Vantage

Cloud 2.0 User's Guide

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Version 2.0

Part number: 180583

Date: January 2016

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Overview

Introduction

Vantage Cloud Subscriptions provide nearly immediate access to scalable, discretionary Vantage transcoding and workflows within a secure, hosted infrastructure. Vantage Virtual Domains of any scale are provisioned in minutes to add to your media production capacity at any time, and you only pay for what you use.

This guide describes the Vantage Cloud Web Manager user interface that automates the provisioning and management of Vantage Virtual Domains and the supporting Amazon Web Services (AWS) infrastructure to deliver Vantage Cloud Subscriptions.

If you are interested in creating your own application for integrating with Vantage Cloud, please refer to the Vantage Cloud API documentation and code samples on the Telestream Vantage Cloud Subscriptions Support web page. You will find other helpful resources there also to help you get the most from Vantage in the Cloud: http://www.telestream.net/telestream-support/vantage-cloud/support.htm

What's in this Book?

This book is structured to bring you up to speed using Vantage Cloud Subscriptions in the fastest way possible. It begins with the following Quick Start, then a brief overview in this chapter, followed by more detailed chapters about how to install, configure, and use Vantage Cloud Virtual Domains.

These are the chapters included in the Vantage Cloud Subscriptions guide:

- Overview
- Installation and Startup
- Using Vantage Cloud Web Manager
- Vantage Cloud Web Manager Description
- Troubleshooting Vantage Cloud Web Manager

If you just want to get started quickly using Vantage Cloud Subscriptions, go to the Quick Start on the next page and follow the steps listed there.

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Quick Start

The steps below help you quickly install Vantage Cloud Web Manager, configure a new Vantage Virtual Domain, and begin using Vantage Cloud Subscriptions.

Note: A more detailed installation procedure is included in the *Installation and Startup* chapter. The beginning of that chapter covers *Upgrading Vantage Cloud* if you already have Cloud installed and you want to upgrade to a newer version.

To install Vantage Cloud Web Manger for the first time, follow these steps:

1. Sign up for an AWS account and credentials at http://aws.amazon.com.

2. Install Vantage Cloud by downloading and running the software you received from Telestream. (To request the software, contact Telestream: http://www.telestream.net/telestream-support/vantage-cloud/help.htm.)

Note: You can install a Trial Version of Vantage Cloud Subscriptions, or you can install the purchased version. When installing the purchased version, be sure to uninstall the Trial Version first, using the Control Panel. If you inadvertently install both packages, Vantage Cloud can become unusable, requiring help from Support.

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3. Launch Vantage Cloud Web Manager from the desktop. The Manager opens in your default Internet browser. (If you have any trouble, see *Error During Launch* in the Troubleshooting chapter.)
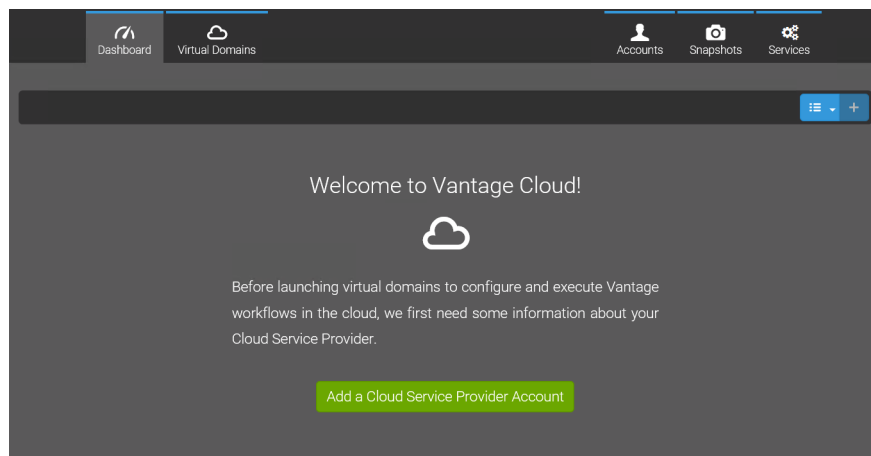
4. Establish your AWS account credentials:

   a. In the Welcome view, click the *Add a Cloud Service Provider Account* button:

b. In the Accounts view, enter an AWS Account *Name,* and then enter your AWS login credentials—*AWS Access Key* and *AWS Secret Access Key*.

c. Click the Validate magnifying glass button 🔍 to verify the account details.

A popup message notifies you if the account information is valid. If not valid, re-enter the credentials and click the Validate button to retest.

d. If you want to use this AWS account for all new Vantage Virtual Domains, click the blue *Use This Account* button ⬭ Use This Account to enable it.

5. Configure a new Vantage Virtual Domain.

a. Click the top *Virtual Domains* button to open the Virtual Domains view.

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    b. Click the green *Configure a Virtual Domain* button Configure a Virtual Domain or click the + + button in the Virtual Domains view.

    c. Enter a *Name* in the Virtual Domain panel to name the Vantage Virtual Domain.

    d. Use the *Account* drop-down menu in the Cloud Service Provider panel to select the AWS account you just created and validated.

    e. Use the *Endpoint* drop-down menu to select the AWS cloud server location nearest to you to provide a platform for the Vantage Virtual Domain and Services.

    f. Use the *Instance Type* drop-down menu to select the amount of computing power you want to use for the Domain Instance (Vantage clients and database) and the type of storage and capacity for the Vantage Store (shared storage).

    g. Use the *Vantage Application* drop-down menu to select the Vantage services you want.

    h. Use the *Instance Type* drop-down menu to select the amount of computing power you want to use for the Service Instance (Vantage services).

    i. Add to the *Instance Count,* if you want multiple Vantage service instances for parallel processing power, by using the + (plus) icon.

6. Start the new Vantage Virtual Domain:

Click the *Start* button ▶ in the Virtual Domain.

The Virtual Domain begins the startup process. First time startup may take several minutes.

Click the Dashboard top button to display the Dashboard view and monitor the percentage of startup. After the Virtual Domain is running, you can monitor the domain, the services, and notifications in this view. Colors indicate status at a glance: light gray for stopped, blue for in transition, and green for running.
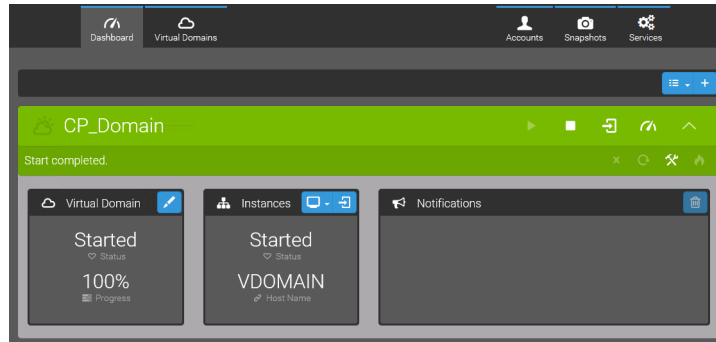
You can pause a Virtual Domain using the Pause button to reduce charges while you are briefly away or doing maintenance. Pause stops Vantage Service Instances, but it leaves the Vantage Domain Instance running. Some charges still accrue. Click the Start button to restart the paused domain.

To collapse or expand the Virtual Domain view, click the arrow .

To stop a Virtual Domain when you are finished with it for the day, select the domain, and then click the Stop button: .

7. Click the *Access This Virtual Domain* button to open the Remote Access window.

To launch a remote desktop showing the Vantage Virtual Domain, click *Launch Windows Remote Desktop* . The first launch asks you to run the Cloud Remote Desktop Utility (by saving and double-clicking the utility installer file).

If the Windows utility installer doesn't launch, you may need to use an elevated command prompt (right-click the .msi file and choose *Run As Administrator*).

After you run the utility once, you will be able to launch the remote desktop directly from the *Launch Windows Remote Desktop* button.

Note: You can also output an RDP file to access the desktop using non-Windows devices.

8. Vantage is now ready to use in the Virtual Domain! See the remainder of this chapter and the other chapters for details about configuring and using Vantage Virtual Domains.

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What Are Vantage Cloud Subscriptions?

Vantage Cloud Subscriptions consists of a *Vantage Cloud Web Manager* local web client which works with a local Vantage Cloud Service. Together these components allow browser-based configuration and control of Vantage Virtual Domains running in the Amazon Web Services (AWS) cloud. User access to the Vantage user interface clients and services in the cloud is provided by Remote Desktop Protocol (RDP).

When you establish an *AWS* account, Amazon gives you access to Vantage available in their cloud environment, running on servers located at points around the world. You can select the server location closest to you (known as an *Endpoint*) for best network performance, and you can select the computing and storage capability you want to use (known as an *Instance Type*). You get access to cloud-based bulk storage, known as *S3*, and shared storage within the virtual Vantage system for Vantage Stores.
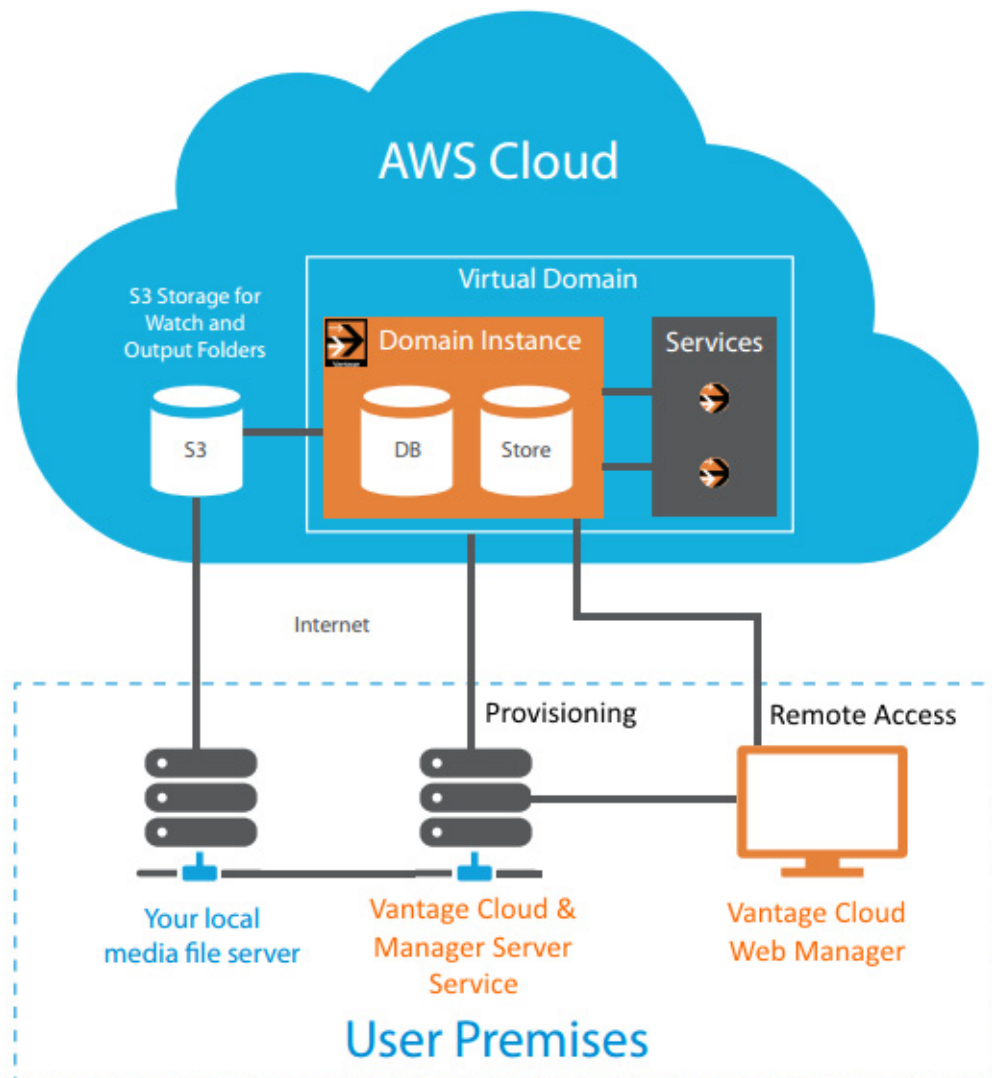
Vantage Cloud Web Manager and AWS Concepts

Before you begin using Vantage Cloud Subscriptions, you need to know how Vantage Cloud controls the AWS infrastructure and learn about the Vantage Cloud Subscriptions components, features, and capabilities. The following pages walk you through the concepts and commands you will use to access Vantage in the cloud.

Creating an AWS Account

Before you begin using Vantage Cloud, you have to create an AWS account on the Amazon web site. When you sign up for an AWS account, Amazon generates a user name, called an *Access Key*, and a password, called a *Secret Access Key*. These are your AWS login credentials and should be protected. You will insert these into fields in the Vantage Cloud Web Manager so it can access AWS and set up Vantage Virtual Domains for you in the AWS cloud.

Using Vantage Cloud

To configure and manage Vantage Virtual Domains, you run the Vantage Cloud installer to install the Vantage Cloud components, which consist of the *Vantage Cloud Web Manager Server* and the *Vantage Cloud Service*, on your workstation. These components perform these functions:

Cloud Service:

- Keeps track of Virtual Domains, accounts, snapshots, etc.
- Manages provisioning of the Cloud infrastructure at AWS when a virtual domain is launched.
- Serves up a REST interface to provide user interaction.

Vantage Cloud Web Manager Server:

- Serves up the HTML-based Vantage Cloud Web Manager user interface for the Cloud Service by interacting with the REST interface.
- Provides a means to access Cloud instances using a special RDP utility.
- Provides a means to access the User Guide and API documentation.

Together, these components provide a browser-based interface that lets you enter your credentials and log into Amazon, set the size and location of the computing resources you want to use, and create your own *Vantage Virtual Domain* in the cloud. When you launch the Vantage Cloud Web Manager from the desktop icon, the user interface opens in your default web browser.

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Creating New Vantage Virtual Domains

After using the Vantage Cloud Web Manager to identify your AWS account and credentials, you can begin defining a Virtual Domain.

The first entry is a Virtual Domain name, which can be anything you like.

Next, you will select the AWS service location you want to use. Typically, you should select the location closest to you (or your source material) for best performance.

You then define the Instance Type, which sets the capacity of the AWS virtual machines that will be provisioned in your Vantage Virtual Domain. Two Instance Types are specified—one for the Domain Instance (Vantage clients, database, and shared storage for the Vantage Store), and one for the Service Instances (Vantage services).

Finally, you specify which Vantage services you want and how many instances of those services you want.

Once you have completed the Virtual Domain configuration, you simply click the Start button and Vantage Cloud Subscriptions instructs AWS to build the Vantage Virtual Domain and the IT infrastructure to support it.

Starting a Vantage Virtual Domain

You have to start a Vantage Virtual Domain before you can use Vantage in the cloud.

Starting a Vantage Virtual Domain in Vantage Cloud Web Manager causes AWS to create a Virtual Private Cloud (VPC). This is a virtual network on AWS with an Internet gateway and a block of IP addresses dedicated to your private cloud connections.

AWS also creates Elastic Compute Cloud (EC2) Instances within the VPC and makes all the necessary network connections and address assignments. AWS creates these Instances behind the scenes from Telestream-supplied templates called Amazon Machine Images (AMIs).

An Instance is a virtual Windows server dedicated to running your Vantage software. It takes a *Vantage Domain Instance* to run the domain database and clients and another *Vantage Service Instance* to run the transcoder and other services. Vantage Cloud Web Manager lets you set the Instance Count to create multiple Service Instances so you can distribute Vantage Services across multiple servers for efficiency.

During Vantage Virtual Domain startup, Vantage Cloud Web Manager displays notifications showing you each major step in the startup process.

After the VPC, Instances, and Vantage components are started, your Vantage Virtual Domain is ready to use in the AWS cloud. The following diagram shows the components that reside in the cloud.

AWS Cloud

Virtual Private Cloud (VPC)

S3 Storage for Watch and Output Folders

S3

Vantage Domain Instance (EC2)

DB

Store

Vantage Service Instances (EC2)

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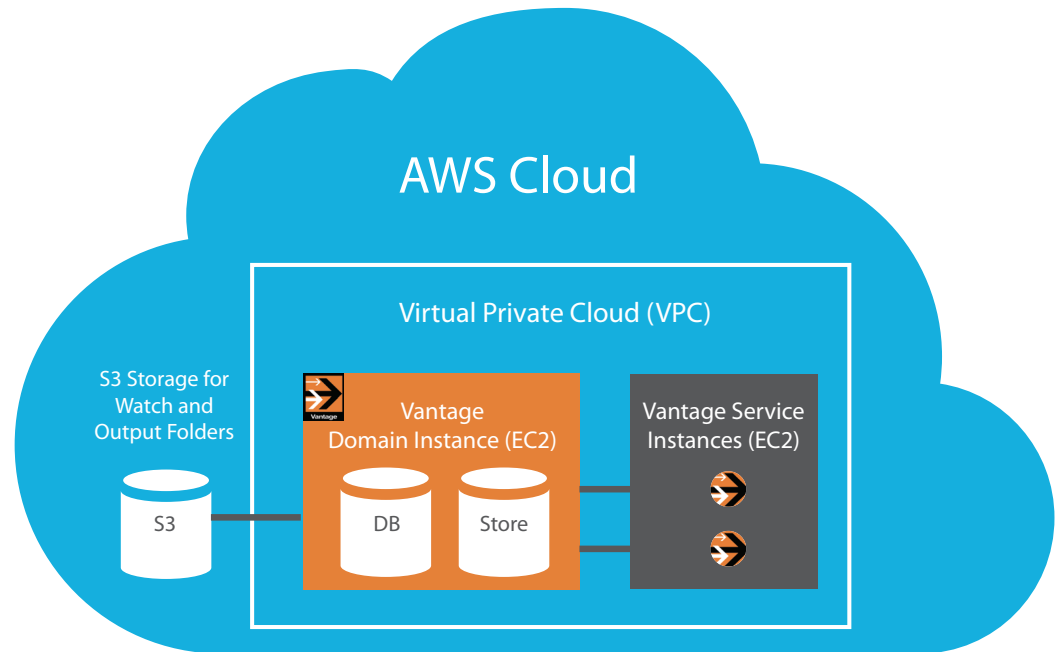
Accessing and Controlling Vantage in the Cloud

Once the Vantage Virtual Domain starts, you can use the *Launch Windows Remote Desktop* button in Vantage Cloud Web Manager to open a remote view of the Vantage Virtual Domain server. The Vantage Cloud Web Manager establishes a remote desktop session with your Vantage Virtual Domain using *Remote Desktop Protocol (RDP)*.

The Remote Desktop Protocol connects you to a virtual Windows desktop (shown below) containing Vantage Workflow Designer, Vantage Management Console, a virtual C: drive for Windows and programs, and a virtual *D: drive* for the Input folder, Vantage Store, and other local storage. The Vantage client applications are already enabled for user administration and do not require a login.
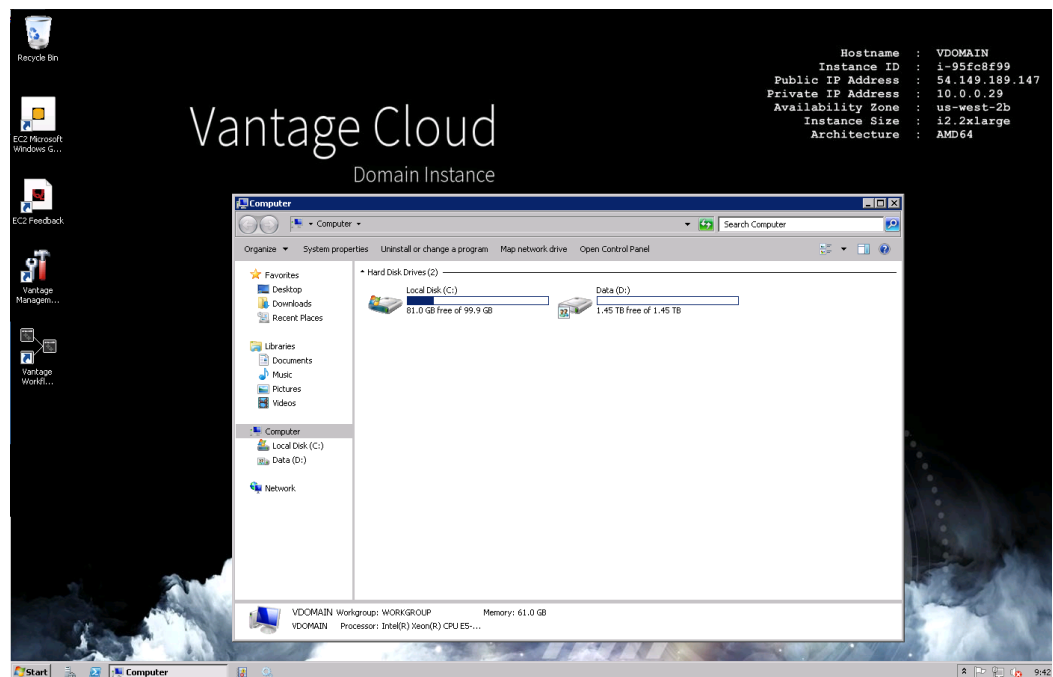
The clients in the cloud are the same Vantage Workflow Designer, Management Console, and Web Apps that you would use in a local Vantage installation, and you use them in exactly the same way you always have.

An Input folder and Vantage Store are created on the D: Drive within the Virtual Domain and are required for input to and output from the Vantage Virtual Domain.

Pausing a Vantage Virtual Domain

Vantage Cloud Web Manager lets you pause a running Vantage Virtual Domain using the *Pause* button. The paused state is useful when you will not be using the system for a few hours but you don't want to shut the whole system down and risk losing important manual settings or spend the time to start up and configure a new domain.

When you use Vantage Cloud Web Manager to pause a Vantage Virtual Domain, the Domain Instance continues to run, but the Service Instances are terminated. Amazon may continue to charge you at a reduced hourly rate. When you start the Vantage Virtual Domain again, the Service Instances are recreated, and you can resume where you left off.

Stopping a Vantage Virtual Domain

When you are done using a Vantage Virtual Domain and want to shut it down, use the Cloud Web Manager Virtual Domain *Stop* button. When you stop a Vantage Virtual Domain, AWS terminates all Instances and deletes the VPC. AWS hourly charges should also stop.

Once the Vantage Virtual Domain stops, you can start it again by using a Start Virtual Domain command. Startup can take some time, so you may be better off pausing rather than stopping if you plan to be away from the system for a few hours or less.

Note: When you stop a Vantage Virtual Domain, changed service limit settings are lost. When you pause a domain, service limit settings on Service Instances are lost but are retained on the Domain Instance).

Retrying a Command

If an initial attempt to start, pause, or stop a Vantage Virtual Domain fails, use the Retry button to repeat the command again. The Retry button repeats whichever command was in progress when an error occurred.

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Using Force Stop

The Force Stop command does the same thing as the regular stop commands, but the Cloud Manager ignores any returned errors and continues to attempt to stop the Vantage Virtual Domain. This command is a last resort.

WARNING: *Because errors are ignored when you use Force Stop, EC2 Instances and the VPC may not be terminated. If this happens, you will continue to accrue hourly charges from Amazon. If you use either of the Force commands, you should log into AWS and use the Amazon console to view and remove any unwanted EC2 Instances and VPCs.*

Saving a Snapshot

Vantage Database Snapshots are a convenient way to take a snapshot (save the state) of Vantage workflows (local or virtual) and later import that snapshot into the Vantage database in a Vantage Virtual Domain. When you select the Save Snapshot button, everything required to recreate a fully functioning Vantage Virtual Domain is saved. See *Creating and Using Vantage Database Snapshots* for details.

Exporting a Vantage Virtual Domain

You may want to export a Vantage Virtual Domain so that you can replicate it again later. If so, Vantage Cloud Web Manager includes an Export Virtual Domain function that exports an XML file. The file contains a description of the Virtual Domain, including state, configuration and status details, as well as required objects. This function does not save the state of Vantage but just saves the Vantage Cloud Web Manager configuration for a Vantage Virtual Domain. The Import Virtual Domain function lets you import an exported XML file to reconstitute a Virtual Domain. See *Exporting and Importing Vantage Virtual Domains* for details.

Note that there is also a way to export (save) and reimport a Vantage state. If the Virtual Domain has a snapshot configured for it, that snapshot will be exported as a part of the Virtual Domain. Later the snapshot can be imported into a selected Vantage Cloud service. See *Creating and Using Vantage Database Snapshots* in the *Using Vantage Cloud Web Manager* chapter.

Using Vantage in the Cloud

The overall process for using Vantage in the cloud is essentially the same as using a local Vantage installation with some minor differences regarding storage. When you're ready to put Cloud to work, this is the general procedure you will follow:

1. As part of configuration, you will create Watch and Output folders in your allocated Amazon AWS S3 storage. Vantage Cloud Subscriptions requires these folders to reside on S3.

2. Next, you create workflows using your Vantage Virtual Domain, or use Vantage Cloud Web Manager to take a snapshot of the workflows on a local Vantage domain and import the snapshot into your Vantage Virtual Domain and activate the workflows.

3. Then you submit media to the Watch folder to start Vantage workflow processing.

4. Your workflows in the Vantage Virtual Domain will detect media coming in from the S3 Watch folder, localize the media files to an Input folder on the D: Drive of the Virtual Domain, and process the files.

5. The workflow output goes temporarily into a Vantage Store folder created automatically during installation on the D: Drive of the Virtual Domain.

6. From the D: Drive Vantage Store, the Vantage workflows copy or move processed media (and attachment) files to the S3 Output folder you created earlier.

7. Lastly, you can copy the processed media from your S3 Output folder to any preferred destination, such as your local media server or workstation. Just be sure that your file transfer method and destination are cloud-supported and accessible.
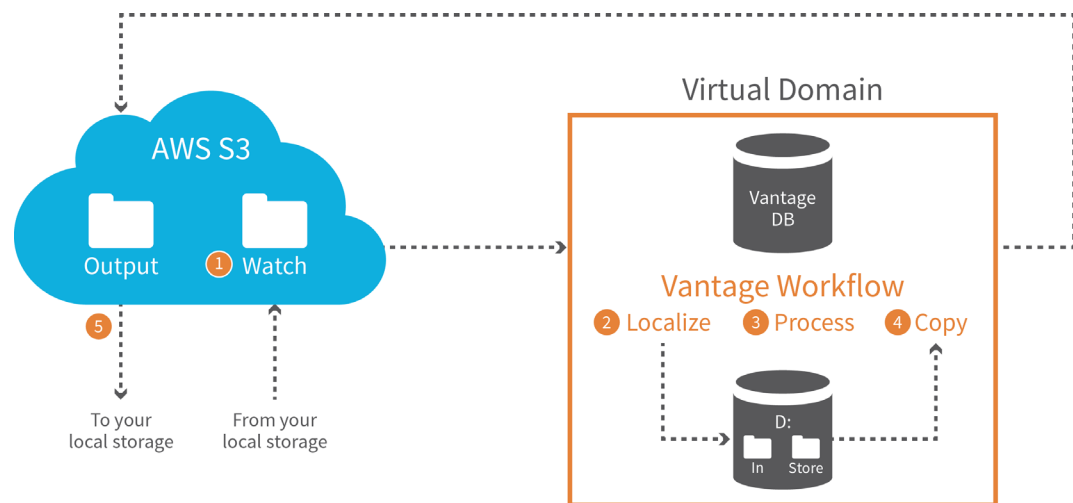
Note: You can use high speed, high volume transfer servers, such as Aspera, to move data in and out of AWS S3. Alternatively, you can use Aspera to copy files directly to the Virtual Domain D-drive Input folder (which may cost more). Either of these methods can save considerable file-transfer time.

Recommended Security Practices

Security is vitally important, and using an application over the public Internet naturally raises concerns about security. Users can be assured that Vantage Cloud Subscriptions were designed with security in mind, and Amazon has designed the AWS Virtual Private Cloud environment to be generally safe and secure. Additionally, you can enhance security by applying your own corporate security policies, and by observing the following recommended practices.

How AWS Manages Security

- Restricts access to publicly accessible instances, and restricts who can access the publicly accessible instances by checking the caller's public IP address.

- Adds the public IP address of the server running Vantage Cloud when starting the Vantage Virtual Domain.

- When a Vantage Virtual Domain is exported and then imported, the new server's public IP address is added during Virtual Domain startup (if different from the previous server).

- By default only the Domain Instance is publicly accessible. Service Instances become publicly accessible on the Internet only when starting an RDP connection.

Managing Security Risks

Vantage Virtual Domain configurations can be exported to an XML file. This makes it easy to return a domain to a specific state or to clone domains. Exported Vantage Virtual Domain data is encrypted for security, but it contains all of the AWS account information needed to access your Vantage Virtual Domains from any computer. <u>Be very careful where you place exported XML files and how and to whom you send them. Sending these files is the equivalent of sending someone your AWS account password.</u>

To manage your security risks, observe these warnings:

SECURITY WARNINGS

- **Export and import of Vantage Virtual Domains is for migration to new servers only, NOT for alternative access systems.**

- **<u>Exported Vantage Virtual Domains contain your AWS account information and enable access to Vantage Virtual Domains from any computer.</u> Treat all exported Vantage Virtual Domains as securely as you treat your passwords.**

- **NEVER share your Vantage Virtual Domains.**

- **NEVER share your AWS credentials.**

Configuring Your Network for Security

Telestream recommends the following network configuration practices:

- Establish a Vantage Cloud Subscriptions server within your enterprise security system.

- Only access your Vantage Virtual Domain directly from your secure server.

- Use a VPN connection to the on-premises server, and then use RDP from the server to the Vantage Virtual Domain.

- Do NOT configure two servers for access to the same Vantage Virtual Domains.

Moving or Migrating Your Vantage Cloud Subcriptions Server

When moving a Vantage Cloud Subscriptions server, follow these practices:

1. Stop All Vantage Virtual Domains on the existing server.

2. Export all Vantage Virtual Domains from the existing server. Ensure the exported Virtual Domains do not leave your secure environment.

3. Install the Vantage Cloud Web Manager software on the new server.

4. Import the exported Vantage Virtual Domains to the new server and make sure they work by starting and testing each one.

5. Uninstall Vantage Cloud Web Manager from the old server, and delete the folder and files in C:\ProgramData\Telestream\Vantage Cloud.

Accessing Your Vantage Virtual Domains Remotely

- Use a VPN connection to the server running Vantage Cloud Web Manager for remote access.

- To work with Telestream Support, allow remote access to the Vantage Cloud Virtual Domain server so Support sees the Vantage Virtual Domain from the system that created and manages it.

Getting Started

Now that you have a basic overview of how Vantage Cloud functions, you're ready for the next step, which is installing and getting started using Vantage Cloud Subscriptions.

Please go to the next chapter, *Installation and Startup*, which will guide you through detailed steps to perform installation, configuration, and logging in for the first time.

After logging in, you may want to read the chapter entitled, *Using Vantage Cloud Web Manager* on page 51 for procedures to use Vantage Cloud Web Manager with Amazon Web Services to access Vantage in the cloud.

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Installation and Startup

Introduction

This chapter explains how to install, configure, and start Vantage Virtual Domains:

- Upgrading Vantage Cloud
- Prerequisites
- Considerations
- Installation and Configuration
- Vantage Virtual Domain Recommended Practices

Upgrading Vantage Cloud

If you already have a previous version of Vantage Cloud installed, you can skip the detailed installation procedure and use the following steps to upgrade. Be sure your systems meet the *Prerequisites* on the next page. When you upgrade, existing Cloud configurations are retained, including such things as AWS account information, Virtual Domain configurations, and snapshots.

Note: If you are replacing a trial version of Vantage Cloud with a purchased version, uninstall the Trial Version first, using the Control Panel. If you inadvertently install both packages, Vantage Cloud can become unusable, requiring help from Support.

To upgrade Vantage Cloud from a previous release, follow these steps:

1. Stop all Virtual Domains. If a Virtual Domain enters an error state while stopping, resolve the error before continuing.
2. Close any open instances of the Vantage Cloud Manager application.
3. Run the *VantageCloudSetup.exe* installer to install the new Vantage Cloud release.
4. Double-click the Vantage Cloud Web Manager desktop icon to launch the new software in your default browser.
5. Verify that your Cloud installation is configured as it was before the upgrade.
6. Vantage Cloud is now ready to use. See *Using Vantage Cloud Web Manager* and *Vantage Cloud Web Manager Description* to learn how to use the new features.

Prerequisites

The local portion of Vantage Cloud Subscriptions consists of a Web User Interface, Manager Service, and Vantage Cloud Service. The following are Vantage Cloud requirements divided according to the requirements of each component:

Web UI:

- Any OS capable of running the listed browsers.
- Microsoft Edge 3 or later, Internet Explorer 11, Safari 9 or later, Chrome 46 or later, Firefox 40 or later
- Internet connection
- Ports:
  - TCP/UDP 3389 (RDP)
  - 43000 Vantage Cloud REST API

Manager Service:

- These 64-bit Windows versions: Windows 7, 10, Server 2008 R2, Server 2012 R2
- Internet connection
- Administrator privileges to install
- Ports:
  - TCP 80 (HTTP)
  - 3000 Web Manager

Cloud Service:

- These 64-bit Windows versions: Windows 7, 10, Server 2008 R2, Server 2012 R2
- Microsoft .NET 4.5.1
- Administrator privileges to install
- Ports:
  - TCP 80
  - TCP 8676 / 8677 (Vanage SDK)
  - All ICMP (Ping)

Considerations

Certain considerations and limitations apply to using Vantage Cloud Subscriptions:

- Vantage Virtual Domains do not support Active Directory user accounts.

- On any single computer, you can run multiple Vantage Virtual Domains and Services. Resource availability at AWS may be limited by your AWS account as described in *AWS Considerations*. Vantage Cloud Web Manager will report that condition, should it occur.

- The Snapshot feature allows you to capture the Vantage workflows of a local or virtual Vantage domain and import them into a Vantage Virtual Domain.

AWS Considerations

- Performance varies by instance type (virtual server specifications) and network traffic. Busier times of day may affect both server performance and transfer speeds.

- Virtual servers can become temporarily unavailable. Please see this URL for details: http://aws.amazon.com/ec2/faqs#How_many_instances_can_I_run_in_Amazon_EC2)

- AWS default account settings specify limits on various AWS resources. Vantage Cloud Web Manager will report that condition when it is unable to create new Virtual Domains due to lack of available resources. AWS resource allocation can be increased by contacting AWS support. AWS accounts have a default limit of 5 Virtual Private Clouds (VPCs) per Endpoint, including one required Default VPC automatically established for your account. See the AWS documentation page on Amazon Virtual Private Cloud for details. Also see *No VPC Available* in the Troubleshooting chapter of this guide for a discussion of the error message that is presented if you try to start too many VPCs.

- AWS accounts have a default limit of 5 external addresses (called elastic IP addresses by AWS) per account per Endpoint. This limits the number of simultaneous Vantage Virtual Domains and Remote Desktop connections you can have, each of which requires one address. See the AWS documentation page on Elastic IP Addresses for details.

- AWS may not be able to provide access to some Instance Types if those types are in use by other customers. Cloud Manager displays a message when an Instance Type is unavailable. If you need a particular Instance Type, you may have to connect to a more distant Endpoint or wait for a less busy time of day to access the desired Instance Type. See the AWS page about Lightspeed GPU availability.

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Installation and Configuration

The six steps below help you quickly install Vantage Cloud Web Manager, configure a new Vantage Virtual Domain, and begin using Vantage Cloud Subscriptions.

These are the six steps:

1. Sign up for an Amazon AWS Account
2. Install and Run the Vantage Cloud Web Manager
3. Configure a New Vantage Virtual Domain
4. Start the Vantage Virtual Domain
5. Connect to the Remote Desktop
6. Configure AWS S3 Storage and Vantage Workflows
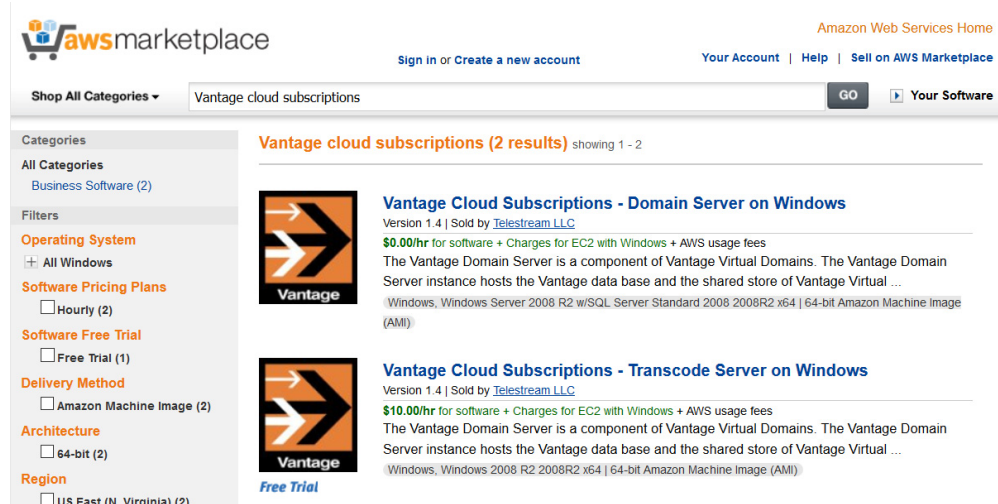
❶ Sign up for an Amazon AWS Account

a. Point your browser to http://aws.amazon.com.

b. Follow the AWS procedure to sign up for an AWS account and log in.

c. On the main AWS page, click AWS Marketplace in the lower right corner.
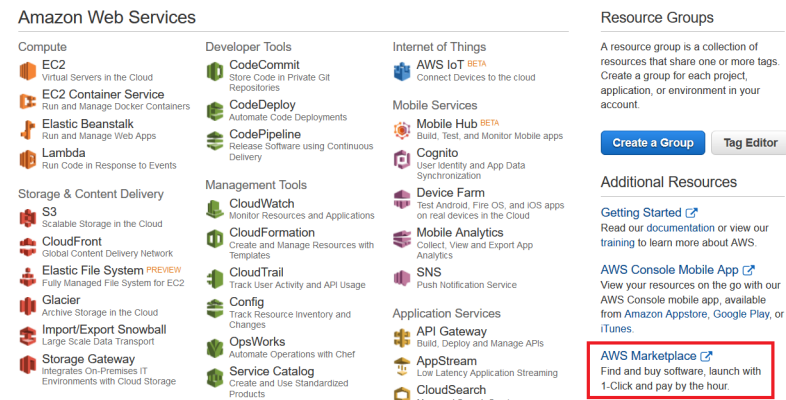
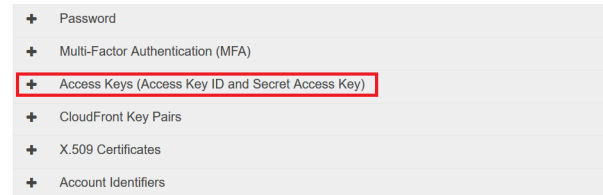**d.** , Search for Vantage in the AWS Marketplace search box.

e. Register for the Vantage Cloud Domain and Vantage Cloud Transcode AMIs within your AWS Marketplace account, but don't launch them.

f. Obtain Security credentials. (Click the drop-down menu next to your login name, and select Security Credentials > Access Keys to get an Access Key ID and a Secret Access Key.) You will need these keys later to log into Vantage Cloud.

Your Security Credentials

Use this page to manage the credentials for your AWS account. To manage credentials for AWS Identity and Access Management (IAM) users, use the IAM Console .

To learn more about the types of AWS credentials and how they're used, see AWS Security Credentials in AWS General Reference.

+ Password

+ Multi-Factor Authentication (MFA)

+ Access Keys (Access Key ID and Secret Access Key)

+ CloudFront Key Pairs

+ X.509 Certificates

+ Account Identifiers

g. Amazon also offers IAM subuser accounts for multiple users. See the AWS IAM documentation for details.

When creating subuser accounts, the following minimum IAM permissions are required.

IAM minimum permissions to run Vantage Cloud Subscriptions:

```
{
  "Statement": [
   {
    "Effect": "Allow",
    "Action": [
      "ec2:AllocateAddress",
      "ec2:AssociateAddress",
      "ec2:AssociateDhcpOptions",
      "ec2:AssociateRouteTable",
      "ec2:AttachInternetGateway",
      "ec2:AuthorizeSecurityGroupIngress",
      "ec2:CreateCustomerGateway",
      "ec2:CreateDhcpOptions",
      "ec2:CreateInternetGateway",
      "ec2:CreateKeyPair",
      "ec2:CreateNetworkAcl",
      "ec2:CreateNetworkAclEntry",
      "ec2:CreateRoute",
      "ec2:CreateRouteTable",
      "ec2:CreateSecurityGroup",
      "ec2:CreateSubnet",
      "ec2:CreateTags",
      "ec2:CreateVpc",
      "ec2:DeleteCustomerGateway",
      "ec2:DeleteDhcpOptions",
      "ec2:DeleteInternetGateway",
      "ec2:DeleteKeyPair",
      "ec2:DeleteNetworkAcl",
      "ec2:DeleteRoute",
      "ec2:DeleteRouteTable",
      "ec2:DeleteSecurityGroup",
```

```
                    "ec2:DeleteSubnet",
                    "ec2:DeleteTags",
                    "ec2:DeleteVpc",
                    "ec2:DescribeAddresses",
                    "ec2:DescribeAvailabilityZones",
                    "ec2:DescribeDhcpOptions",
                    "ec2:DescribeInstanceStatus",
                    "ec2:DescribeInstances",
                    "ec2:DescribeInternetGateways",
                    "ec2:DescribeKeyPairs",
                    "ec2:DescribeNetworkAcls",
                    "ec2:DescribeRouteTables",
                    "ec2:DescribeSecurityGroups",
                    "ec2:DescribeSubnets",
                    "ec2:DescribeTags",
                    "ec2:DescribeVpcs",
                    "ec2:DetachInternetGateway",
                    "ec2:DisassociateAddress",
                    "ec2:DisassociateRouteTable",
                    "ec2:GetPasswordData",
                    "ec2:ModifyVpcAttribute",
                    "ec2:ReleaseAddress",
                    "ec2:RunInstances",
                    "ec2:TerminateInstances"
                  ],
                  "Resource": [
                    "*"
                  ]
                }
            ]
        }
```

IAM permissions to use S3 protocol with Vantage:

```
    {
      "Statement": [
        {
          "Effect": "Allow",
          "Action": [
            "s3:DeleteObject",
            "s3:GetObject",
            "s3:ListAllMyBuckets",
            "s3:ListBucket",
            "s3:PutObject"
          ],
          "Resource": [
            "*"
          ]
        }
      ]
    }
```

❷ Install and Run the Vantage Cloud Web Manager

Follow these steps to install Vantage Cloud:

a. Choose a Windows computer where you can install Vantage Cloud. The system must have Internet access to AWS at http://aws.amazon.com.

b. Download the Vantage Cloud Setup software from Telestream to your Windows computer. To request the software, access this URL from your browser: http://www.telestream.net/telestream-support/vantage-cloud/help.htm.
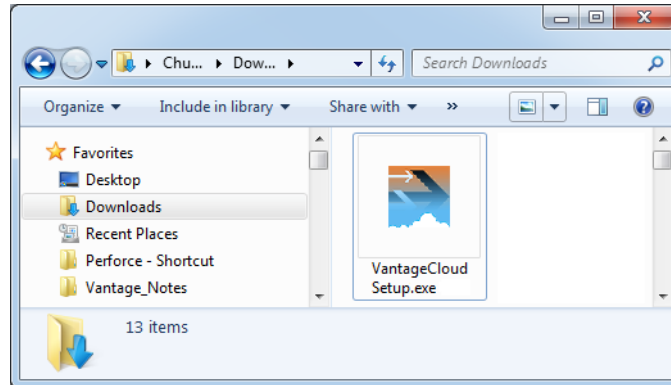
Note: You can install a Trial Version of Vantage Cloud Subscriptions, or you can install the purchased version. When installing the purchased version, be sure to uninstall the Trial Version first, using the Control Panel. If you inadvertently install both packages, Vantage Cloud can become unusable, requiring help from Support.

c. Double-click the *VantageCloudSetup[version].exe* file to launch the Vantage Cloud installer.

The installer opens to a Welcome page.

d. Check the box that says *I agree to the license terms and conditions*.

e. Click *Options* to see the default installation location. You can leave this location as is, or you can browse to change it. Click OK when finished.
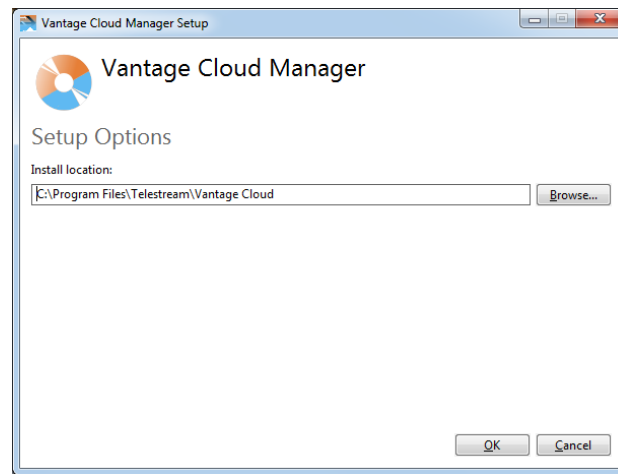
f. Click *Install*. Vantage Cloud Web Manager installs and a Success screen appears when installation has finished.
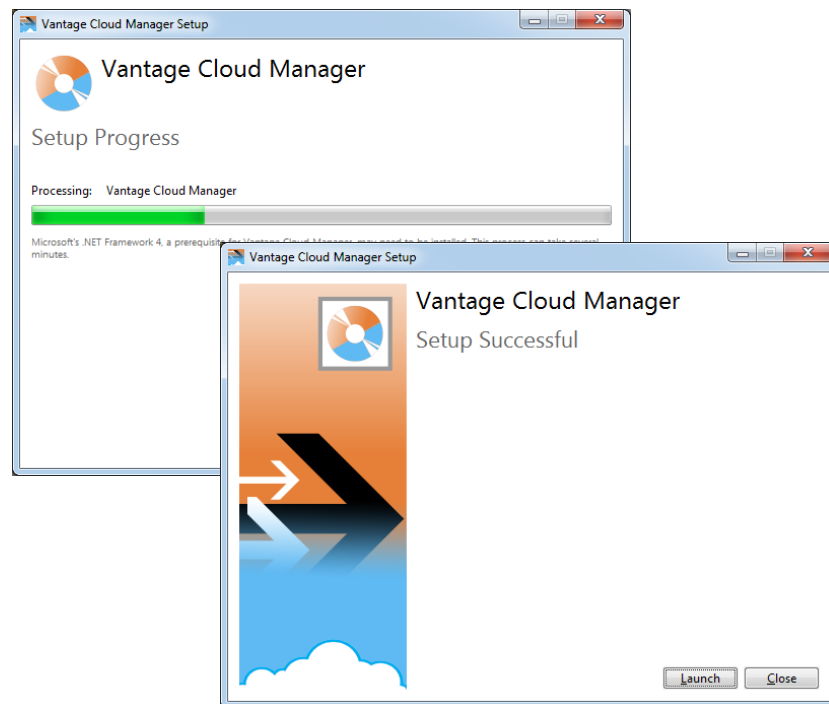

g. Click Launch, or double-click the Vantage Cloud Web Manager desktop icon. Vantage Cloud Web Manager opens in your default browser. (If you have any trouble, see *Error During Launch* in the Troubleshooting chapter.)

❸ Configure a New Vantage Virtual Domain

When you launch the application for the first time, a welcome screen appears. Follow these steps to set up your Vantage Virtual Domain:

a. Click the green *Add a Cloud Service Provider Account* button.
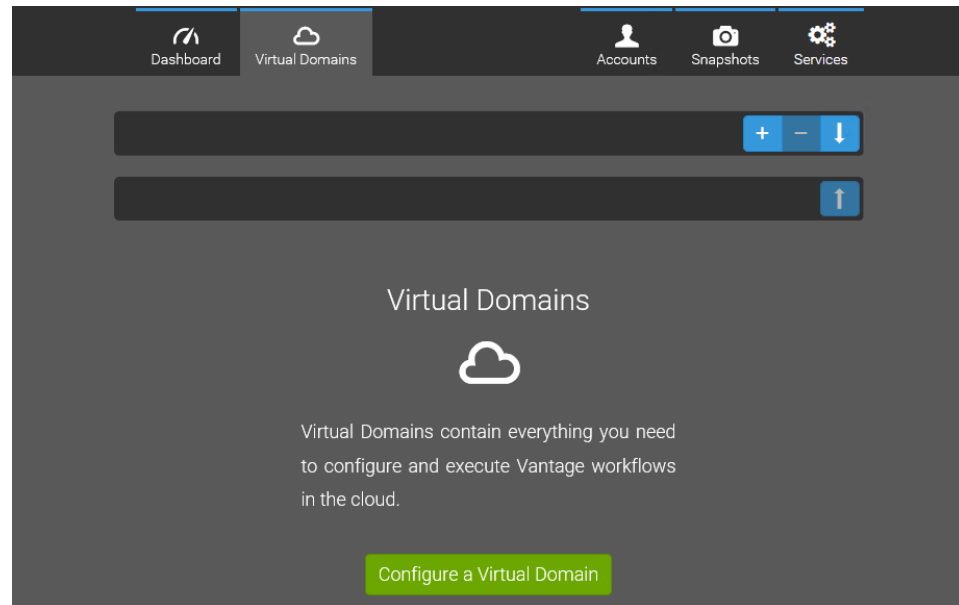
b. The Accounts form requests your AWS account information. This allows you to use Vantage Cloud Web Manager to log into your account and create Vantage Virtual Domains.
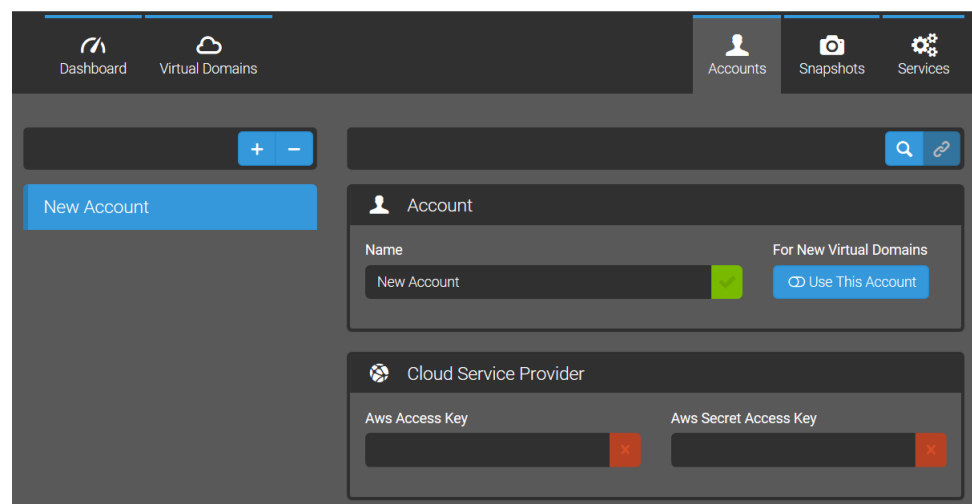
Fill in the requested information as follows:

Name—Enter the name of the Cloud Service Provider account's owner.

AWS Access Key—Enter the Access Key ID assigned to you when you signed up for your AWS cloud services account (not the general login).

AWS Secret Access Key—Enter the Secret Access Key assigned to you when you signed up for your cloud services account (not the general login password).

(After you complete the form, you will go on to create Virtual Domains, but you can still access this form at any time by selecting it from the top menu.)

c. Click the Validate magnifying glass to check your connection and credentials. A dialog box pops up to indicate success or failure validating the AWS login.

d. If you plan to use only one AWS account, you can go on to the next step. Your data is automatically saved.

To add more accounts, click the + (plus) button, and a fresh new account form opens. If you want to delete an account, click the account below the +/- buttons to highlight it, and click the – (minus) button.

e. Click the Virtual Domain button in the top menu to open a form for creating a new Virtual Domain.

Virtual Domain

Note: Many commands are also available via context menus if you right-click in the left panel.

The Virtual Domain form appears.

g. Fill in the form with your Virtual Domain configuration selections. For a visual representation of what you are configuring, see the following block diagram.

Name—Change the default name to a unique Virtual Domain name.

Status—Shows the operational state of the Virtual Domain (started, stopped...).

Account—The name you gave to your AWS account.

Endpoint—This is the location of AWS computing resources. Typically, you should use the Endpoint nearest to your S3 storage location for best network performance. Some Endpoints may not offer the full range of computing capacities. If the computing configuration you want is not available, try a different Endpoint.

Domain Instance Type—Choose the virtual computing resource best suited to your task. At the right end of each selection, mouse over the blue "i" button to get a description of the AWS computing resource.
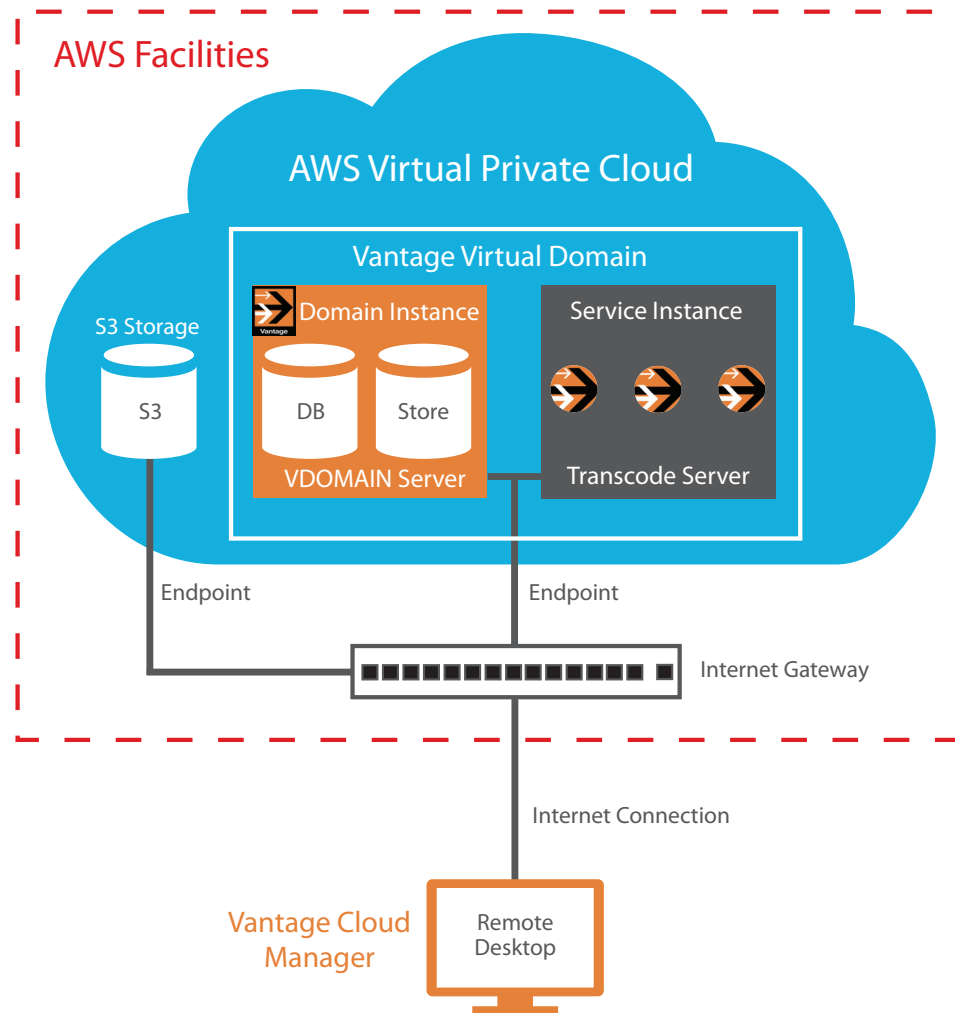
Vantage Database Snapshot—For the first use, this is set to [none], but you can create a snapshot of a local domain and deploy it to the Cloud if you wish. On future startups, you can select an existing snapshot to restore the Vantage Virtual Domain database to a previous setup or load a configuration from another Vantage domain. This makes it easy to save your operational state (workflows etc.) and return to it later. See *Creating and Using Vantage Database Snapshots*.

Vantage Application—Choose the level of Vantage service you want. The selections correspond to available Vantage feature license levels. Costs vary by level. See *Vantage Application License Options* in the *Description* chapter for lists of features corresponding to the selectable options.

Service Instance Type—Choose the virtual computing capacity (AWS EC2 instance type) suited to your Vantage service task. Services include transcoding, notifying, etc. (Note that the Transport service is installed on the Domain Instance, not the Service Instances.) At the right end of each selection, mouse over the "i" button for a description of the AWS computing resource.

Instance Count—Set the Instance Count to the number of Vantage service engines you want to use (the default is 1).

Deploying a Virtual Domain in the AWS Cloud

AWS Facilities

AWS Virtual Private Cloud

Vantage Virtual Domain

Domain Instance

Service Instance

S3 Storage

S3

DB   Store

VDOMAIN Server   Transcode Server

Endpoint   Endpoint

Internet Gateway

Internet Connection

Vantage Cloud Manager

Remote Desktop

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❹ Start the Vantage Virtual Domain

a. Click the *Start* button (right arrow) in the Dashboard view to start your Vantage Virtual Domain and monitor startup progress.

Startup takes a few minutes. When the Vantage Virtual Domain starts, a VPC, EC2 virtual servers, and Vantage are provisioned, and Vantage Cloud becomes available to use.

Dashboard   Start
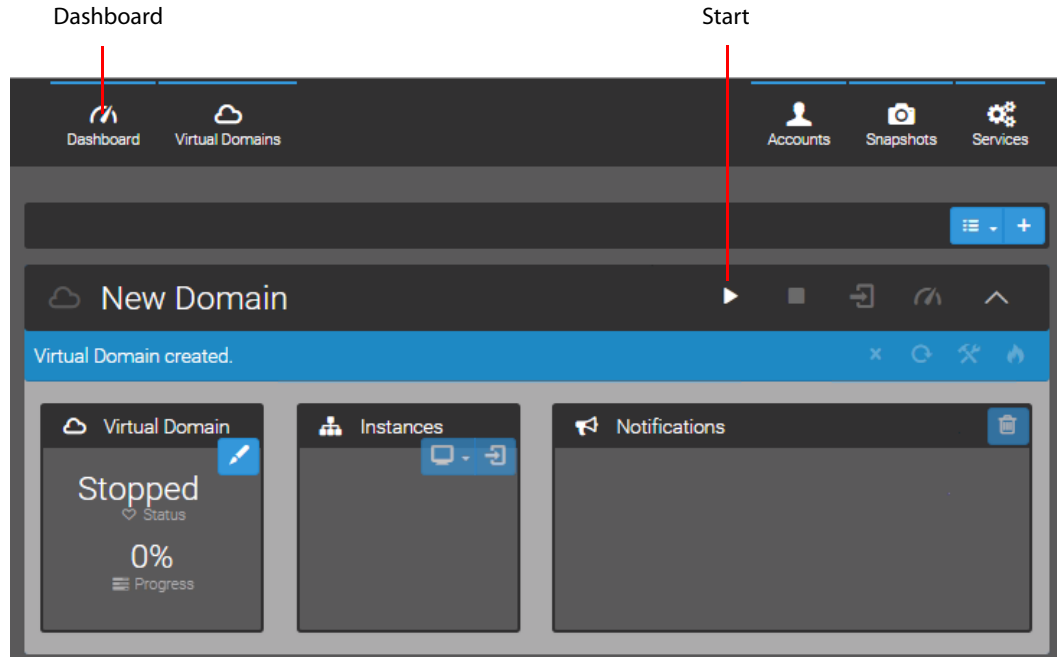
❺ Connect to the Remote Desktop

Once you have established and started a Vantage Virtual Domain, you are ready to use the domain by connecting to the remote desktop:

a. Click the *Access Virtual Domain* button.

Access Virtual Domain
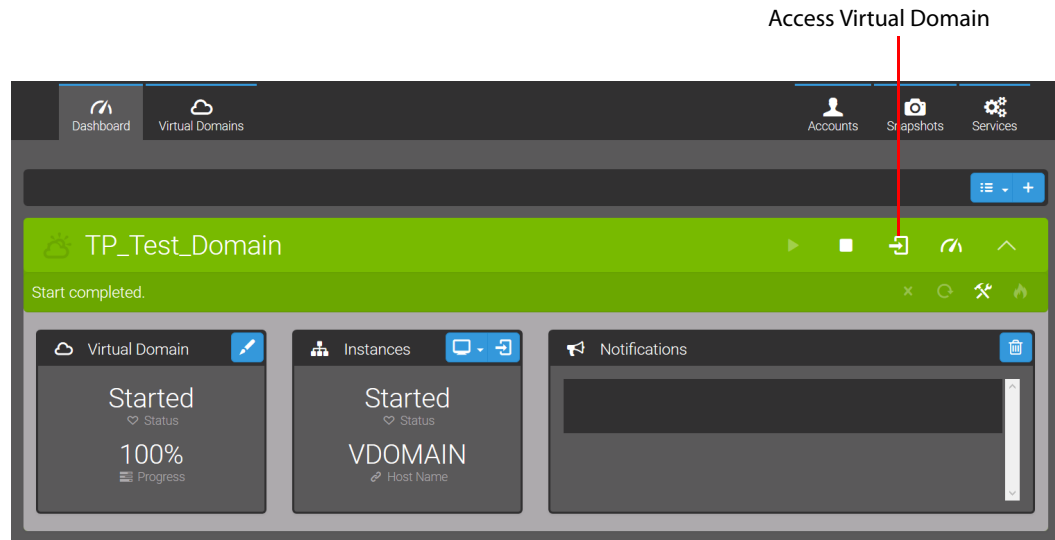
A dialog opens informing you that you need to download and run a one-time installation file (VantageCloudRemoteDesktopUtility.msi).
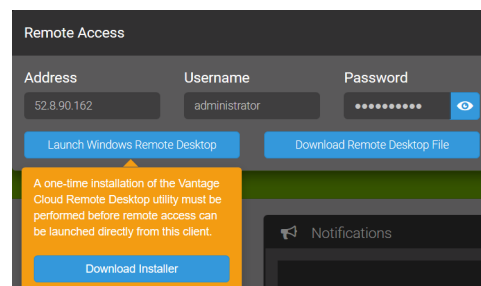
b. On Windows computers, click *Download Installer*, save the .msi installer file to a convenient location, and run the installer after downloading. (This installs a protocol handler in Windows along with an RDP configuration file, and also makes some modifications to the Windows registry.)

If the Windows installer doesn't launch, you may need to use an elevated command prompt (right-click the .exe file and choose *Run As Administrator*).

On non-Windows platforms, click *Download Remote Desktop File*, and save the file to a convenient location.

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c. On Windows computers, click Launch Windows Remote Desktop.

On non-Windows computers, open your Remote Desktop Utility and use it to access the configuration file you just saved and open the remote desktop.
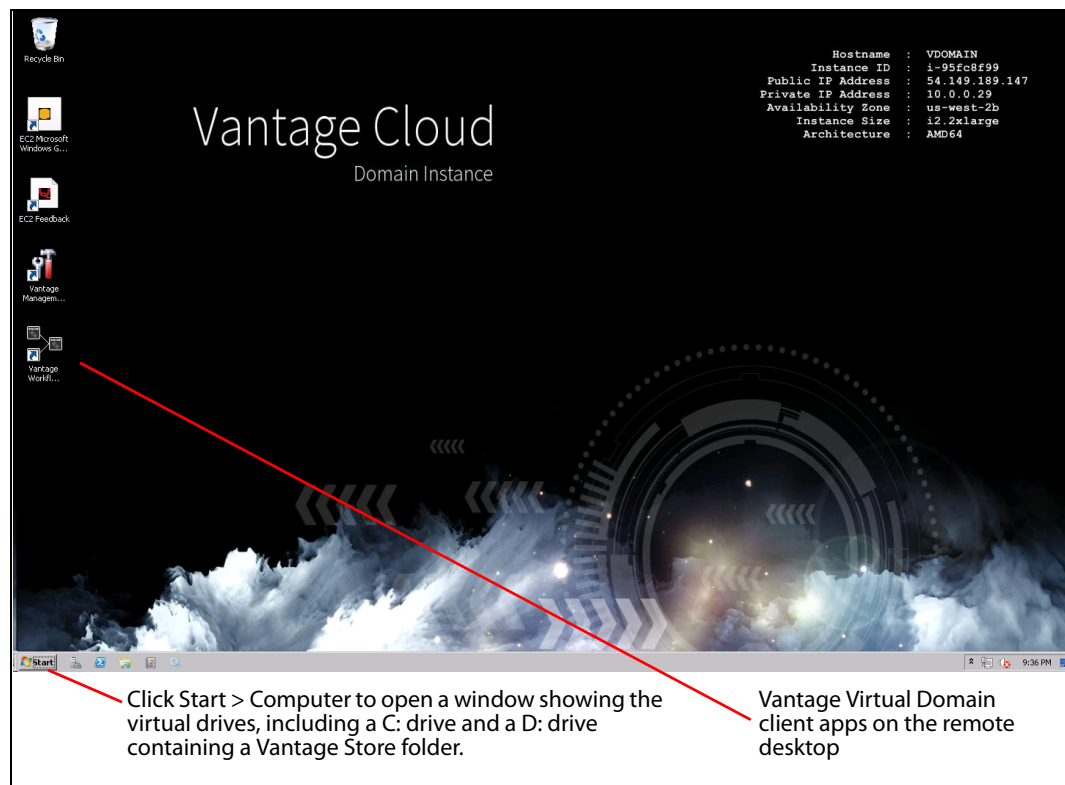
On all computers, if you have any trouble with the configuration files, you can always open your Remote Desktop Utility, and copy and paste the address, user-name, and password from the Cloud Manager dialog into the utility.

d. Click *Yes* when the Remote Desktop Connection dialog appears (Windows only). If you would like avoid this dialog in the future, click *Don't ask me again for connections to this computer.*
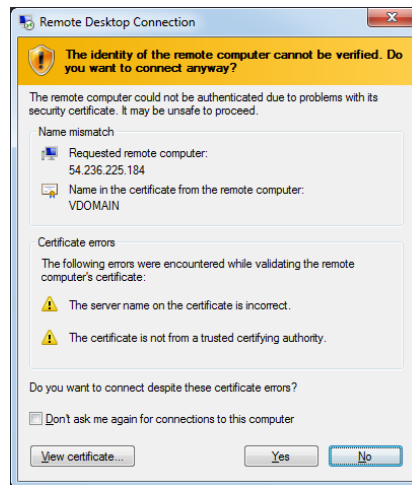
The Vantage Virtual Domain remote desktop window opens.

- The desktop includes icons for the Workflow Designer and the Vantage Management Console clients.

- The Start menu provides access to the C- and D-drives.

- The D-drive includes Vantage Output and Vantage Store folders.

Click Start > Computer to open a window showing the virtual drives, including a C: drive and a D: drive containing a Vantage Store folder.

Vantage Virtual Domain client apps on the remote desktop

a. Double-click the Workflow Designer or the Management Console icon on the desktop to start the Vantage client that you want to use. The Vantage client applications are already enabled for user administration and do not require a login.

You use Vantage in the cloud in the same way you would use a local version. See the *Vantage User's Guide* or the *Vantage Domain Management Guide* under the Help menus of the client applications if you need instructions.

❻ Configure AWS S3 Storage and Vantage Workflows

Before you create Vantage workflows, you need to create Watch and Output folders in your AWS S3 storage location. You upload media from local storage to the S3 Watch folder for Vantage Virtual Domain processing. After processing, the Vantage Virtual Domain makes the media available to download from the S3 Output folder.

To create Watch and Output folders and upload media, follow these steps:

a. Log onto AWS S3. The figure shows example S3 login screens. **Note:** For best performance, choose an S3 location near the Endpoint you plan to use; for example, set S3 and your Endpoint both for US East. For details about S3 setup, please refer to the AWS S3 online documentation.
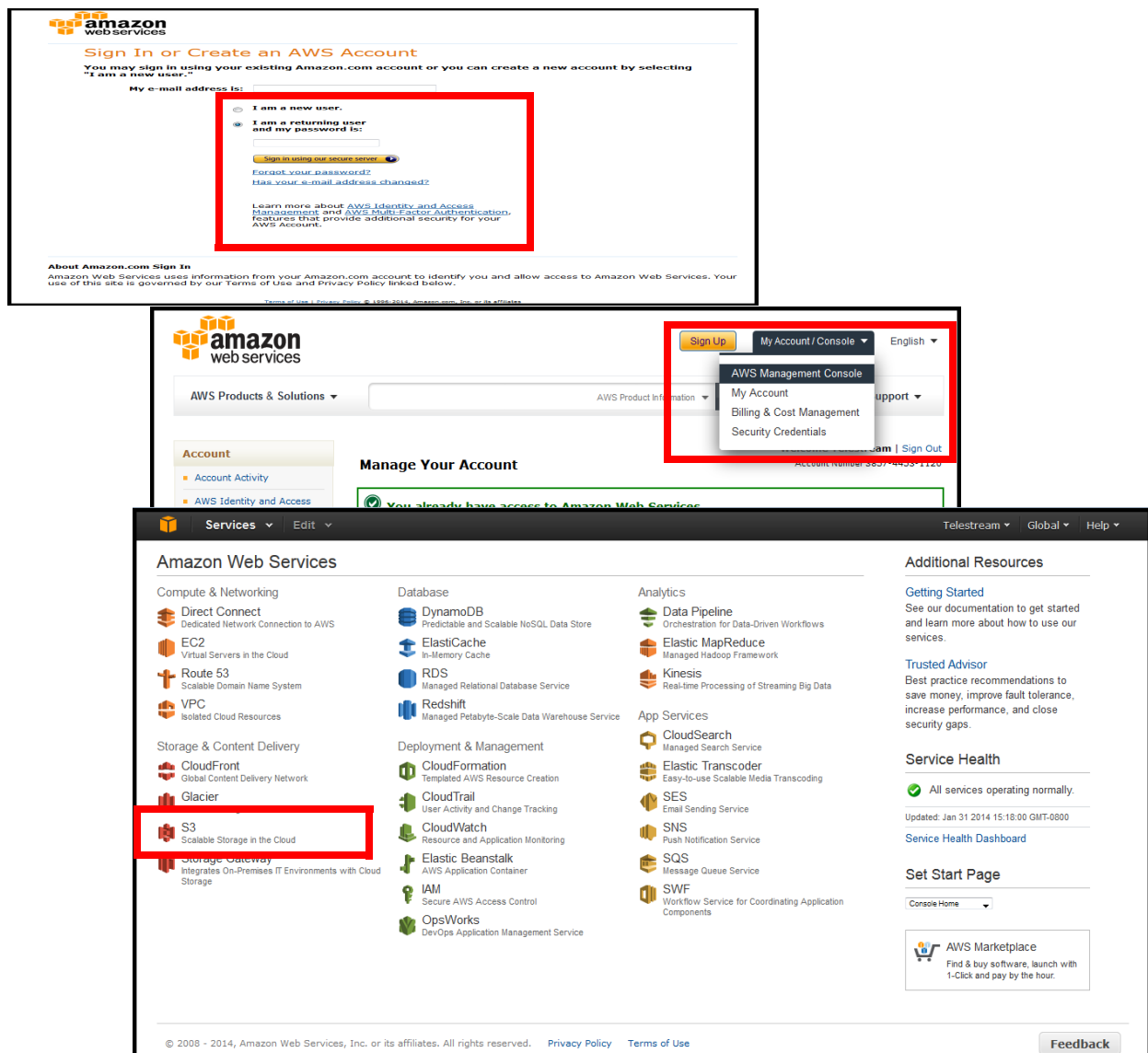
b. Use the S3 Create Bucket button to create Watch and Output folders (Amazon calls folders buckets). In the Create a Bucket dialog, select the same region as the computing resources you plan to use. (After creating a bucket, click it in the list of buckets and click Properties to set permissions and any other desired properties.)
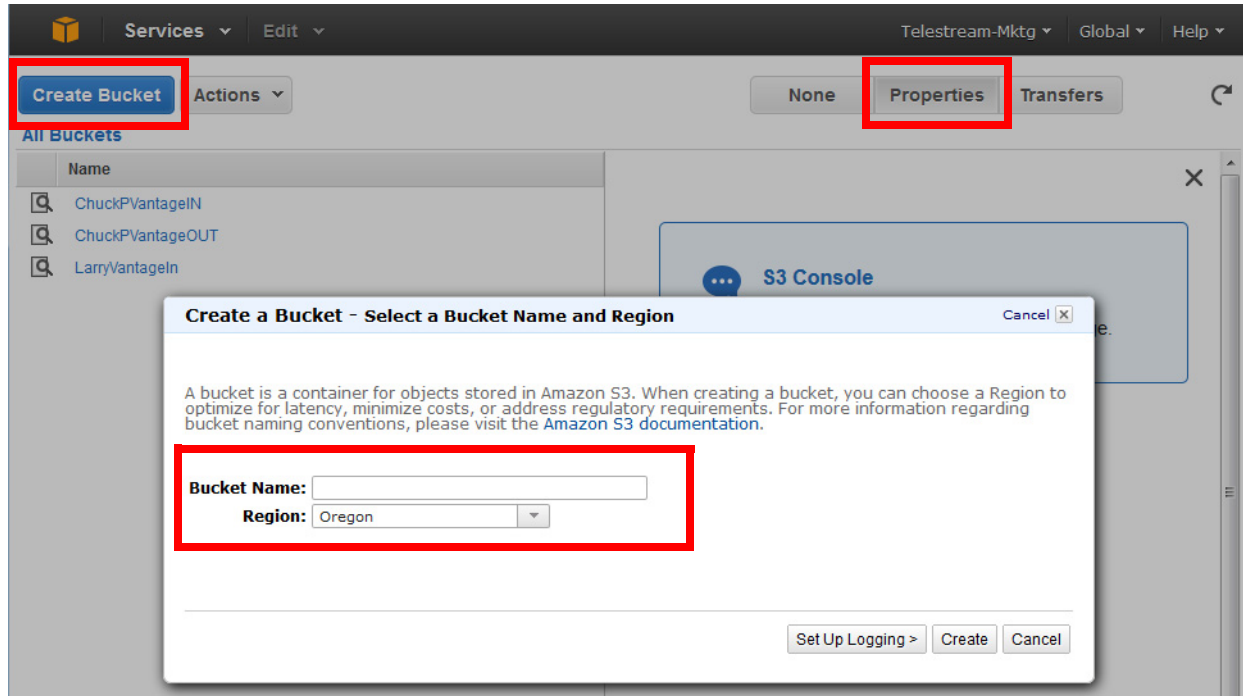
c. When you run Vantage in the Vantage Virtual Domain, specify the Cloud Service Provider (AWS) in the Watch action File System inspector window, and in the next window, provide the folder location and credentials Vantage will need for accessing the storage folder. The figure shows AWS S3 storage selected.
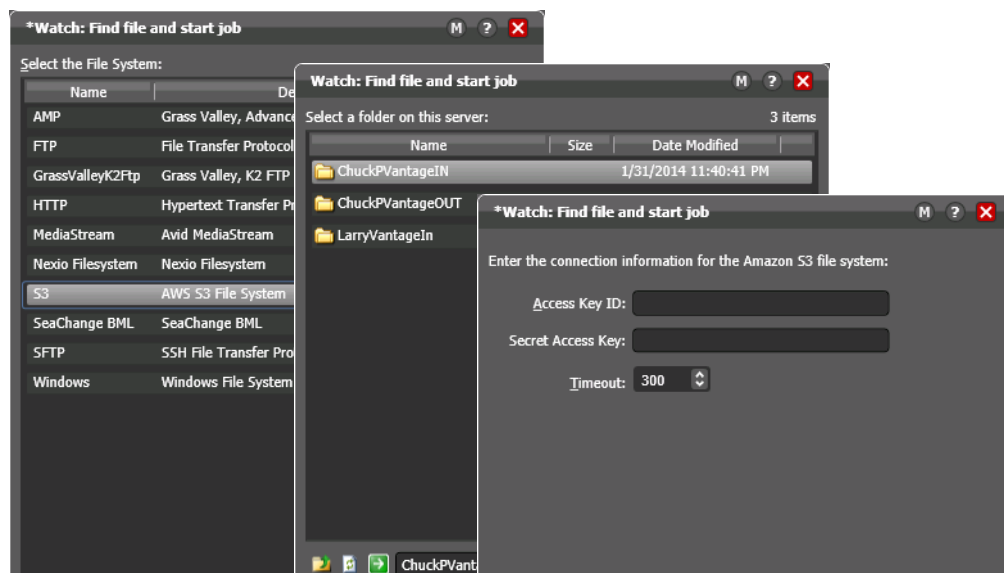
d. When your workflows are activated, copy media for processing into your new AWS S3 Watch folder. As the figure shows, in AWS, you click a bucket to open it, and then use the Upload button to put media files into the Watch folder (bucket) from your local machine or networked server.
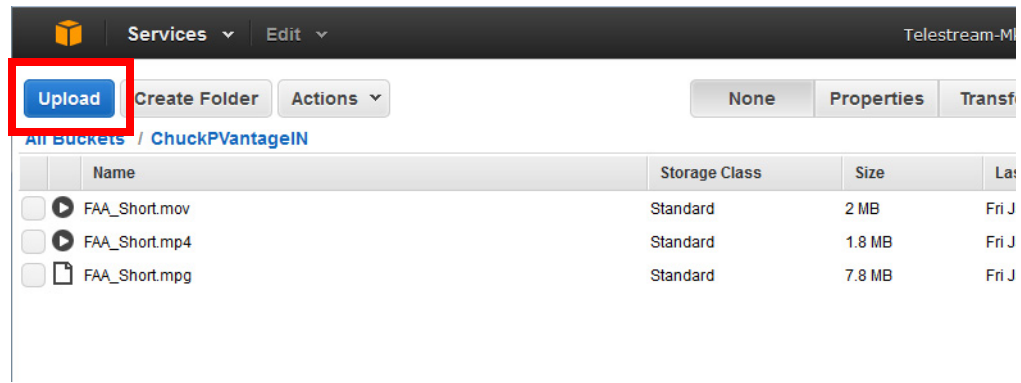
Note: **Transcoding directly from S3 object storage is not supported. Files must be localized to the shared block storage within the Vantage Virtual Domain. See the following Vantage Virtual Domain Recommended Practices for details about how to use S3 and how to localize files before transcoding.**

Vantage Virtual Domain Recommended Practices

The following topics offer recommendations for working with Vantage Cloud.

Workflow Recommended Practices

Follow these steps (shown in the figure below) when constructing workflows:

1. **Upload your original media files into AWS (S3) Storage.**

   Your Vantage Virtual Domain workflow Watch action has built-in support for this storage and can directly monitor the S3 storage location (Input Watch bucket) you specify for the arrival of new files.

2. **Move or Copy your media from S3 to the Vantage Virtual Domain D: drive.**

   This is shared storage mapped to the D: drive of all of the instances. Folders on this shared drive should be referenced with UNC path names in Vantage workflows. The system is configured with a default folder: \\VDOMAIN\Vantage Store\.

   Your workflows should begin with a Copy action to localize files from your S3 Storage Input Watch bucket to your shared folders on the virtual SAN. Both the Move and Copy actions have built-in support for moving files to or from S3.

3. **Do all transcoding (Flips) from Vantage Virtual Domain (D: drive) Storage.**

   The D: drive on the domain server is configured as a SAN and shared to the servers in the Vantage Virtual Domain. Use the pre-configured folders or create your own. Folders should be accessed using UNC references, such as \\VDOMAIN\Media Local.

4. **Copy or Move the transcoded media to AWS S3 Storage**

   Copy from the Vantage Store folder on the virtual shared SAN to your S3 Output bucket. You can then migrate the output from S3 to any networked location.
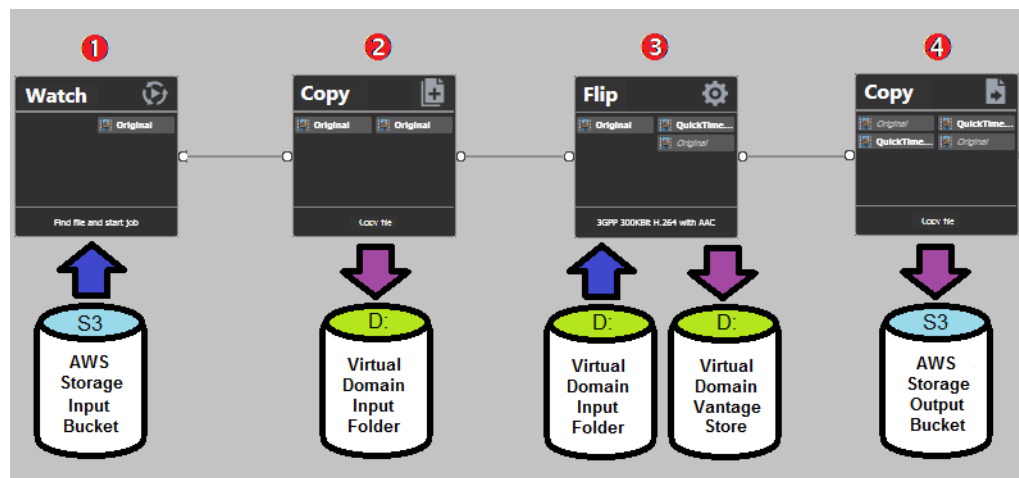
Note: Do not use Amazon TntDrives for Watch folders because files may be detected multiple times each time you access the folder. Instead, use the integrated S3 functionality in the Vantage Copy, Move and Colocate actions.

Stores Recommended Practices

Vantage Virtual Domains are configured with a default Vantage Store for receiving processed outputs. You can create additional stores as needed. When stores other than the Vantage Store are exported in a domain snapshot and then reimported, the stores are re-created in an offline state. This may cause workflows using those stores to fail.

To prevent problems caused by offline stores, set Vantage actions to *Use Available Store*. This allows Vantage to use any available Store for outputs, preventing workflows from failing because their original store is not online. You can also bring stores online using the Vantage Management Console > Storage selection.

AWS S3 Recommended Practices

The following caveats apply specifically to using AWS S3 for media storage:

- S3 is an object storage file system designed for files to be read and written in their entirety, not updated in place. Therefore, Vantage workflows must localize media files to Vantage Virtual Domain shared storage using Move or Copy actions.

- Be sure input nicknames for transcoding and analysis actions reference the localized media on the D: drive.

Preventing S3 Transfer Failures

Use Vantage Copy, Move and Colocate actions to access content in S3 buckets. To do so, configure folders in the Vantage Management Console that reference S3 buckets. Because of the variable nature of transfer speeds in the cloud, transfers from S3 may produce Vantage job failures that can be resolved by a retry. When setting up a Copy action to transfer media from S3, set the default number of retries to 3. This ensures transfers repeat until they complete without manual intervention.
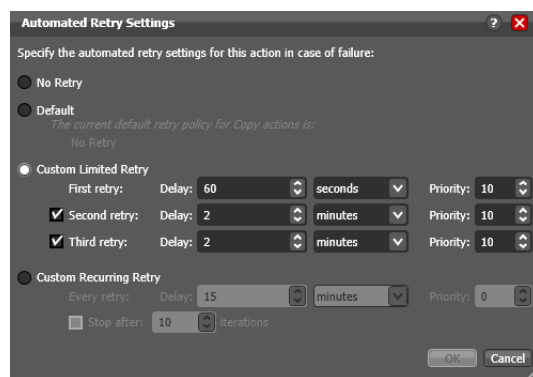
If you experience more than 3 transfer failures in a row, confirm that the source material is completely present and not being accessed within S3. If you continue to get failures, contact AWS Support to be sure the S3 bucket (folder) is working correctly.

Performance and transfer speeds in the cloud can be highly variable; for example, transfer speeds between VPCs and S3 buckets may range from 1 Mb/s to 400 Mb/s. For best performance, follow these suggestions:

- Use S3 buckets and Vantage Virtual Domains in the same Endpoint whenever possible. Using different endpoints sometimes results in poor performance.

- Use parallel transfers to and from multiple buckets simultaneously. You can have many jobs running at a time with the Vantage Transport service session limit set high. (Session Limits can be set on the Setup tab for each service within the Vantage Management Console when the service is in maintenance mode.)

- Name S3 buckets with different first letters.

Other Localization Methods

The S3 interface has been added to Vantage to provide native AWS object storage for moving media in and out of Vantage Virtual Domains. This makes it easy and simple to use a Vantage Virtual Domain.

However, Vantage Cloud Subscriptions supports network accessible storage with the same built-in protocols that a local Vantage installation supports. Therefore, you can use any networked storage and transfer protocol that is supported by both Vantage and Amazon. For example, you could use FTP servers or high-speed transfer servers such as Aspera or Signiant.

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Adding Subnets

Amazon AWS allows you to create additional subnets within the Virtual Private Cloud that can interact with the Vantage Cloud subnet. This can be useful if you have hardware or software that must be installed on its own subnet.

Approximately 768 IP addresses are available for subnets in addition to the 254 addresses used by Vantage Cloud out of the 1022 total addresses available in the VPC.

For instructions in setting up subnets, please see these AWS help pages:

- How to configure VPCs and subnets:
  http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC_Subnets.html

- An example of subnetting for a database instance:
  http://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/USER_VPC.html

For administrators only, the following steps summarize an example procedure:

1. Launch a Vantage Virtual Domain.

2. Create a new subnet in the AWS console with the CIDR block 10.0.1.0/24. Note that IP address blocks cannot overlap among subnets.

3. Set the route table of the new subnet to that of the subnet created by Vantage Cloud. (**Important:** please see the note below for details about route tables.)

4. Launch a new service instance in the same VPC, using the second subnet (also check the box to automatically assign a public IP address).

5. Use Remote Desktop to access the new service instance.

6. Open a file browser and navigate to \\VDOMAIN\ to ensure you can access the shared drives in the Vantage Virtual Domain.

Note: In this example, stopping the Virtual Domain in Vantage Cloud Web Manager will terminate Vantage Cloud Virtual Domains as well as any manually added subnets. It is recommended that you manually remove added subnets before stopping the Virtual Domain. Otherwise Vantage Cloud will generate an error when it tries to remove the route table, which is reused between the subnets. Alternatively, you can create a separate route table for each subnet.

Using Vantage Cloud Web Manager

Introduction

This section presents Vantage Virtual Domain concepts followed by common procedures that you may need to perform using Vantage Cloud Web Manager.

These topics are covered:

- Creating and Using an Amazon AWS Account
- Creating and Managing Vantage Virtual Domains
- Exporting and Importing Vantage Virtual Domains
- Creating and Using Vantage Database Snapshots
- Creating or Changing Accounts
- Changing Instance Type
- Monitoring Virtual Domain Status in Dashboard View
- Playing Back Proxies Using the Workflow Portal
- Gathering Service Information
- Using Retry for Failed Jobs
- Uninstalling Cloud Manager

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Creating and Using an Amazon AWS Account

In the interest of brevity, details about using Amazon AWS are not presented in this guide because Amazon provides their own helpful and thorough online instructions:

http://aws.amazon.com/documentation/

To use Vantage Cloud Subscriptions with Amazon, you need to be able to use these AWS features and components, as documented by Amazon:

Topic	Amazon Link
Get an overview and create an Amazon AWS account	http://aws.amazon.com/
Get an IAM Access Key ID and Secret Access Key	http://docs.aws.amazon.com/IAM/latest/UserGuide/ManagingCredentials.html
Use the AWS Management Console	http://docs.aws.amazon.com/awsconsolehelpdocs/latest/gsg/getting-started.html
Use Amazon S3 storage	http://aws.amazon.com/documentation/s3/
Use AWS VPC	http://aws.amazon.com/documentation/vpc/

Specific instructions related to using Vantage Cloud with Amazon may be added here as needed.

Creating and Managing Vantage Virtual Domains

When you create a Vantage Virtual Domain, you are setting up the configuration that you want in Vantage Cloud Web Manager. Nothing is created in the cloud and no hourly charges accrue until you *start* the Vantage Virtual Domain.

For detailed instructions to create and start a Virtual Domain and Remote Desktop, see *Installation and Startup* at the front of this guide. For detailed control descriptions, see the *Vantage Cloud Web Manager Description*.

These are the basic steps to create and start a Vantage Virtual Domain:

1. Click the *Virtual Domain* button in the top menu. The Virtual Domain view opens.

2. Fill in the fields and make selections to name the domain, specify the account, configure the Domain Instance and the Service Instances (see the following table).

3. Click the *Start* button (shown below) near the top right of the Virtual Domain.

4. To access the Vantage desktop:

   a. Select the *Dashboard* top button.
   b. Click the *Access this Virtual Domain* (RDP) button .
   c. Click *Launch Windows Remote Desktop*.

Vantage Virtual Domains are listed in the left panel. Vantage Virtual Domain Configuration and Status details appear in the right panel. Start button

New Vantage Virtual Domain
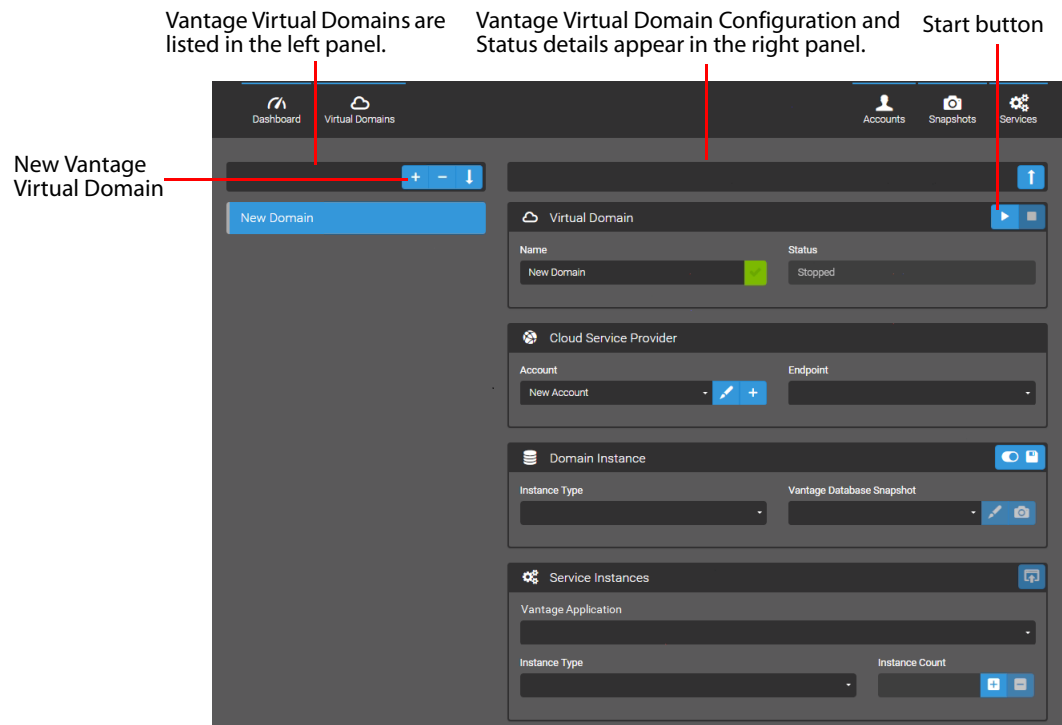
Once created, Virtual Domains are listed in and can be selected from the left panel. Once started, a Virtual Domain runs within an AWS Virtual Private Cloud (VPC), the Service Instances run on AWS EC2 instances, and AWS begins charging you.

If you need to stop the domain (stopping all charges), click the (square) *Stop* button . To pause the domain (reducing charges), click the Pause button   in the Dashboard view.

Vantage Service Instances License Options

When you select the Vantage Application in Service Instances, you are selecting a licensed set of Vantage features and associated costs, as listed below.

| Available Features	Over the Top Option	Multi-Format Option	International Option	Telestream Online Description
Lightspeed Capable	X	X	X	www.telestream.net/vantage/lightspeed-server.htm
Multiscreen	X	X	X	www.telestream.net/vantage/vantage-multiscreen.htm
Analysis Pro	X	X	X	www.telestream.net/vantage/vantage-analysis.htm
Web Dashboard	X	X	X	www.telestream.net/pdfs/datasheets/dat-Vantage-Domain-Management-Options.pdf
Reporting & Analytics	X	X	X	www.telestream.net/pdfs/datasheets/dat-Vantage-Domain-Management-Options.pdf
Dolby E Decode	X	X	X	www.telestream.net/vantage/options.htm
Aspera Enterprise Server Filesystem	X	X	X	www.telestream.net/pdfs/app-notes/Vantage_Aspera_Enterprise.pdf
Aspera Faspex Delivery	X	X	X	www.telestream.net/pdfs/app-notes/app_Vantage_Aspera.pdf
Signiant Delivery	X	X	X	www.telestream.net/pdfs/app-notes/app_Vantage_Signiant.pdf
Metadata Conversion	X	X	X	This allows for media and file metadata processing and automation.
Transcode Pro Connect		X	X	www.telestream.net/vantage/vantage-transcode.htm
IPTV VOD		X	X	www.telestream.net/vantage/vantage-iptv-vod.htm
Post Producer		X	X	www.telestream.net/post-producer/overview.htm
VOD Producer DAI		X	X	www.telestream.net/VOD-Producer-DAI/overview.htm
5x Workflow Portal		X	X	www.telestream.net/vantage/vantage-portal.htm
Nielsen Watermarking		X	X	www.telestream.net/pdfs/app-notes/app_Vantage_Nielsen.pdf
Screen Subtitling			X	This general purpose transcode Flip filter burns-in subtitles from a file.
Tachyon Convert			X	www.telestream.net/pdfs/app-notes/app_Vantage_Tachyon_VPL.pdf

Exporting and Importing Vantage Virtual Domains

You can export a Vantage Virtual Domain to an XML file (named with the domain name and a .vvd extension) and import it again later to restore the domain to its previous state or to configure a new Vantage Virtual Domain.

An exported Vantage Virtual Domain file contains a complete description of the Vantage Virtual Domain, including state, configuration and status details, as well as any objects on which the Vantage Virtual Domain depends.

An export is not the same as a snapshot and does not include the Vantage database, workflows, or workflow components. However, if a Vantage Virtual Domain was configured from a snapshot, the snapshot is included in the export and can be included in an import.

Vantage Virtual Domains cannot be exported while in transition, such as from Started to Paused or Stopped. They can be exported only while the Vantage Virtual Domain is in a stable state. Secure information, such as the "AWS Secret Access Key," is encrypted.
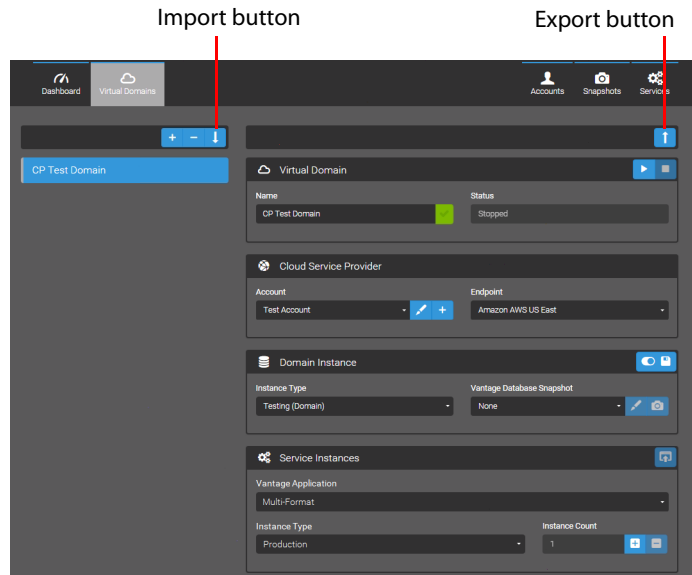
Exporting a Vantage Virtual Domain

To export a Vantage Virtual Domain description file, follow these steps:

1. Ensure the Vantage Virtual Domain is in a stable state, not in transition between states.

2. Select *Virtual Domain* in the top menu to show the Virtual Domain view.

3. Select a Vantage Virtual Domain from the domain list.

4. Click the *Export this Virtual Domain* button ⬆. The exported .vvd file is saved to the default downloads folder on your computer.

Importing a Vantage Virtual Domain

To import a Vantage Virtual Domain description file, follow these steps:

1. Select *Virtual Domain* in the top menu to show the Virtual Domain view.

2. Select a Vantage Virtual Domain from the domain list.

3. Click the *Import this Virtual Domain* button ⬇. The Import Virtual Domain dialog opens showing , "Drop a file here (or click to select)."

4. Browse for the previously exported .vvd file, and drag the file to the dialog box, or click once on the dialog box and browse for the file.

5. The Virtual Domain is restored to the state described by the file.

Note: If you export a Vantage Virtual Domain while it is running (Started), and then stop or force stop the Vantage Virtual Domain before importing to a new location, you will need to go through the special sequence below when you do the import.

Importing a Stopped Vantage Virtual Domain

To import a Vantage Virtual Domain description file from a Vantage Virtual Domain that was stopped or force stopped *after* exporting, follow these steps. (This procedure is not necessary if the Vantage Virtual Domain was exported while stopped or while running and it is still running.)

1. Select the Virtual Domain view in the top menu.

2. Click the *Import this Virtual Domain* button ⬇ to import the exported Vantage Virtual Domain while it is running.

3. Select the Dashboard view in the top menu.
Dashboard status reads Started [Disconnected].

4. The Vantage Virtual Domain reconnects to AWS automatically after a brief delay.

5. An error message appears: *No VPC correctly tagged in the Vantage Virtual Domain with id <ID>*.

6. Click Force Stop 🔥 and wait for the Vantage Virtual Domain to completely stop.

7. Click Start ▶.

Creating and Using Vantage Database Snapshots

Vantage Database Snapshots are a convenient way to take a snapshot (save the state) of a Vantage database (local or virtual) and later import that snapshot into the Vantage database in a Vantage Virtual Domain. This leads to a consistent Workflow Designer state.

You can save snapshots by name, so you can create them as often as you like, uniquely identifying each one. Additionally, you can check an *Automatically Save* option to automatically save a snapshot each time the Vantage Virtual Domain stops.

These items from the Vantage system are captured by the snapshot:

- Workflows (This includes activated state; if a workflow is activated when exported, it will be activated when imported.)
- Workflow Categories
- Catalogs and Folders
- Stores and Output Folders
- Media and Attachment Nicknames
- Metadata Labels
- Variables
- Run on Rule Variables
- Service Settings for the Domain Instance
- Settings & Options: General, Email, Authorization, Signiant, Agility ECS
- Stylesheets
- Application Configurations (Job Status Views, Workflow Portal, Dublist Portal)
- Reports (Job and Service)
- Fulfillment Schemes

Everything required to recreate a fully functioning Vantage Virtual Domain is saved. However, some minor items are not saved; for a list of items not saved in snapshots, please see the topic, *Items Not Included in Snapshots*, in the *Troubleshooting Vantage Cloud Web Manager* chapter.


Note: When importing snapshots created using a different Vantage Domain, the importing domain must have the same or greater feature licensing, otherwise, some workflows using unlicensed features may not function. See *Vantage Service Instances License Options* earlier in this chapter for Vantage Application feature selections and their capabilities.

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Saving a Snapshot

For steps to create a snapshot of a local Vantage domain (a domain that is not in the cloud), please see *Creating Local Snapshots*. The following steps explain how to create a Vantage Virtual Domain Database Snapshot:

1. Ensure your Vantage Virtual Domain is started. (You can't take a snapshot of a stopped Vantage Virtual Domain.)

2. Click the *Virtual Domain* top button to show the Virtual Domain view.

3. Select the desired Virtual Domain in the left column.
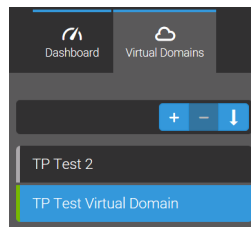
4. Click *Save Snapshot* (camera button) .
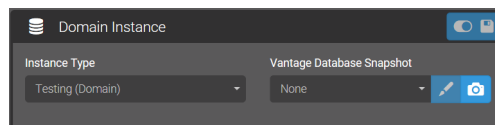
A Create New Vantage Database Snapshot dialog opens.

5. Enter a name in the Create New Vantage Database Snapshot dialog, and click *Create*. The snapshot is saved to your Vantage Virtual Domain drive.
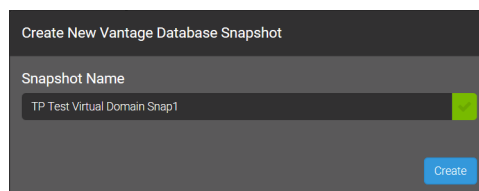
Loading a Snapshot

At a later time, if you want to load a Vantage Database Snapshot to restore your Workflow Designer to a particular state, follow these steps:

1. Ensure your Vantage Virtual Domain is stopped.
2. Click the *Virtual Domain* button to show the Virtual Domain view.
3. Select a snapshot from the Vantage Database Snapshot drop-down menu.
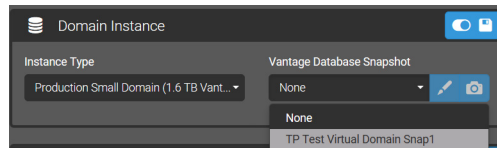
4. Start the Vantage Virtual Domain. When the domain starts, it restores the Vantage database to the state stored in the snapshot.

Managing Snapshots

Using the Snapshots view, you can manage snapshots of your local and Vantage Virtual Domains. You can rename, delete, or import snapshots, including importing snapshots from both cloud and local Vantage Virtual Domains.

Note: Beginning with Vantage Cloud 2.0, snapshots are no longer limited to the same Vantage version. A snapshot can be imported from one Vantage version into a different Vantage version.

Renaming or Deleting Snapshots

To rename or delete a snapshot:

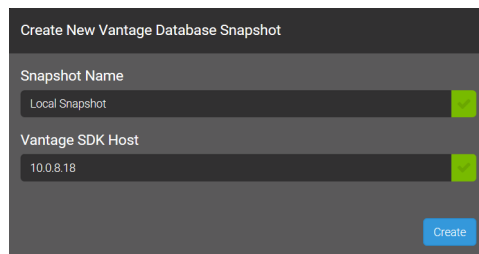1. Select the *Snapshots* top button to open the Snapshots view.
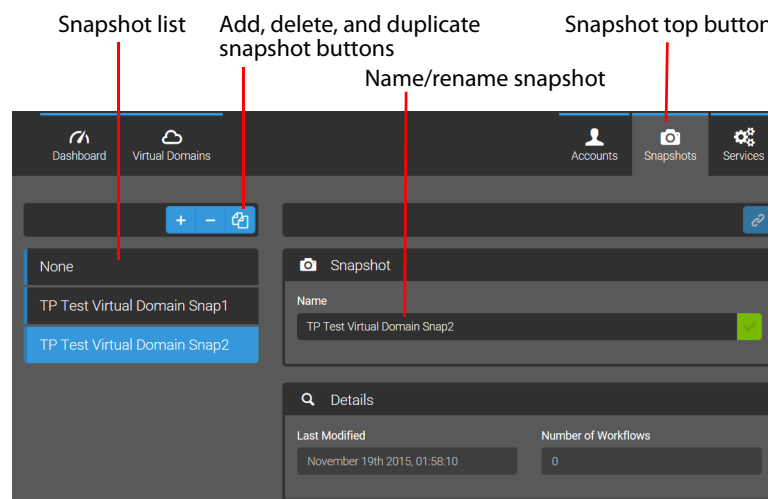
2. Select the desired snapshot from the snapshot list in the left column.

3. To change the name, type a new name in the Snapshot Name field. The snapshot name immediately changes, as reflected in the drop-down menu.

4. To delete a snapshot, select it in the snapshot list, and click Delete. Confirm in the dialog.

Creating Local Snapshots

You can create snapshots of a local (non-virtual) Vantage domain so that you can use your workflows from that domain in your Vantage Virtual Domains:

1. Select the *Snapshots* top button to open the Snapshots view.

2. Click the + button on the left ![+]. The Create New Vantage Database Snapshot dialog opens.

Create New Vantage Database Snapshot

Snapshot Name

Local Snapshot

Vantage SDK Host

10.0.8.18

Create

3. Enter a name for the snapshot in the *Snapshot Name* field.

4. In the *Vantage SDK Host* field, enter the server name or IP address where the Vantage domain SDK service resides. (To verify the host name, select Services in the Vantage Management Console and note the Machine Name for the SDK service.)

5. Click *Create* (and confirm) to create the new snapshot from the local Vantage Domain. The new snapshot is available in the snapshot list in the Snapshot view.
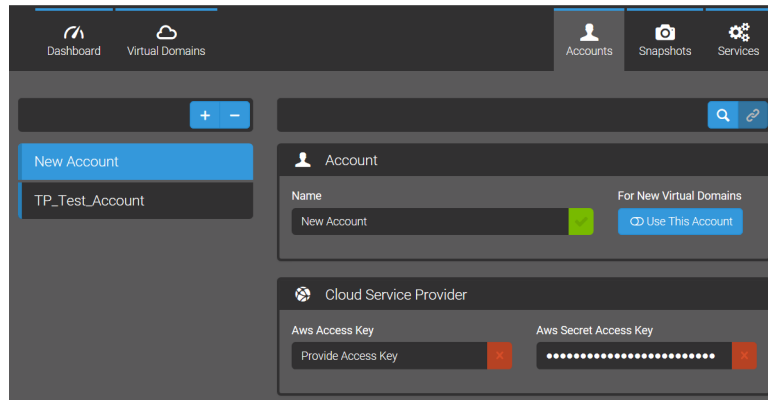
Creating or Changing Accounts

You can add or change accounts in the Accounts view.

Creating an Account

To create additional accounts with your Cloud Service Provider, follow these steps:

1. Click the *Accounts* top button to open the Accounts view.

2. Click the *Add Accounts* button ➕ in the left column to create a new account, which appears in the list at left.

3. Enter an *Account Name*.

4. Enter the *AWS Access Key*, and the *AWS Secret Access Key*.

5. Click the *Validate* 🔍 magnifying glass to check that the credentials work. A dialog opens to tell you whether the validation login succeeded. If it fails, check your access keys to ensure they are correct.

Changes are automatically saved.

Changing an Account

To change the details of an account, follow these steps:

1. Click the *Accounts* top button to open the Accounts view.

2. Select an account in the left column. If you want to see which Virtual Domains use the selected account, click the link button 🔗.

3. Make changes as desired to the *Account Name*, *AWS Access Key*, or the *AWS Secret Access Key*.

4. Click *Validate* to check that the credentials work. A dialog opens to tell you whether the validation login succeeded. If it fails, check your access keys to ensure they are correct.

Changes are automatically saved.

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Changing Instance Type

To increase or decrease cloud computing resources, you can change the Domain or Service Instance Type in the Virtual Domain view while the Vantage Virtual Domain is stopped. The changes take place when the Virtual Domain is started.

The Domain Instance Type sets the computing capacity and storage of computing resources for the Vantage Virtual Domain Database.

The Service Instance Type sets the capacity of the computing resources for the Vantage Virtual Domain services (for actions such as Watch, Flip, Move, etc.).

Simply select a different Instance Type from the drop-down menu, or change the Instance Count using the +/- buttons. Changes take place when you start the Virtual Domain

If you want more information about the Instance Type selection, mouse over the blue "i" button to get a description of the AWS computing resource.

Monitoring Virtual Domain Status in Dashboard View

A number of tools are available to monitor Vantage Virtual Domain status. These include the Dashboard view and the Vantage Web Apps. The Dashboard view is where most monitoring and managing of a running Virtual Domain takes place.

Dashboard View

Click the Dashboard top button for the Dashboard view, which lets you do these tasks:

- Start ▶ , stop ◻ , pause ✕ , and force stop 🔥 Virtual Domains:
- Access the Vantage Remote Desktop view ⤒
- Monitor the status and remote details of the Domain or Service Instances
- View and clear 🗑 notifications
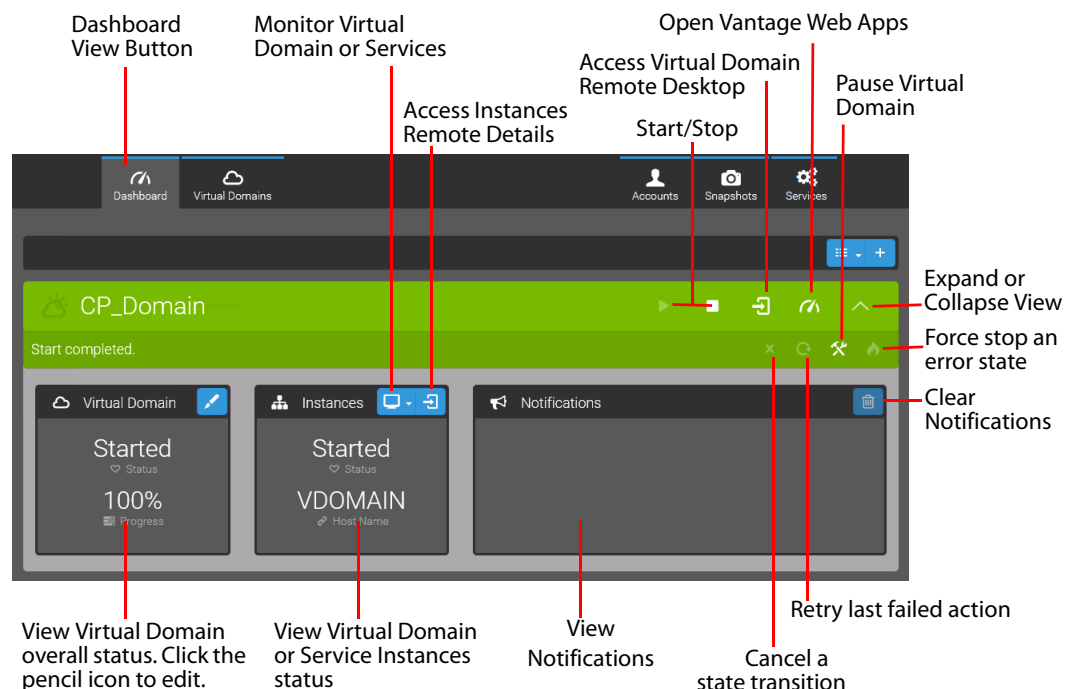
Overall Virtual Domain status and Notifications are always displayed.

To access the remote desktop for the Virtual Domain (and the IP address, and login), click the Virtual Domain Remote Access ⤒ button.

To access the status and remote details (IP, login, desktop) for the Domain Instance or Service Instance, select Domain Instance or Service Instance ▭ ⌄ , and click the Instances Remote Access button ⤒ .

The Notifications section of the Dashboard view shows informational and warning messages about your Vantage Virtual Domains. Be sure to check these frequently. If the list of notifications grows too long and you want to delete all notifications and start over, click the Clear Notifications button 🗑 .

Using Web Dashboard to Monitor a Domain

In the Dashboard view, click the Web Dashboard button to open the standard Vantage Web Apps in your browser.

To log in, click *Search* in the *Select a Vantage Domain* popup window. Select the VDOMAIN and enter this user name with no password: *Administrator*.

The Dashboard and Job Status apps show Vantage performance and job status details for the Virtual Domain. These are the same displays that are available with the standard Vantage product. For help, click the Web Help button on the front of each application.
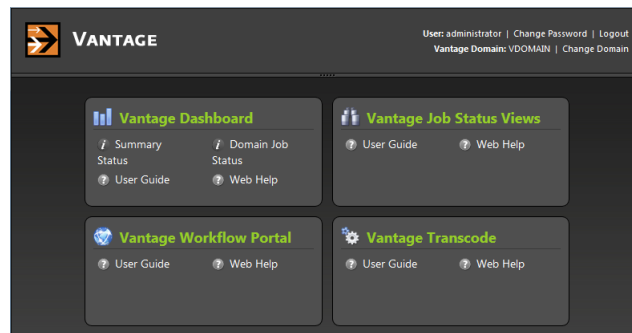
Playing Back Proxies Using the Workflow Portal

The public IP address (referred to as an Elastic IP by AWS) varies for each Domain Instance. This means that if you want to use the Workflow Portal in a Vantage Virtual Domain to view proxies over the Internet, you must look up the IP address and enter it manually in Vantage as the HTTP alias of the Vantage Store where the proxies will be located. The following details explain how to set up proxy playback and how to manually enter the HTTP alias.

Playback of Vantage proxies entails these setup steps:

- Creating a Virtual Directory in IIS for the Vantage Store
- Creating an HTTP alias in the Vantage Management Console for the Vantage store
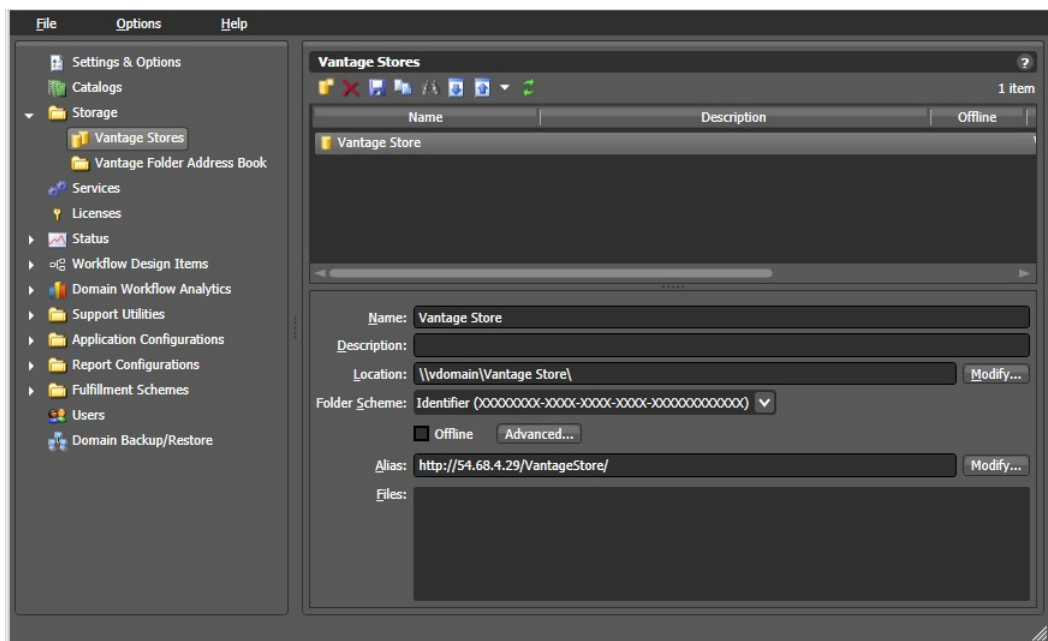- Creating a Workflow Portal configuration

The Vantage Virtual Domain has a proper Virtual Directory in place for the Vantage Store, so the first item in the list above is already completed for you.

The second item requires that you manually create the HTTP alias to the Virtual Domain Vantage Store as follows:

1. In the Vantage Cloud Web Manager application, locate and note the public IP address of the Domain Instance listed in the Status section.
2. Open the Vantage Management Console.
3. Go to Storage > Vantage Stores.
4. For the Vantage Store (\\vdomain\Vantage Store\), type this into the Alias field:

```
http://[public IP address of the domain instance]/VantageStore/
```
See the example Alias entry in the following figure.


The third item, creating a Workflow Portal configuration, is described in the Vantage Domain Management Guide. The process is the same as for a Vantage domain on your local premises. You can directly access this guide topic from the Vantage Management Console by clicking Application Configurations > Workflow Portal and then clicking the ? icon in the upper right corner of the window.

Gathering Service Information

The Services top menu button shows the Services view. This view shows basic information about the installation and includes two stethoscope buttons for exporting a diagnostic information zip file containing details about the system.

The left button exports a file for all services, and the right button exports a file for the currently displayed service: Vantage Cloud or Web Manager.

You can save the zip file to your local system and forward it to Telestream Customer Support for help with troubleshooting. For more information about the Services view and exported logs and diagnostic files, please see the *Get Technical Support Information* topic in the *Troubleshooting* chapter.

Services top button

Diagnostic zip file export   Services Diagnostic
zip file export
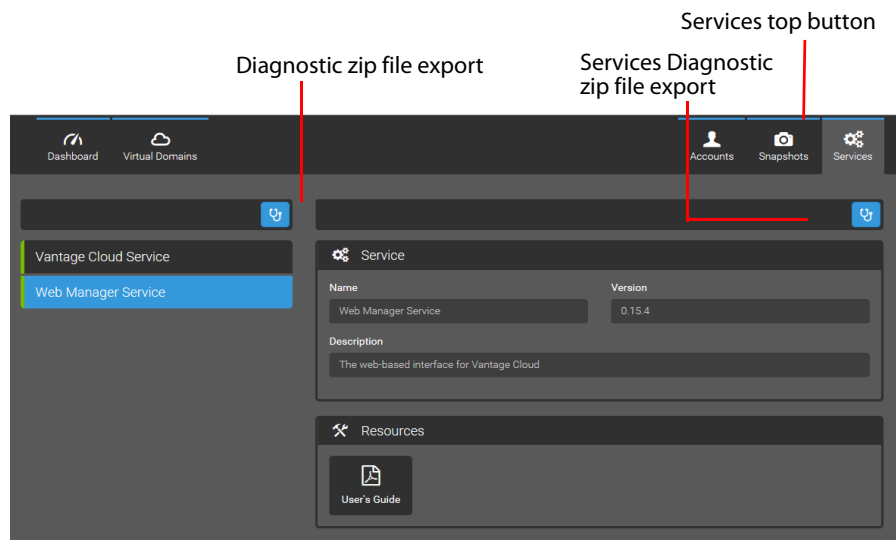
Using Retry for Failed Jobs

For Conform, Flip, IPTV Flip, and Multiscreen Flip actions running on a Lightspeed server, Vantage Cloud is preconfigured to retry failed jobs.

These are the default retry settings:

- First retry: 10 seconds, 0 priority
- Second retry: 30 seconds, 0 priority
- Third retry: 1 minute, 0 priority

These settings are optimized for Lightspeed retry performance; however, you can alter them for any of the affected actions as follows:

1. In the Vantage Management Console components panel, open Workflow Design Items > Action Defaults.
2. Select an action in the Action Defaults details panel.
3. To disable retries, click No Retry.
4. To define a limited retry rule, click Limited Retry and complete the rule as follows:
   a. For the first retry, specify the delay period number and units and priority.
   b. For second and third retries, check the box and complete the rule configuration.
5. To define a recurring retry rule, click Recurring Retry and complete the rule:
   a. Specify the delay period number and units and execution priority.
   b. Clear the *Stop after* checkbox to enable unlimited retries, or check the box and specify a maximum number of retry iterations.
   c. Click the Save button 💾.

Uninstalling Cloud Manager

Follow these steps to uninstall the Vantage Cloud Web Manager application:

1. Stop all Vantage Virtual Domains (and delete them if they will not be used again.)
2. Close the browser running the Vantage Cloud Web Manager.
3. To uninstall Vantage Cloud Web Manager, open Control Panel > Programs and Features.
4. Select Vantage Cloud Web Manager, and right-click Uninstall. Follow the prompts.
5. After removing the application, also delete the folder in C:\ProgramData\Telestream\VantageCloud.

Vantage Cloud Web Manager Description

Introduction

The Vantage Cloud Web Manager rapidly provisions Vantage domains within your Amazon Web Services account to provide immediate transcoding capacity.
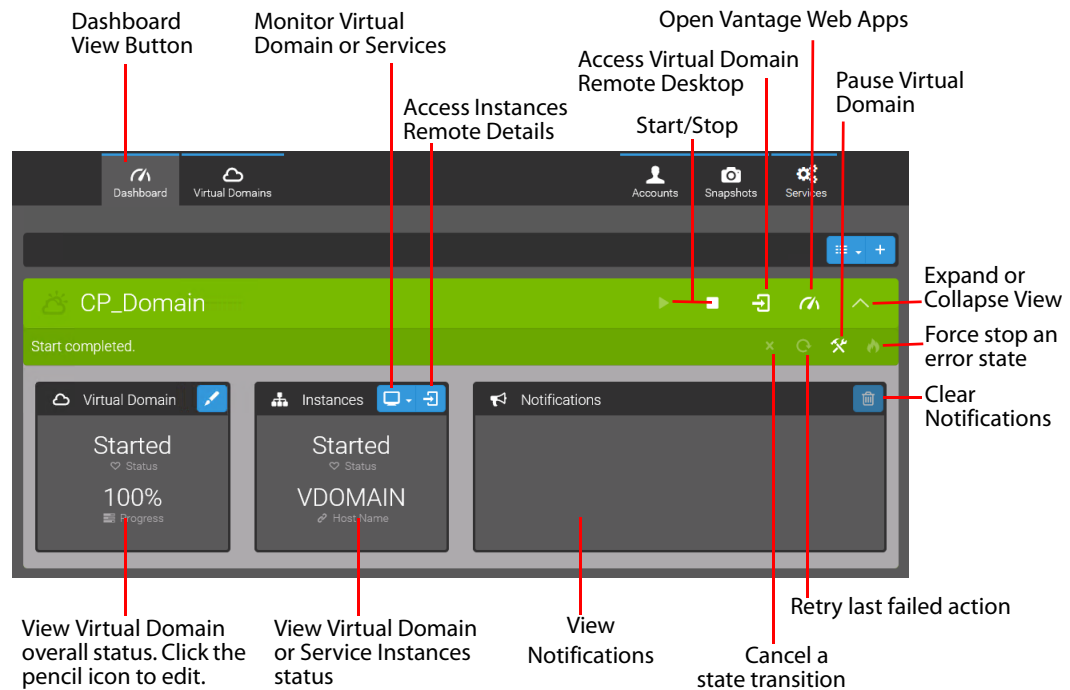
The following topics describe the Vantage Cloud Web Manager client features and functions in detail for your reference. These topics are covered:

- Dashboard View
- Virtual Domain View
- Accounts View
- Snapshots View
- Services View

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Dashboard View

The Dashboard top button reveals the Dashboard view, which lets you do these tasks:

- Start ▶, stop ▣, pause ⚒, and force stop 🔥 Virtual Domains:
- Access the Vantage Remote Desktop view ⬒
- Monitor the status and remote details of the Domain or Service Instances
- View and clear 🗑 notifications

Dashboard
View Button

Monitor Virtual
Domain or Services

Open Vantage Web Apps

Access Virtual Domain
Remote Desktop

Pause Virtual
Domain

Access Instances
Remote Details

Start/Stop

Expand or
Collapse View

Force stop an
error state

Clear
Notifications

View Virtual Domain
overall status. Click the
pencil icon to edit.

View Virtual Domain
or Service Instances
status

View
Notifications

Cancel a
state transition

Retry last failed action

Dashboard View Controls

These are the Dashboard controls, from top to bottom, left to right:

Overall Controls

▤ *Order Virtual Domains*—Orders list by ascending or descending name or status.

+ *Create Virtual Domain*—Goes to the Virtual Domains view to add a new domain.

Virtual Domain Controls

▶ *Start*—Starts the Vantage Virtual Domain selected in the left column.

▣ *Stop*—Stops the selected Virtual Domain and stops most hourly charges.

Remote Access—Opens a dialog for remote access to the Virtual Domain desktop. Also shows the IP address and login, which can be changed.

Vantage Dashboard—Opens the Vantage Web Apps Dashboard. For details about using the Web Dashboard, see the Web Dashboard Help menu.

Additional Virtual Domain Controls

Cancel—Cancels the current operation on the selected Vantage Virtual Domain.
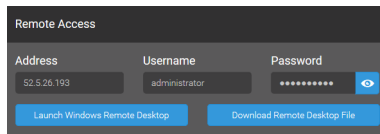
Retry—Retries the last unsuccessful operation, such as Start or Stop.

Pause—Pauses the selected Vantage Virtual Domain by shutting down services. Reduces but does not stop Cloud Service Provider hourly charges for services. Click the Start button to restart the paused domain.

Force Stop—Available and used only as a last resort when the Vantage Virtual Domain is in an error state. Forces the Virtual Domain to stop.

Note: Vantage Cloud attempts to delete all Vantage Virtual Domain components on a Force Stop, but it may not be able to delete everything. Check your Cloud Service Provider management to verify cleanup of all Vantage Virtual Domain components and manually delete any remnants.

Status Panel Controls

Edit Virtual Domain—Opens the Virtual Domain view showing the current domain and allowing you to edit the details.

Instances Panel Controls

Select Domain or Service Instances—Selects the domain or services instances for status monitoring and viewing notifications.

Access Instance Remote Details—Opens a dialog showing the remote details (IP, login) for the selected domain or service instance.

Notifications Panel Controls

Clear Notifications—Clears currently displayed notifications.

Virtual Domain View

The Virtual Domain top button opens a view of the Vantage Virtual Domains, which are listed in the left panel. Details are displayed in the right panel for the Virtual Domain selected in the left panel.
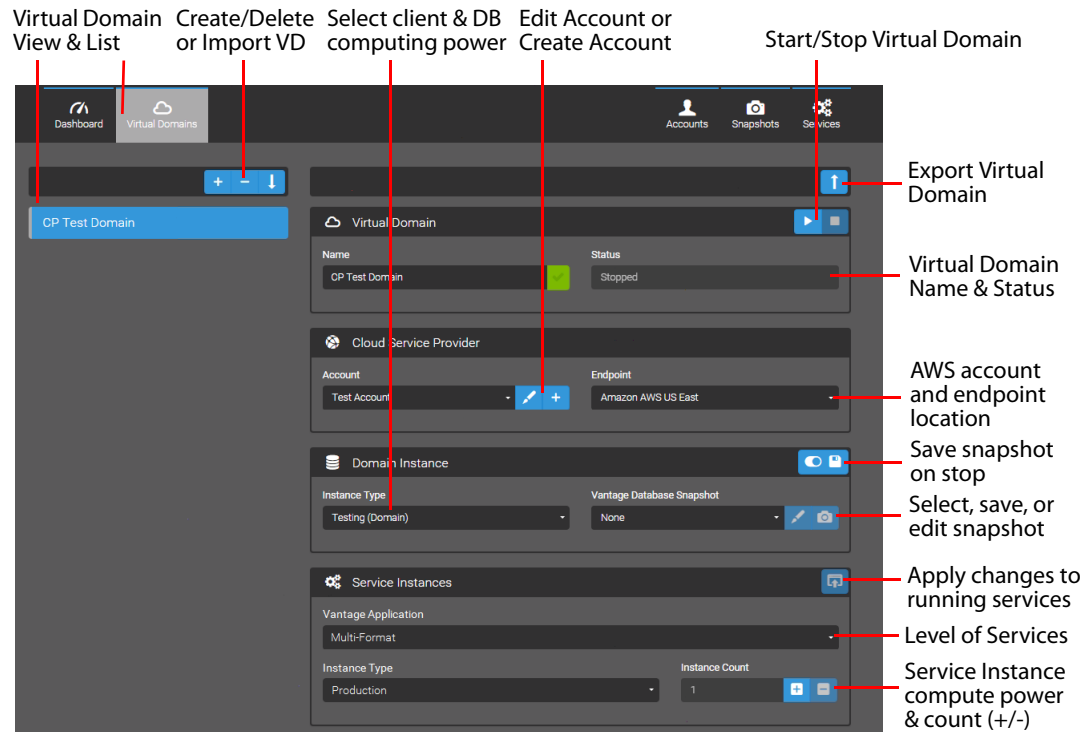
Virtual Domain View Controls

The following controls can be used to create or edit a Vantage Virtual Domain:

Virtual Domain List

The left panel lists existing Virtual Domains and lets you select a Virtual Domain to display its details. These controls allow you to create, delete, or import Virtual Domains:

+ *Create Virtual Domain*—Creates a new Virtual Domain.

– *Delete Virtual Domain*—Deletes the selected (highlighted) Virtual Domain.

↓ *Import Virtual Domain*—Imports a Virtual Domain from a previously exported file.

↑ *Export Virtual Domain*—Exports a Vantage Virtual Domain (.vvd) file to your default Downloads folder.

Virtual Domain

▶ *Start*—Starts the Vantage Virtual Domain selected in the left column.

■ *Stop*—Stops the selected Virtual Domain and stops most hourly charges.

Name—Displays and allows changing the name of the Vantage Virtual Domain.

Status—Shows the status of the Virtual Domain (stopped, paused, running).

Domain Instance

The Domain Instance section displays the computing resource size for the current Vantage Virtual Domain and also provides buttons to save or edit a Vantage Database Snapshot.

Automatic Snapshot—Switch button can be set to enable or disable saving an automatic snapshot when a Virtual Domain stops.

✎ *Edit Snapshot*—Enables editing snapshot details in the Snapshots view.

📷 *Save Snapshot*—Saves a Vantage Database Snapshot, which captures the current state of the Vantage Virtual Domain's Vantage database. When loaded into a Vantage Virtual Domain, a snapshot restores the Vantage database to the state the database (local or virtual) was in when the snapshot was taken.

Domain Instance Type—Drop-down menu allows selecting the virtual computing capacity used for the virtual Vantage clients and database.

Database Snapshot—Drop-down menu allows selecting a database snapshot, restoring the state of the database to the contents of the snapshot.

Service Instances

The Service Instances section shows details about the Vantage services running in the selected Vantage Virtual Domain.

🔲 *Apply Changes*—Applies Services Instance Count changes.

Vantage Application—Selects the level of Vantage service desired (*Over the Top*, *Multi-Format*, or *International)*. The selections correspond to available Vantage feature license levels listed in the table on the following page. Costs vary by level.

Instance Type—Lists the type of virtual computing capacity to be used for Vantage service instances. Smaller resources offer lower processing power and storage with decreased cost and speed. A larger resource offers greater capacity at higher cost. If you change this selection on a running domain, also select *Apply Changes* to implement.

Instance Count—Sets the number of Vantage service instances to be deployed in the Vantage Virtual Domain. Use the plus and minus (+/-) buttons to increment or decrement the instance count. If you change this selection on a running domain, also select *Apply Changes* to implement.

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Vantage Application License Options

When you select the Vantage Application in Service Instances, you are selecting a licensed set of Vantage features and associated costs, as listed below.

Available Features	Over the Top Option	Multi-Format Option	International Option	Telestream Online Description
Lightspeed Capable	X	X	X	www.telestream.net/vantage/lightspeed-server.htm
Multiscreen	X	X	X	www.telestream.net/vantage/vantage-multiscreen.htm
Analysis Pro	X	X	X	www.telestream.net/vantage/vantage-analysis.htm
Web Dashboard	X	X	X	www.telestream.net/pdfs/datasheets/dat-Vantage-Domain-Management-Options.pdf
Reporting & Analytics	X	X	X	www.telestream.net/pdfs/datasheets/dat-Vantage-Domain-Management-Options.pdf
Dolby E Decode	X	X	X	www.telestream.net/vantage/options.htm
Aspera Enterprise Server Filesystem	X	X	X	www.telestream.net/pdfs/app-notes/Vantage_Aspera_Enterprise.pdf
Aspera Faspex Delivery	X	X	X	www.telestream.net/pdfs/app-notes/app_Vantage_Aspera.pdf
Signiant Delivery	X	X	X	www.telestream.net/pdfs/app-notes/app_Vantage_Signiant.pdf
Metadata Conversion	X	X	X	This allows for media and file metadata processing and automation.
Transcode Pro Connect		X	X	www.telestream.net/vantage/vantage-transcode.htm
IPTV VOD		X	X	www.telestream.net/vantage/vantage-iptv-vod.htm
Post Producer		X	X	www.telestream.net/post-producer/overview.htm
VOD Producer DAI		X	X	www.telestream.net/VOD-Producer-DAI/overview.htm
5x Workflow Portal		X	X	www.telestream.net/vantage/vantage-portal.htm
Nielsen Watermarking		X	X	www.telestream.net/pdfs/app-notes/app_Vantage_Nielsen.pdf
Screen Subtitling			X	This general purpose transcode Flip filter burns-in subtitles from a file.
Tachyon Convert			X	www.telestream.net/pdfs/app-notes/app_Vantage_Tachyon_VPL.pdf

Accounts View

The Accounts top menu button provides access to the Accounts view where you can add and delete AWS accounts and modify their details.

Create/Delete Accounts

Accounts View and List

Validate and Links buttons

AWS account Name and apply account to new VDs button

AWS Account Access Key and Secret Access Key
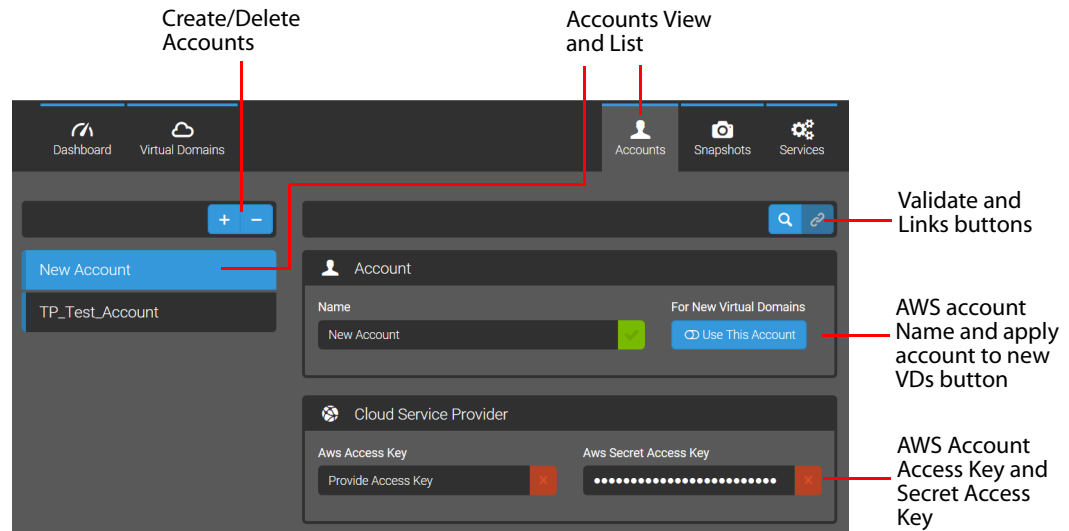
Accounts Controls

+ *Create*: Starts a new account. Clears all data fields so you can start new entries.

– *Delete*: Deletes the currently selected account. (Caution: There is no undo.)

Accounts List: Lets you choose among several accounts that have been entered. Each time you create a new account, it goes into the list of available accounts. You can select the account, and all the details of the account are remembered.

Name: Enter any name you want to represent the current account entries. For example, if you have three company accounts for three different departments, you can give each one a meaningful name. Account names must be unique.

Use This Account *Use This Account*: Applies the current account to all new Virtual Domains as the default account when the domains are created.

AWS Access Key: Enter the cloud user login ID assigned to you by AWS.

AWS Secret Access Key: Enter the secret code supplied to you by AWS.

Q *Validate*: Lets you test the AWS credentials you have entered. A message is returned telling you whether the login was successful or failed. If it failed, check your keys.

🔗 *Links*: Lists the Virtual Domains that use the selected account.

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Snapshots View

The Snapshots top menu button opens the Snapshots view, which allows you to create and delete snapshots of Vantage local domain and Virtual Domain databases.

The snapshot feature takes a snapshot of the selected Vantage domain database and allows you to later load that snapshot into the Vantage database of a Vantage Virtual Domain or a local Vantage domain. Everything required to recreate a fully functioning Vantage Virtual Domain is saved. See *Creating and Using Vantage Database Snapshots* on page 57 for details and procedures.
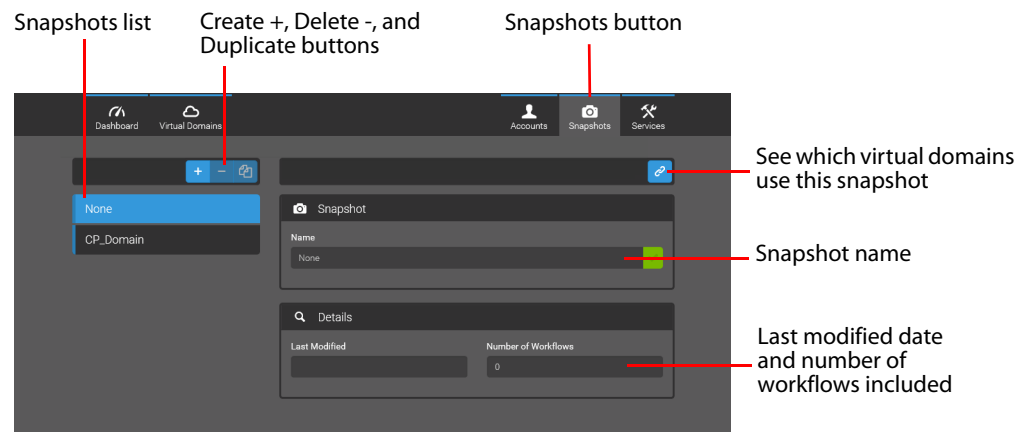
Snapshot Controls

These fields and buttons are available:

+ *Create*: Creates a new snapshot of the selected database.

− *Delete*: Deletes the selected snapshot. (Caution: There is no undo.)

Snapshots List: Lets you choose among the existing snapshots. Each time you create a new snapshot, it goes into the list of available snapshots.

🔗 *Links*: Lists the Virtual Domains that use the selected snapshot.

Name: Displays the selected snapshot name, and allows changing the name.

Last Modified: Shows the date the snapshot was last saved.

Number of Workflows: Lists the number of workflows in the current snapshot.

Services View

The Services top menu button displays the Service view, which contains information about the current state of the Vantage Cloud services.

Services   Export details   Services button
                  about all services

Export details
about displayed
service

Name, Version,
and description
of selected
service

Available help
resources
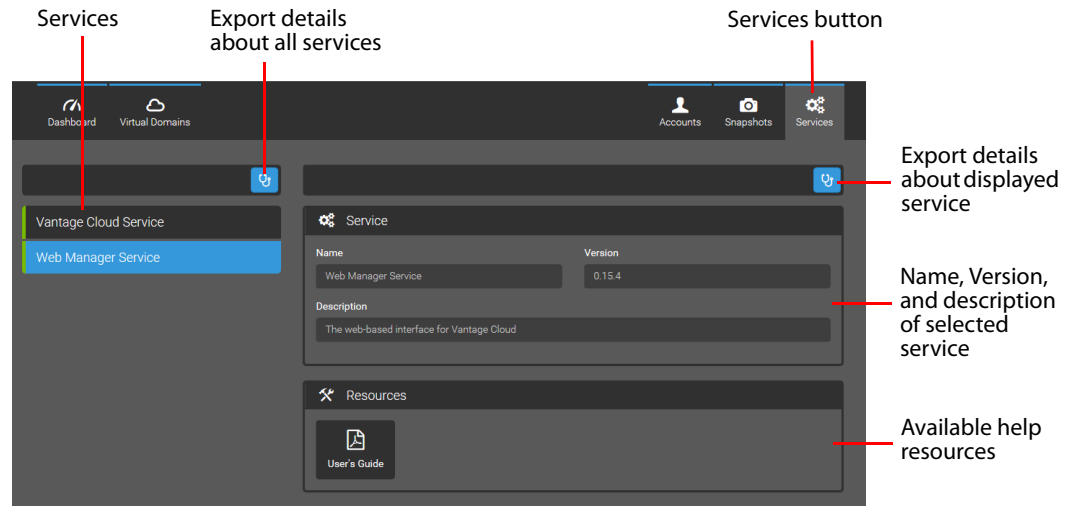
Services Controls

Service List—Lists the two locally installed services that run Vantage Cloud: Vantage Cloud Service and Web Manager Service. Click a service to see the details on the right.

 Export Diagnostics: The left button opens or exports a diagnostic zip file for ALL services. The right button opens or exports a diagnostic zip file for the displayed service. If you save a zip file, it goes into your default downloads folder. For descriptions of the files included in the zip file, see the *Get Technical Support Information* topic in the *Troubleshooting* chapter.

Service

The Virtual Domain section displays information about the selected Vantage Virtual Domain.

Name—Displays the name of the Vantage Cloud Service or Web Manager Service. These are the locally installed programs that make Vantage Cloud work.

Version—Shows the version number of the software.

Details—Displays status messages about the Vantage Virtual Domain, including errors and the current step in the startup or stopping process.

Resources

Lists user guides and other documentation. Click a resource to open it in your browser.

Troubleshooting Vantage Cloud Web Manager

Introduction

This section lists troubleshooting information and problems and solutions.

- Investigating Problems
- Troubleshooting Specific Issues

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Investigating Problems

The following topics enable you to gather information about problems and possibly solve the problems yourself. If you are unable to solve a problem, the information you gather can be supplied to Telestream Support so they can help you resolve any problems.

■ Get Technical Support Information

Get Technical Support Information

The Services top menu button shows the Services view. This view shows basic information about the installation and includes two stethoscope buttons for exporting a service information zip file containing system details. The left button exports a file for all services, and the right button exports a file for the currently displayed service.

You can save the file to your local system and forward it to Telestream Customer Support for help with troubleshooting.
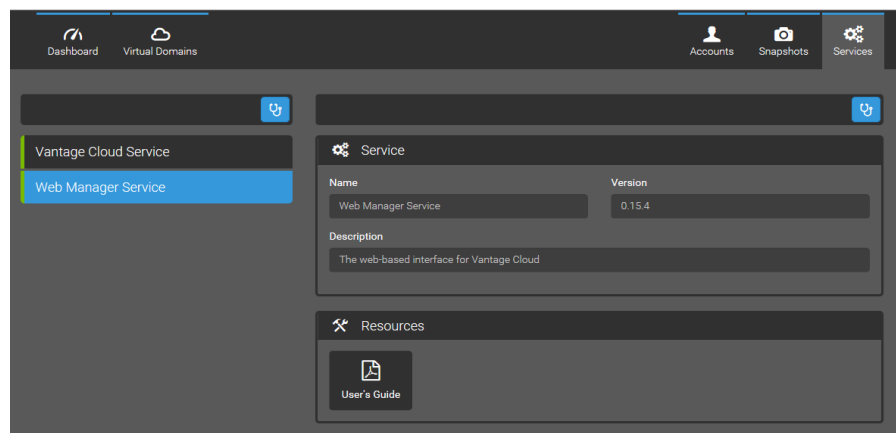
Services Files

The downloaded services files contain configuration and log files for Vantage Cloud.

Service Provider Configuration File

The csp.xml panel describes the Cloud Service Provider configuration as an XML file, including names, identifiers, and details for the Vantage Virtual Domain, Endpoints, Vantage Instance Image version, and so on. This file may help Telestream Support diagnose issues with your system.

Service.exceptions.log

This log file contains errors messages generated by the Web Manager service.

Service.log

The Service.log file shows the interaction between the Cloud Manager and the Cloud Service Provider. If there are connection or interaction problems with the Service Provider, they may show up here.

cspar.xml

The cspar.xml file stores the Account information for your installation.

ror.xml

The ror.xml file describes the configuration of the available service instances.

vdr.xml

The vdr.xml file stores configuration and status information for the Virtual Domains.

vdsr.xml

The vdsr.xml file stores Vantage database snapshot information.

Troubleshooting Specific Issues

The following topics list possible problems with Vantage Cloud and provide solutions.

- Error During Launch
- Provisioning Error
- No VPC Available
- Requested Instance Type is Not Supported/Available
- Orphaned VPCs and Instances
- Requested Instance Type is Not Supported/Available
- Communication Failure with the Virtual Domain
- RDP Connection Failure
- Snapshot Failure
- Items Not Included in Snapshots
- Snapshots Containing Traffic or Third Party Actions Fail
- Resolving Port Conflicts

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Error During Launch

A message such as those shown below appears when you launch Cloud in the browser:

This webpage is not available.

This may occur because the Vantage Cloud Manager Server is not running.

The Vantage Cloud Service has become unresponsive.

If this is the first time opening the web manager a progress animation (a cloud) will be displayed. If there are existing Virtual Domains, these will be kept in the web manager.

To resolve either of the above issues, open Start > Services, and start either or both of the two Cloud services if they are not running.

Another possible cause of failure to launch may be a port conflict. That is, you may have other software on the system that uses port 3000, the port used by the Vantage Cloud Web Manager Server to talk to the Web Manager. If you suspect a port conflict, see the *Resolving Port Conflicts* topic later in this chapter for a procedure to change the port.

Internet Explorer 11 incorrect security settings

If you are using Internet Explorer on a Windows Server operating system and the Cloud Web Manager won't open, disable Enhanced Security Configuration (ESC):

1. Launch Server Manager.

2. Select Local Server (2012) or Server Manager (2008) in the left panel.

3. Click IE Enhanced Security Configuration On/Off (2012) or Configure IE ESC (2008) in the right panel.

4. Set to OFF for administrators and users.

Provisioning Error

If a Virtual Domain will not start, a possible cause is an invalid configuration:

  – C:\ProgramData\Telestream\Vantage Cloud\Service.config

  – Any file in C:\ProgramData\Telestream\Vantage Cloud\Data

These troubleshooting steps may resolve the problem:

1. Uninstall and reinstall Cloud and launch it again.

2. Open the Services view and export all service information (click the stethoscope button above the list of services). Check the logs in the exported file set for issues.

3. Sometimes the error message indicates a specific file that is causing the problem. Contact Telestream Support in this case.

No VPC Available

When Vantage Cloud Subscriptions deploys a Vantage Virtual Domain, it automatically creates a Virtual Private Cloud (VPC).

By default, an AWS account has a limit of 5 VPCs per account and Endpoint. One VPC is consumed by the AWS default VPC, which cannot be used for running a Vantage Virtual Domain. That leaves 4 VPCs available. If you are running 4 Vantage Virtual Domains at the same time, you may receive an error message indicating that no VPCs are available.

Possible solutions include stopping a Vantage Virtual Domain at the current Endpoint so you can start another one, launching a Vantage Virtual Domain at a different Endpoint, or requesting more VPCs and elastic IP addresses per Endpoint from Amazon.

Requested Instance Type is Not Supported/Available

Occasionally, an Instance Type may not be available on an endpoint because most or all systems of that type are in use. If the selected Instance Type is not available because it is in use by other customers, Cloud Manager displays an error message indicating that the requested instance type is not supported or not available.

You can resolve an Instance Type limitation in any of these ways:

1. Use another Instance Type if the type you requested is not essential.

2. Wait for the Instance Type to become available during less busy times.

3. Change your Endpoint to one that has the desired Instance Type available, and also change S3 to match the new Endpoint location to ensure best efficiency.

4. Contact AWS support and ask for an increase in the number of instance types. The instance type can be identified by mousing over the Instance Type in the Vantage Cloud Web Manager Configuration panel for the specified Vantage Virtual Domain.

Please see the AWS page about Lightspeed GPU availability.

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Orphaned VPCs and Instances

When you use the Force Stop button to stop a Vantage Virtual Domain, the associated VPC (and possibly an EC2 instance) may be orphaned—not automatically deleted as they should be. If this occurs, the Vantage Virtual Domain Status Details panel provides a warning notification that resources could not be removed. The notification includes a VPC ID identifying the orphaned VPC.

To resolve this issue, delete the VPC and EC2 instance manually on the AWS site:

1. Use your Web browser to log into the AWS Management Console.

2. Select EC2 from the Amazon Web Services list.

3. Select *Instances* in the navigation panel on the left.

4. Select the instance from the list, if it is still present, click *Actions*, and click *Terminate*.

5. Click the orange cube icon in the upper left to return to the AWS console.

6. Select *VPC* from the AWS console list, and select *Your VPCs* from the left panel.

7. Select the VPC whose VPC ID matches the one in the Status Details notification.

8. Click the *Delete VPC* button at the top of the VPC list to delete the orphaned VPC.

(This AWS Web page summarizes VPC and EC2 concepts: VPC Getting Started Guide.)

No Public IP Addresses Available

You may receive an error message indicating no additional public IP addresses are available. This indicates that all available access addresses are being used to service previous Vantage Virtual Domain instances and connections. You can free up an address by stopping another Vantage Virtual Domain.

By default, an AWS account has 5 access addresses (also called elastic IP addresses) available for use per Endpoint. When a Vantage Virtual Domain starts, the domain instance is assigned an access address, which is used for communication with the SDK service and Remote Desktop. The access address remains associated with the domain instance until the Vantage Virtual Domain is stopped.

If a user attempts to start a Vantage Virtual Domain when all access addresses are associated with running domain instances, the Vantage Cloud application displays an error message and does not allow the Vantage Virtual Domain to start until either an access address becomes available or the AWS account limit is increased.

When a Vantage Virtual Domain starts, service instances are not assigned an access address. An access address becomes associated with a service instance only when a user makes a Remote Desktop (RDP) connection request to a running service instance.

If all access addresses are in use when a user makes an RDP request to a service instance, an access address may be taken from another service instance. This will cause the RDP connection with another remote instance to drop in favor of the new RDP request. An RDP request to a service instance will not steal an access address associated with a Domain Instance or with an EC2 instance in the AWS account that is not managed by Vantage Cloud (i.e. if an instance was created with the AWS EC2 Management Console and not the Vantage Cloud application).

For Amazon's documentation on elastic IP addresses, see: http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/elastic-ip-addresses-eip.html.

Communication Failure with the Virtual Domain

If you try to connect with the Virtual Domain and experience communication errors, check your firewall. Vantage Cloud Web Manager communicates with the Virtual Domain using the ports listed in *Prerequisites*. Please be sure to open those ports in your firewall.

RDP Connection Failure

If you cannot connect to Vantage Cloud via RDP, check the following information.

When you attempt to establish an RDP connection to a Vantage Virtual Domain Instance, the first thing the Cloud Manager application does is check whether that instance will accept a TCP connection to the RDP port.

If you receive an error message that the instance is not yet ready to accept remote desktop connections, this usually means that the Vantage Virtual Domain Instance is not fully up and running yet. Wait a little longer for the Virtual Domain to start, and you should be able to connect.

Here is a more detailed list of reasons the TCP connection test to the RDP port may fail:

- The instance has not launched completely.
  (Solution: Check the AWS console to verify status.)

- The instance does not have a public IP address.
  (Solution: Assign a public IP in AWS.)

- Your firewall is blocking connections to port 3389.
  (Solution: Open the firewall for this port.)

Snapshot Failure

Snapshots require certain conditions to work properly. The following topics discuss snapshot requirements, errors, and workarounds.

Importing from On-Premises Vantage Systems

When creating snapshots from an on-premises Vantage system, these rules apply:

- All workflows are exported and saved. If this operation fails, the create snapshot operation fails, thus when successful, the create operation always generates snapshots that include all Vantage workflows. In general this is supported regardless of Vantage version.

- Capturing domain settings in snapshots is only partially supported by Vantage systems prior to version 6.3 UP3. If any domain settings from a Vantage system prior to version 6.3 UP3 fail to export, Vantage Cloud issues a warning, but the create snapshot operation will still succeed. The Vantage Cloud service logs which Domain settings were not saved as a part of the snapshot; see the *Get Technical Support Information* heading earlier in this chapter for details about exporting log files.

Run On Rule Error

If you import a workflow that uses Run on Rules (besides the Lightspeed Run on Rule) from an older version of Vantage into the current Vantage version and create a snapshot from this domain, the snapshot will fail to load.

Workaround: Remove and re-apply the Run on Rule variable with the current Vantage version, and then re-create the snapshot.

Missing Items Error

If you create a snapshot and then use the Vantage Management Console to delete any of the following items referenced by workflows in the snapshot, the snapshot will fail to load when reimported:

- Variables
- Media Nicknames
- Attachment Nicknames
- Metadata Labels

Workaround: Update the workflow to reference the missing items and re-create the snapshot.

Items Not Included in Snapshots

When you import a snapshot, certain items may seem to be missing. For various reasons, a snapshot cannot include every single item in the Vantage domain database. Items not included are stores, output folders, nicknames, labels, and variables that are NOT referenced by any workflows. Additionally, action templates and action defaults are not included.

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Resolving Port Conflicts

The Vantage Cloud Web Manager service allows access to the web interface using port 3000. However, this port may already be in use by another application. To resolve this issue, you can change the Vantage Cloud Web Interface port to another number.

Note: This procedure requires manually editing a Windows environment setting to change the port number. Continue only if you are comfortable making such changes.

The following procedure allows you to specify a different port for the Vantage Cloud Web Manager. This should be necessary after installation only if the Web Manager is not available when accessed through a browser. You can verify that the Web Manager is not accessible by checking the manager error file (located at *C:\ProgramData\Telestream\Vantage Cloud\Logs\server.exceptions.log*) for this message:

```
> error: uncaughtException: listen EADDRINUSE :::3000
```

To change the port number and correct this error, follow this procedure:

1. Open the Windows Control Panel, and select *System*.

2. On the *Advanced* tab, click *Environment Variables*.

3. Select the *New* button under System Environment Variables

4. In Variable Name, enter: VANTAGE_CLOUD_MANAGER_PORT.

5. In Variable Value, enter a new port number. The allowed range is 1024 to 65535.

6. Click OK in all windows to close the Control Panel.
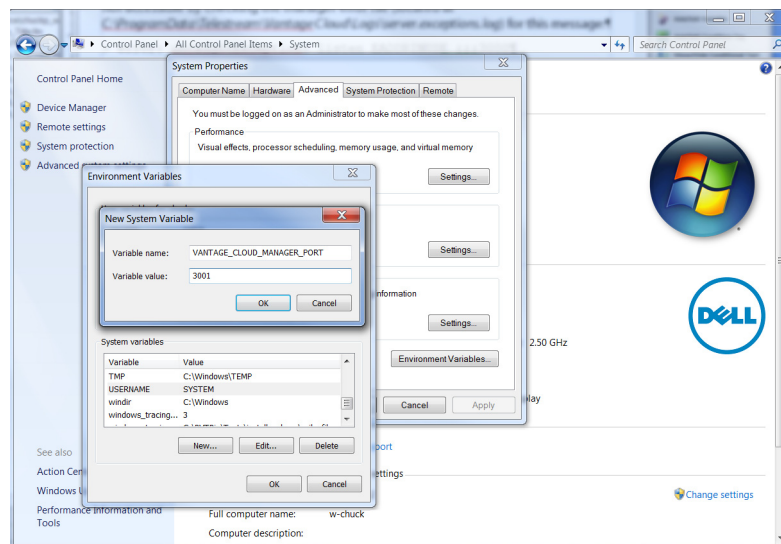
7. At the Start > All Programs prompt, type `Services` and press Enter.

8. Right-click the Vantage Cloud Manager Server, and select *Restart*.
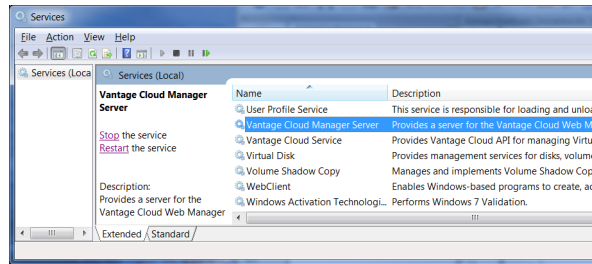
9. If necessary, modify any firewalls, such as Windows Firewall and any anti-virus program firewalls, to allow traffic through the new port. (For Windows Firewall, go to Control Panel > Windows Firewall > Advanced Settings. Create an Inbound Rule and an Outbound Rule to open your chosen port, and name it Vantage Cloud.)

10. Launch Vantage Cloud Web Manager, change the port number in the address field from 3000 to your new port number, and click Enter. Vantage Cloud should open in the browser.

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