **code:** error code, integer
- **codeInfo:** HATEOAS to a description of the specific error. Error code description endpoint is available at: [http://\[HOST\]:43000/VantageCloudRest/Codes/{errorCode}](http://[HOST]:43000/VantageCloudRest/Codes/{errorCode}),
- **message:** Message about the specific error. This message can be presented to an end user.
- **details:** Detailed message about the specific error. This information is considered to be developer information and should not be presented to the end user. Notice that this property quite often will be a copy of the message.

For a list of all possible error codes see [http://\[HOST\]:43000/VantageCloudRest/Codes/](http://[HOST]:43000/VantageCloudRest/Codes/).

No Errors

In case of a successful request the API will always respond with an HTTP status code 200 (OK).

Sorting, Paging and Field Selection

The API supports sorting, paging and field selection for all endpoints responding with sets of data and field selection for endpoints responding with a single data structure.

Sorting

This request will sort the set of Snapshots by NumberOfWorkflows in descending order and then by Name in ascending order:

[http://\[HOST\]:43000/VantageCloudRest/Snapshots?sort=-NumberOfWorkflows,+Name](http://[HOST]:43000/VantageCloudRest/Snapshots?sort=-NumberOfWorkflows,+Name)

Only non-complex type fields are supported. Sort field names and the sort query parameter itself are case insensitive. Non-existing field names are ignored. This can be useful for doing service side sorting.

Paging

This request skips the first 2 Virtual Domains in the response and limits the response to the following 3 Virtual Domains:

[http://\[HOST\]:43000/VantageCloudRest/VirtualDomains?offset=2&limit=3](http://[HOST]:43000/VantageCloudRest/VirtualDomains?offset=2&limit=3)

Offset and limit requests that exceed the returned set length are accepted. For example, if there were 4 Virtual Domains only the Virtual Domains with indices 2 and 3 would be returned. The offset and limit query parameter names are case insensitive. This can be useful for splitting up large data sets to present them as pages to the end user.

Field Selection

These requests limit the return to include the specified fields of the Account(s):

[http://\[HOST\]:43000/VantageCloudRest/Accounts?fields=User,Identifier](http://[HOST]:43000/VantageCloudRest/Accounts?fields=User,Identifier)

[http://\[HOST\]:43000/VantageCloudRest/Accounts/{accountId}?fields=AccountName](http://[HOST]:43000/VantageCloudRest/Accounts/{accountId}?fields=AccountName)

In the first example the User and Identifier fields of each Account are returned while only the AccountName is returned in the second example. This feature applies to both sets and single entities. Field names and the field query parameter itself are case insensitive. Non-existing field names are ignored. This can be useful for optimizing the amount of data transferred. For example, this could be used for polling a Virtual Domain state while a Virtual Domain is starting.

Combining

The features above can be combined and are applied by Vantage Cloud in the following order:

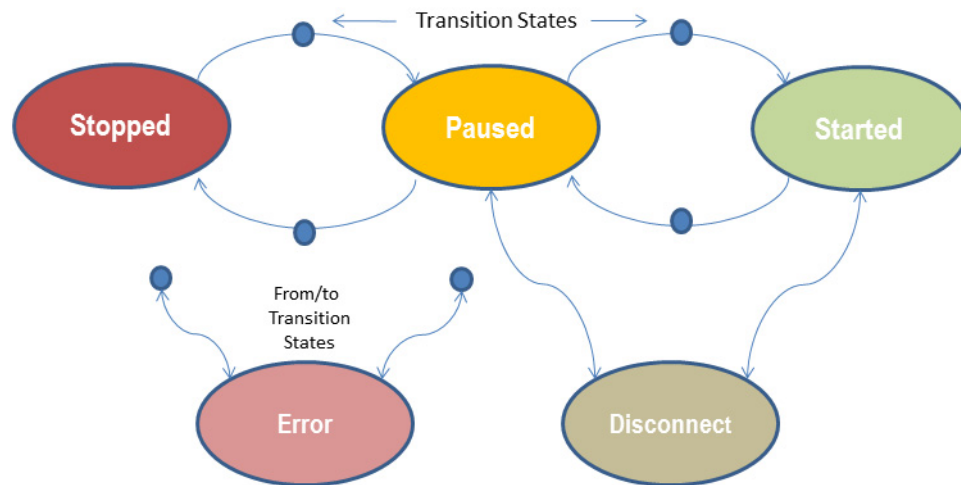
1. Sorting
2. Field Selection
3. Paging

This means that Sorting is applied to the full returned set and can include fields not included in the Field Selection. Paging is applied to the sorted set.

State Diagram and Description

The following simplified state diagram and descriptions show how commands are used to control Vantage Virtual Domains. In addition to reviewing the states described here, you may also want to spend some time operating the Vantage Cloud Manager software to see how each state functions in the user interface.

Figure 1. Simplified State Diagram



The main state groups are the stable states and the transition states explained on the following pages. Commands are available to transition from each stable state to another stable state.

The following topics describe the stable and transition states and commands:

- [Stable States](#)
- [Transition States](#)
- [Actions](#)
- [Other API Calls](#)

Stable States

The stable states are those in which Vantage Cloud is not actively modifying the Virtual Domain. These states include the normal operating states listed below as well as the disconnected and error states.

Normal States

The following are the main operating states of a Vantage Virtual Domain:

- **Stopped**—the Virtual Domain has been created but is not running, and hourly charges are not accrued. The “template” for the domain still exists, and the domain can be started again by using a Start Virtual Domain command.
- **Paused**—the Virtual Domain has been running but is currently suspended while not in use. In this state hourly charges are still being accrued but are reduced. From the paused state, domains can be stopped or started.
- **Started**—the Virtual Domain is started, running, and ready to use. In this state, hourly charges are being accrued. This state can be reached from the stopped or paused state, and can also transition to those states.

Disconnected States

Disconnected states can occur from either of these states:

- Paused state
- Started state

To ensure Virtual Domains remain connected, a monitor thread runs in the Paused and Started main states. The monitor thread checks for a number of things, the most important of which are changes in the number of instances, changes in the external IP address of the Vantage Cloud host, and changes in the Virtual Domain reachability.

If the reachability status fails, the monitor thread triggers a disconnect. The monitor thread then monitors for restored reachability. When reachability is restored, the monitor thread automatically triggers a reconnect transition in which all components are validated and the Virtual Domain returns to the original stable main state.

Error States

Error states can arise because of a failure in a transition state (described below). When an error state is entered, the Virtual Domain remains in the error state until the user issues a command (action) to trigger a transition away from the error state.

Transition States

Transition states occur when Vantage Cloud is modifying the Virtual Domain in some way, moving the Virtual Domain into or out of a stable state, such as an error state, to another stable state, such as Started. Transition states are produced by issuing action commands to move the Virtual Domain from one state to another.

The transition states include the following:

- PausingFromStopped
- StoppingFromPaused
- StartingFromStopped
- StoppingFromStarted
- StartingFromPaused
- PausingFromStarted

Additionally, there are other transition states, such as for canceling and for error occurrences. For example, these force transition states are available only in error states:

- ForcePausingFromStarted
- ForceStoppingFromStarted
- ForceStoppingFromPaused

The following topic offers additional details about the force options.

Transition Error Recovery

An error during a transition causes the Virtual Domain to remain in the error state until the user corrects the error. The correction for an error state during a transition can be either to retry the same transition, try a different transition, or (as a last resort) to force a transition:

- Retry Stop—retries the transition to stop; aborts if it encounters an error.
- Retry Pause—retries the transition to pause; aborts if it encounters an error.
- Retry Start—retries the transition to start; aborts if it encounters an error.
- Force Stop—ignores any errors and forces a stop. Use as a last resort.
- Force Pause—ignores any errors and forces a pause. Use as a last resort.

A force stop or force pause should be used as a last resort because they can leave components running at AWS that must be manually removed. After a force, be sure to log into AWS and check for running processes that need removal.

Actions

API calls invoke Actions that trigger transitions in the Virtual Domain state. In Vantage Cloud Manager, the actions can be seen in the Actions menu. Using the API, you can cause transitions to occur by invoking the appropriate action commands:

- Start, Pause, or Stop a Virtual Domain (and Retry by repeating a failed Start, Pause, or Stop command).
- Cancel Operation—cancel a transition from Started to Stopped or Started to Paused.
- Force Stop or Force Pause—ignore errors and force a transition.
- Reconnect—causes a manual reconnection to a Virtual Domain.

Valid Values for Controlling a Virtual Domain

Putting the actions listed above together with everything described so far, we can now list the valid commands and values for controlling a Vantage Virtual Domain.

The endpoint for controlling a Virtual Domain is this:

[http://\[HOST\]:43000/VantageCloudRest/VirtualDomains/{id}?action=\[VALUE\]](http://[HOST]:43000/VantageCloudRest/VirtualDomains/{id}?action=[VALUE])

where [VALUE] is one of these:

- Start
- Stop
- Pause
- ForceStop
- ForcePause
- Cancel
- ApplyChanges
- Reconnect

Other API Calls

A few other miscellaneous API calls are available unrelated to states and transitions. These calls do not invoke Virtual Domain actions but trigger other Vantage Cloud functions. Examples include the following:

- Clear Notifications—clears notifications from the notification list.
- Save Snapshot—creates and saves a snapshot of the specified Vantage domain.

Use Cases

Introduction

This chapter presents overviews of use cases that demonstrate how to do typical tasks when interfacing with the API. Cases are presented in order by expected frequency of use, with the most common task examples shown first.

If you do not see the examples you need, contact Telestream. We may be able to provide additional examples and will expand this chapter as we receive feedback from our customers about what they need.

Code examples are written using the C# language and are available in the Vantage Cloud API *Samples.zip* file.

These topics are presented in this chapter:

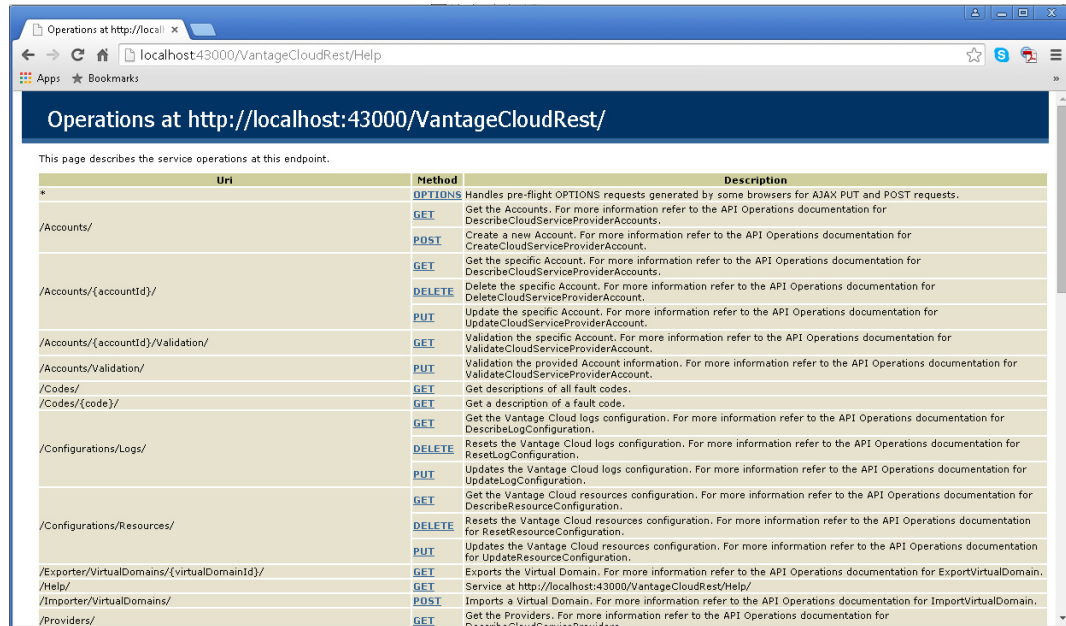
- [Getting Started](#)
- [Deploying a Client Application](#)
- [Creating, Starting, and Stopping a Virtual Domain](#)

Getting Started

The first thing to do is to access the API Help, which includes a listing of the API commands. A quick and simple way to do this is to open a browser on the Cloud Manager host and enter this command:

<http://localhost:43000/VantageCloudRest/Help>

The figure shows a typical Cloud REST API Help listing.



Uri	Method	Description
*	OPTIONS	Handles pre-flight OPTIONS requests generated by some browsers for AJAX PUT and POST requests.
/Accounts/	GET	Get the Accounts. For more information refer to the API Operations documentation for DescribeCloudServiceProviderAccounts.
	POST	Create a new Account. For more information refer to the API Operations documentation for CreateCloudServiceProviderAccount.
/Accounts/{accountId}/	GET	Get the specific Account. For more information refer to the API Operations documentation for DescribeCloudServiceProviderAccounts.
	DELETE	Delete the specific Account. For more information refer to the API Operations documentation for DeleteCloudServiceProviderAccount.
	PUT	Update the specific Account. For more information refer to the API Operations documentation for UpdateCloudServiceProviderAccount.
/Accounts/{accountId}/Validation/	GET	Validation the specific Account. For more information refer to the API Operations documentation for ValidateCloudServiceProviderAccount.
/Accounts/Validation/	PUT	Validation the provided Account information. For more information refer to the API Operations documentation for ValidateCloudServiceProviderAccount.
/Codes/	GET	Get descriptions of all fault codes.
/Codes/{code}/	GET	Get a description of a fault code.
	GET	Get the Vantage Cloud logs configuration. For more information refer to the API Operations documentation for DescribeLogConfiguration.
/Configurations/Logs/	DELETE	Resets the Vantage Cloud logs configuration. For more information refer to the API Operations documentation for ResetLogConfiguration.
	PUT	Updates the Vantage Cloud logs configuration. For more information refer to the API Operations documentation for UpdateLogConfiguration.
	GET	Get the Vantage Cloud resources configuration. For more information refer to the API Operations documentation for DescribeResourceConfiguration.
/Configurations/Resources/	DELETE	Resets the Vantage Cloud resources configuration. For more information refer to the API Operations documentation for ResetResourceConfiguration.
	PUT	Updates the Vantage Cloud resources configuration. For more information refer to the API Operations documentation for UpdateResourceConfiguration.
/Exporter/VirtualDomains/{virtualDomainId}/	GET	Exports the Virtual Domain. For more information refer to the API Operations documentation for ExportVirtualDomain.
/Help/	GET	Service at http://localhost:43000/VantageCloudRest/Help/
/Importer/VirtualDomains/	POST	Imports a Virtual Domain. For more information refer to the API Operations documentation for ImportVirtualDomain.
/Providers/	GET	Get the Providers. For more information refer to the API Operations documentation for DescribeCloudServiceProviderAccounts.

The Help table provides the following information and functionality:

- Lists all the API commands
- Left column lists URIs for accessing Cloud features
- Center column lists HTTP methods available for each URI
- Right column explains each command
- Tooltips for the methods display the complete URI for the method
- Each HTTP method is a hyperlink to the method's reference page

Important Help Notes

Notes about the Help:

- The page that explains specific HTTP method formats uses random example data which may not be usable as is. All example identifiers are the same but requests that need multiple identifiers may not expect them to be the same.
- Enumerations are incorrectly defined as integers in the help. To get the set of valid enumeration values refer to the SOAP API Help.

Using Methods in the Help Listing

Here's how you can examine and test an example method in the Help listing:

1. Hover the mouse over a method to see the tooltip. For example, hover over the `/Accounts/ GET` method to see this URL:
<http://localhost:43000/VantageCloudRest/Accounts/>
2. Ctrl-click the method to display a reference page describing the method. (This page includes HTTP request body definitions for the POST and PUT methods.)

Reference for <http://localhost:43000/VantageCloudRest/Accounts/>

Get the Accounts. For more information refer to the API Operations documentation for `DescribeCloudServiceProviderAccounts`.

Url: <http://localhost:43000/VantageCloudRest/Accounts/>

HTTP Method: GET

Message direction	Format	Body
Request	N/A	The Request body is empty.
Response	Xml	Example Schema
Response	Json	Example

The following is an example response Xml body:

```
<ArrayOfCloudServiceProviderAccount xmlns="http://Telestream.VantageCloud/1.0/">
  <CloudServiceProviderAccount>
    <CloudServiceProviderIdentifier>1627aea5-8e0a-4371-9022-9b504344e724</CloudServiceProviderIdentifier>
    <Identifier>1627aea5-8e0a-4371-9022-9b504344e724</Identifier>
    <Name>String content</Name>
    <Password>String content</Password>
    <User>String content</User>
  </CloudServiceProviderAccount>
  <CloudServiceProviderAccount>
    <CloudServiceProviderIdentifier>1627aea5-8e0a-4371-9022-9b504344e724</CloudServiceProviderIdentifier>
    <Identifier>1627aea5-8e0a-4371-9022-9b504344e724</Identifier>
    <Name>String content</Name>
    <Password>String content</Password>
    <User>String content</User>
  </CloudServiceProviderAccount>
</ArrayOfCloudServiceProviderAccount>
```

The following is an example response Json body:

```
[ {
  "CloudServiceProviderIdentifier": "1627aea5-8e0a-4371-9022-9b504344e724",
  "Identifier": "1627aea5-8e0a-4371-9022-9b504344e724",
  "Name": "String content",
  "Password": "String content",
```

3. Copy the URL near the top of the reference page into the address field of a new browser tab, and press enter to execute the method.

The API executes the method, in this case, retrieving AWS account details.

```
[{"CloudServiceProviderIdentifier":"2754bx...", "Identifier":"5794...", "Name":"MyAccount", "Password":"xGY+n4WYR...", "User":"402GGD..."}]
```

As you can see, you could actually use our browser client as your API client if its simple functionality suits your needs. If you prefer a more robust client, continue to the next topic.

Deploying a Client Application

Ready-made clients for testing and exploring the API are available from many sources. One of the most popular and used by Telestream is Google Postman. You can download Postman from this location:

<https://www.getpostman.com/>

With Postman or a similar ready-made API client, all you have to do is follow the instructions provided with the client and use the commands described previously to get the client talking to the Cloud API.

Creating, Starting, and Stopping a Virtual Domain

This topic demonstrates how to use your client application to send the Vantage Cloud REST API commands that create, start, and stop a Virtual Domain.

Initial Setup

Get set up to work with your chosen client and the Cloud REST API:

1. Refer to the API Help page as described previously and to the API_Reference HTML documents in the *API_Reference.zip* file. These documents describe the Vantage Cloud REST API commands used in these examples.
2. Launch your API client and follow the steps below in the order given.

To test methods, you will use these four components:

- A REST HTTP method, such as GET, PUT, POST, or DELETE
- The base API address: <http://localhost:43000/VantageCloudRest/>
- The URI from the Help left column, for example: [/VirtualDomains/](#)

This combination creates a complete REST API command that looks like this:

POST <http://localhost:43000/VantageCloudRest/VirtualDomains/>

Creating and Starting a Virtual Domain

To create and start a Virtual Domain, follow these steps:

1. To gather the AWS account credentials for use in startup, GET this:
<http://localhost:43000/VantageCloudRest/Accounts/>
2. To get the service provider (AWS), GET this:
<http://localhost:43000/VantageCloudRest/Providers/>
3. To create a provider account, POST this:
<http://localhost:43000/VantageCloudRest/Accounts/>
4. To create a new Virtual Domain, POST this:
<http://localhost:43000/VantageCloudRest/VirtualDomains/>
5. To start the Virtual Domain, POST this: StartVirtualDomain
<http://localhost:43000/Vantagecloudrest/VirtualDomains/d5573163-37d7-48a0-9ccd-5958e5d40503?action=start>
6. To check domain status and state for startup errors, GET this:
<http://localhost:43000/VantageCloudRest/VirtualDomains>

7. To get domain instance information, GET this:

`http://localhost:43000/VantageCloudRest/VirtualDomains/{virtualDomainId}/DomainInstance/`

8. To get domain instance access, GET this:

`http://localhost:43000/VantageCloudRest/VirtualDomains/{virtualDomainId}/DomainInstance/Access/`

Your Virtual Domain has now been created and started and should be ready to operate.

Stopping and Removing a Virtual Domain

When you need to stop the Virtual Domain, follow these steps:

1. To stop the Virtual Domain, POST this:

`http://localhost:43000/Vantagecloudrest/VirtualDomains/d5573163-37d7-48a0-9ccd-5958e5d40503?action=stop`

2. To check Virtual Domain status for errors during transitions to the stopped state, GET this:

`http://localhost:43000/VantageCloudRest/VirtualDomains`

3. To remove the Virtual Domain from the Vantage Cloud service, DELETE this:

`http://localhost:43000/VantageCloudRest/VirtualDomains/{virtualDomainId}`

This completes the full cycle of creating, starting, stopping, and removing a Virtual Domain. After you have done these steps, you should have had enough exposure to the API to continue using other commands according to your needs.

Glossary

Actions

Actions as defined by the API are commands that cause a transition from one state to another. The actions are listed in the Vantage Cloud Manager Actions menu. These actions should not be confused with Vantage actions, which perform tasks within a Vantage workflow.

Amazon EC2

Amazon Elastic Compute Cloud.

AWS

AWS stands for Amazon Web Services. Through the AWS Web site, Amazon offers access to cloud applications, cloud storage, and many other services.

Client Machine or Workstation

A local Windows computer designed for individual use (not a server). Vantage Cloud Subscriptions uses an Internet-connected client workstation to run the Vantage Cloud Manager application used to manage Vantage Virtual Domains.

Cloud

The cloud is the term used to describe services and applications accessed via the Internet rather than installed locally on your computer.

Cloud Manager

See *Vantage Cloud Manager*.

Cloud Service Provider

A Cloud Service Provider is a company such as Amazon that provides access to platforms, services, and applications in the cloud. Typically, users pay an hourly fee for general access and additional fees for specific services and applications.

Disconnected States

Disconnected states can occur when a Virtual Domain is paused or started and loses some or all of its connections to other Cloud components. A disconnected state is usually detected by a monitor thread that automatically restarts the connections. Connections can also be reconnected manually.

Endpoint

A physical location for cloud computing resources. When you create a Vantage Virtual Domain, you must specify an Endpoint where you want the Vantage Virtual Domain to run. Typically, you should use the Endpoint nearest you to minimize latency. However, if a capability is not currently available locally, you can use a more distant Endpoint.

Error States

Error states are characterized by error messages indicating that some sort of error has occurred with a Virtual Domain. Errors during transitions cause the Virtual Domain to enter an error state. To recover from an error during a transition, you can retry the transition or force a transition (last resort).

GPU

Graphic Processing Unit. Hardware computing resources that are designed for graphics-intensive computing, such as transcoding video. In the cloud, GPU processing typically includes parallel processing using many computing cores.

Instance

An instance is a virtual machine that can be provisioned and run at a Cloud Service Provider. A Domain Instance consists of a virtual machine running the Vantage domain database for a Vantage Virtual Domain. A Service Instance consists of a virtual machine running the Vantage Services (such as Transcoding) for a Vantage Virtual Domain.

Instance Type

The Instance Type (such as Production, Production Large, Lightspeed, etc.) describes the capability of the individual Instances based on the needs of your Virtual Domain. The Instance Types available in Vantage Cloud map to hardware configurations for the Instances running in the Virtual Domain that are optimized for the given scenario.

MEX

Web Services Metadata Exchange. A web services protocol that works together with WSDL to provide retrieval of metadata information about endpoints. This protocol is used only with the Vantage Cloud SOAP API, which is deprecated.

Notification

A Vantage Cloud Notification is a message providing status information or warnings regarding the Vantage Virtual Domain. Notifications are generated when non-error events occur that should be communicated to the user. Notifications remain until the user removes them.

Paused

One of three main stable states of a Vantage Virtual Domain. When paused, the Virtual Domain is suspended but still exists. From the paused state, the domain can be stopped or started.

Public IP Address

A public IP address can be associated with a Domain Instance or a Service Instance to enable and identify connections to the instance from outside the Virtual Domain. Each Domain Instance uses and retains one public address as long as the Virtual Domain is paused or started. A Service Instance uses a public IP address if a connection to it is requested and may lose the address at any time to the connection request of another instance. Vantage Cloud manages public IP addresses automatically and does not normally require intervention unless the number of instances requesting connections exceeds the number of public IP addresses available from the service provider. For example, AWS limits the available public IP addresses to 5 by default.

For more information, please see Amazon's documentation: [Amazon Elastic Compute Cloud](#).

Remote Desktop Protocol (RDP)

The protocol used to connect between your local computer and instances in the Vantage Virtual Domain. The client application is responsible for creating RDP sessions to grant users access to the Virtual Domain.

REST

Representational State Transfer. A software architecture for creating web services. REST is used to communicate with the Cloud API.

Snapshot

See Vantage Database Snapshot.

SOAP

Simple Object Access Protocol. A communication protocol for formatting messages sent between applications via the Internet. The Cloud SOAP API is deprecated.

Stable States

The three main states that characterize a Virtual Domain when it is stable and not transitioning from one state to another. The three stable states are stopped, paused, and started.

Started

One of three main stable states of a Vantage Virtual Domain. When started, the Virtual Domain is fully operational. From the started state, the domain can be paused or stopped.

Stopped

One of three main stable states of a Vantage Virtual Domain. When stopped, the Virtual Domain instance is terminated, but the “template” for the domain still exists and can be restarted.

Transition States

Transition states are temporary states that a Virtual Domain passes through as it moves from one stable state to another, such as stopped or paused to started or vice versa.

Vantage Cloud Manager

Vantage Cloud Manager is a client application that you install on your computer to give you access to the Vantage applications residing in the cloud.

Vantage Database Snapshot

A snapshot of a Vantage database from a local or virtual Vantage installation. A snapshot taken earlier can be loaded into the Vantage database of the same Vantage Virtual Domain or of another Vantage Domain (local or virtual). Snapshots make it easy to copy a Vantage database from one Vantage Virtual Domain to another. A snapshot does not capture every aspect of a Vantage database, but it does capture these items: Workflows, Categories, Stores and Output Folders, Media and Attachment Nicknames, Metadata Labels, and Variables, and Run on Rule Variables.

Vantage Domain

A Vantage domain is a collection of computers, Vantage workflows, actions, Vantage services, jobs, binders, and configuration settings, all known to and interacting with each other, stored in a database. Vantage domains may exist on a single computer or they may be distributed across many computers for durability and scalability. The name of a Vantage domain is the same as the name of the server that hosts the Vantage domain database. Multiple Vantage domains may exist on a network, but they are independent entities that do not communicate with each other.

Vantage Domain Instance

The core components of a Vantage Virtual Domain, including the database and clients.

Vantage Service Instance

The services component of a Vantage Virtual Domain; that is, the transcoding engine and other services that provide the available Vantage actions.

Vantage Virtual Domain

A Vantage domain that is provisioned and runs at a Cloud Service Provider End Point in a specific Cloud Service Provider Account. Access to the Vantage Virtual Domain is provided by the Vantage Cloud Manager application installed on a local Windows computer and communicating with the Vantage Virtual Domain via the Internet.

WSDL

Web Services Description Language. An XML protocol that describes network services as endpoints. The endpoints operate on messages that contain document-oriented or procedure-oriented information. To define endpoints, operations and messages are described at an abstract level and bound to detailed network protocol and message definitions. Endpoints are combined to create services. WSDL is used with the Vantage Cloud SOAP API, which is deprecated.

