Vantage 8.0

Installation Guide

telestream

September 2019 281894

Copyrights and Trademark Notices

Copyright 2019. All rights reserved worldwide. No part of this publication may be reproduced, transmitted, transcribed, altered, or translated into any languages without the written permission of Telestream. Information and specifications in this document are subject to change without notice and do not represent a commitment on the part of Telestream.

Telestream, CaptionMaker, Episode, Flip4Mac, FlipFactory, Flip Player, Gameshow, GraphicsFactory, Lightspeed, MetaFlip, Post Producer, ScreenFlow, Split-and-Stitch, Switch, Tempo, TrafficManager, Vantage, VOD Producer and Wirecast, are registered trademarks and Cricket, e-Captioning, iQ, iVMS, iVMS ASM, Inspector, MacCaption, Pipeline, Vantage Cloud Port, Vidchecker, and Surveyor are trademarks of Telestream, LLC. All other trademarks are the property of their respective owners.

Contents

Vantage Installation Guide 1

1

Copyrights and Trademark Notices 2

Before You Install Vantage 9

Server Hardware Requirements 10
- Ensure Maximum Server Performance 10
- Vantage Server Requirements 11
- Database Server Requirements for SQL Standard 11

Operating System Requirements 12
- Vantage Web Applications OS 12
  - Vantage Web Applications Browser Requirements 13
- Vantage Client Software OS 14
- Vantage Services, Domain Database, and MS SQL Server OS 15
  - Windows Server Configuration Requirements 15

Third-Party Software Requirements 18
- QuickTime Requirements 18
  - QuickTime 7.7.9 for Workflow Portal Client 18
- .NET Framework Requirements 19
- Anti-Virus Software Recommendations 19

Network Requirements 19
- IP Address and Subnet Recommendations 19
  - Static IP Addresses Recommended 20
  - Single Subnet Recommended 20
  - Using Vantage Across Multiple Subnets 20
  - Considerations When Using Vantage on Multiple Subnets 20
  - Troubleshooting Network Issues 21
- Port Requirements 22
  - Vantage Services Ports 22
  - Vantage Thick Client Ports 23
- Firewall Guidelines 23
- Windows Authentication Guidelines 24

About Vantage Windows Authentication 24
Configuration Guidelines for the Vantage Windows User Account 25
Configuring Folders for Vantage Access 25
Time Synchronization Guidelines 26
Database Selection and Configuration Guidelines 27
Vantage Installers Overview 28
Obtaining the Vantage Installer 28
Vantage Installation Package 29
Vantage Setup Installer 29
Vantage Database Deployment Utility 30
Vantage Client Installer 30
Vantage Web Applications Installer 30
Licensing Overview 31
Using Vantage in Demo Mode 31
Obtaining a Vantage License 32
Adding or Replacing License Files 32
Planning for a Vantage Array Installation 33

Planning and Managing a Vantage Database 35

Operating System Requirements 36
Database Server Requirements for SQL Standard 36
Database Selection and Configuration Guidelines 38
Guidelines for Selecting SQL Express or SQL Standard 39
Comparing SQL Express and SQL Standard 39
Vantage Guidelines for SQL 2016 Express 39
Database Shutoff Feature for SQL Express 39
Guidelines for an Array Installation with SQL Standard 40
Recommendations for Large Arrays 40
Other Database Configurations 40
Improving Uptime with Mirroring or Availability Groups 41
Installing MS SQL Server 42
Installing SQL Server 2012 Standard 42
Installing SQL Server 2014 Standard 44
Installing SQL Server 2016 Standard 45
Installing the Vantage Database 47
Prerequisites for Instance Installation 47
Configuring the Administrator Role 48
Configuring the Vantage User Role 49
Installing the Vantage Domain Database 50
Database Maintenance Topics 53
Backing Up and Restoring the Vantage Database 54
Understanding Domain Backup and Restore 54
Backing Up the Domain 55
Restoring the Domain 56
Shrinking a Full Database 57
Moving the Vantage Domain Database to Another Database 58
Preparing for the Move 59
Backing up the Existing Database 60

Removing the Vantage Domain Database 60
Removing Microsoft SQL Server 61
Installing SQL Server Standard 62
Installing the Vantage Domain Database 62
Restoring the Vantage Domain Database Backup 63
Finishing the Move 63

Installing Vantage 65

Installation Prerequisites and Overview 66
Installation Prerequisites 66
Installation Overview 68
Extracting and Running the Installer 70
Installing Vantage on a Single Node 72
Installation Notes 73
Quick Installation Check 74
Installing a Vantage Array 75
Setting Up SQL Server and the Vantage Domain Database 75
Installing SQL Server 2012 Standard 76
Installing SQL Server 2014 Standard 78
Installing SQL Server 2016 Standard 79
Installing the Vantage Domain Database 81
Installing Vantage Array Components 82
Installing Vantage Services, Transcode Engine, and Clients 82
Installation Notes 84
Adding Vantage Services 85
Setting the Vantage Windows Log On ID for Services 86
Quick Installation Check 87
Post-Installation Steps for Single Nodes and Arrays 88
Setting Up a Vantage Store 89
Installing and Configuring Vantage Web Applications 90
Installing Vantage Web Applications 91
Using Web Apps with Active Directory 93
Managing Web Workflow Portal Client Alias Support 95
Bypassing Database Login 97
Enabling Vantage Licenses 98
Installing a Vantage License 98
Activating a Vantage License Offline 99
Troubleshooting License Installation Problems 100
Resolving a DEP Conflict 100
Installing Client Programs on Client Workstations 101
Updating VOD DAI Workflow Portal Configurations 101
Configuring Client DB Access and User Administration 102
Configuring Vantage DB Users 102
Configuring Client Login Connection Settings 103
Enabling User Administration 104
Creating Vantage Users 105
Verifying the Installation 106
Command Line Installation 107

Extracting and Installing 108
Open a Command Prompt 108
Run the Archive and the Installer 108
Self-Extracting Archive Commands 109
Help Command 109
Command List 109
Command Examples 110
Vantage Setup Installer Commands 110
Help Command 110
Command Syntax 110
Command Examples 110
Command List 111
Options 111
Parameters 112
Features 112
Examples of Installing Vantage Services for a Local User 113

Upgrading and Modifying Vantage 115

Upgrading from a Previous Version 116
Updating Vantage Between New Versions 119
Using ComponentPac Management to Update Actions 120
Installing ComponentPacs 121
Upgrading Actions and Workflows 123
Upgrading an Action 123
Upgrading a Workflow 124
Upgrading Workflow Batches 124
Locking Against Upgrades 124
Removing ComponentPacs 125
Updating Individual Components 126
Updating the Vantage Domain Database 127
Updating Vantage Server Components 128
Updating Vantage Clients on Client Workstations 129
Using the Client Installer to Install or Update Clients 129
Using the Vantage Installer to Install or Update Clients 129
Updating Vantage Web Applications 130
Moving the Vantage Domain Database 131
Preparing for the Move 132
Backing up the Existing Database 133
Removing the Vantage Domain Database 133
Removing Microsoft SQL Server 134
Installing SQL Server Standard 135
Installing the Vantage Domain Database 135
Restoring the Vantage Domain Database Backup 136
Finishing the Move 136
Adding a Server to a Vantage Domain 137
Adding a Lightspeed Server to an Existing Vantage Domain 138
Moving Licenses to Another Domain 139

Moving Vantage Services to Another Domain 140
Setting the Vantage Windows Log On ID for a Service 140
Removing the Vantage Domain Database 141
Removing Microsoft SQL Server 142

Removing Vantage 143

Uninstalling Vantage from a Server 144
Uninstalling Vantage Clients from a Workstation 146
Removing ComponentPacs 147

Troubleshooting Vantage Installation 149

Troubleshooting Vantage Installation 150
Verifying DTC Service Settings 150
Verifying DTC Operation 151
Verifying the DTC Configuration 151
License Cannot Be Activated Offline 152
Troubleshooting Vantage Web Applications 154

Before You Install Vantage

Use this topic to understand and plan for the hardware, software, database, and network requirements before performing an installation. You'll also learn about Vantage installers, how to obtain a Vantage license, and some distributed Vantage domain planning advice – this topic is about what you need to know before you install a Vantage domain.

Installing Vantage is easiest when you plan carefully, and you have a working knowledge of Windows server administration, networking, Microsoft SQL Server, and installation and configuration of enterprise-level software. Consult your IT group for assistance as necessary.

Note: Go to www.telestream.net/telestream-support/vantage/support.htm to browse the Vantage Web library, user guides, patches, application notes, and other documents.

The following topics provide information you should consider when planning a Vantage installation:

- Server Hardware Requirements
- Operating System Requirements
- Third-Party Software Requirements
- Network Requirements
- Database Selection and Configuration Guidelines
- Vantage Installers Overview
- Licensing Overview
- Planning for a Vantage Array Installation

Server Hardware Requirements

Vantage is optimized for multi-core processors that support Windows operating systems. The following topics provide more information on Vantage server hardware requirements:

- Ensure Maximum Server Performance
- Vantage Server Requirements
- Database Server Requirements for SQL Standard

Ensure Maximum Server Performance

To ensure maximum server performance for all servers in the Vantage domain, be sure to set the Control Panel Power Options as follows:

Set the **Power Options** to **High Performance** with **Sleep disabled**:

1. Navigate to Start > Control Panel > Power Options.
2. Select the *High Performance* plan.
3. Set Sleep mode to *Never* (never sleep).
4. Select *Change advanced power settings*, and set all critical functions so that they are always ON (this usually means setting them to *Never* turn OFF).

- Also disable any real-time processes that may interfere with performance, such as virus scanning of media files as they are being captured, automatic real-time software updates, and real-time file indexing.

Vantage Server Requirements

Vantage server requirements depend on which domain components (services, media files, and database) are installed on the server, as well as how much media you plan to store on the server. The following table lists the hardware requirements for servers that host Vantage and SQL Express database services.

Hardware	Requirements
Processor	64-bit dual six-core processors or greater; 8 MB cache or greater recommended.
RAM	At least 16GB RAM or greater recommended, depending on the number of concurrent transcode sessions desired.
Disk space	All-in-one installations: 500 GB; approximately 1 GB for Vantage services and clients, approximately 500 MB for the Transcode and Analysis Engine, and approximately 400 GB for the Vantage store media and database. The initial database size is approximately 100 MB.
Ethernet/Fibre	All-in-one installations: Gigabit Ethernet (GbE / 1 GigE) minimum. (Dual Ethernet may be needed in some situations). Vantage arrays: Gigabit Ethernet (GbE / 1 GigE) minimum. Recommend dual bonded Ethernet or 10GigE. The Vantage domain database and all Vantage services should be on the same subnet.
Numeric Processing Instruction Set	MMX, SSE, and SSE2 enabled.

Database Server Requirements for SQL Standard

Correctly specifying the hardware and planning the database is crucial for optimal Vantage system operation. For hardware requirements and other guidelines for a SQL Standard database, please refer to the *Planning and Managing a Vantage Database* chapter and these specific topics before you install Vantage or the database:

- Operating System Requirements
- Database Server Requirements for SQL Standard
- Guidelines for Selecting SQL Express or SQL Standard

Operating System Requirements

The following topics describe the operating system requirements for Vantage components:

- Vantage Web Applications OS
- Vantage Client Software OS
- Vantage Services, Domain Database, and MS SQL Server OS

Note: Automatic Windows and software updates and automatic restarts of Vantage servers should be disabled. Schedule update installations and system restarts only during planned maintenance periods to prevent disruption of Vantage operations.

Vantage Web Applications OS

Vantage Web Applications should be installed on an IIS server running on the same subnet as the Vantage domain database, so that the Web applications can auto-discover the Vantage domain. To improve the performance of Vantage Web Applications and Vantage services, place the Vantage Web Applications on a dedicated server, separate from the Vantage domain database and Vantage services. The following list ranks the possible Vantage Web Application configurations from most preferred (#1) to least preferred:

1. Dedicated Vantage Web Application server.
2. Vantage Web Applications installed on a Vantage domain database server that does not host Vantage services.
3. Vantage Web Applications installed with the Vantage domain database and Vantage services on the same server (includes all-in-one domains).

Vantage Web Applications should only be installed and operated on the following operating systems:

- Windows Server 2012 R1 (64-bit only)
- Windows Server 2012 R2 (64-bit only)
- Windows Server 2016 (64-bit) Standard or Data Center Edition
- Microsoft IIS 8.0 or later is required.
- .NET 4.8 is required.

Installation of the IIS and .NET components is covered as part of Web app installation in the next chapter: Installing and Configuring Vantage Web Applications. The Web Apps installer now installs .NET 4.8 for you automatically if it is not already present.

Vantage Web Applications Browser Requirements

Telestream supports the following browsers for use with the Vantage Web applications:

- Internet Explorer 11, 32-bit or 64-bit (Windows only)
- Chrome current version (Mac OS X & Windows)
- Safari current version (Mac OS X only)

Note: To use Vantage Web applications with Internet Explorer, you must configure Internet Explorer as described below. Also note that Firefox is not recommended because it does not allow previewing in the Web Workflow Portal on Windows Server systems.

To configure Internet Explorer for use with Vantage Web applications, do the following:

- Enable Active Scripting—Open Internet Explorer, select *Tools* > *Internet options,* select the Security tab, click *Custom level*, scroll down to Scripting, click the *Active scripting Enable* radio button, click OK, and click OK.
- If you are using Internet Explorer on a Windows Server operating system, disable Enhanced Security Configuration (ESC) using the Windows Server Manager (Server Manager > Security Information > Configure Internet Explorer ESC).

Vantage Client Software OS

Vantage client programs (Vantage Management Console, Vantage Workflow Designer, and Vantage Workflow Portal) may be installed and run directly on a Vantage server, or on client workstations.

Vantage client programs are supported on the following operating systems:

- Windows 7, 8.1, and 10 (all versions may be x86 or x64)
- Windows Server 2012 R1 and R2
- Windows Server 2016 (x64 with Desktop Experience) Standard or Data Center

---

Note: To effectively operate Vantage services and their client programs in an array, and with other networked systems, you must disable the Windows Firewall and upgrade all systems to the latest Microsoft service packs and security updates.

Vantage requires Windows Desktop Experience (see *Install the Desktop Experience*).

Note: Desktop Experience is required so that the Vantage transcoders, clients, and preview player can function correctly.

If you connect to the server using a Remote Desktop Protocol (RDP) product, you must also install the Desktop Composition role feature.

Once Desktop Composition is installed, you must also enable the Desktop Composition policy.

Note: If you cannot install or enable Desktop Composition because needed options are grayed out, group policies set by your IT administrator may be preventing access.

Vantage Services, Domain Database, and MS SQL Server OS

Vantage services, the Vantage Domain Database, and the MS SQL Server for Vantage should be installed and operated only on the following operating systems (64-bit recommended for performance):

- Windows Server 2012 R1 or R2 (x64 only)
- Windows Server 2016 (x64 with Desktop Experience) Standard or Data Center Edition

All Vantage services and Telestream core services have been qualified on Windows Server 2012 R1/R2 and Server 2016 except as noted below:

- Avid AAF Encoder—Qualified on Server 2012 R2 only.
- Screen MediaMate—Tested and deployed by Screen; see Screen's documentation.

For all third party Vantage services (besides Aspera), refer to the respective third party manufacturer's documentation for supported operating systems.

Windows Server Configuration Requirements

The following topics describe additional Windows requirements for Vantage:

■ Install the Desktop Experience
■ Windows Server 2012 R1/R2 Desktop Experience
■ Understand User Account Control Admin Approval Mode
■ Power Options Settings

Install the Desktop Experience

Prior to installing Vantage, the Microsoft Desktop Experience must be installed on Vantage servers (except dedicated database servers) for Vantage clients and services. The Desktop Experience feature provides Windows 7 features on your server and is required by several actions, including the Analyze, Conform, Timed Text, and various Flip actions as well as Vantage clients and the proxy preview player.

To install the Windows Desktop Experience follow the procedure below for your OS.

Windows Server 2016 Desktop Experience

When you install Windows Server 2016, you can choose "Windows Server (Server with Desktop Experience)." This installs the Desktop Experience along with the server OS. No additional installation steps are required.

Windows Server 2012 R1/R2 Desktop Experience

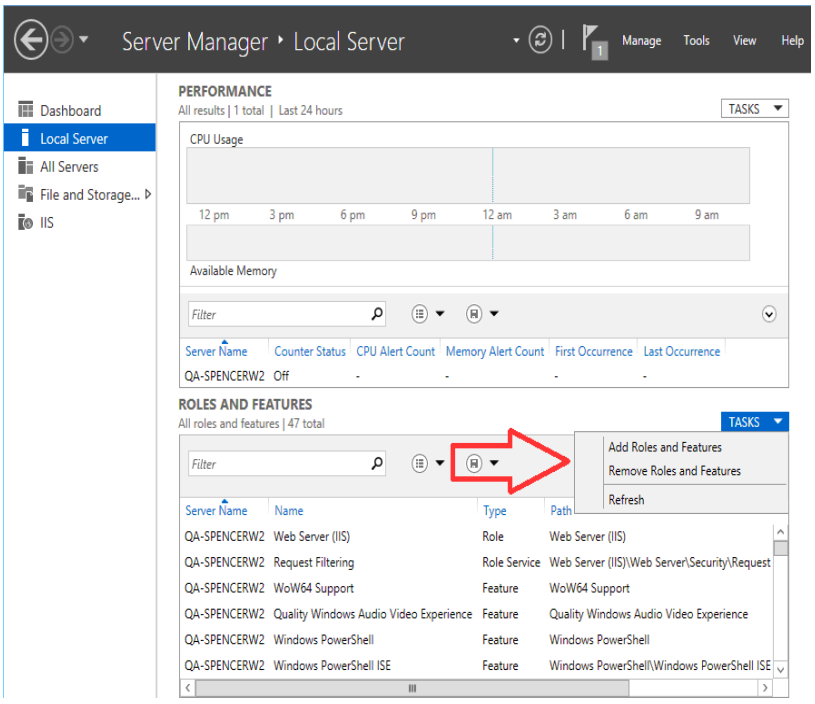
You can use either Windows PowerShell or the Server Manager to install Desktop Experience for Windows 2012, as explained below.

To install Desktop Experience on Windows Server 2012 R1/R2 using Windows PowerShell:

1. Press *Start*.
2. Type: `PowerShell`.
3. Right-click PowerShell.
4. Select *Run as administrator*.
5. Execute this command:
   `Install-WindowsFeature Desktop-Experience`

To install Desktop Experience on Windows Server 2012 R1/R2 using the Server Manager:

1. Launch Server Manager.
2. In the left-hand column, go to *Local Server*.
3. Scroll down to ROLES AND FEATURES.
4. Left-click the TASKS button and select *Add Roles and Features* (see the figure below). The Add Roles and Features Wizard window opens.



5. Click *Next* four times until you arrive at the *Features* page.
6. On the *Select feature* page, expand the *User Interfaces and Infrastructure* group and enable the *Desktop Experience* check box. Then click *Install* to complete the installation.

Understand User Account Control Admin Approval Mode

If User Account Control: Run all administrators in Admin Approval Mode is enabled, run the installers by right-clicking the installer and selecting Run as Administrator. If this feature is disabled, you can run the installer normally.

To verify the setting value (Enabled | Disabled):

1. Display the command window (Start > Command Prompt).
2. In the command window, type *secpol.msc* and press Enter.
3. In the Local Security Policy window, select Local Policies > Security Options. In the Policy column, find User Account Control: Run all administrators in Admin Approval Mode and view the Security Setting.

Power Options Settings

All Vantage servers should be set to High Performance in the Power Options Control Panel. This ensures that the network interface cards never sleep, which is desirable to ensure all Vantage servers remain in communication with each other all the time.

1. In Windows, display the Control Panel folder.
2. Search for Power Options.
3. Click Power Options, and select High Performance.
4. Close the Control Panel.

Third-Party Software Requirements

The following topics describe Vantage software requirements and recommendations for third-party products:

- QuickTime Requirements
- .NET Framework Requirements
- Anti-Virus Software Recommendations

CAUTION: If you do not install/upgrade all required software, Vantage may not operate correctly.

QuickTime Requirements

The Telestream Media Transcode and Analysis engine requires QuickTime version 7.6.9 if you plan to transcode QuickTime files. Obtain the free QuickTime installer from Apple.com at this URL:

http://appldnld.apple.com/QuickTime/041-0025.20101207.Ptrqt/QuickTimeInstaller.exe.

Note: The Vantage Setup installer checks for QuickTime, and if QuickTime is not present, the installer installs QuickTime 7.6.9 for you if you have an Internet connection. If there is no Internet connection or QuickTime is present but outdated, the installer displays a message advising you to install QuickTime manually. Please use the URL above to download the correct version. If QuickTime is installed and up-to-date, the installer leaves QuickTime untouched.

After installation, be sure to uncheck (disable) *Check for Updates*, so that version 7.6.9 is not updated without your knowledge; then restart the server.

If you do not install the correct QuickTime version, encoding some formats causes this error: "An error occurred during execution of the Transcode Task: RenderSession Configuration Error, message: Requested encoder | decoder not installed."

Note: Because QuickTime for Windows has security vulnerabilities as stated by the US Department of Homeland Security (DHS), you may prefer not to install it on your computers. If QuickTime is not installed, a number of Vantage functions will not operate, such as portal proxy playback and several Flip action functions. For details about the QuickTime vulnerability and the effect of removing it from Vantage systems, see the *Telestream and QuickTime* statement on the Telestream.net web site.

QuickTime 7.7.9 for Workflow Portal Client

The Workflow Portal desktop client preview player works best with QuickTime 7.7.9. This is the recommended version to use on Vantage client machines.

.NET Framework Requirements

- Microsoft .NET Framework 4.8 is required on Vantage servers, client workstations, and Web Apps installations. This .NET version is installed automatically by the Vantage or Web Apps installer on all operating systems, if not already present.
- Microsoft .NET 3.5.1 is also required on Vantage servers that run the general purpose Flip action and on servers running SQL Server 2014, but it is not required on other servers or client machines. This .NET version must be installed manually using Server Manager on servers that require it. After installation, open Server Manager > Roles > Server Roles, and check Web Server (IIS) to enable it. Then enable the services listed in the IIS Role Service Requirements table in the *Installing Vantage* chapter.

Anti-Virus Software Recommendations

Telestream recommends that you do not use anti-virus software on Vantage servers. You should not enable real-time scanning. If you do use anti-virus software, you should identify Vantage as a safe or trusted application. Telestream recommends that you disable real-time file scanning, because it will impact performance and potentially lock files being processed, impacting Vantage's ability to operate properly.

Note: Be sure to turn off anti-virus software during Vantage installation or install the anti-virus software after you install Vantage.

Network Requirements

These topics provide information on Vantage network requirements and guidelines:

- IP Address and Subnet Recommendations
- Port Requirements
- Firewall Guidelines
- Windows Authentication Guidelines
- Time Synchronization Guidelines

IP Address and Subnet Recommendations

The following topics recommend best practices for configuring Vantage servers on your network. These are some principles governing Vantage operation on a network:

- Vantage Services communicate with each other (peer-to-peer) and require reliable communication to prevent services from being treated as offline or failed.
- Services require reliable communication with the database.
- UDP, which is used for database discovery and services, does not work across sub nets. This affects domain setup but not day-to-day operation.
- Desktop client software applications require access to the SQL database.

Static IP Addresses Recommended

Telestream recommends using static IP addresses and/or a host file for all machines within a Vantage domain. This is especially important when the network does not have a DNS server. Static IP's help ensure that there is an explicit machine name to host IP correlation, which has proven to be the most effective way to maintain a large cluster.

Single Subnet Recommended

In a Vantage array installation, Telestream recommends that you install the Vantage domain database, Vantage services, and client programs in the same subnet to avoid communication issues. Within Vantage client and web applications, the service discovery feature automatically discovers all Vantage domains within a subnet. If you must access a Vantage domain from outside the subnet that hosts the Vantage domain database, you can use a DNS host name or IP address to specify the domain.

Using Vantage Across Multiple Subnets

You can use Vantage across multiple subnets, provided you adhere to these requirements:

- The subnet must be reliable (not dropping significant numbers of packets); otherwise there will be sporadic communication between services.
- DNS configurations must be set properly (for example, static host entries must be used if DHCP is used for dynamic IP addresses).
- Use host files to ensure that dynamic machine identities do not exist.
- Firewalls need to be disabled or have the appropriate ports open (see Firewall Guidelines later in this chapter).
- Check ALL subnets where services may be running to ensure that firewalls are configured correctly.
- Client software running on a different subnet generally works without issues.

Considerations When Using Vantage on Multiple Subnets

Vantage software cannot discover services across subnets; when building the Vantage Domain you will need to add services manually:

Open the Vantage Management Console and add services to the domain as follows:

1. Select Services in the left column.
2. Click the Add Services icon in the right panel Services tool bar.
3. Select My Service/Machine is not listed.
4. Enter the machine name or IP address, and click OK.
5. Select the services you wish to add.

Additionally, Vantage client software may not be able to discover the Vantage database across subnets. The first time you run the client software, do the following:

1. Select My Domain is not Listed.
2. Provide the host name for the database, and click OK.

Troubleshooting Network Issues

The following list provides common network issues and solutions:

Symptom—Jobs are stalled in the waiting (yellow) state and are not being assigned to services:

- Problems: (1) Services go offline and online arbitrarily. (2) Services of that type are not available due to firewall restrictions.
- Solution: Review firewall settings.
- Problem: Services are not available at all.
- Solution: Review services and ensure that they are running.

Symptom—Services toggle in the Management Console, arbitrarily going offline and back on again. Service logs show "Unable to communicate with service":

- Problem: May be a DHCP problem where IP addresses are changing.
- Solution: Ensure host tables are updated so that every service machine has a fixed name or use static IP addresses.
- Problem: May be an unreliable network causing other services to think that the service has failed.
- Solution: Analyze packet loss on the network to locate points of unreliability
- Problem: May be asymmetrical firewall configurations where machine A can communicate with B, but not vice versa.
- Solution: Review firewalls between services and ensure parity in terms of which ports are open.

Symptom—Services cannot be discovered in the Management Console, even when using explicit service names:

- Problem: Firewall configuration is likely blocking network traffic.
- Solution: Update firewall information to reflect requirements (see Firewall Guidelines later in this chapter).

Port Requirements

Vantage services are pre-configured with the default TCP port numbers listed below. To enable network communications between Vantage components, ensure that there are no port number conflicts between the applications on each Vantage server.

Note: For instructions on viewing or changing the default port settings, search for *Configuring Vantage Services* in the *Vantage Domain Management Guide*.

Vantage Services Ports

Vantage Service	Ports
Analysis	TCP: 8673, HTTP: 8672
Aspera	TCP: 8701, HTTP: 8700
AudioTools	TCP: 8713 HTTP: 8712
Aurora	TCP: 8689, HTTP: 8688
Avid	TCP: 8738, HTTP: 8738
Baton	TCP: 8703, HTTP: 8702
Catalog	TCP: 8665, HTTP: 8664
Cerify	TCP: 8727 HTTP: 8726
Cloud	TCP: 8737 HTTP: 8736
Communicate	TCP: 8663, HTTP: 8662
Edit	TCP: 8699, HTTP: 8698
emotion	TCP: 8733 HTTP: 8732
FileCatalyst	TCP: 8715, HTTP: 8714
IPTV VOD	TCP: 8697, HTTP: 8696
Live	TCP: 8721 HTTP: 8720
MediaMate	TCP: 8685, HTTP: 8684
Metadata	TCP: 8675, HTTP: 8674
Metric	TCP: 8719, HTTP: 8718
Monitor	TCP: 8659, HTTP: 8658
Multiscreen	TCP: 8683, HTTP: 8682
Nexidia	TCP: 8725, HTTP: 8724
Pulsar	TCP: 8717, HTTP: 8716
SDK	TCP: 8677, HTTP: 8676
Signiant	TCP: 8709, HTTP: 8708
Staging	TCP: 8687, HTTP: 8686
TimedText	TCP: 8735 HTTP: 8734
Traffic	TCP: 8681, HTTP: 8680
Transcode	TCP: 8671, HTTP: 8670
Transport	TCP: 8661, HTTP: 8660
VidChecker	TCP: 8705, HTTP: 8704

Vantage Thick Client Ports

To enable network communication with Vantage Thick Clients, open the following ports.

Vantage Clients or Third Party Software	Ports to Open
Vantage Windows (Thick Clients) - Workflow Portal, Dublist Portal	TCP: 54980
Vantage Clients SQL database access	TCP: 1433, 49150-49300
Vantage Dublist Portal (Thick Client) pre-qualification support	TCP: 8681
SQL Browser service	UDP: 1434
TCP/IP network access (Microsoft Windows share/storage)	TCP: 445

Firewall Guidelines

Telestream recommends that you disable the Windows Firewall on all computers that will communicate with or support Vantage services. The default Windows Firewall configuration will block access to the Vantage server from other Vantage components, such as other Vantage machines running Vantage client software. If you do run a firewall, the following ports must be open to allow Vantage to communicate.

Third Party Software	Ports
Avid Interplay (Unity Client, Transfer Engine, Web Services)	Discovery: UDP port 8321. For other ports, see Avid documentation, Interplay Admin Guide, Interplay Software Installation and Configuration Guide
FTP (Passive mode)	TCP: 20, 21. Custom FTP port numbers can be entered in Vantage workflows. Also, FTP uses additional port numbers as specified in the protocol specifications. Refer to the protocol specifications for additional information.
Grass Valley AMP	Port 3811 by default.
Harris NEXIO	TCP: 2098
HTTP	TCP: 80
Microsoft Distributed Transaction Coordinator (DTC)	User configurable; default port: 3372 when TIP is enabled. See Microsoft documentation for details.
Server Message Block (SMB)	TCP: 137–139, 445, UDP: 137–139, 445
SFTP	TCP: 22 Custom SFTP port numbers can be entered in Vantage workflows. Also, SFTP uses additional port numbers as specified in the protocol specifications.
SMTP	TCP: 25. This default value is configured on Vantage servers as described in *Configuring Vantage Email Notifications* in the Vantage Domain Management Guide.
WS-Discovery	TCP: 46123, UDP: 3702

Note: Third-party port numbers are provided for convenience, but are beyond Telestream's control and subject to change. The list is incomplete because of the many server products available. Contact product vendors for port usage details.

Windows Authentication Guidelines

By default, Vantage services use the Windows *Local System account* when accessing file space for media storage and delivery. When all Vantage services, clients, and delivery targets are on one server, the default configuration works well. When any Vantage service, client, or delivery target is on another computer, Windows authentication requirements must be met to enable communication between multiple computers.

The following topics provide additional authentication guidelines:

- About Vantage Windows Authentication
- Configuration Guidelines for the Vantage Windows User Account
- Configuring Folders for Vantage Access

About Vantage Windows Authentication

A Vantage domain requires authentication planning when workflows require Vantage to ingest media from or send media to another computer. For remote file access, use the following guidelines:

- Configure each Vantage service that accesses files on another server to use a Windows log in ID and password. For example: *VantageWinUser*.
- Configure each remote storage folder to support access from the log in ID for Vantage services.
- If the same service operates on multiple Vantage servers, and requires access to files at a remote location, configure the same log in ID and password for all instances of that service.

  For example, if the Transcode service is running on three servers, it operates as one Transcode service with three instances or *nodes*. Vantage requires that every Vantage node within a service use the same log in ID.

Note: When a service is comprised of multiple nodes, the Local System account, which is the default log in ID for all-in-one installations, cannot be used because it represents a different user on each system.

Configuration Guidelines for the Vantage Windows User Account

To support Vantage service access to other Vantage servers and file folders on other computers, Telestream recommends that you create a Vantage user account within the Windows domain or workgroup. To distinguish the Vantage Windows user account from regular Vantage user accounts, use a name that indicates that this is a Windows user account. For example, VantageWinUser.

Your Windows domain or workgroup administrator can configure the Vantage Windows user account before Vantage installation. When configuring this account, consider the following guidelines:

- The Vantage Windows user account should be added to the local administrator group on each server so that Vantage has the proper authority to run Vantage services and install Vantage software.
- The Vantage Windows user account must be authorized to log in as a service (see your Windows domain or workgroup administrator), so that Vantage services can log in as the Vantage Windows user on each Vantage server.
- The Vantage Windows user account should have appropriate read and write permission to network locations that Vantage will access. These network locations include the Vantage store and input and output storage locations.
- You can use the Vantage Windows user account to install the Vantage software.

For instructions on configuring services to use the Vantage Windows user account, see *Setting the Vantage Windows Log On ID for Services*.

Configuring Folders for Vantage Access

Vantage servers and clients may need access to folders on other computers for any of the following:

- Input of files in Watch folders
- Manual submission of input files
- Storage of output files for future Vantage use
- Delivery of output files to remote destination folders

The following topics describe how to configure folders for Vantage use:

■ Configuring Folder Access Within the Windows Domain or Workgroup
■ Configuring Folder Access Outside of the Windows Domain or Workgroup
■ Configuring Access to a SAN System

Note: Vantage cannot access network locations defined using a Windows mapped drive. You must use a universal naming convention (UNC) path to define network locations for Vantage use.

Configuring Folder Access Within the Windows Domain or Workgroup

If you create a Vantage Windows user account as described in *Configuration Guidelines for the Vantage Windows User Account*, granting Vantage access to any folder within the domain is as simple as granting access to the Vantage Windows user. If Vantage workflow designers, operators, or administrators also need access, grant folder access to their Windows user names.

Configuring Folder Access Outside of the Windows Domain or Workgroup

When Vantage needs to access computers in a different Windows domain or workgroup, the Windows log in ID from the current domain or workgroup is not accepted. To support Vantage service access, you can configure a Vantage authorization record as described in *Specifying Authorization Credentials for Remote Folder Access* in the Vantage Domain Management Guide.

Configuring Access to a SAN System

When you want to access files in a SAN system, be aware that some systems expose the shared drive as a letter (mapped) drive (for example, X:) that is visible on any client of the SAN. Although Vantage cannot reference a Windows mapped drive, you can reference SAN drives via a drive letter, provided that each Vantage server is a client of the SAN and that all mount points use the same letter.

Time Synchronization Guidelines

When a Vantage domain includes multiple servers and workstations, you should verify that all the computers are set to the same regional settings and the correct time zone. Otherwise, the timestamps associated with Vantage events may display incorrectly and time-driven events might not occur on schedule. When checking the time configuration in the Vantage domain, be sure to check the configuration on the following:

- All servers with Vantage services
- All Vantage domain database servers
- All Vantage web hosts
- All file servers that support Vantage stores and folders
- All workstations that run Vantage Workflow Designer, Vantage Workflow Portal, and Vantage Management Console (VMC)

Network time protocols on your network should keep the time within tolerances, as long as you correctly configure the following:

- The time zone for each server or workstation should be correct for the respective time zone.
- Any adjustment for daylight savings time should be consistent on all servers and workstations within the same time zone.

Database Selection and Configuration Guidelines

The Vantage database has very specific requirements, and its configuration differs depending on your expected processing workload and whether you are installing Vantage in a Single-Node or Array configuration. For detailed database requirements, please see the following topics included in the *Planning and Managing a Vantage Database* chapter of this guide, in the *Vantage Database Management Guide,* or in the *Vantage Domain Management Guide*:

- Operating System Requirements
- Database Server Requirements for SQL Standard
- Database Selection and Configuration Guidelines

Vantage Installers Overview

The following topics introduce the Vantage installers:

- Obtaining the Vantage Installer
- Vantage Installation Package

Note: The Vantage installer on a USB memory stick is available upon request. Contact sales@telestream.net to request the installer on a memory stick.

Obtaining the Vantage Installer

The Vantage installer is available from Telestream's Web site. To locate and download the Vantage installer, follow these steps:

1. Use your Web browser to go to dynamic.telestream.net/downloads/download-vantage.asp?prodid=vantage.
2. If you do not have a Telestream account, click Create an Account to display the Create a Telestream Account page. Fill out the form and click Create Account. You can use your user name and password immediately. Telestream will send you a confirmation email.
3. On the login page, enter your authorized user name & password, then click Log In.
4. On the Downloads page, click Download Now to download the Vantage installer package.

   Select a folder (or desktop) destination and click Save to download and save the Vantage installer file on your computer.
5. The Download Progress window displays as the file is downloaded to your computer. When the download is complete, close the Web browser.
6. Right-click the Vantage installer zip and select Extract All. Follow the steps to extract the installers and related files.

The main Vantage installer is *Vantage_8.0.exe*, which is a self-extracting archive.

When you run (double-click) the archive file, it extracts a *Vantage_8.0_Setup.exe* file and ComponentPacs to the *C:\Vantage8.0* folder. After extraction, the setup file automatically runs and starts the installation.

Other installers may be provided to allow installing of individual components and patches.

Note: Installer files may include a build number in the file name, as indicated by the x's in this example: *Vantage_8.0_Setup_xx.xx.xxx.xxxxx.exe*. These numbers are excluded in this guide for the sake of simplicity and clarity.

Later, in the *Installation* chapter, you'll use these installers to install Vantage as directed.

Vantage Installation Package

The installation package includes the following installers:

- Vantage Setup Installer
- Vantage Database Deployment Utility
- Vantage Client Installer
- Vantage Web Applications Installer

Vantage Setup Installer

The *Vantage_8.0_Setup.exe* installer (extracted to the C:\Vantage8.0 folder when you run the *Vantage_8.0.exe* archive file) is the main Vantage installation program. It installs all of the server software and all of the clients. When you use it to install Vantage programs and services, you can choose an all-in-one Single Node installation or an Array Node installation. Choose Single Node to install all components on a single server. Choose Array Node if you are installing selected components on a Vantage array server. You can also choose Install Products or Custom Install. Install Products lets you select licensed product groups, and Custom Install lets you select individual components.

The Vantage Setup installer is capable of installing everything needed for a complete Vantage installation. If you check all components, Vantage Setup installs these items:

- Creates a Telestream directory for Vantage and related files. For Single Nodes only, this directory includes Local Store, Default Catalog, and Samples workflow folders.
- Installs Intel Performance Primitives software for Intel processors
- Checks for QuickTime (used only by the Telestream Media Transcode and Analysis engine) and installs it if missing or advises if it is obsolete.
- Installs SQL Server 2016 SP1 Express *IF* Express or Standard are not already installed. If the installer detects an existing SQL Server installation, it skips installing Express.
- Creates a SQL instance named VANTAGE (only for automatic Express installations)
- Creates the Vantage domain database on the VANTAGE instance
- Installs the Telestream Media Transcode and Analysis engine
- Installs Vantage services and client programs according to your selections, including Web Applications for arrays
- Creates Control Panel Programs and Features entries for Telestream Media Transcoding and Analysis and Vantage 8.0. Other Vantage installers may add list entries, such as Vantage Clients or Vantage Web Applications.
- Creates desktop shortcuts for Vantage client applications on the desktop

Vantage Database Deployment Utility

The Vantage Database Deployment Utility enables you to install or upgrade the Vantage domain database into an existing SQL installation, such as when installing the database as part of a Vantage Array database server installation. You must first install SQL. Then when you run the utility, it performs the following tasks:

- Creates a SQL instance named VANTAGE in the existing SQL installation
- Creates the Vantage domain database on the VANTAGE instance.

Note: If you run the database utility and a SQL instance named VANTAGE already exists, this utility will update the existing instance (while retaining all your data).

Vantage Client Installer

The Vantage Client installer (*Vantage 8.0 Client Applications.msi*) provides a convenient installer for quickly installing Vantage client applications on client workstations. The Client installer can install the Management Console, Workflow Designer, Workflow Portal, and Dublist Portal.

Vantage Web Applications Installer

The Vantage Web Applications installer installs these Vantage Web Applications:

- *Vantage Dashboard*—allows administrators to view Vantage system information.
- *Vantage Job Status Views*—enables operators to view job status information, and if properly authorized, execute job controls.
- *Vantage Workflow Portal (VWP)*—allows operators to perform operator-intervention media processing tasks via an Internet connection.
- *Vantage Dublist Portal*—allows managing and processing of dublists for the Traffic-Manager option.
- *Lightspeed Live Capture web application*—manages live video capture as part of the Lightspeed Live Capture option.
- *Vantage Tape Capture web application*—manages the Lightspeed Tape Capture option to capture media from videotape.
- *External Links*—Provides access to a convenient "bookmarks page" for storing frequently used Internet links.

Licensing Overview

The following topics describe Vantage licensing:

- Using Vantage in Demo Mode
- Obtaining a Vantage License
- Adding or Replacing License Files

Note: A Vantage domain with more than one node requires one Vantage Array license per node.

Using Vantage in Demo Mode

When you install Vantage without a license, Vantage operates in demo mode. Demo mode allows you to design workflows, input Windows Media (WMV and AVI) files for transcoding (with a watermark), and analyze a few seconds of video and audio. Some features that are not available in demo mode include:

- Support for monitoring and delivering to broadcast servers
- Support for conversion of XML files and third party integrations

Note: If you'd like to unlock the entire set of features in Vantage for a time-limited trial, please contact your Telestream sales representative, or contact the Telestream sales team at sales@telestream.net. Demonstration mode is limited to all-in-one single node domains.

Obtaining a Vantage License

You must obtain, install, and activate a license to:

- Test a Vantage array in demo mode
- Operate Vantage in production
- Upgrade Vantage from one version to another
- Add more Vantage services (more Transcode services, for example)
- Add licensed features (the Advanced Avid option, for example).

Please contact your Telestream sales representative or contact the Telestream sales team at sales@telestream.net to determine your Vantage requirements and obtain or update your license. When your license has been prepared, Telestream will email you the license as an attachment.

For Telestream contact details, go to www.telestream.net/company/contact-telestream.htm.

When you receive the license (an XML file), save it in a safe place for installation and activation at the end of the installation process.

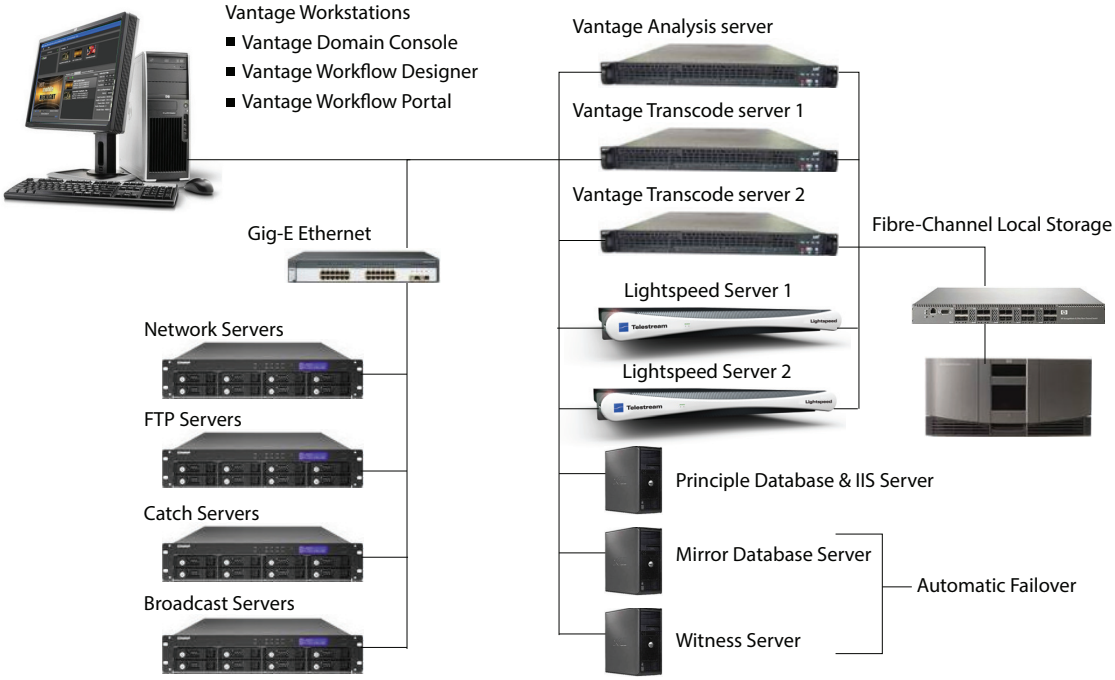
Adding or Replacing License Files

Depending on your requirements, you may obtain a new license file or you may obtain updated files. Contact Telestream Sales or Customer Service, and follow their instructions for adding or updating license files.

Note: You can evaluate an All-in-One Single Node Vantage installation without installing a license. Demo mode allows you to design workflows, perform transcoding with a watermark, and analyze short video or audio clips. However, in demo mode (no license is installed), some features (such as broadcast server protocols) are disabled, and Vantage can only read Windows Media (WMV and AVI) files for transcoding or analysis. You cannot operate a Vantage array without a license.

Planning for a Vantage Array Installation

Prior to installing a Vantage array, Telestream recommends that you develop a system diagram, indicating each server and the Vantage services and client programs it should host, plus the database server (and optional mirror and witness server).



The diagram should also identify which computers host client programs (Vantage Management Console, Vantage Workflow Designer, and Vantage Workflow Portal).

Additionally, document all network resources utilized by the Vantage domain (file sources and destinations).

When adding Vantage services to scale performance, Telestream generally recommends adding one or more Vantage transcoding servers, which is typically the first service to max out server capacity. Multiple transcode servers improves load balancing and speeds overall job throughput. Secondly, if you use the Vantage Analysis service heavily, consider hosting it on a dedicated server as well.

Note: Each server hosting Vantage services requires a Vantage Array or Vantage Enterprise System Management license. Dedicated database servers do not require a special license.

Note: When naming servers, do not use underscores in the names. Underscores are not valid URL characters and will prevent the Web Applications from connecting to the Vantage domain.

Planning and Managing a Vantage Database

This guide lists Vantage database requirements and explains how to install and manage the Vantage Database.

Installing a database in preparation for Vantage is easiest when you plan carefully, and you have a working knowledge of Windows server administration, Microsoft SQL Server, and installation and configuration of enterprise-level software. Consult your IT group for assistance as necessary.

Note: Go to www.telestream.net/telestream-support/vantage/support.htm to browse the Vantage Web library, user guides, patches, application notes, and other documents.

The following topics provide information for planning, installing, and maintaining a Vantage database:

- Operating System Requirements
- Database Server Requirements for SQL Standard
- Database Selection and Configuration Guidelines
- Installing MS SQL Server
- Installing the Vantage Database
- Backing Up and Restoring the Vantage Database
- Shrinking a Full Database
- Moving the Vantage Domain Database to Another Database

Operating System Requirements

The Vantage Domain Database and the MS SQL Server for Vantage should be installed and operated only on the following operating systems (64-bit only):

- Windows Server 2012 R1 or R2
- Windows Server 2016 Standard or Data Center Edition

Database Server Requirements for SQL Standard

The following recommendations are for customers running SQL Standard. To determine which version of SQL to use, please refer to the *Guidelines for Selecting SQL Express or SQL Standard*.

Telestream recommends using "per core" SQL Standard licensing when using Vantage. In this licensing scenario, all physical cores on the server (or virtual machine) must be licensed. Please contact your IT department or Microsoft for more information about SQL Standard licensing options. For Microsoft's discussion of licensing by cores, refer to this URL: http://www.microsoft.com/licensing/about-licensing/briefs/licensing-by-cores.aspx.

Telestream recommends the following hardware for dedicated database servers:

SQL Standard: 4-Core Server Minimum Recommendations

Component	Specification
CPU	64-bit, 4 physical cores, 8 MB cache, 3.0 GHz or greater. For example, Intel E3-1230 v2.
RAM	16 GB DDR minimum required, 32 GB or more recommended for high job volumes; 1600 MHz recommended
OS/Software HDD	RAID-1, 2 drive volume, minimum 7200 RPM, SSD preferred
Database HDD	RAID-5, 3 drive volume, minimum 250 GB per drive, 7200 RPM
Network	Dual 1 GbE or greater NICs
Operating System	Windows Server 2012 (R2 recommended for best performance) or Windows Server 2016

SQL Standard: 8-Core Server Minimum Recommendations

Component	Specification
CPU	64-bit, 8 physical core processors, 2.0 GHz or greater. For example, Intel ES-2640 v2.
RAM	24 GB DDR minimum required, 32 GB or more recommended for high job volumes; 1600 MHz recommended
OS/Software HDD	RAID-1, 2 drive volume, minimum 7200 RPM, SSD preferred
Database HDD	RAID-5, 3 drive volume, minimum 250 GB per drive, 7200 RPM
Network	Dual 1 GbE or greater NICs
Operating System	Windows Server 2012 (R2 recommended for best performance) or Windows Server 2016

Please see the following page and table for additional guidelines.

When choosing your database server, the primary consideration is how many clients will access job status views simultaneously. Real-time job status views are the largest consumer of database CPU resources.

The following table can guide you in selecting a server and configuring the system.

Job Status View Clients	Database Server	Notes
1 or 2 clients	4-core server	IIS and the Workflow Designer may run on the DB server.
3-8 clients	4-core server	IIS and Workflow Designer must run on a separate server.
More than 8 clients	8-core server (or more)	Contact Telestream for guidance if you plan to have more than 20 clients.

Note: The recommendations above ensure sufficient CPU headroom for activities such as Workflow Portal operation, running large arrays, deleting jobs, etc.

For additional guidelines on database installation in a Vantage domain, see *Database Selection and Configuration Guidelines*.

Database Selection and Configuration Guidelines

If no other Microsoft SQL database version is already installed, Vantage automatically installs Microsoft SQL 2016 SP1 Express. If a Microsoft SQL database is already installed, Vantage detects it and does not install the default Express version.

Vantage is supported on the following database systems:

- Microsoft SQL Server 2012 Express, Standard, or Enterprise
- Microsoft SQL Server 2014 Express, Standard, or Enterprise
- Microsoft SQL Server 2016 Express, Standard, or Enterprise

The MS SQL Server for Vantage should be installed and operated only on the following operating systems (64-bit recommended for performance):

- Windows Server 2012 R1 or R2
- Windows Server 2016 Standard or Data Center Edition

The following topics provide guidelines for choosing and implementing a database:

■ Guidelines for Selecting SQL Express or SQL Standard
■ Guidelines for an Array Installation with SQL Standard
■ Other Database Configurations
■ Improving Uptime with Mirroring or Availability Groups
■ Installing the Vantage Database

Note: SQL database tools must not be used to move a Vantage domain database of one version to a later version of Vantage. To upgrade Vantage, only use Vantage installers or the Vantage Database Deployment Utility.

Guidelines for Selecting SQL Express or SQL Standard

The decision about whether to use SQL Standard or Express depends on your planned maximum database size and the expected average volume of database traffic. The following topics provide information to help you choose which database to use:

- Comparing SQL Express and SQL Standard
- Vantage Guidelines for SQL 2016 Express

Comparing SQL Express and SQL Standard

SQL Express and SQL Standard database limitations are compared in this table:

SQL 2014/2016 Express	SQL 2014/2016 Standard
Max. Cores: 4	Max. Cores: 16/24
Max. DB RAM: 1 GB	Max. DB RAM: 64/128 GB
Database Size: 10 GB	Max. Database Size: 524 PB

Microsoft offers additional information about SQL Server capabilities and limitations at this URL: http://msdn.microsoft.com/en-us/library/cc645993.

Vantage ships with SQL 2016 SP1 Express, which is suitable for single-node installations or Array installations up to four nodes. For very large installations, SQL Standard may be required.

Vantage Guidelines for SQL 2016 Express

Vantage installs SQL 2016 SP1 Express, which allows up to 10GB of database storage. Due to this storage limitation, SQL Express is not suitable for every Vantage installation.

The following guidelines indicate the maximums for using Vantage with SQL 2016 SP1 Express:

- **Transcoding:** SQL 2016 SP1 Express can support up to 15,000 Vantage jobs in the database at a time. ***Note:*** *This assumes that each job contains 10 actions. More actions in a job require more storage, allowing fewer jobs.*
- **TrafficManager:** SQL 2016 SP1 Express can support up to 1,500 TrafficManager commercials in inventory at a time.
- **Vantage Array:** Up to four (4) Vantage servers can simultaneously connect to SQL 2016 SP1 Express as part of a Vantage Array. This includes any redundant or backup machines.

Database Shutoff Feature for SQL Express

If a Vantage single-node or Array installation using SQL Express nears the SQL Express database size limit, Vantage stops accepting jobs. Attempts to submit jobs manually launches a warning dialog indicating that the database is at or near capacity. To release space in the database, see the procedure in the Managing a Vantage Domain chapter: *Shrinking a Full Database* in the Vantage Domain Management Guide.

Guidelines for an Array Installation with SQL Standard

For high traffic installations, Vantage performance improves when you use SQL Standard and separate the database from other services such as the operating system and Vantage services. The following guidelines provide increasing levels of performance improvement:

- Always place SQL Standard and the database on a dedicated server, separate from Vantage services, the Vantage store, and the input and output files. This approach provides the largest increase in performance.
- Place the Vantage database files on a dedicated physical drive or RAID array, separate from the operating system.

Note: Installing a Vantage domain database on a separate server does not require an extra Vantage license for that server.

When installing a Vantage array with SQL Standard, ensure that the server hardware meets the requirements described in *Operating System Requirements*. To improve database availability, see *Improving Uptime with Mirroring or Availability Groups*.

Recommendations for Large Arrays

For arrays containing 10 or more nodes, consider these additional recommendations: .

Feature	Recommendation
Server memory for DB < 32 GB	64 GB
Server memory for DB > 32 GB	128 GB
Cores	16 cores minimum, 24 cores recommended.
Partitioning	Create a dedicated partition for SQL Server data.
SSD or hard drives	SSDs may provide better performance but only in cases of high I/O. Use SQL to monitor I/O wait times and PERFMON to measure average disk I/O latency. Latency should be less than 0.020 seconds (20 ms).

Other Database Configurations

Vantage systems can work with other special database configurations:

- For a fully redundant system, you can use SQL Standard with Mirroring. This requires professional services from Telestream with machines and licenses for two SQL Standard databases, plus a third machine running the free SQL Express.
- Large volume systems can use SQL Enterprise.
- You can use SQL with Clustering.

Improving Uptime with Mirroring or Availability Groups

SQL Server Availability Groups or database mirroring can prevent Vantage domain interruption if a single database server fails. Telestream supports mirroring for SQL Standard 2012 and SQL Standard 2014 and Basic Availability Groups for SQL Standard 2016. SQL Enterprise with Clustering may also be used for high availability.

A mirrored database requires the following physical servers:

- A dedicated server to host the principal database
- A dedicated server (of similar capability to the principal database server) to host the mirror database
- An optional dedicated server to host the witness server.

The witness database is a lightweight service which can run effectively on a low-end server, but cannot be installed on a database server.

Basic Availability Groups require:

- A dedicated server to host the primary replica database
- A dedicated server (of similar capacity) to host the secondary replica database
- A reliable witness file share server.

Note: This guide does not provide instructions for installing or implementing a mirrored database or Availability Groups. Consult your database administrator or contact your Telestream representative regarding installation service options.

Note: Telestream strongly recommends using a dedicated server for the witness server to ensure uninterrupted operation in case of a database failover. If the witness server function is placed on a server with Vantage services, transcoding can consume too many resources and prevent timely database switchover.

Note: If a mirrored database fails over, the domain change is not reflected in Vantage client program title bars, which still show the original domain name. Users can correct this by using File > Change Vantage Domain in the clients to select the new domain.

Installing MS SQL Server

If you are creating or upgrading a Single-Node Vantage installation, pre-installing the database is not necessary. The Vantage Setup installer will install MS SQL Server Express and the Vantage database automatically on the single-node server with the Vantage applications and services.

However, if you are installing or upgrading an existing Vantage Array installation on multiple servers, you need to have MS SQL Server Standard (or better) installed before you install the Vantage product using the Vantage Setup installer. This procedure will guide you through the MS SQL Server Standard installation, and the procedure that follows (*Installing the Vantage Database*) will install or upgrade the Vantage database. After SQL Server and the Vantage database are installed, you can install the Vantage Array using the Vantage Setup installer.

This guide does not provide instructions for installing a mirrored database and implementing mirroring. Consult your database administrator or contact your Telestream representative regarding installation service options.To set up the Vantage domain database, follow these procedures in the order listed:

- Installing SQL Server 2012 Standard
- *Installing SQL Server 2014 Standard*
- *Installing SQL Server 2016 Standard*
- *Installing the Vantage Database*

Installing SQL Server 2012 Standard

The following procedure explains how to install SQL Server 2012 Standard. If you are installing SQL Server 2014 or SQL Server 2016, please skip to that topic, *Installing SQL Server 2014 Standard* or *Installing SQL Server 2016 Standard*.

Follow these steps to install SQL Server 2012 Standard on a server:

1. Log into the target server with a local administrator account.
2. Insert the SQL Server 2012 Standard DVD into the server's DVD drive and start the installer (*setup.exe*) if it does not run automatically.
3. SQL Server Installation Center—Click Installation in the left column, then select *New installation or add features to an existing installation*.
4. Setup Support Rules—Click OK.
5. Product Key—Enter your product key and click Next.
6. License Terms—Accept the license terms and click Next.
7. SQL Server Updates—Click Next after updates have completed.
8. Feature Selection—Check Database Engine Services and Management Tools, and click Next.

9. Instance Configuration:
   a. Select Named instance.
   b. Enter *VANTAGE* in the Named instance field and the Instance ID field.
   c. Click Next to continue.
10. Disk Space Requirements—Click Next to continue.
11. Server Configuration:
   a. For SQL Server Agent, the Startup Type should be disabled. (If the Startup Type is set to automatic, the service must be stopped before running Vantage Setup.)
   b. For Server Database Engine, select NT AUTHORITY\NETWORK SERVICE
   c. Click Next to continue.
12. Database Engine Configuration:
   a. Click Add Current User.
   b. Select Mixed Mode.
   c. Enter the Vantage sa user password (*vantage12!*) in the Enter Password and Confirm Password fields.
   d. Click Next to continue.
13. Continue to click through the installer windows accepting the default settings to complete installation.
14. Complete—Click Close to close the SQL Server installer.
15. Select Start > SQL Server Management Studio.
16. Connect to the Vantage domain database using the following information:

    Server type: Database Engine
    Server name: [hostname]\VANTAGE
    Authentication: SQL Server Authentication
    Login: sa
    Password: vantage12!
17. In the Object Explorer panel, right-click [hostname]\VANTAGE and select Properties.
18. In the Server Properties window, go to the Memory page.
19. Set the *Maximum server memory (in MB)* to 75% of the system's memory. For example: If the system's memory is 8 GB (8192 MB), then the maximum server memory for SQL should be set to 6 GB (6144 MB) (8192 x 0.75 = 6144).
20. Click OK.
21. Close the SQL Server Management Studio.

Now that SQL Server Standard is installed and configured for Vantage, install the Vantage domain database as explained in this topic: *Installing the Vantage Domain Database*. The Vantage installer will detect that SQL Standard is already installed, will not install SQL Express, and will attach to the installed instance.

Installing SQL Server 2014 Standard

Follow these steps to install SQL Server 2014 Standard on a server (skip this topic if you already installed another version of SQL Server):

1. Launch setup from the SQL Server 2014 Standard installation media.
2. In the *SQL Server Installation Center*, go to *Installation* on the left.
3. Select *New SQL Server Stand-alone installation or add features to an existing installation*.
4. On the Product Key page, enter a product key and click Next.
5. Accept the license terms and click Next.
6. Click Next on the Microsoft Update page.
7. On the Setup Role page, select *SQL Server Feature Installation* and click Next.
8. On the Feature Selection page, enable *Database Engine Services*, *Management Tools – Complete* and click Next.
9. On the Instance Configuration page, select *Named instance*, enter *VANTAGE* and click Next.
10. On the Server Configuration page, click the cell for the account name of the *SQL Server Database Engine* service. After selecting the cell, click the drop-down list and select <<*Browse…*>>.
11. In the *Enter the object name to select* field, type *NETWORK SERVICE* and click OK. Then click Next on the Server Configuration page.
12. On the Database Engine Configuration page, select *Mixed Mode (SQL Server authentication and Windows authentication)*. Enter *vantage12!* for the password and click the *Add Current User* button.
13. (Optional) If you would like to specify a non-default location for the database files, go to the Database Engine Configuration page, select the Database Directories tab, and change the Data root directory path.
14. Click Next on the Database Engine Configuration page.
15. Click install on the Ready to Install page.
16. When installation completes, click Close and close the SQL Server Installation window.
17. From the Start menu, launch the SQL Server 2014 Management Studio.
18. In the *Server name* field, enter .*vantage* as the server name.
19. Set authentication to *SQL Server Authentication*.
20. Enter *sa* for the login and *vantage12!* for the password.
21. In the Object Explorer panel, right click .*vantage (SQL Server 12.0.2000 – sa)* and select *Properties*.
22. From the Select a page panel, go to *Memory* and set *Maximum server memory (in MB)* to 75% of the host system's memory. For example, if the system's memory is 8 GB (8192 MB), then the maximum server memory for SQL should be set to 6 GB (6144 MB) (8192 x 0.75 = 6144).

23. Click OK to close the Microsoft SQL Server Management Studio window.

Now that SQL Server Standard is installed and configured for Vantage, install the Vantage domain database as explained in this topic: *Installing the Vantage Domain Database*. The Vantage installer will detect that SQL Standard is already installed, will not install SQL Express, and will attach to the installed instance.

Installing SQL Server 2016 Standard

Follow these steps to install SQL Server 2016 SP1 Standard on a server (skip this topic if you have already installed SQL Server 2016 SP1 Standard):

1. Launch setup from the SQL Server 2016 Standard installation media.
2. In the SQL Server Installation Center, select *Installation* on the left.
3. Select *New SQL Server Stand-alone installation or add features to an existing installation*.
4. On the Product Key page, enter a product key and click *Next*.
5. Accept the license terms and click *Next*.
6. Click *Next* on the Microsoft Update page and the Install Rules page.
7. On the Feature Selection page, click *Feature Selection* on the left, enable *Database Engine Services* and click *Next*.
8. On the Instance Configuration page, select *Named instance*, enter *VANTAGE* and click *Next*.
9. Click the cell where the SQL Server Database Engine Row and Account Name column intersect. After selecting the cell, click the drop-down list and select *<<Browse…>>*.
10. In the *Enter the object name to select* field, type *NETWORK SERVICE* and click OK. Then click *Next* on the Server Configuration page.
11. On the Database Engine Configuration page, select *Mixed Mode (SQL Server authentication and Windows authentication)*. Enter *vantage12!* for the password and click the *Add Current User* button.
12. (Optional) If you would like to specify a non-default location for the database files, go to the Database Engine Configuration page, select the Data Directories tab, and change the Data root directory path.
13. Click *Next* on the Database Engine Configuration page.
14. Click *Install* on the Ready to Install page.
15. When installation completes, click *Close* and close the SQL Server Installation window.
16. Install SQL Server 2016 Service Pack 1 (SP1):

    https://www.microsoft.com/en-us/download/details.aspx?id=54276

Installing SQL Server 2016 Management Studio

Management Studio is not automatically installed for SQL Server 2016. To install and configure it, follow these steps:

1. Browse to https://msdn.microsoft.com/en-us/library/mt238290.aspx.
2. Click the link to "Download SQL Server Management Studio." At the time this document was written, version 16.5.3 was used.
3. After the download completes, launch the setup and click Install.
4. Click Close when the installation completes.

After the SQL Server 2016 Management Studio has been installed, it must be used to set the maximum limit for SQL Server's memory consumption:

1. From the Start menu, launch the SQL Server 2016 Management Studio.
2. Connect to the instance using SQL Server Authentication:

   Server name: .\VANTAGE

   Authentication: SQL Server Authentication

   Login: sa

   Password: vantage12!
3. Right-click the hostname at the top of the Object Explorer tree and select Properties.
4. From the Select a page panel, go to *Memory* and set *Maximum server memory (in MB)* to 75% of the host system's memory. For example, if the system's memory is 8 GB (8192 MB), then the maximum server memory for SQL should be set to 6 GB (6144 MB) (8192 x 0.75 = 6144).
5. Click *OK* to close the Microsoft SQL Server Management Studio window.

Now that SQL Server Standard is installed and configured for Vantage, install the Vantage domain database as explained in this topic: *Installing the Vantage Domain Database*. The Vantage installer will detect that SQL Standard is already installed, will not install SQL Express, and will attach to the installed instance.

Installing the Vantage Database

If you have already installed MS SQL Server 2012, 2014, or 2016 the Vantage Installer allows you to install or upgrade a current Vantage database in the existing SQL installation. You can install in any of these MS SQL database versions:

- SQL Express
- SQL Standard, SQL Standard with Mirroring, SQL Standard with Clustering
- SQL Enterprise and SQL Enterprise with Clustering

Before you begin, follow the prerequisite procedure below.

Prerequisites for Instance Installation

It is assumed you have already created a SQL database instance into which a Vantage database instance can be deployed. The database instance must meet certain prerequisites before you can use the Vantage utility to deploy a Vantage database instance:

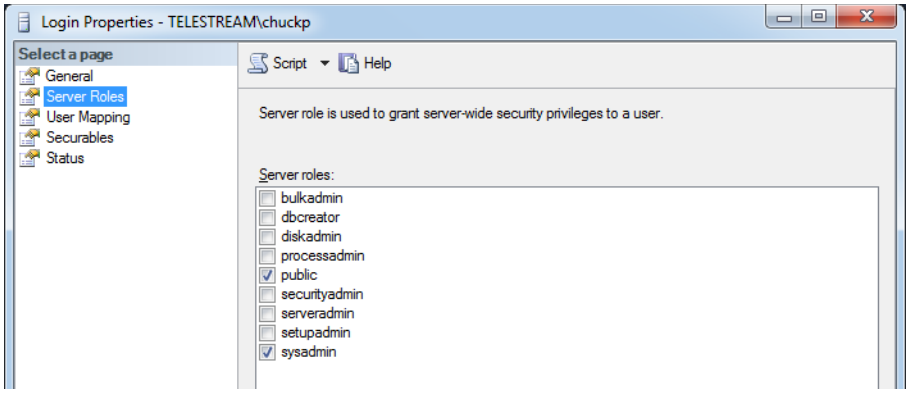
- The SQL instance must be deployed as a named instance.
- The SQL instance must include a SQL or active directory user account. The user can be sa or another account, and any password may be used.

The user account installing the Vantage database must have the *sysadmin* role assigned. The steps below explain how to assign a role.

- The user account running the Vantage database after it is installed can have the *db_owner* and *dbcreator* roles assigned instead of *sysadmin*, if you prefer the user to have lower privileges.

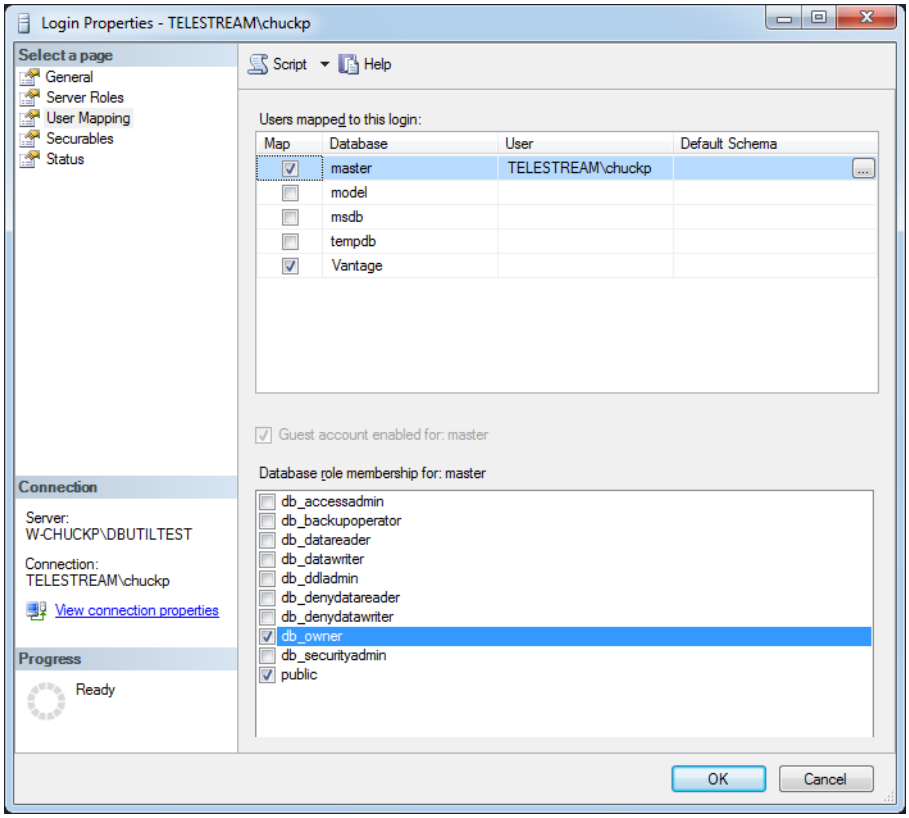
Configuring the Administrator Role

1. In the SQL Server Management Studio > Object Explorer panel, expand Security, and expand Logins.
2. Right-click the *sa* user or another user that you want to use as the administrator login, and select *Properties*.
3. Go to Server Roles and enable *public* and *sysadmin*. Click *OK*. This gives the user system administrator privileges for the database instance.

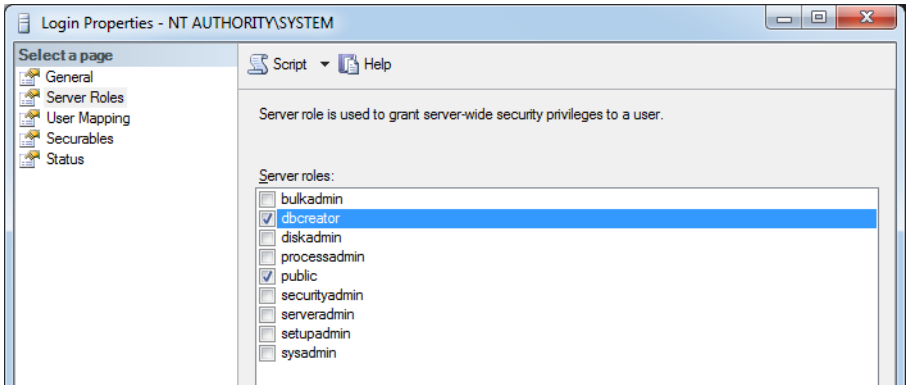


Configuring the Vantage User Role

1. Right-click the current Windows user and select *Properties*.
2. Click *User Mapping*. Check *master* or Vantage (if present) in the database column, and check *db_owner*. Click *OK*.



3. Right-click the Windows user and select *Properties* again.
4. Click Server Roles and check *dbcreator* to enable it. Click *OK*. This gives the current Windows user sufficient privileges to run the Vantage database instance after installation.



5. From the Select a page panel, go to *Memory* and set *Maximum server memory (in MB)* to 75% of the host system's memory. For example, if the system's memory is 8 GB (8192 MB), then the maximum server memory for SQL should be set to 6 GB (6144 MB) (8192 x 0.75 = 6144).
6. Click OK to close the Microsoft SQL Server Management Studio window.

Installing the Vantage Domain Database

This task installs a clean new Vantage domain database instance into the previously installed SQL database. Follow these steps:

1. Log into the database server with a local administrator account, and make sure that virus-checking software and Windows Firewall is off.

Note: To effectively operate Vantage services with other networked devices or systems, you must turn off Windows Firewall.

---

2. Stop the SQL Server Agent Service in Start > Services, if it is running.
3. Run the *Vantage_8.0.exe* file and click Install to extract and run the Vantage _8.0_Setup installer.
4. When the Welcome dialog appears, click Next to display the license agreement.
5. License Agreement—Click *I Accept* if you agree to the license terms, and then click Next.
6. Select *Array {Multi-Node} Installation* and click Next.
7. Select *Custom Install* and deselect all check boxes to install only the Vantage database. Then click Next.
8. When Ready to Install appears, click *Install* to begin installation, which takes a few minutes. Progress is displayed as the installation takes place.

Note: The Vantage Setup program checks for an existing SQL Server installation, and if found, Setup skips the installation of SQL Server. If SQL Server is not found, SQL Server 2016 SP1 Express will be installed. Similarly, if no Vantage database is found, a new one is installed. If a Vantage database is found, it is upgraded; upgrading preserves workflows, design items, job history, catalogs, stores, application configurations, user settings and licenses.

---

9. Click Next when the installer indicates it is finished.
10. The installer displays *Installation was successful!* (or indicates errors if unsuccessful). Click Done to close the installer application. Database installation is complete.

11. Launch the SQL Server Management Studio.
12. Connect to the instance using SQL Server Authentication:

    Server name: .\VANTAGE

    Authentication: SQL Server Authentication

    Login: sa

    Password: vantage12!
13. Right-click the hostname at the top of the Object Explorer tree and select Properties.
14. Go to Memory on the left and set "Maximum server memory (in MB)" to 75% of the server's memory. Click OK.
15. You are now ready to install or upgrade Vantage:

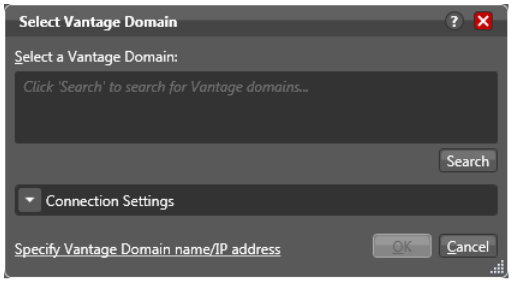
Note: For detailed Vantage installation instructions, please refer to the *Vantage Installation Guide*, available as a standalone guide and also included in the *Vantage Domain Management Guide*.

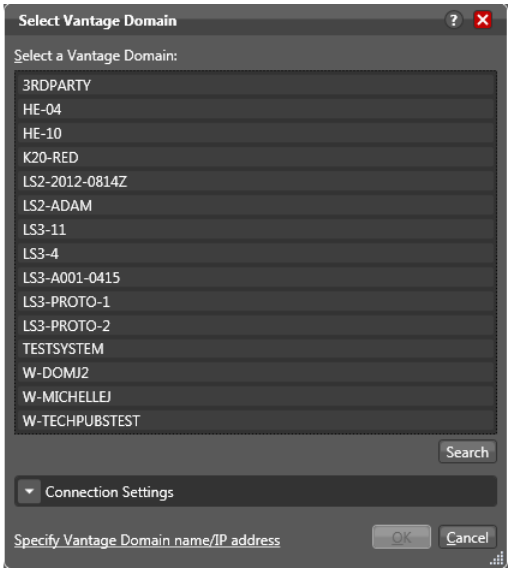
---

   a. **New Vantage Installations:** If you are installing a new Vantage instance, run the Vantage_8.0_Setup.exe installer again (extracted to the C:\Vantage8.0 folder when you ran the Vantage_8.0.exe archive file), select *Array {Multi-Node} Installation*, select *Custom*, select the components you want, but do NOT select *Database*. This ensures Vantage installs, but the database is not touched.
   b. **Upgrading Vantage:** If you are upgrading an existing Vantage instance, use the Control Panel Programs and Features to remove only Vantage but leave MS SQL and the domain database in place. Then run the Vantage_8.0_Setup.exe installer (extracted to the C:\Vantage8.0 folder when you ran the Vantage_8.0.exe archive file), select *Array {Multi-Node} Installation*, select *Custom*, select the components you want, but do NOT select Database. This ensures Vantage installs, but the upgraded database is not touched.

16. After Vantage installation, use the Vantage Management Console > File > Change Vantage Domain (shown below) to find and connect your Vantage installation to the deployed database. Use the Search button to populate the list.

    If you installed a Vantage database with a custom name and password, you may need to select *Specify Vantage Domain name/IP Address*. Then enter the server name, the custom database name, expand the *Connection* settings, and enter the custom Login and Password. When you click OK, the Vantage Management Console should connect to the database and begin normal operation.





    REMINDER: If you use Windows authentication, you must also set the SQL Server service Log On to the same Windows account that you will use for database authentication. To change the SQL Server service Log On, select Start > Administrative Tools > Services > SQL Server > Properties > Log On > This account.

17. If necessary (for a new installation), install Vantage licenses using the Vantage Management Console > Licenses panel and configure Vantage as described in the Vantage Domain Management Guide.

18. If you have deployed a new database or replaced an existing database with a new one, the domain will not have any ComponentPacs installed. When you run the Vantage Setup installer to install Vantage components and services after deploying the database, the major ComponentPacs will be installed. If you do not run the Vantage Setup installer after database deployment on the database server, or if you wish to install additional ComponentPacs, use the Vantage Management Console > ComponentPac Management feature to install the ComponentPacs.

19. Lastly, if you assigned the Vantage services to the host name of the database server before using the Database Deployment Utility, use the Microsoft Services Console to restart the Vantage services after the database is deployed. Also close and reopen the Vantage Management Console and Workflow Designer. These operations prevent a situation where Vantage action templates and fulfillment schemes do not deploy properly.

Database Maintenance Topics

The topics covered in the remainder of this guide explain how to perform typical database maintenance procedures:

- Backing Up and Restoring the Vantage Database
- Shrinking a Full Database
- Moving the Vantage Domain Database to Another Database

Backing Up and Restoring the Vantage Database

The Domain Backup feature allows you to save archival copies of the Vantage domain database in a separate file. The Domain Restore feature allows you to replace your current Vantage domain database with the contents of a previously-backed up domain. The domain backup and restore features are primarily used for the following:

- Returning the database to a previously backed-up state.
- Preparation for database mirroring.

Note: The domain backup and restore features are not designed for use during Vantage upgrades. If you back up the database from a specific version of Vantage, that backup can only be restored to the same Vantage software version. During a Vantage upgrade, the Vantage installers manage any required database updates as described in *Upgrading from a Previous Version* in the *Vantage Installation Guide* or the *Vantage Domain Management Guide*.

The following topics describe domain backup and restore:

■ Understanding Domain Backup and Restore
■ Backing Up the Domain
■ Restoring the Domain

Understanding Domain Backup and Restore

During a domain backup, Vantage creates a single backup file that contains all workflows, all services, and all jobs registered in the domain. It is important to remember that the backup file contents reflect the domain contents as of the moment the backup file is created. To capture changes made after a backup, you must create another backup.

When you restore a domain, all services are stopped, the current database contents are irretrievably destroyed, and the backup file you specify is used to create the replacement database. The services defined in the backup file are started and the Vantage domain database repopulates with the backup database values.

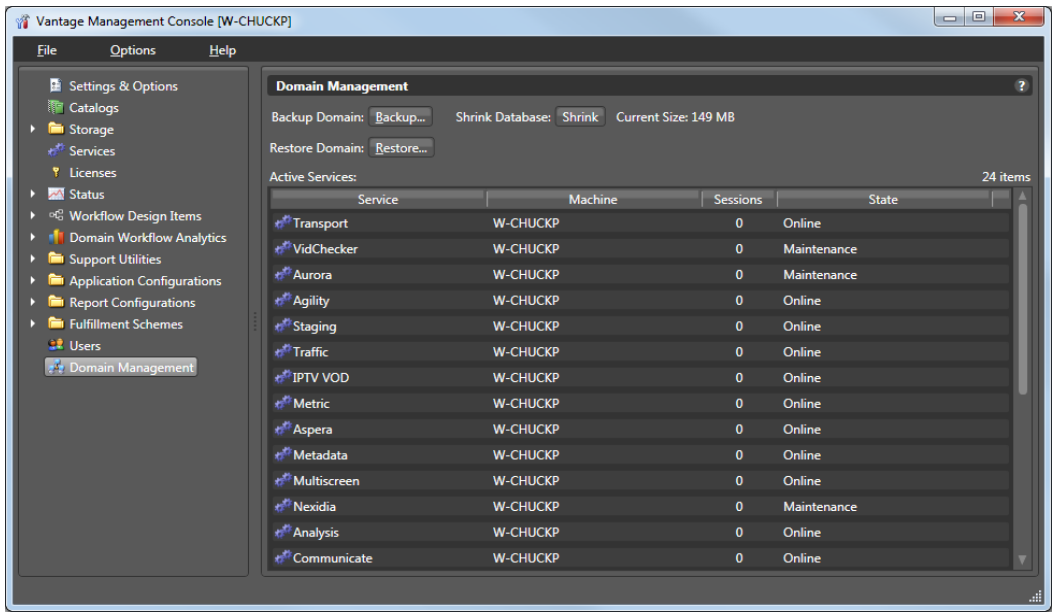
Because the restore feature irretrievably destroys the contents of the current database, Telestream recommends that you back up the current database before restoring a previous database. Backing up the current database captures all database changes made since the last backup, and it gives you a backup file that you can use to restore the current database if necessary.

Backing Up the Domain

To back up the Vantage domain database, do the following:

1. Start the Vantage Management Console as described in *Starting the Vantage Management Console* in the *Vantage System Administration Guide* or the *Vantage Domain Management Guide*.
2. In the components panel, select Domain Management.

   Vantage displays the Domain Management details panel shown in this figure:



3. Verify that all services in the Active Services list are hosting 0 sessions.

Note: Although you can create a successful backup while services are executing workflow tasks, some job records may be lost. It is best to back up the domain when there is no activity in the domain.

---

4. Click the Backup... button.
5. In the *Save the domain* dialog, browse to the folder where you want to store the backup file, and click Save.
6. When the Backup Complete message appears, click OK.

Restoring the Domain

CAUTION: Telestream recommends that you restore a Vantage domain using the same machine that created the backup file. If you restore the domain from another machine, the services defined in the database must match the services installed on the other machine.

To restore a Vantage domain database, do the following:

1. Start the Vantage Management Console as described in *Starting the Vantage Management Console* in the *Vantage System Administration Guide* or the *Vantage Domain Management Guide*.
2. In the components panel, select Domain Management.

   Vantage displays the Domain Management panel shown in the previous figure.
3. To provide the option to return to the current Vantage domain database later, back up the current domain database as described in *Backing Up the Domain*.

CAUTION: Always back up your current database before restoring it to an earlier backup. Restoring your Vantage domain database overwrites the entire contents of the current database with the contents of the backup file selected.

4. Verify that all services in the Active Services list are hosting 0 sessions.

Note: When you restore a domain, all services are stopped, and all information related to any jobs in progress is lost. The restored database contains only the domain information captured when the domain was backed up.

5. Click the Restore... button, read the information dialog that appears, and click OK.
6. In the *Load the domain* dialog, browse to the backup file you want to restore, select the backup file, and click Open.
7. When the Restore Complete message appears, click OK.

Shrinking a Full Database

If a Vantage installation using SQL Express nears the SQL Express database size limit, Vantage stops accepting jobs. Attempts to submit jobs manually launches a warning dialog indicating that the database is at or near capacity.

You may be able to resolve this issue using the Vantage Shrink Database feature, which applies the MS SQL DBCC SHRINKDATABASE command to the existing database to delete unused entries and reduce file size. The shrink process may take some time and may slow database performance, so it should be done only when the Vantage system is not busy.

Use this procedure to shrink the database:

1. Start the Vantage Management Console.
2. In the components panel, select Domain Management.

   Vantage displays the Domain Management details panel (see the preceding figure).
3. To protect against potential data loss, use the Backup... button to back up the current domain database as described in *Backing Up the Domain*.
4. Click the Shrink button to shrink the database.

   A dialog pops up to explain that the Shrink command may affect database performance and should be done only when Vantage is not busy.

   A Status message indicates progress.

   Current Size displays the database size next to the button, so you can see any changes immediately upon completion of the shrink command.

   Multiple presses of the button may shrink the database additionally each time.

Moving the Vantage Domain Database to Another Database

You might want to move the Vantage domain database because:

- You are upgrading SQL Server from Express to Standard
- You are upgrading SQL Server from an older version to a newer one
- You are moving the database from one server to another

Note: This procedure backs up the database, moves the database to a different SQL Server version and/or server, and restores the database. Vantage does not support a Vantage restore from one Vantage database version to another. If you are upgrading Vantage and moving the database, upgrade Vantage first, and then move the database.

Note: This guide does not provide instructions for moving a mirrored database. Consult your database administrator or contact your Telestream representative regarding installation service options.

To move a Vantage domain database, follow the procedures in the following topics in the sequence presented:

1. Preparing for the Move
2. Backing up the Existing Database
3. Removing the Vantage Domain Database
4. Removing Microsoft SQL Server
5. Installing SQL Server Standard
6. Installing the Vantage Domain Database
7. Restoring the Vantage Domain Database Backup
8. Finishing the Move

Preparing for the Move

If you are upgrading SQL Server, it is recommended but not required that you back up the Vantage domain database. However, if you are moving the Vantage domain database to a new server, you must backup the database, as the backup file will be used to restore the domain on the new server.

To back up the existing Vantage domain database so that it can be transferred to the new database later, follow these steps:

1. Use Vantage Workflow Designer to deactivate all active workflows to prevent new jobs from starting.
2. Use the Job Status Views tab in Vantage Workflow Designer, the Vantage Job Status Views web application, or Vantage Dashboard to either determine when all jobs are complete or stop any jobs in process or in waiting.
3. If you are moving the database to another server, do the following:
   a. Take note of any Storage, Variables, and/or Qualification Rules settings for each service. (In the Vantage Management Console, select Services. In the service panel, click each service and check the tabs at the bottom of the window.)

      When you move the Vantage domain database from one server to another, the Storage, Variable, and Qualification rule configuration for each service is lost. Write down any configuration that you want to transfer to the new server.

Note: The service Storage, Variable, and Qualification Rule configuration is not lost when you change the SQL Server version on a server. Skip to Step 4 if you are not moving the Vantage domain database to a different server.

---

   b. In the Vantage Management Console, remove all services from the Vantage domain as described in *Removing a Service from the Domain* in the *Vantage Domain Management Guide*.

Note: The default Vantage user account is *Administrator* with no password. This account has administrative privileges.

---

   c. In the Vantage Management Console, select Licenses in the components panel.
   d. On the Licenses tab, select all licenses and click the Delete button ✕.

Note: To add the licenses back a the end of this procedure, you will need access to the license files. If you do not know where these files are, locate them now before you delete them from the existing database.

---

4. If you are changing the Microsoft SQL version on a server (and not moving the database to another server), place all services in Maintenance Mode as described in *Entering and Exiting Service Maintenance Mode*.

Backing up the Existing Database

If you are upgrading SQL Server, it is recommended that you back up the Vantage domain database. If you are moving the Vantage domain database to a new server, you must back up the database, as the backup file will be used to restore the domain on the new server.

To back up the existing Vantage domain database so that it can be transferred to the new database later, follow these steps:

1. In the Vantage Management Console, select the domain you want to modify, select Domain Management in the components panel, click Backup..., and use the file save dialog to save the backup file to a safe location.

   You will need to access the backup file to restore the Vantage domain database after you move it. For more information, see *Backing Up the Domain*.

2. Close all Vantage clients, including Vantage Workflow Designer, Vantage Web Applications, Vantage Workflow Portal, and Vantage Management Console.

Removing the Vantage Domain Database

The Vantage Domain Database may or may not be present as a separate entry in the Windows Control Panel Programs and Features window, depending on how it was originally installed.

In either case, the Domain Database must be removed using one of the following procedures:

If the Domain Database is present in the Control Panel list, remove it as follows:

1. Log into the server with a local administrator account.
2. Open the control panel tool to remove programs in your operating system:

   Control Panel > Programs and Features > Uninstall Programs.
3. Select Vantage Domain Database and click Remove or Uninstall.

If the Domain Database is *not* present in the Control Panel list, remove it as follows:

1. Log into the server with a local administrator account.
2. Open the control panel tool to remove programs in your operating system:

   Control Panel > Programs and Features > Uninstall Programs.
3. Select Vantage and click Change.
4. Deselect the check box for Vantage Domain Database and continue with removal.

Removing Microsoft SQL Server

When you are upgrading Microsoft SQL Server or moving the Vantage domain database to another server, you may want to remove the old version of SQL Server.

To remove Microsoft SQL Server, follow these steps:

1. Log into the server with a local administrator account.
2. Open the control panel tool for removing programs:
   Control Panel > Programs and Features > Uninstall Programs.
3. Select Microsoft SQL Server and click Remove or Uninstall.

Note: If you are prompted to stop the SQL Server (VANTAGE) service, go to Start > Services and stop the service before clicking Retry to continue with uninstalling.

Note: If you have multiple instances (for example SQLEXPRESS and VANTAGE), you will need to remove them both.

---

4. Select Microsoft SQL Server Native Client and click Remove or Uninstall.

Note: Uninstalling the SQL Server does not delete your Vantage workflows, resources, or transaction history. It leaves your domain database files intact in [Install_Drive]:\Program Files\Telestream\Vantage\Database. For information on removing the database files, see *Uninstalling Vantage from a Server* in the *Vantage Installation Guide* or the *Vantage Domain Management Guide*.

At this point, the SQL Server is removed but the database files and any Vantage services and clients that were installed on the server remain installed. The domain cannot resume operation until the SQL Server is reinstalled on this server or set up on another server.

Installing SQL Server Standard

Please see Installing SQL Server 2012 Standard, *Installing SQL Server 2014 Standard*, or *Installing SQL Server 2016 Standard* earlier in this chapter After installing SQL, continue with the next topic to install the Vantage database.

Installing the Vantage Domain Database

This task installs the Vantage domain database instance. Follow these steps:

1. Log into the database server with a local administrator account, and make sure that virus-checking software and Windows Firewall is off.

Note: To effectively operate Vantage services with other networked devices or systems, you must turn off Windows Firewall.

---

2. Stop the SQL Server Agent Service in Start > Services, if it is running.
3. Run the *Vantage_8.0.exe* file and click Install to extract and run the Vantage _8.0_Setup installer.
4. When the Welcome dialog appears, click Next to display the license agreement.
5. License Agreement—Click *I Accept* if you agree to the license terms, and then click Next.
6. Select *Array {Multi-Node} Installation* and click Next.
7. Select *Custom Install* and deselect all check boxes to install only the Vantage database and click Next.
8. When Ready to Install appears, click *Install* to begin installation, which takes a few minutes. Progress is displayed as the installation takes place.

Note: The Vantage Setup program checks for an existing SQL Server installation, and if found, Setup skips the installation of SQL Server. If SQL Server is not found, SQL Server 2016 SP1 Express will be installed. Similarly, if no Vantage database is found, a new one is installed. If a Vantage database is found, it is upgraded; upgrading preserves workflows, design items, job history, catalogs, stores, application configurations, user settings, and licenses.

---

9. Click Next when the installer indicates it is finished.
10. The installer displays *Installation was successful!* (or indicates errors if unsuccessful). Click Done to close the installer application. Database installation is complete.

If you are upgrading SQL Server on the same server, the upgrade is almost complete. Vantage should have discovered the old database files. Now you need to finish the process as described in *Finishing the Move*.

If the old database files are not found, or if you are installing the Vantage domain database on a different server, restore the database from the backup file as described in *Restoring the Vantage Domain Database Backup*.

Restoring the Vantage Domain Database Backup

To restore the Vantage domain database using the backup file you previously created, follow these steps:

1. Start the Vantage Management Console on any Vantage server in the domain.

Note: If you have moved the Vantage domain database to a new server, the name of the Vantage domain changed to the name of the new host server.

---

2. In the Vantage Management Console, select the domain to modify, select Domain Management in the components panel, click Restore..., and select the file to restore. For more information, see *Backing Up the Domain* in the *Vantage System Administration Guide* or the *Vantage Domain Management Guide*.

Finishing the Move

To finish the move, you must enable the services you disabled when preparing for the move. If you moved the Vantage domain database to another server, you must also install Vantage licenses. To return Vantage to operation, follow these steps:

1. If you changed the Microsoft SQL version on a server (and did not move the database to another server), do the following:
   a. Remove all services from Maintenance Mode as described in *Entering and Exiting Service Maintenance Mode* in the *Vantage System Administration Guide* or the *Vantage Domain Management Guide*.
   b. Skip to Step 4.
2. If you moved the Vantage domain database to a different server, activate Vantage Domain licenses as follows:
   a. In the Vantage Management Console, open the domain you want to modify, and select Licenses in the components panel.
   b. On the Licenses tab, click the Add License button and use the open file dialog to select the license file.

      If your domain has multiple license files (for multiple features), repeat this step for additional licenses.
3. If you moved the database to another server, update the configuration of services as follows:
   a. In the Vantage Management Console, open the domain you want to modify, and select Services in the components panel.
   b. In the Services panel, click the Add Service button and use the dialog to select a service to add.
   c. If any Storage, Variables, and/or Qualification Rules settings were configured for the service, add them now.
   d. Repeat this step for each service until all services are updated.
4. Use Vantage Workflow Designer to reactivate all workflows.

Installing Vantage

Use this topic to perform a first-time installation and configuration of the Vantage and SQL Server software as well as supporting software.

If you are upgrading an existing Vantage version, skip this chapter and go to the chapter on Upgrading and Modifying Vantage.

Before launching into this chapter, please be sure you have reviewed and planned for all requirements presented in the Before You Install Vantage chapter.

Note: To obtain the Vantage software or browse the Vantage library of user's guides, application notes, and other documents, go to www.telestream.net/telestream-support/vantage/support.htm.

The following topics are included in this chapter:

- Installation Prerequisites and Overview
- Installing Vantage on a Single Node
- Installing a Vantage Array
- Post-Installation Steps for Single Nodes and Arrays
- Command Line Installation

Installation Prerequisites and Overview

The following topics summarize Vantage prerequisites and provide an overview of the installation steps.

- Installation Prerequisites
- Installation Overview
- Extracting and Running the Installer

Installation Prerequisites

These prerequisites are required by Vantage:

- Microsoft .NET Framework 4.8 is required on Vantage servers, client workstations, and Web Apps installations. This .NET version is installed automatically by the Vantage or Web Apps installer on all operating systems, if not already present.
- Microsoft .NET 3.5.1 is also required on Vantage servers that run the general purpose Flip action and on servers running SQL Server 2014, but it is not required on other servers or client machines. This .NET version must be installed manually using Server Manager on servers that require it. After installation, open Server Manager > Roles > Server Roles, and check Web Server (IIS) to enable it. Then enable the services listed in the IIS Role Service Requirements table.
- QuickTime 7.6.9 from Apple.com is required by the Telestream Transcode & Analysis engine. If it is not present, the installer installs it. If it is outdated a message advises you to update it. You can use this link to download it: QuickTime version 7.6.9.

Note: If you prefer not to install QuickTime because of known security vulnerabilities, a number of Vantage functions will not operate, such as portal proxy playback and several Flip action functions. For details about QuickTime issues, see the *Telestream and QuickTime* statement on the Telestream.net web site.

- The Windows servers must be correctly configured, including these options:
  - Desktop Experience installed (required by clients and the Analyze, Conform, and various Flip actions)
  - UAC set as desired and correct privileges (admin or user) used to install Vantage
  - Power Options set to High Performance to prevent the server from sleeping

  Please see Windows Server Configuration Requirements in the Before You Install Vantage chapter for instructions.

Note: Automatic Windows and software updates and automatic restarts of Vantage servers should be disabled. Schedule update installations and system restarts only during planned maintenance periods to prevent disruption of Vantage operations.

With the prerequisites installed, you're ready to install Vantage in one of two ways:

(1) A Single Node all-in-one domain installation (everything on one server)

(2) An Array (Multi-Node) installation with distributed processing on multiple servers.

Differences between the two installation types are listed below.

Single Node Installation	Array Multi-Node Installation
• Installs Intel Performance Primitives and checks for QuickTime and .NET versions. • Installs MS SQL 2016 SP1 Express unless deselected or MS SQL is already installed. • Automatically installs or updates Domain Database and SQL, if present. • Creates Vantage Store (C:\VantageStore\), as well as Catalog (default), and Samples folders in C:\ Program Files (x86) \Telestream\Vantage. • Installs the Vantage Media Transcode & Analysis engine, if needed. • Installs clients: Management Console, Workflow Designer, Workflow Portal, and Dublist Portal.	• Installs Intel Performance Primitives and checks QuickTime and .NET versions. • *Does not install* MS SQL 2016 SP1 Express or install/update the Domain Database unless selected. MS SQL Standard is preferred (customer supplied). • *Does not create* Store, Catalog, or Samples folders but does create C:\ Program Files (x86)\Telestream\Vantage folders. • Installs the Vantage Media Transcode & Analysis engine, if needed. • Installs clients: Management Console, Workflow Designer, Workflow Portal, and Dublist Portal. • Installs Web Apps, if selected.

Note: A Vantage array requires one Vantage Array license per node. Installation of an array requires additional steps compared to installation on a single node.

Note: On your Vantage servers use *only* the *Vantage_8.0_Setup.exe* installer (in C:\Vantage8.0) to install client components. On client machines, you can use either the *Vantage_8.0_Client_Application.msi* installer or the *Vantage_8.0_Setup.exe* installer to install clients, but don't switch installers later if you make client installation changes.

Installation Overview

The Vantage 8.0 installer consists of a self-extracting archive executable (.exe) file containing the Vantage Setup file and ComponentPacs. When you run the archive file, it extracts the installation files to a directory, and then automatically runs the Vantage Setup installer to install the product and ComponentPacs.

During extraction, you are prompted to select the directory where you want to extract the Vantage Setup installer and ComponentPacs. By default this directory is *C:\Vantage8.0*. After extraction the Vantage Setup installer starts automatically from the directory where you extracted it.

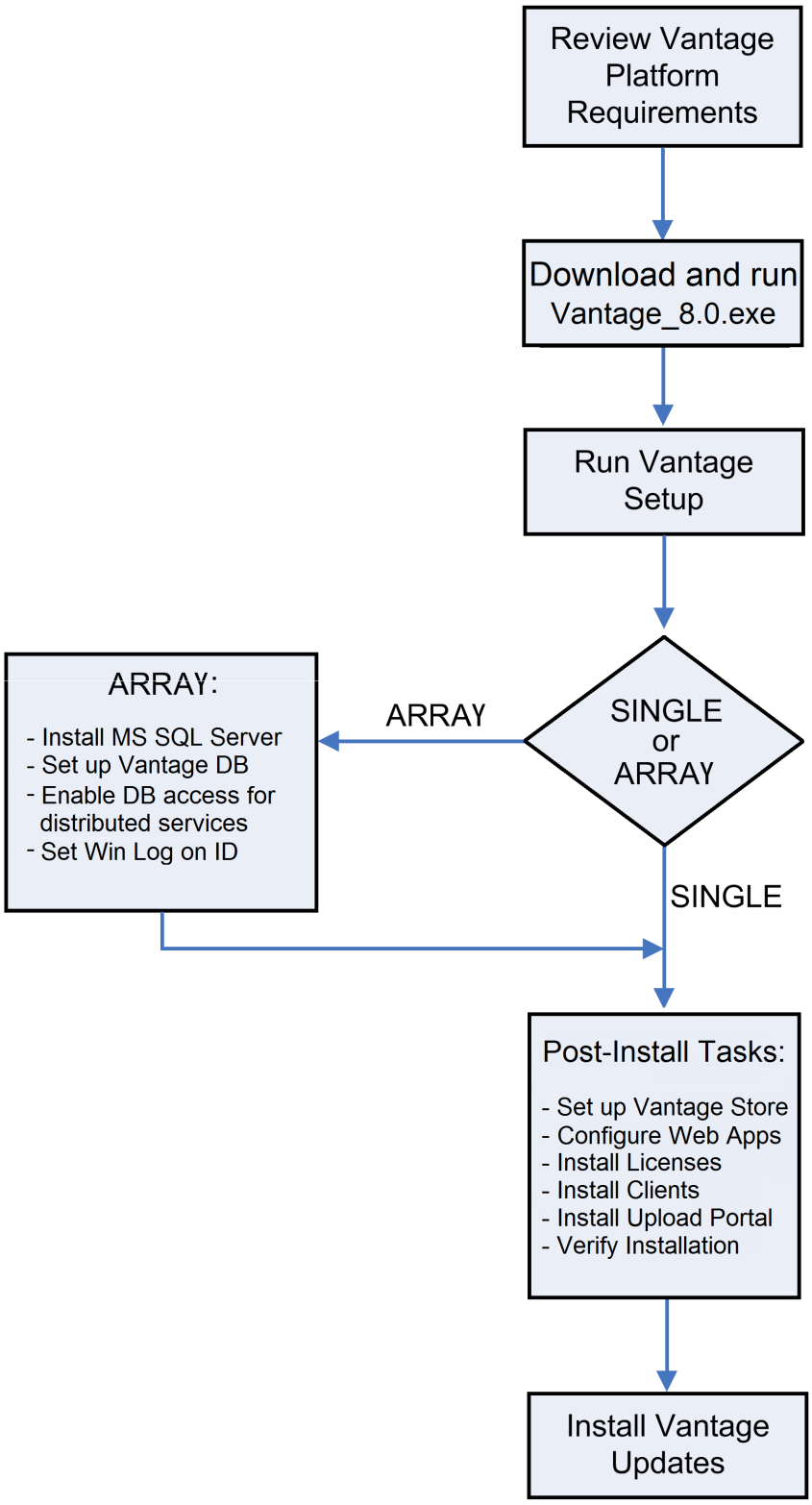
The following overview and flowchart (below) summarize the main Vantage installation steps with links to the detailed procedures. Be sure to follow all steps in this chapter carefully and in sequence from the beginning of the chapter to the end.

If you are upgrading an existing Vantage installation, skip this chapter and refer instead to this chapter: Upgrading and Modifying Vantage.

If you are creating a new installation, follow the steps and links below.

1. See the *Before You Install Vantage* chapter in this guide to ensure your hardware, OS, and software meet the Vantage installation requirements.
2. Download and run the *Vantage_8.0.exe* installer from the Telestream.net web site. The installer self-extracting archive runs and places installation files in the default *C:\Vantage8.0* directory or the directory you specify. Then the *Vantage_8.0_Setup.exe* installer runs automatically and begins product installation.
3. Install the database and install all licensed Vantage components using the installer as explained in one of these two topics:
   - Single computer installation: *Installing Vantage on a Single Node*
   - Array installation: *Installing a Vantage Array*

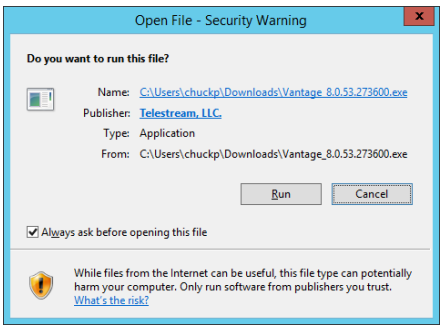
   To install product feature groups (recommended) when you run the installer, select *Install Product* and select the product groups for which you have licenses, or to install individual components, select *Custom Install* and select specific components.
4. If installing a new Vantage array, set up database access for distributed services and Windows log on IDs:
   - *Adding Vantage Services*
   - *Setting the Vantage Windows Log On ID for Services*.
5. Continue post-installation tasks: *Post-Installation Steps for Single Nodes and Arrays*
   - *Setting Up a Vantage Store*
   - *Installing and Configuring Vantage Web Applications*
   - *Enabling Vantage Licenses*
   - *Installing Client Programs on Client Workstations*
   - *Configuring Client DB Access and User Administration*
   - Verifying the Installation
6. Install Vantage updates, if any. See Updating Vantage Between New Versions in the Upgrading and Modifying Vantage chapter.

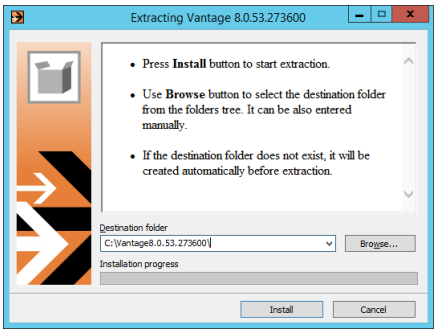

Review Vantage Platform Requirements
Download and run Vantage_8.0.exe
Run Vantage Setup
SINGLE or ARRAY
ARRAY
ARRAY:
- Install MS SQL Server
- Set up Vantage DB
- Enable DB access for distributed services
- Set Win Log on ID
SINGLE
Post-Install Tasks:
- Set up Vantage Store
- Configure Web Apps
- Install Licenses
- Install Clients
- Install Upload Portal
- Verify Installation
Install Vantage Updates

Extracting and Running the Installer

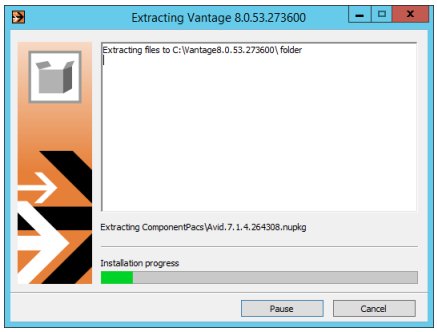
The following example shows how to run the archive and the installer. Additional installation details are presented after this topic.

1. Double-click the *Vantage_8.0.exe* self-extracting archive, which will extract the installation files to *C:\Vantage8.0*. Click Run to begin the extraction.

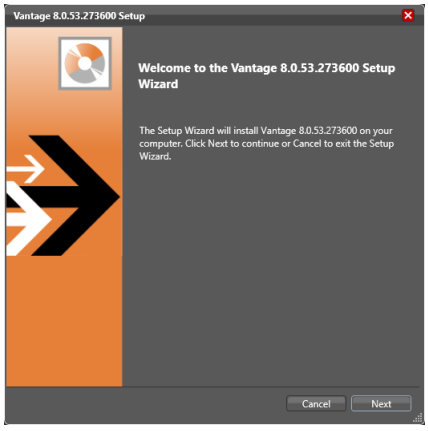




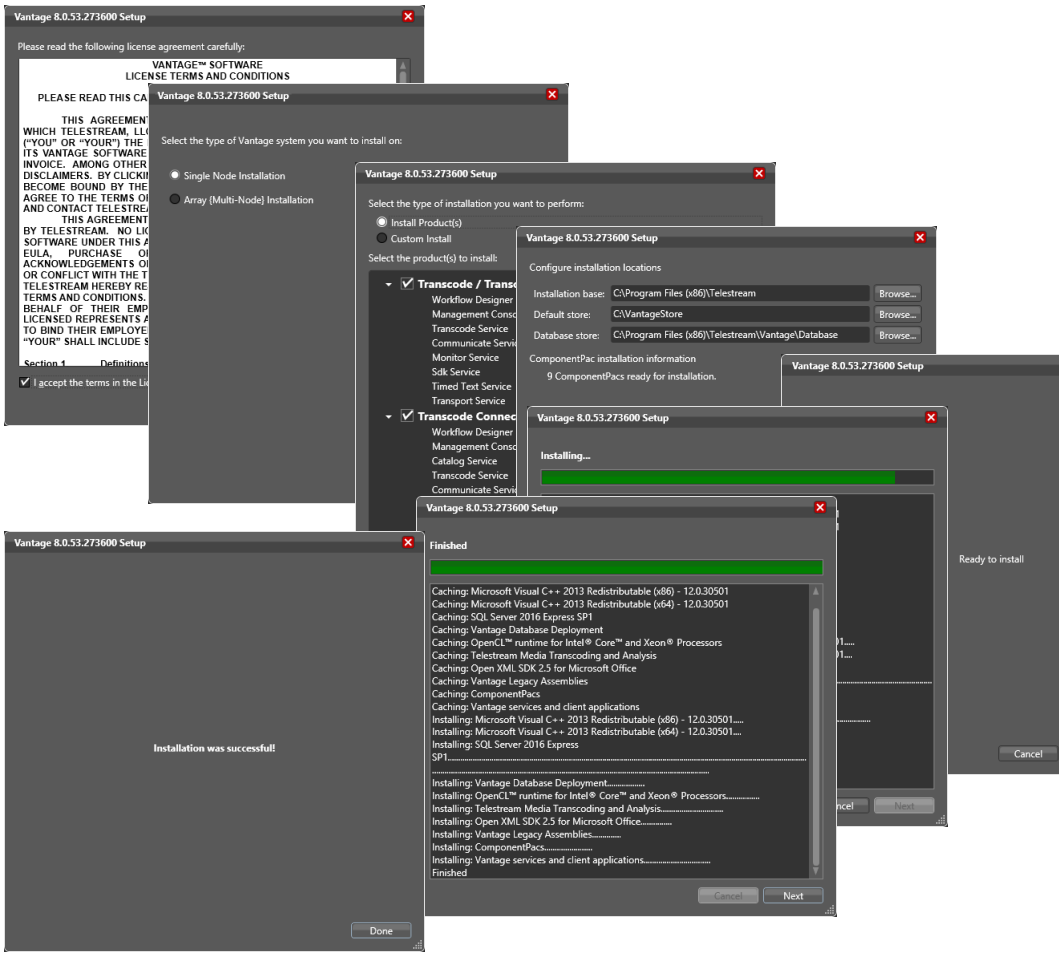
2. Browse or enter a new destination or use the default destination. Then press Install.



Extraction begins as shown by a progress bar. When extraction completes, the *Vantage_8.0_Setup.exe* installer starts automatically.



3. Press Next to start the installation, then follow the prompts. Representative screens of each step in the process are shown below.



When installation completes, the final screen shows “Installation was successful.” Click Done to close the installer.

Note: If you extract and copy the Setup file away from the ComponentPacs Directory before running it, the installation still succeeds, but no ComponentPacs are installed. If the server is part of a Vantage Array, the ComponentPacs are retrieved from another server in the Vantage Domain. Additionally, redistributable components are installed from the Internet rather than from the copies in the ComponentPacs Directory.

Installing Vantage on a Single Node

An all-in-one Vantage domain is one in which all Vantage server components are installed and operate on a single server (node). The components include the Vantage software and services, the Vantage domain database, and Vantage client programs (Vantage Management Console, Vantage Workflow Designer, Vantage Workflow Portal, and Vantage Dublist Portal). Additional licensed client programs can also be installed separately on client workstations.

Note: A Vantage domain with more than one node is a Vantage Array and requires one Vantage Array license per node. Installation differs for an array. See *Installing a Vantage Array* and skip these single node instructions.

The fastest, easiest, and recommended way to install a new Vantage installation on a single node is to follow the steps below to install everything at once.

If you need to update or reinstall specific individual components, follow the instructions in the Upgrading and Modifying Vantage chapter.

To install all licensed Vantage components on a single server, follow these steps:

1. Log into the target server with a local administrator account, and make sure that virus-checking software and Windows Firewall are off.
2. Run the *Vantage_8.0.exe* archive. The archive extracts the installation files, and then automatically runs the *Vantage_8.0_Setup.exe* installer to install all components.
3. When the Welcome dialog appears, click Next to display the license agreement.
4. When the license agreement appears, click *I accept the terms in the License Agreement* (if you accept the terms), and click Next (or click Cancel).
5. Select *Single Node* Installation (the default) when the dialog instructs you to "Select the type of Vantage system you want to install on." Then click Next.
6. Select the type of installation you want to perform: *Install Product* or *Custom Install*. *Install Product* lists products and options in licensed groups. *Custom Install* lists every Vantage component and option and allows you to select what you want.
7. In the Install Product or Custom Install display, check the boxes by the components you want to install, and click Next.

   At a minimum, you should choose to install the Transcode/Transcode Pro selection. If licensed, you may choose multiple options that include additional services, the Workflow Designer, and the Workflow Portal.
8. Browse to Configure the installation locations for the Installation base, the default Vantage Store, and the Vantage database. Defaults are recommended.
9. When the *Ready to Install* dialog appears, click *Install* to begin product installation. This process takes a few minutes to complete and shows progress and components being installed as it runs. See *Installation Notes* below for additional details.

Note: The Vantage Setup program checks for an existing SQL Server installation, and if found, Setup skips the installation of SQL Server. If SQL Server is not found, SQL Server 2016 SP1 Express will be installed. Similarly, if no Vantage database is found, a new one is installed. If a Vantage database is found, it is upgraded; upgrading preserves workflows, design items, job history, catalogs, stores, application configurations, user settings and licenses.

10. When installation is complete, the progress text displays *Finished*. Click Next.

11. The dialog displays Installation successful! Click Done to complete the installation.

This completes the initial Vantage installation. Vantage installs these components:

- Microsoft SQL Server 2016 SP1 Express, including Browser, Native Client, Support Files
- Telestream Media Transcoding and Analysis
- Vantage
- Vantage Domain Database
- Client shortcuts on the desktop: Workflow Designer, Management Console, Workflow Designer, and Dublist Portal.

If any components failed to install, you can run the installer again selecting a Custom Install and checking only the components you want to install again.

Installation Notes

The following notes provide additional installation details:

Note: Telestream recommends that you do not use anti-virus software on Vantage servers. If you prefer to use anti-virus software, identify Vantage as a safe/trusted application. For additional information on using Vantage with anti-virus software, see *Anti-Virus Software Recommendations*. For more information on using Vantage with the Windows Firewall, see Firewall Guidelines.

Note: If Intel Performance Primitives (IPP) is not present, the Vantage installer installs it.

Note: If QuickTime is not installed, the installer downloads and installs it for you if you have an Internet connection. If an outdated version is present or there is no Internet connection, the installer displays a message advising you to install it manually. The Telestream Transcode and Analysis engine requires QuickTime version 7.6.9. You can use this link to download it: QuickTime version 7.6.9. If you install QuickTime manually, uncheck (disable) *Check for Updates*, so QuickTime is not updated automatically. Then restart the server and re-run *Vantage_8.0_Setup.exe* again to continue.

Note: Microsoft .NET Framework 4.8 is required on Vantage servers, client workstations, and Web Apps installations. This .NET version is installed automatically by the Vantage or Web Apps installer on all operating systems, if not already present.

Note: Microsoft .NET 3.5.1 is also required on Vantage servers that run the general purpose Flip action and on servers running SQL Server 2014, but it is not required on other servers or client machines. This .NET version must be installed manually using Server Manager on servers that require it. After installation, open Server Manager > Roles > Server Roles, and check Web Server (IIS) to enable it. Then enable the services listed in the IIS Role Service Requirements table.

Quick Installation Check

At this point, the Vantage installation should be functioning, though not licensed. Vantage Management Console should be operational if you double-click the Vantage Management Console icon on the desktop. By default, no login is required. If you enable User Administration under Settings & Options > General to require a login, you can then log in with the user name "administrator" and no password.

Next, continue with the following post-installation tasks:

- Post-Installation Steps for Single Nodes and Arrays
  - Setting Up a Vantage Store
  - Installing and Configuring Vantage Web Applications
  - Enabling Vantage Licenses
  - Installing Client Programs on Client Workstations
  - Verifying the Installation

Installing a Vantage Array

A Vantage array consists of two or more Vantage components distributed among two or more servers for optimum speed and efficiency. Typically a Vantage array implements the Vantage domain database on one server and the Vantage Services, Transcode Engine, Clients, and Vantage Web Applications on another server. It is even possible to split Vantage Services and the Vantage Transcode Engine across multiple servers for maximum throughput and to put the Web Applications on their own server.

To implement a Vantage domain across multiple servers, specific configurations must be applied to all computers that host any Vantage services or host the Vantage domain database for the array.

A Vantage array installation and configuration generally takes from one hour to several hours to install, depending on the complexity (number of servers). To install a Vantage array, perform the tasks in the specified order:

1. Setting Up SQL Server and the Vantage Domain Database
2. Installing Vantage Array Components
3. Adding Vantage Services
4. Setting the Vantage Windows Log On ID for Services

Note: Each Vantage domain requires one Vantage Array license per server.

Setting Up SQL Server and the Vantage Domain Database

If you are upgrading an existing Vantage installation, you will already have SQL Server installed. Skip this step and go on to the next step, Installing Vantage Array Components.

If the database is not installed, continue with this procedure.

Note: This guide does not provide instructions for installing a mirrored database and implementing mirroring. Consult your database administrator or contact your Telestream representative regarding installation service options.

Although you can install and operate the Vantage domain database and Vantage services on the same server (as is done in an all-in-one, single node domain), Telestream recommends that you use a dedicated server for the Vantage array domain database and that you use Microsoft SQL Server Standard instead of the SQL Server Express used in single node installations.

To set up the Vantage domain database, follow these procedures in the order listed:

1. *Installing SQL Server 2012 Standard*, or *Installing SQL Server 2014 Standard*, or *Installing SQL Server 2016 Standard*
2. *Installing the Vantage Domain Database*

Installing SQL Server 2012 Standard

The following procedure explains how to install SQL Server 2012 Standard. If you are installing SQL Server 2014 or SQL Server 2016, please skip to that topic, *Installing SQL Server 2014 Standard* or *Installing SQL Server 2016 Standard*.

Follow these steps to install SQL Server:

1. Log into the target server with a local administrator account.
2. Insert the SQL Server 2012 Standard DVD into the server's DVD drive and start the installer (*setup.exe*) if it does not run automatically.
3. SQL Server Installation Center—Click Installation in the left column, then select *New installation or add features to an existing installation*.
4. Setup Support Rules—Click OK.
5. Product Key—Enter your product key and click Next.
6. License Terms—Accept the license terms and click Next.
7. SQL Server Updates—Click Next after updates have completed.
8. Setup Support Files—Click Install, allow the installer to complete its actions, and click Next.
9. Feature Selection—Check Database Engine Services and Management Tools, and click Next.
10. Instance Configuration:
    a. Select Named instance.
    b. Enter *VANTAGE* in the Named instance field and the Instance ID field.
    c. Click Next to continue.
11. Disk Space Requirements—Click Next to continue.
12. Server Configuration:
    a. For SQL Server Agent, the Startup Type should be disabled. (If the Startup Type is set to automatic, the service must be stopped before running Vantage Setup.)
    b. For Server Database Engine, select NT AUTHORITY\NETWORK SERVICE
    c. Click Next to continue.
13. Database Engine Configuration:
    a. Click Add Current User.
    b. Select Mixed Mode.
    c. Enter the Vantage sa user password (*vantage12!*) in the Enter Password and Confirm Password fields.
    d. Click Next to continue.
14. Continue to click through the installer windows accepting the default settings to complete installation.
15. Complete—Click Close to close the SQL Server 2012 Standard installer.

16. Select Start > SQL Server Management Studio.
17. Connect to the Vantage domain database using the following information:

    Server type: Database Engine
    Server name: [hostname]\VANTAGE
    Authentication: SQL Server Authentication
    Login: sa
    Password: vantage12!
18. In the Object Explorer panel, right-click [hostname]\VANTAGE and select Properties.
19. In the Server Properties window, go to the Memory page.
20. Set the *Maximum server memory (in MB)* to 75% of the system's memory. For example: If the system's memory is 8 GB (8192 MB), then the maximum server memory for SQL should be set to 6 GB (6144 MB) (8192 x 0.75 = 6144).
21. Click OK.
22. Close the SQL Server Management Studio.

Now that SQL Server Standard is installed and configured for Vantage, install the Vantage domain database as explained in this topic: *Installing the Vantage Domain Database*. The Vantage installer will detect that SQL Standard is already installed, will not install SQL Express, and will attach to the installed instance.

Installing SQL Server 2014 Standard

Follow these steps to install SQL Server 2014 Standard on a server (skip this topic if you already installed another version of SQL Server):

1. Launch setup from the SQL Server 2014 Standard installation media.
2. In the *SQL Server Installation Center*, go to *Installation* on the left.
3. Select *New SQL Server Stand-alone installation or add features to an existing installation*.
4. On the Product Key page, enter a product key and click Next.
5. Accept the license terms and click Next.
6. Click Next on the Microsoft Update page.
7. On the Setup Role page, select *SQL Server Feature Installation* and click Next.
8. On the Feature Selection page, enable *Database Engine Services*, *Management Tools – Complete* and click Next.
9. On the Instance Configuration page, select *Named instance*, enter *VANTAGE* and click Next.
10. On the Server Configuration page, click the cell for the account name of the *SQL Server Database Engine* service. After selecting the cell, click the drop-down list and select <<*Browse…*>>.
11. In the *Enter the object name to select* field, type *NETWORK SERVICE* and click OK. Then click Next on the Server Configuration page.
12. On the Database Engine Configuration page, select *Mixed Mode (SQL Server authentication and Windows authentication)*. Enter *vantage12!* for the password and click the *Add Current User* button.
13. (Optional) If you would like to specify a non-default location for the database files, go to the Database Engine Configuration page, select the Database Directories tab, and change the Data root directory path.
14. Click Next on the Database Engine Configuration page.
15. Click install on the Ready to Install page.
16. When installation completes, click Close and close the SQL Server Installation window.
17. From the Start menu, launch the SQL Server 2014 Management Studio.
18. In the *Server name* field, enter .*vantage* as the server name.
19. Set authentication to *SQL Server Authentication*.
20. Enter *sa* for the login and *vantage12!* for the password.
21. In the Object Explorer panel, right click .*vantage (SQL Server 12.0.2000 – sa)* and select *Properties*.
22. From the Select a page panel, go to *Memory* and set *Maximum server memory (in MB)* to 75% of the host system's memory. For example, if the system's memory is 8 GB (8192 MB), then the maximum server memory for SQL should be set to 6 GB (6144 MB) (8192 x 0.75 = 6144).

23. Click OK to close the Microsoft SQL Server Management Studio window.

Now that SQL Server Standard is installed and configured for Vantage, install the Vantage domain database as explained in this topic: *Installing the Vantage Domain Database*. The Vantage installer will detect that SQL Standard is already installed, will not install SQL Express, and will attach to the installed instance.

Installing SQL Server 2016 Standard

Follow these steps to install SQL Server 2016 SP1 Standard on a server (skip this topic if you already installed SQL Server 2016 SP1 Standard):

1. Launch setup from the SQL Server 2016 SP1 Standard installation media.
2. In the SQL Server Installation Center, select *Installation* on the left.
3. Select *New SQL Server Stand-alone installation or add features to an existing installation*.
4. On the Product Key page, enter a product key and click *Next*.
5. Accept the license terms and click *Next*.
6. Click *Next* on the Microsoft Update page and the Install Rules page.
7. On the Feature Selection page, click *Feature Selection* on the left, enable *Database Engine Services* and click *Next*.
8. On the Instance Configuration page, select *Named instance*, enter *VANTAGE* and click *Next*.
9. Click the cell where the SQL Server Database Engine Row and Account Name column intersect. After selecting the cell, click the drop-down list and select *<<Browse…>>*.
10. In the *Enter the object name to select* field, type *NETWORK SERVICE* and click OK. Then click *Next* on the Server Configuration page.
11. On the Database Engine Configuration page, select *Mixed Mode (SQL Server authentication and Windows authentication)*. Enter *vantage12!* for the password and click the *Add Current User* button.
12. (Optional) If you would like to specify a non-default location for the database files, go to the Database Engine Configuration page, select the Data Directories tab, and change the Data root directory path.
13. Click *Next* on the Database Engine Configuration page.
14. Click *Install* on the Ready to Install page.
15. When installation completes, click *Close* and close the SQL Server Installation window.

Installing SQL Server 2016 Management Studio

Management Studio is not automatically installed for SQL Server 2016. To install and configure it, follow these steps:

1. Launch setup from the SQL Server 2016 SP1 Standard installation media, if it is not still running after completing your SQL Server 2016 SP1 installation.
2. In the SQL Server Installation Center, select *Installation* on the left, and select *Install SQL Server Management Tools* on the right.
3. On the Welcome screen, click *Install*.
4. Click *Restart* when prompted to complete installation setup.
5. From the Start menu, launch the SQL Server 2016 Management Studio.
6. In the *Server name* field, enter .*vantage* as the server name.
7. Set authentication to *SQL Server Authentication*.
8. Enter *sa* for the login and *vantage12!* for the password.
9. In the Object Explorer panel, right click .*vantage (SQL Server 12.0.2000 – sa)* and select *Properties*.
10. From the Select a page panel, go to *Memory* and set *Maximum server memory (in MB)* to 75% of the host system's memory. For example, if the system's memory is 8 GB (8192 MB), then the maximum server memory for SQL should be set to 6 GB (6144 MB) (8192 x 0.75 = 6144).
11. Click *OK* to close the Microsoft SQL Server Management Studio window.

Now that SQL Server Standard is installed and configured for Vantage, install the Vantage domain database as explained in this topic: *Installing the Vantage Domain Database*. The Vantage installer will detect that SQL Standard is already installed, will not install SQL Express, and will attach to the installed instance.

Installing the Vantage Domain Database

This task installs the Vantage domain database instance.

Note: Telestream recommends that you install the database on a different hard drive from the one allocated for temporary media storage. For details, see *Database Selection and Configuration Guidelines* in the *Before You Install Vantage* chapter.

Follow these steps:

1. Log into the database server with a local administrator account, and make sure that virus-checking software and Windows Firewall is off.

Note: To effectively operate Vantage services with other networked devices or systems, you must turn off Windows Firewall.

---

2. Stop the SQL Server Agent Service in Start > Services, if it is running.
3. Run the *Vantage_8.0.exe* file and click Install to extract and run the Vantage _8.0_Setup installer.
4. When the Welcome dialog appears, click Next to display the license agreement.
5. License Agreement—Click *I Accept* if you agree to the license terms, and then click Next.
6. Select *Array {Multi-Node} Installation* and click Next.
7. Select *Custom Install* and deselect all check boxes to install only the Vantage database. Click Next.
8. When Ready to Install appears, click *Install* to begin installation, which takes a few minutes. Progress is displayed as the installation takes place.

Note: The Vantage Setup program checks for an existing SQL Server installation, and if found, Setup skips the installation of SQL Server. If SQL Server is not found, SQL Server 2016 SP1 Express will be installed. Similarly, if no Vantage database is found, a new one is installed. If a Vantage database is found, it is upgraded; upgrading preserves workflows, design items, job history, catalogs, stores, application configurations, user settings and licenses.

---

9. Click Next when the installer indicates it is finished.
10. The installer displays *Installation was successful!* (or indicates errors if unsuccessful). Click Done to close the installer application. Database installation is complete.

Note: Existing workflows do not require updating to run as they did on earlier Vantage releases. However, you can update actions and workflows to take advantage of new features. See the *Vantage User Guide* for details.

Installing Vantage Array Components

Once you have your SQL database and Vantage Domain Database installed, you're ready to install the Vantage Array components, including Vantage services, transcoders, and clients. Telestream recommends that you install these components on a different server than your database for maximum operating efficiency.

Note about the Cloud Service: In a Vantage array, each node that will process Cloud jobs must have the following installed: Vantage, the Cloud Service, the Transcoding Services (IPTV, Post Producer, Transcoder, Analysis, Multiscreen, and Timed Text) and at least one ComponentPac.

Once the associated Vantage service was installed, the job completed successfully.

To install the Vantage components, follow these procedures in the order presented:

1. Installing Vantage Services, Transcode Engine, and Clients
2. Adding Vantage Services
3. Setting the Vantage Windows Log On ID for Services

Installing Vantage Services, Transcode Engine, and Clients

This procedure installs the Vantage services, Transcode & Analysis Engine, Vantage Management Console, and Vantage Workflow Designer on a server. If you prefer, you can divide these components among multiple servers for greater processing efficiency. To do so, select only the components you want to install on the current server when you perform step 7 below.

Note: Vantage installers modify Windows Distributed Transaction Coordinator (MSDTC) properties to meet Vantage services and database communication requirements. This modification is automatic, and requires no action on your part.

To install the Vantage components, do the following:

1. Log into the target server with a local administrator account. Make sure that virus-checking software and Windows Firewall are turned off.

Note: Telestream recommends not using anti-virus software on Vantage servers. If you use anti-virus software, you should identify Vantage as a safe/trusted application. Be sure to turn off anti-virus software during Vantage installation or install anti-virus software after installing Vantage.

---

2. Run the Vantage installation archive file, *Vantage_8.0.exe*, which you previously downloaded (see *Obtaining the Vantage Installer*). The archive extracts components, and runs the *Vantage_8.0_Setup.exe* installer to begin installation.
3. When the Welcome dialog appears, click Next to display the license agreement.
4. When the license agreement appears, click *I accept the terms in the License Agreement* (if you accept the terms), and click Next (or click Cancel).

5. Select *Array {Multi-Node}* Installation when the dialog instructs you to "Select the type of Vantage system you want to install." Then click Next.
6. Select the type of installation you want to perform: *Install Product* or *Custom Install*. *Install Product* lists products and options in licensed groups. *Custom Install* lists every Vantage component and option.
7. In the Install Product or Custom Install display, check the boxes by the components you want to install, and click Next.

   At a minimum, you should choose to install the Transcode/Transcode Pro selection. If licensed, you may choose multiple options that include additional services, the Workflow Designer, the Workflow Portal, and Web Applications.

Note: If Vantage Web Applications have never been installed and you are not installing them on a Lightspeed server, leave them unchecked in the installer and install them later as explained in *Installing and Configuring Vantage Web Applications*. If they have been installed before (and IIS is already configured), or you are installing on a Lightspeed server, you can check the installer to install them now.

---

8. Browse to Configure the installation location for the Installation base.
9. When the *Ready to Install* dialog appears, click *Install* to begin product installation. This process takes a few minutes to complete and shows progress and components being installed as it runs. See *Installation Notes* below for additional details.
10. When installation is complete, the progress text displays *Finished*. Click Next.
11. The dialog displays Installation successful! Click Done.

This completes the initial Vantage installation. *Vantage 8.0* is now visible in the Control Panel > Programs and Features list, and Vantage should be functional, though not licensed. To test this, launch the Vantage Management Console from its desktop icon.

If any components failed to install, you can run the installer again selecting a Custom Install and checking only the components you want to install again.

Installation Notes

The following notes provide additional installation details:

Note: Telestream recommends that you do not use anti-virus software on Vantage servers. If you prefer to use anti-virus software, identify Vantage as a safe/trusted application. For additional information on using Vantage with anti-virus software, see *Anti-Virus Software Recommendations*. For more information on using Vantage with the Windows Firewall, see Firewall Guidelines.

Note: If Intel Performance Primitives (IPP) is not present, the Vantage installer installs it.

Note: If QuickTime is not installed, the installer downloads and installs it for you if you have an Internet connection. If an outdated version is present or there is no Internet connection, the installer displays a message advising you to install it manually. The Telestream Transcode and Analysis engine requires QuickTime version 7.6.9. You can use this link to download it: QuickTime version 7.6.9. If you install QuickTime manually, uncheck (disable) *Check for Updates*, so QuickTime is not updated automatically. Then restart the server and re-run *Vantage_8.0_Setup.exe* (in C:\Vantage) again to continue.

Note: Microsoft .NET Framework 4.8 is required on Vantage servers, client workstations, and Web Apps installations. This .NET version is installed automatically by the Vantage or Web Apps installer on all operating systems, if not already present.

Note: Microsoft .NET 3.5.1 is also required on Vantage servers that run the general purpose Flip action and on servers running SQL Server 2014, but it is not required on other servers or client machines. This .NET version must be installed manually using Server Manager on servers that require it. After installation, open Server Manager > Roles > Server Roles, and check Web Server (IIS) to enable it. Then enable the services listed in the IIS Role Service Requirements table.

Note: When a service joins a domain, if it is unable to acquire an array license, it remains in maintenance mode and logs an error. See the Vantage Management Console > Support Utilities > Error Log.

Adding Vantage Services

When Vantage services are installed on a server, the installer looks for the Vantage domain database on the server. If the Vantage domain database is present, all services are configured to connect to that domain. If no Vantage domain database is present, the Vantage services are not configured, and you must configure each service to connect to the appropriate Vantage domain.

To add Vantage services to a Vantage domain, follow these steps:

1. Start the Vantage Management Console by double-clicking its desktop icon, select the domain to manage, and log in.

Note: The default Vantage user account is *Administrator* with no password. This account has administrative privileges.

---

2. Select Services in the component (left) panel.

   The Services details (right) panel shows all services on all servers that are connected to the domain you selected.

3. Click the Add Service button to display the Select Service dialog.

   The Select Service dialog lists all Vantage services running in this subnet, and the list includes unassigned services and services running on other Vantage domains.

4. Select one or more services to add to this domain, and click OK to add them.

   Services are identified by name, machine or host, and Vantage domain. Make sure that you do not select services that are properly attached to another domain. To select multiple services, use shift-click to select a series of services, or use Ctrl-click to select individual services.

If you are moving a service from one domain to another, the Vantage Management Console displays the Reassign Services window. Click OK to add them to this domain.

Continue now with the next task: *Setting the Vantage Windows Log On ID for Services*.

Setting the Vantage Windows Log On ID for Services

After installation, the default log on ID for each Vantage service is the *Local System account*. This log on ID provides access to files on the local server only. If a service, such as Transcode, requires access to files on another server, the Local System account cannot provide that access. If Vantage services need access to input folders, output folders, or a Vantage store that is on another computer, you must do the following:

- Create a Vantage Windows user ID for the service.
- Grant access to the Vantage Windows user ID on the other computers.

For more information, see *Windows Authentication Guidelines*.

Most Vantage services require a Vantage Windows user ID to access files on other computers.

For services of the same type, the Windows log on ID for that service must be the same on all Vantage servers in the domain. For example, all Analysis services within the domain must use the same log on ID. However, the Catalog service, which does not access files, can remain set to use the Local System account.

To change the log on ID for a Vantage service, do the following for that service on each Vantage server in the array:

1. In the Vantage Management Console, click Services in the left panel.
2. Select a service in the list (Shift-click or Ctrl-click to select multiple services).
3. Click the Change Service Logon button or right-click and select Change Service Log On. A dialog opens, requesting the logon.
4. Select Local System account to use the account currently accessing Vantage from your local machine, or select *This account* and fill in the user name and password for the account that has access to the desired network location.
5. Click OK. A message confirms that the logon is changing.

Note: Changing a service logon restarts that service. Also note, when changing the logon for multiple services simultaneously, some services may not restart properly. If this occurs, go to Start > Services on the server, select the affected services, and click (or right-click) Restart to manually restart the services.

---

6. Grant file access to the new user on all Vantage servers that the service must access.

Quick Installation Check

At this point, the Vantage installation should be functioning, though not licensed. Vantage Management Console should be operational if you double-click the Vantage Management Console icon on the desktop. By default, no log in is required. If you enable User Administration under Settings & Options > General to require a login, you can then log in with the user name "administrator" and no password.

Vantage Web Apps should also start if you enter the following URL in a browser on the server: http://[server name]/Vantage/.

Next, continue with the following post-installation tasks:

- Post-Installation Steps for Single Nodes and Arrays
  - Setting Up a Vantage Store
  - Installing and Configuring Vantage Web Applications
  - Enabling Vantage Licenses
  - Installing Client Programs on Client Workstations
  - Configuring Client DB Access and User Administration
  - Verifying the Installation

Post-Installation Steps for Single Nodes and Arrays

This section includes post-installation procedures common to both Vantage Single Node and Vantage Array installations. After the initial installation is finished, continue with these steps:

- Setting Up a Vantage Store
- Installing and Configuring Vantage Web Applications
- Enabling Vantage Licenses
- Installing Client Programs on Client Workstations
- Configuring Client DB Access and User Administration
- Command Line Installation
- Verifying the Installation

Setting Up a Vantage Store

A Vantage store is a required folder that serves as a temporary location to store media files while Vantage processes them. It is used by the transcoders and the Workflow Portal (including Web Apps Workflow Portal) and must be in place before you use the domain. A Vantage array installation does not automatically set up a Vantage Store, so you will need to create one now. An all-in-one, single-node installation creates a default storage location at *C:\VantageStore* and also creates a Vantage catalog. However, you may prefer to set up a more convenient location for processing your Vantage jobs.

To create a Vantage Store, follow these steps:

1. If you have not created a Windows share to serve as the Vantage store, create it now and make it available to the Vantage Windows user. For more information, see *Configuring Folders for Vantage Access*.
2. Open the Vantage Management Console.
3. Click Storage in the left panel to display the Vantage storage options.
4. Select Vantage Stores to display the Vantage Stores list in the details (right) panel.
5. Click the New Vantage Store toolbar button to open the Add New Store dialog.
6. Type a name for the store in the Name text box.

   The name that you enter here is the name that appears in Workflow Designer when an action is configured to access a media file or attachment.
7. To specify the store root directory, do the following:
   a. Click Modify to display the Browse for Folder dialog box.
   b. Open Network, open the computer name, and then select the root directory for the store.
   c. Click OK.

   You can also type a UNC path in the Location text box. For example, *\\Computer-Name\Sharename*.

Notes: If you use a local drive letter to specify a directory, only Vantage services and clients on the same computer can access the store. If the Vantage store is on a different computer, you must publish a share and grant access to the appropriate Windows users before it will appear in the Browse for Folder dialog. For more information, see *Windows Authentication Guidelines* in the *Before You Install Vantage* chapter.

---

8. Click the Save button to save the new store.

Installing and Configuring Vantage Web Applications

Vantage Web Applications (for Vantage arrays only) provide convenient operator and administrator browser-based access to Vantage without the overhead of running the full Vantage clients. Functions include the Dashboard, Job Status Views, Workflow Portal, Dublist Portal and Live Capture. When planning Web Apps installation, it is recommended that you run them on a separate server from the Transcoder & Analysis Engine with the firewall enabled, since users may be accessing the Web Apps remotely.

If you are updating existing Web Apps, the server is already configured. See *Updating Vantage Web Applications* for an abbreviated procedure.

If you are installing Web Applications for the first time, use the following procedure.

The following topics explain Web Application installation and configuration:

- Installing Vantage Web Applications
- Using Web Apps with Active Directory
- Managing Web Workflow Portal Client Alias Support
- Bypassing Database Login
- Enabling Vantage Licenses

Installing Vantage Web Applications

When installing the Vantage Web Applications on a server for the first time, the procedure is different for Lightspeed servers and standard servers:

- Standard servers—You must set up IIS first. If IIS is already installed, you must create the configuration that supports Vantage Web Applications. Start at Step 1 below.
- Lightspeed servers—Lightspeed servers ship with IIS properly installed. There is no need to set up IIS on a Lightspeed server. Skip the steps below and see *Updating Vantage Web Applications* for an abbreviated installation procedure.

To install IIS and the Vantage Web Applications, follow these steps:

1. Log on to the target server with a local administrator account.
2. If you are installing on a Lightspeed server, skip to Step 5.
3. Verify that your IIS server and .NET framework requirements are met (also see *Vantage Web Applications OS*):
   - IIS 8.0 or later is required.
   - .NET 4.8 is required.

Note: .NET 4.8 is installed by the Web Apps installer if it is not already present.

---

4. Install and/or configure IIS on the target server:
   a. Open the Control Panel Administrative tools, and open the Server Manager.
   b. Make these selections to install and configure:

      Install—Server Manager > Local Server > Roles and Features > Add Roles & Features.

      - Installation Type: Role-based or feature based installation > Next.
      - Server Selection: Select a server from the server pool > LOCAL SERVER > Next.
      - Server Roles: Web Server IIS + Management Tools > Add Features > Next.
      - Features: Select .NET Framework 3.5 Features > Next.

      Configure—Role Services: Enable services listed in the following table and press Next.

      - Confirmation: Click *Specify an alternate source path* and enter the path of the SxS folder located in the Sources folder on the Server 2012/2016 installation disc (example: `D:\sources\sxs`).
      - Click Install, and after installation finishes, press Close.

IIS Role Service Requirements

Service	Install/Select	Uninstall/Deselect
Common HTTP Features	Static Content Default Document Directory Browsing HTTP Errors	HTTP Redirection WebDAV Publishing
Application Development	.NET Extensibility 4.5/4.6 ASP.NET 4.5/4.6 ISAPI Extensions ISAPI Filters	.NET Extensibility 3.5 Application Initialization ASP ASP.NET 3.5 CGI Server Side Includes WebSocket Protocol
Health and Diagnostics	HTTP Logging Request Monitor	Logging Tools Tracing Custom Logging ODBC Logging Tracing (2016)
Security	Request Filtering	Basic Authentication Windows Authentication Digest Authentication Client Certificate Mapping Authentication IIS Client Certificate Mapping Authentication URL Authorization IP and Domain Restrictions
Performance	Static Content Compression	Dynamic Content Compression
Management Tools	IIS 6 Management Console IIS 6 Management Compatibility IIS 6 Metabase Compatibility IIS 6 WMI Compatibility IIS 6 Scripting Tools IIS 6 Mgmt. Console	IIS Management Scripts and Tools Management Service
FTP server		FTP server FTP Service FTP Extensibility
IIS Hostable Web Core		IIS Hostable Web Core

5. Run the *Vantage_8.0_Setup.exe* installer (in C:\Vantage8.0) to begin Web Apps installation. Choose an Array > Custom installation, and check the box to install only the Web Applications (all else unchecked).

   Alternatively, you can run the separate *VantageWebApplicationsSetup.exe* installer.

Note: Ideally the Vantage Web Apps should be installed on a different server from any of the services which perform transcoding. However, you can put both on a single node if necessary. **Also note:** Run the Web Apps installer after you have used the *Vantage_8.0_Setup.exe* installer to install other Vantage components. Running the *Vantage_8.0_Setup.exe* installer after the Web Apps installer removes the Web apps.

---

6. When the Welcome Window appears, click Next.
7. Click *I accept...* to accept the license terms after reading them, and click Next (or click Cancel if you do not agree to the license terms).
8. When the Select Installation Address dialog appears, click Next to accept the default configuration, or change the settings as required, and click Next.

Note: Ensure the Application Pool drop-down selection is set to *create Vantage Application Pool*.

---

9. Click Install to begin installation.
10. When the Installation Complete dialog appears, click Finish.
11. If Vantage services were running before the Vantage Web Applications installation, restart them using Microsoft Services (Start > Administrative Tools > Services).
12. Provide the Vantage Web Applications login requirements to each of your Vantage users, so that they know how to access them. The URL for the Vantage Web Applications is: *http://[hostname]/Vantage* where [hostname] is the server where you installed them.

Note: For information on the browser requirements for Vantage Web Applications, see Vantage Web Applications Browser Requirements.

Note: If your installation uses the Workflow Portal Web application, configure support for this program as described in *Managing Web Workflow Portal Client Alias Support*.

Using Web Apps with Active Directory

If you are using Vantage with Active Directory enabled in Vantage Management Console Settings & Options, you may receive a server error message when you attempt to log into Vantage Web Apps. To resolve this issue, you must set up IIS for *ASP.NET Impersonation*.

ASP.NET Impersonation assigns one special account as the authentication account for Web Apps with all necessary privileges and allows Vantage users to log in using that

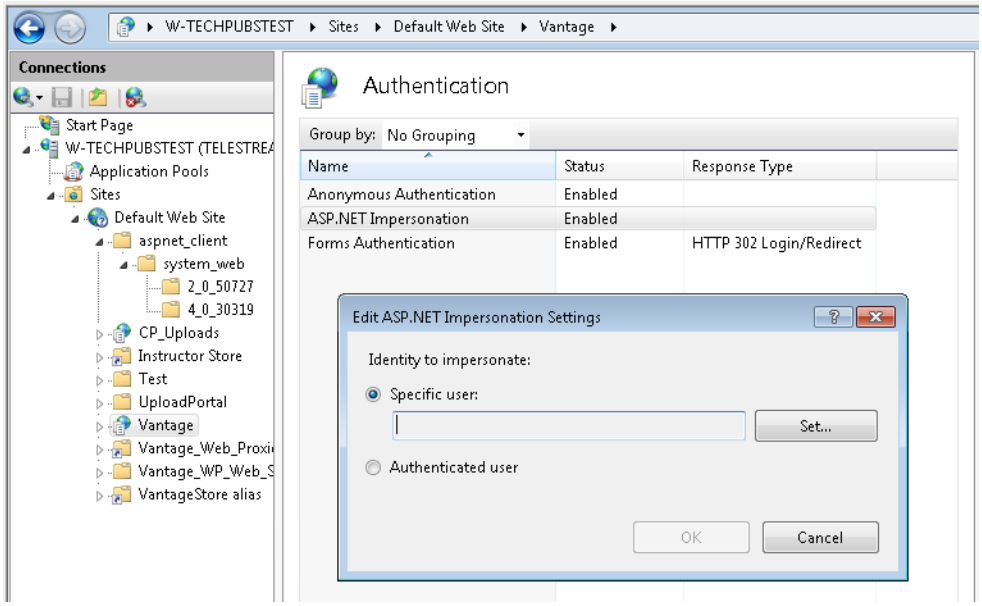
account. For example, you might create the Windows account called *WebAppsUser* on the server where the Web Apps are installed. You then assign that user the desired Windows permissions, which *must include assignment to the local administrators group*. Finally, set up impersonation as described below. With impersonation operating, when Vantage users access the IIS server to run the Web Apps, IIS substitutes the credentials from the special account to log them into IIS and allow access to the Web Apps.

To set up ASP.NET impersonation for the Web Apps, follow these steps:

1. Create a Windows Active Directory account *with local administrator privileges* to act as the impersonator on the IIS server where the Web Apps are installed.
2. Click Start and enter IIS in the Search Programs field. Then select Internet Information Services Manager from the list of search results.
3. In the IIS Connections panel, expand the top tier (hostname), expand Sites, Expand Default Web Site, and click Vantage.
4. In the IIS group under Vantage Home in the center panel, double-click Authentication. The Authentication panel opens (the ASP.NET Impersonation in IIS figure).
5. Right-click ASP.NET Impersonation, and select Enable. The state of this feature changes to Enabled.
6. Right-click ASP.NET Impersonation, and select Edit.
7. Select Specific User, and click Set....
8. Fill in the User Name and password for the Active Directory user created in step 1 to use for logging into the Web Apps, and click OK.

Now when authorized Vantage users log into the Web Apps, IIS impersonates the local admin user you specified and allows the Vantage users Web Apps access.

ASP.NET Impersonation in IIS



Managing Web Workflow Portal Client Alias Support

The Vantage Workflow Portal Web application requires HTTP access to Vantage stores for viewing of proxy media files using the automatically installed HTML5 Video Player on client computers. If your Vantage installation does not use the Workflow Portal Web client, or if operators will not be using the Workflow Portal Web client to view proxy files, you do not need to configure alias support.

Providing HTTP access to Vantage stores for proxy viewing requires the following:

- Create and configure a virtual directory on the IIS server that references the Vantage store. A virtual directory must be created for every store that will store proxy files for the Workflow Portal Web application.
- Create and configure a Vantage alias for the virtual directory.
- Create and configure a Workflow Portal configuration using the Vantage Management Console to support operator management.
- Install the HTML5 Video Player on computers that will view proxy media files using the Workflow Portal Web application. This happens automatically when you install the Vantage Web Applications including the Workflow Portal Web App.

The following topics describe how to manage an alias for a Vantage store:

■ Creating an IIS Virtual Directory
■ Creating an Alias for Each Vantage Store in the Vantage Management Console
■ Modifying an Alias
■ Deleting an Alias

Creating an IIS Virtual Directory

For detailed instructions to create an IIS virtual directory, refer to the Microsoft IIS product documentation. The following procedure provides an example of how to configure a virtual directory on an IIS server:

1. If not already installed, install the Vantage Web Applications as described in *Installing and Configuring Vantage Web Applications*.
2. On the server that hosts the Vantage Web Applications, select Start > Administrative Tools > Computer Management.
3. In the left panel of the Computer Management window, expand Services and Applications and select Internet Information Services (IIS) Manager.
4. In the Connections panel, expand the server entry, and expand the Sites entry.

Note: In some situations, adding or removing a virtual directory causes Web Dashboard sessions to close. This does not change the Web Dashboard configuration or operation. Web Dashboard users can simply restart the program.

---

5. Right click Default Web Site and select Add Virtual Directory.

6. Configure the virtual directory as follows:
   a. Enter an Alias name for the virtual directory.

      Consider using a name that is easy to associate with the Vantage store directory, and note this name, as you will need to use it to create a Vantage alias.

   b. Type the path to the Vantage store directory in the *Physical path* text box, or click the browse button to the right of the text box and select a directory.

      For an all-in-one domain, the path to the default *Local Store* is C:\VantageStore. The default path works only when the store and the Vantage Web Applications are located on the same server.

      If your Vantage store is located on a network attached storage device or other network accessible location, enter the UNC path to the location (for example, //myserver/myStore/).

   c. Click *Connect as*, click *Specific user,* and click Set.
   d. Enter user name and password information for a Windows user with access to the Vantage store directory, and click OK twice.

      If required, the user name should include a domain name. For example, user@domain.net or VantageGuru@MyCompany.net. You can also enter <domain>\user.

Note: If you are operating in a Windows workgroup, the IIS server machine name and the machine name of the file share for the Vantage store should have the same local account name (VantageUser, for example) and password. This allows for easy authentication from IIS to the Vantage store location. In this case, the user name in the Set Credentials window can be specified simply as VantageUser.

---

   e. Click Test Settings.

      The Test Connection dialog should show that the Authentication and Authorization tests passed.

   f. Click Close.
   g. Click OK to complete the virtual directory configuration.

      The virtual directory should now display in the Computer Management window as a folder below the Web site you modified.

   h. Repeat this procedure for all Vantage stores that will store proxy files for use with the Workflow Portal Web application.

Creating an Alias for Each Vantage Store in the Vantage Management Console

After you create virtual directories for your Vantage stores, you need to create a Vantage alias in the Vantage Management Console for each Vantage store that will store proxy files:

1. Start the Vantage Management Console, select the domain to manage, and log on.

Note: The default Vantage user account is *administrator* with no password. This account has administrative privileges.

---

2. Select Storage in the left panel, and Vantage Stores in the main panel.
3. Create a new store or click an existing store in the Vantage Stores list.
4. In the Alias field, enter the virtual directory alias you created in the previous procedure: *http://IIShostname/Virtual Directory*.
5. Click the Save button to save the changes.
6. Repeat this procedure for all Vantage stores that will store proxy files for use with the Workflow Portal Web application.

Modifying an Alias

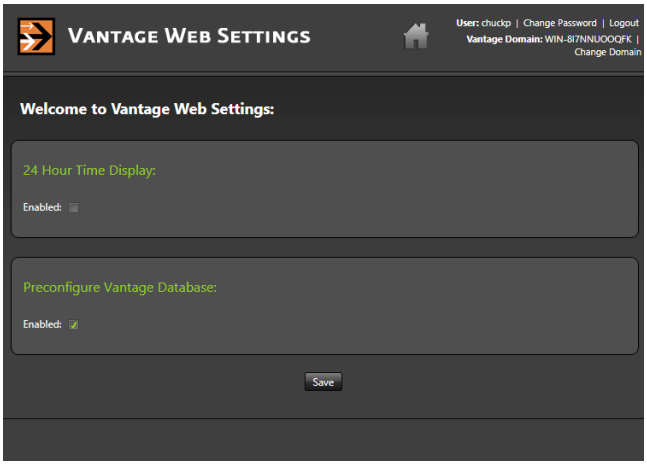
After you have created an alias, you can modify the alias path by simply typing in the Alias field and saving the changes.

Deleting an Alias

To delete an alias, select the alias path in the Alias text box, press Delete, and save.

Bypassing Database Login

To keep database credentials secure and simplify operator login, an administrator can configure operator accounts to automatically log into the database without showing the login and password. To configure this option, log in as an administrator, select Settings, check (enable) Preconfigure Vantage Database, and click Save.



Enabling Vantage Licenses

If you are implementing Vantage in a new production environment or you did not back up your previous database, enable your new licenses now using this procedure. If you have not yet obtained a license or if you need additional licenses, contact Telestream.

The following topics describe Vantage license installation:

- Installing a Vantage License
- Activating a Vantage License Offline
- Troubleshooting License Installation Problems
- Resolving a DEP Conflict

Note: A Vantage domain with two or more nodes requires one Vantage Array license for each node. Additional licenses are required to activate optional features.

Installing a Vantage License

Note: You should remove a license from one domain before you use it in another domain—you cannot use the same license in more than one domain at a time.

Also note that you can install demo licenses as described below or by using the Workflow Designer *File > Add/Update Demo License...* menu selection. See the *Vantage User Guide* for details.

When you receive a license (an XML file), install it using these steps:

1. Store a copy of the license file in a safe place.

   Always keep a backup in case you need to move the database later.
2. Store a copy of the license file in a location that is accessible to the server where you are installing the license, and note the directory where the file is stored.
3. Start the Vantage Management Console by double-clicking its desktop icon.
4. In the left panel, select Licenses.
5. In the right panel, click the Add/Update a license button in the toolbar to display the Add/Update License dialog.
6. Navigate to the folder containing the licenses, select the licenses, and click Open.

   If this computer has an Internet connection, Vantage prompts you to accept the license agreement. If an error message appears, see *Troubleshooting License Installation Problems*.
7. Click *I Accept...* if you agree to the license terms, and click OK.
8. When the Licensing Changed dialog appears, read the message and click OK.
9. Repeat this procedure to install additional licenses.

When installation is complete, the license is stored in the Vantage domain database for use by all Vantage services and clients in the domain. Telestream recommends that you archive a copy, in case you need to move the license to another Vantage domain later.

Activating a Vantage License Offline

If the computer has no Internet connection, an error message displays, indicating the problem. The Vantage Management Console might not have access to the Internet, or the network firewall might be prohibiting Web server (HTTP) traffic.

You can activate the Vantage license yourself using a different computer, or you can call Telestream Customer Service and they will assist you to activate your license.

To activate your license with a different computer, do the following:

1. Click Cancel to continue. Vantage displays the product activation dialog.
2. Click the option to activate using a different computer and click Next.

   Vantage displays a dialog to activate using another computer, including the installation ID for your license.
3. Click Save and create a text file that contains the activation key.
4. Save this file locally and copy this file to a computer with Internet access or save it directly to a share on (or accessible to) a computer which has Internet access.

   After saving the file, leave the dialog open and proceed to the computer with Internet access to validate the Installation ID.
5. On the computer with Internet access, open a web browser and navigate to the URL listed in the Offline Activation Required dialog.
6. Open the installation ID text file and copy and paste the Installation ID into the Installation ID field on the web page.
7. Click Submit – Vantage connects to the licensing server.

   The licensing server validates the installation ID and returns a page displaying your unique activation key composed of ten groups of numbers and letters.
8. If your Vantage server is not immediately adjacent, print this page or write down the activation key.
9. Return to the Vantage server you wish to activate, enter the activation key in the licensing dialog, and activate the license.

   The activation key should be accepted and the Vantage license activated, as confirmed by a dialog.

Troubleshooting License Installation Problems

These are common problems that might occur during license installation:

- General licensing engine failure—the licensing server may be momentarily unavailable; wait one to two minutes, and then repeat the license procedure.
- No Internet connection—see Activating a Vantage License Offline.
- Data Execution Prevention (DEP) conflict—see *Resolving a DEP Conflict*.

Resolving a DEP Conflict

If Vantage displays an error saying that licensing cannot run with *Data Execution Prevention* enabled, follow these steps:

1. Right-click My Computer to display the System Properties dialog.
2. On the Advanced tab, click the Performance Settings button to display the Performance Options window.
3. On the Data Execution Prevention tab, check *Turn on DEP for all programs and services except those I select*.
4. Click Add and navigate to the Vantage Management Console executable: (*C:\Program Files (x86)\Telestream\Vantage\VantageManagementConsole.exe*).
5. Click Open, and click OK to apply this change.
6. Click OK to restart the computer and activate the license.

The activated license is stored in the Vantage domain database for use by Vantage services in this domain.

Note: If you move your Vantage domain database to another server, remove your license to deactivate it, and then import it and activate it again in the new database. Be sure to keep your license file (XML) as a backup.

Installing Client Programs on Client Workstations

The available Vantage Client programs include the Vantage Management Console, the Vantage Workflow Designer, the Workflow Portal, and the Dublist Portal. These are installed on the Vantage server during initial installation, but they may also be installed on client workstations for use by administrators and workflow designers.

To install the Vantage client programs on a workstation, do the following:

1. Log into the target workstation with a local administrator account, and make sure that virus-checking software and Windows Firewall is off.
2. Copy the *Vantage 8.0 Client Applications.msi* installer or the *Vantage_8.0_Setup.exe* installer (in C:\Vantage8.0) to the workstation where you want to install the clients, or make the installer available on a network share.

Note: Installers should not be mixed. Use the same installer for all subsequent client installation changes. Mixing installers may produce unexpected results. Also note that the Vantage Setup installer uses considerable storage for the zipped and unzipped files. If space is limited on your client workstations, use the Client Applications installer.

---

3. Double-click the installer program to run it.
4. When the Welcome dialog appears, click Next to display the license agreement.
5. Read the Vantage Software License Terms and Conditions, click *I Accept*... if you agree to license terms, and click Next.
6. If using *Vantage_8.0_Client_Applications.msi* select which client apps to install.
7. If using *Vantage_8.0_Setup.exe,* select Single Node or Array Node installation and click Next.
8. If using *Vantage_8.0_Setup.exe, s*elect Custom Install, Client Applications, and click Next.
9. If using *Vantage_8.0_Client_Applications.msi,* select where to install and click Next.
10. When the Ready to Install dialog appears, click *Install*.
11. When installation is done, click *Finish* to close the installer.

Updating VOD DAI Workflow Portal Configurations

The VOD DAI Workflow Portal has been improved to provide new variables for Group Contiguous Ads and Enable Local Column Headers. Local Ad Descriptors have also been added, and available combinations of ad insertion types and descriptors have changed.

To make use of these new features, portal configurations created with versions prior to Vantage 7.2 must be recreated in Vantage 8.0. VOD Workflow Portal project files should also be recreated with Vantage 8.0 (if the Vantage 6.3 customer-only VOD DAI Local Ad Portal patch has not been applied) to make use of Local ad descriptors.

If configurations and project files from prior to 7.2 are not recreated in Vantage 8.0, existing portal configurations and project files will continue to operate as before, but the new features will not be available.

Configuring Client DB Access and User Administration

The Vantage client and web applications connect to the Vantage database using the system administrator (sa) role by default. To provide greater security, you may want to create additional SQL roles for users that have a lower level of control. Additionally, you can restrict access to Vantage by enabling user administration and creating user accounts.

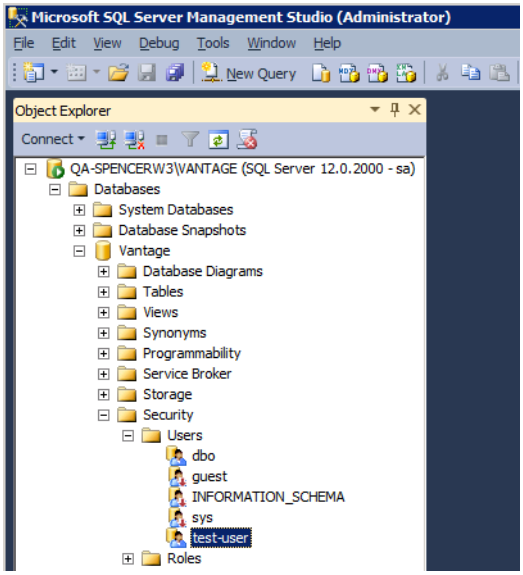
The following procedures explain how to set up client database roles and Vantage user accounts.

Configuring Vantage DB Users

To create a new user for logging into the Vantage database from clients, follow these steps:

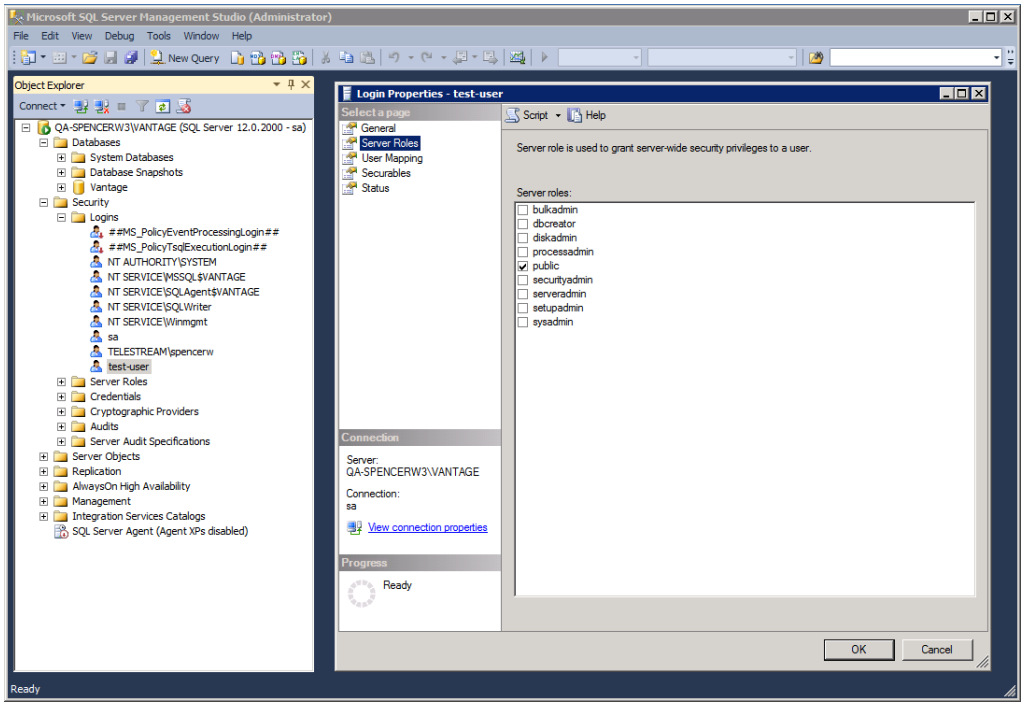
1. Launch the SQL Server Management Studio on the Vantage database server.
2. In Object Explorer, access Databases > Vantage >Security.
3. Right-click New and select User.
4. In the new user dialog box General page, select a user type and enter a login, password, and select other options.
5. Click OK when finished.

   The new user will appear in the Users list.



6. Expand Security, and expand Logins.
7. Right-click the new user and select *Properties*.

8. In the Login Properties window, go to Server Roles and enable *public*. Click *OK*.

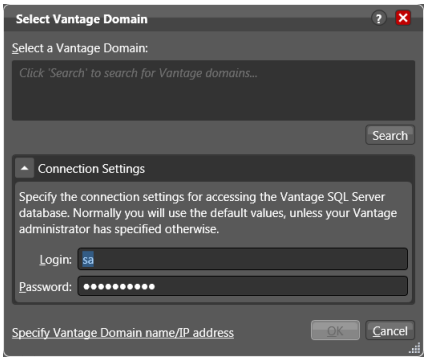


The next step is to move to the client host and save the same user login and password for the client apps to use when logging into the Vantage database.

Configuring Client Login Connection Settings

To configure client apps to use the new client login to the database, follow these steps:

1. Open a client or web app and select (File >) Change Vantage Domain.
2. Click Search and select the Vantage domain from the list of domains.
3. Click the Connection Settings drop-down menu.
4. Enter the client database user and password in the Login and Password fields
5. Click OK.
6. Repeat these steps for each client application.



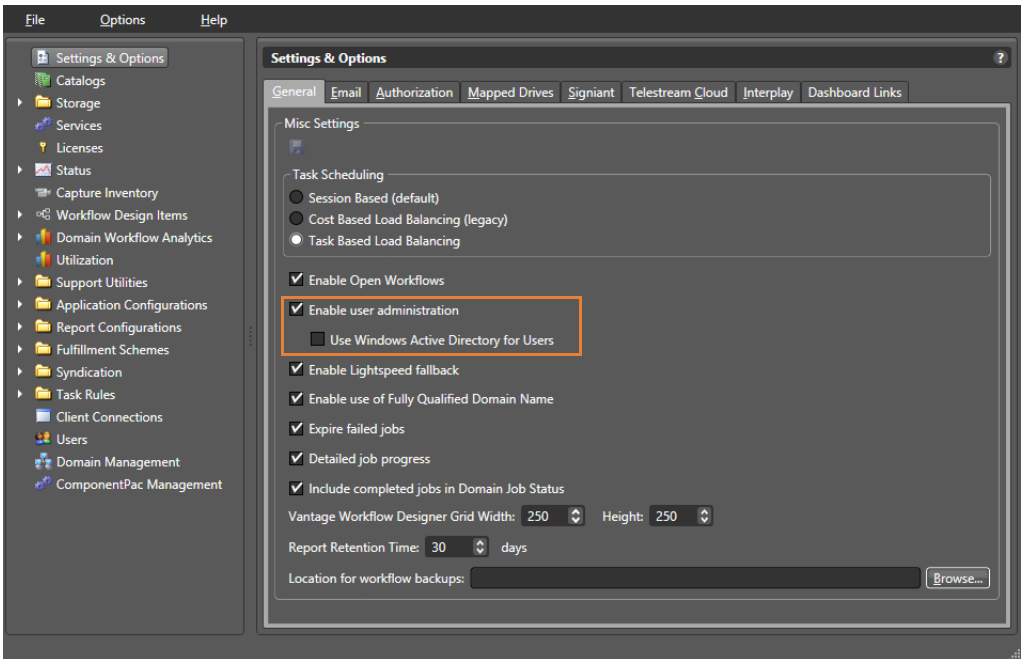
Enabling User Administration

The Vantage User Administration feature is disabled by default, so no login is required to use Vantage client apps. If you want to improve security by requiring a Vantage login, follow these steps:

1. Open the Vantage Management Console.
2. Select Settings and Options in the left panel.
3. Select the General tab.
4. Check Enable User Administration.
5. Check Use Windows Active Directory for Users if you want to use Windows logins for accessing Vantage. Leave this option unchecked to create unique Vantage user accounts for each user.

   If Active Directory is enabled, ASP.NET Impersonation configuration is required, as documented earlier in this chapter under *Using Web Apps with Active Directory*.

   See *Managing Users* in the Vantage Management Console Help system for more information.

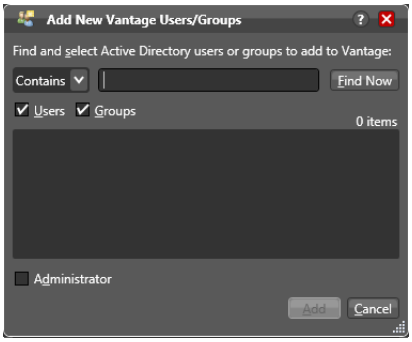


Next, continue in the Vantage Management Console to create user accounts as explained in the next topic.

Creating Vantage Users

If you enabled Vantage User Administration, create users as follows:

1. Click the *New User* button or right-click and select *New User*.
2. For Windows Active Directory, search for and select a user. For a Vantage user account, enter the username and password (and confirm the password).
3. Check the *Administrator* check box if you want the new user to be an administrator.
4. For non-administrators, check *User cannot change password*, if you want to protect the password from being changed by the user.
5. Click *OK* or *Add* to add the user, and then click *Save* to save your changes.
6. Repeat this process to create as many Vantage users as you need.



This completes the process of setting up clients and web apps for database and user access. Now when you start a client or web app, the client app will log into the Vantage database with the database user account you created with public privileges. Then the app will ask the user to log into Vantage with their Vantage or Windows Active Directory user account. This configuration provides a better level of security than the default settings.

Verifying the Installation

At this point in the installation, you should have a fully installed, fully functioning Vantage domain. Before installing updates or doing further system configuration, do a thorough check of all domain components to verify they are fully operational.

Launch the following desktop shortcuts to make sure they are working:

- Vantage Management Console
- Vantage Workflow Designer
- Vantage Workflow Portal
- Vantage Dublist Portal
- Vantage Web Apps—use a browser to access this URL: http://[server name]/Vantage/

Testing the domain at this point assures you that everything has been installed correctly or allows you to pinpoint any components that need reinstalling or configuring.

Once your system is known to work correctly, you can proceed to the next topic, installing updates. If any problems develop after updating, you will know that the update caused the problem, and you can focus on resolving the problem with the update.

Note: Existing workflows do not require updating to run as they did on the earlier Vantage release. However, new options in actions do not display automatically and are not usable until you upgrade each action as described in the *Vantage User Guide*.

Note: Automatic Windows and software updates and automatic restarts of Vantage servers should be disabled. Schedule update installation and system restarts only during planned maintenance periods to prevent disruption of Vantage operations.

Command Line Installation

Vantage includes the capability of installing from the command line, either attended (full UI) or unattended (silent, no UI). For example, system administrators may wish to install Vantage on multiple servers of an array by using an unattended command line installation mode that does not require you to answer any questions or manually select any options. Alternatively, you can initiate an attended full UI installation from the command line as well.

Note: Unattended (silent) installation is intended for installing on array nodes that do not include the database or QuickTime, since the database and QuickTime cannot be installed using this mode.

The Vantage 8.0 installer consists of a self-extracting archive executable (.exe) file containing the Vantage Setup file and other components, including ComponentPacs. When you run the archive file, it extracts the installation files to a directory, and then automatically starts the Vantage Setup file to install the product and ComponentPacs. Alternatively, you can extract without installing, and run a manual installation later.

During extraction, you are prompted to select the directory where you want to extract the Vantage Setup installer and other components. By default this directory is *C:\Vantage8.0*. After extraction the Vantage Setup installer starts automatically from the directory where you extracted it (unless you issue an extract-only command).

The extracted directory contains these directories and files:

C:\Vantage8.0\ComponentPacs\

C:\Vantage8.0\redist\

C:\Vantage8.0\tools\

C:\Vantage8.0\Vantage_8.0_Setup.exe

The ComponentPacs directory contains the multiple Vantage ComponentPacs.

The redist directory contains all of the non-Telestream redistributable installation packages, including 10 VC++ redistributables, .NET 4.8, openCL runtime, OpenXML SDK, UrlRewrite, and SQL 2016 SP1 Express.

The tools directory contains the Vantage Database Deployment utility.

Note: If you extract and copy the Setup file away from the extracted directory before running it, the installation still succeeds, but no ComponentPacs are installed. If the server is part of a Vantage Array, the ComponentPacs are retrieved from another server in the Vantage Domain. Additionally, redistributable components are installed from the Internet rather than from the extracted copies.

Extracting and Installing

The following example shows how to run the archive and the installer. Details about the commands are provided after this topic.

Open a Command Prompt

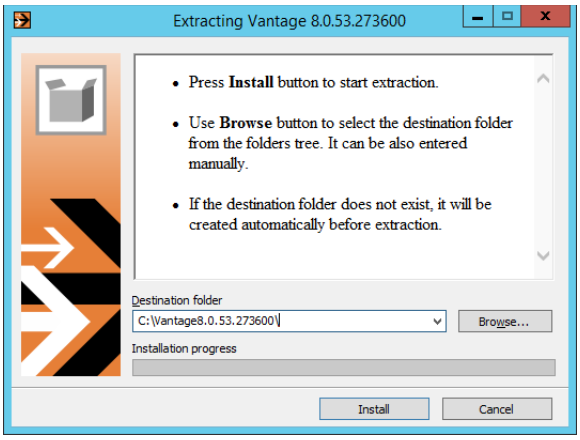
To start a command line extraction and installation, open a command prompt by typing `cmd` in the Start screen and selecting Command Prompt.

Run the Archive and the Installer

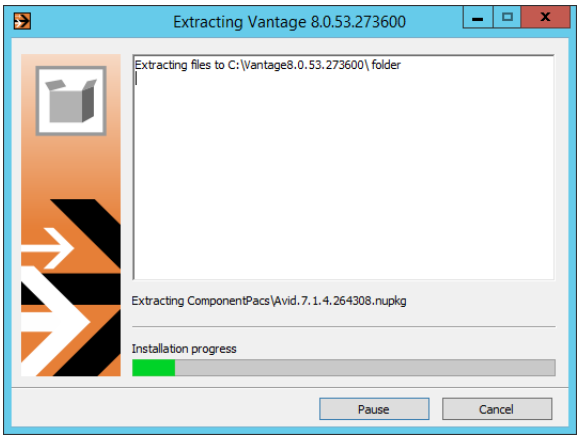
1. Enter a command to run the archive, which will extract the files to a directory and automatically start the installation:

   ```
   c:\> Vantage_8.0.exe -sp"/install /passive InstallFeatures=ClientFeatures"
   ```

2. Extraction begins and the following dialog appears:

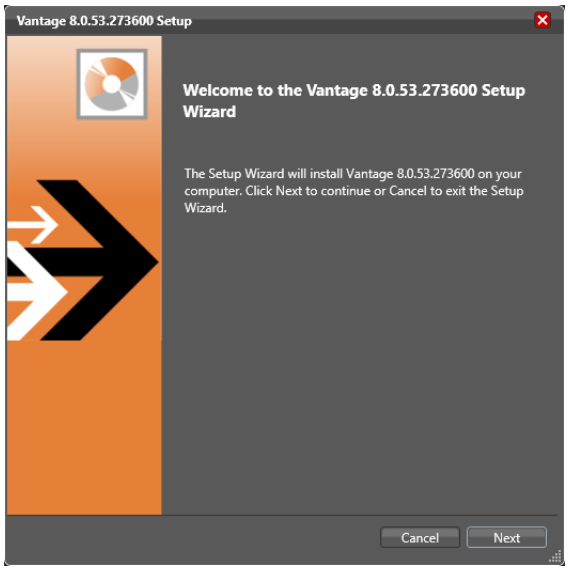


3. Browse or enter a new destination or use the default destination. Then press Install.



Extraction begins and the screen shows a progress bar. When extraction completes, the Vantage Setup installer starts and the Vantage Setup Wizard appears.

4. Press Next to start the installation, and follow the prompts to complete the installation. Refer to *Installing a Vantage Array* earlier in this chapter for installation details.



The following topics present command line extraction and installation commands and options.

Self-Extracting Archive Commands

Commands, options, and parameters for the *Vantage_8.0.exe* self-extracting archive are presented here.

Help Command

To bring up the Vantage Setup command list at the command prompt, pass this example help command through the Vantage self-extractor:

```
C:\Vantage_8.0.exe -s -sp-?
```

Command List

The Vantage self-extracting executable file has its own commands and a command that passes parameters through to the Vantage Setup application:

Option	Description
-d<path>	Sets the destination folder for unpacked files.
-sp<param>	Defines parameters to be passed to the Vantage Setup application.
-s	Sets silent mode. Both the self-extracting dialog and extraction progress will be hidden.

Command Examples

Example 1. Silently extract the Vantage Setup and ComponentPacs to C:\Installers\Vantage\:

```
c:\> Vantage_8.0.exe -dC:\Installers\Vantage -s
```

Example 2. Silently extract the Vantage Setup and ComponentPacs to the default extraction directory C:\Vantage\8.0.exe\, then passively install the Vantage Client Applications:

```
c:\> Vantage_8.0.exe -s -sp"/install /passive InstallFeatures=ClientFeatures"
```

Example 3. Silently extract the Vantage Setup and ComponentPacs to the default location, then silently install the Vantage Services with custom service credentials:

```
c:\> Vantage_8.0.exe -s -sp"/install /quiet ServiceAccount=MyDomain\DomainUser
ServicePassword=passphrase InstallFeatures=FacilityFeatures"
```

Example 4. Silently extract without running the Vantage Setup:

```
c:\> Vantage_8.0.exe -s -sp-NoOp
```

Vantage Setup Installer Commands

Commands, options, and parameters for the *Vantage_8.0_Setup.exe* installer are presented here. You can also see the list at the command prompt by using the help command. You can pass these commands through the archive executable so that extraction and installation run automatically, or you can extract the Setup installer and then issue these commands manually to control installation separately from extraction.

Help Command

To bring up the Vantage Setup command list after extraction, use this example help command:

```
C:\<Vantage_8.0_Setup.exe> /?
```

Command Syntax

Commands follow this pattern:

```
<path><Vantage_Setup_Filename> /<Option> <Parameter=Value> <parameter=Value;Value>
```

The path to the executable file is first, followed by no space and the executable name. Next comes a space and a slash, followed by no space and an option.
After the option come any parameters, separated by spaces. Multiple features (Values) for a single parameter are separated by a semicolon.

Command Examples

Example 1. Unattended installation of all Vantage services but no client apps:

```
C:\Vantage_8.0_Setup.exe /quiet InstallFeatures=FacilityFeatures
```

Example 2. Start attended full UI installation with customer service credentials:

```
C:\Vantage_8.0_Setup.exe /install ServiceAccount=MyDomain\DomainUser
ServicePassword=passphrase
```

Replace the ServiceAccount and ServicePassword credentials above with the local or domain user account credentials that the services run under.

Example 3. Unattended installation of all services and clients:

```
C:\Vantage_8.0_Setup.exe /quiet InstallFeatures=VantageFeatures
```

Example 4. Unattended installation of clients only:

```
C:\Vantage_8.0_Setup.exe /quiet InstallFeatures=ClientFeatures
```

Example 5. Unattended installation of Web Applications:

```
C:\Vantage_8.0_Setup.exe /quiet InstallFeatures="Web Applications"
```

Note that quotation marks are required above and below because of the space between words.

Example 6: Unattended installation of clients and Web Apps:

```
C:\Vantage_8.0_Setup.exe /quiet InstallFeatures="Web Applications;ClientFeatures"
```

Command List

Specify the operation to be performed. If no command is specified, */install* is assumed.

/install - Install Vantage

/uninstall - Remove Vantage

Options

When using the unattended installation modes, the Vantage Database and QuickTime will not be installed (as those components require user interaction).

When using an unattended mode, the return code returned by the setup application should be checked to verify that the installation was successful.

The installer uses standard Windows system error codes as its return values. For example, 0 indicates success; 3010 indicates that installation was successful, but a reboot is required.

/passive - Perform the operation with no user interaction. A progress dialog will be displayed.

/quiet - Perform the operation with no user interaction. To wait for the install process to be completed, the command can be run using *start /wait*.

/installDatabase - Perform an applicable SQL Server and Vantage Database installation. If a Vantage database already exists, this flag instructs the installer to update the existing database. Otherwise, a new database is installed and configured.

Parameters

Parameters are set using the form: ParameterName=Value with a space between each parameter/value pair.

InstallRoot - Specify a directory where the installation will be deployed.

DatabaseDir - Specify a directory where the database files will reside (only applies when the database is selected). This defaults to a subdirectory of InstallRoot.

StoreDir - Specify a directory where the default Storage will be created (only applies to single-node installs).

ServiceAccount - Specify the user account that each service should be configured to run as. This should be in the form *domain\user*.

ServicePassword - Specify the password for the ServiceAccount user.

InstallFeatures - A semi-colon delimited list of features to install. This list is tree-structured, and specifying a parent feature will cause all child features to be installed. For example, including *FacilityFeatures;ThirdPartyFeatures* will cause all the Vantage services to be installed. See below for the available feature identifiers.

Features

This list is tree-structured, and specifying a parent feature will cause all child features to be installed. For example, if you want ALL features installed, only *VantageFeatures* needs to be specified.

VantageFeatures
- ClientFeatures
  - WorkflowFeature
  - MmcFeature
  - DublistPortalFeature
  - SubmitApp
- FacilityFeatures
  - AnalysisFacility
  - AvidFacility
  - CableFactoryFacility
  - CatalogFacility
  - CloudFacility
  - FactoryFacility
  - LiveFacility
  - HeFactoryFacility
  - MessageFacility
  - MetadataFacility
  - MonitorFacility
  - PlaylistFacility
  - SdkFacility
  - StagingFacility
  - SubtitleFactoryFacility
  - TrafficFacility

TransportFacility
ThirdPartyFeatures
AsperaFacility
AudioToolsFacility
CerifyFacility
BatonFacility
DigimetricsFacility
eMotionFacility
FileCatalystFacility
NexidiaFacility
PulsarFacility
ScreenFacility
SigniantFacility
ThirdPartyFacility
VidCheckerFacility
LiveFacility
WebApplications

Examples of Installing Vantage Services for a Local User

The following examples show how to install Vantage Services via the command line for a specific local user in a workgroup.

To install Vantage Services that use a specific local account:

1. Use the *ServiceAccount* and *ServicePassword* parameters in the command line.
2. Add the following to your command line:

   ServiceAccount=hostname\User ServicePassword=Password
3. Edit the values <hostname> and <Password> as required for your installation.

See the following examples for specific commands using the steps above.

Example 1. Install Vantage clients, services, and files to the default locations without a database.

- Services will use the local administrator in this example to login.
- Modify the *ServiceAccount* and *ServicePassword* values as required:

  C:\Temp>Vantage_8.0_Setup.exe /install /quiet InstallFeatures=VantageFeatures ServiceAccount=hostname\administrator ServicePassword=admin

Example 2. Install Vantage services and files to the default locations without a Vantage database. Vantage client applications will not be installed.

- Services will use the local administrator in this example.
- Modify the *ServiceAccount* and *ServicePassword* values as required:

  C:\Temp>Vantage_8.0_Setup.exe /install /quiet InstallFeatures=FacilityFeatures ServiceAccount=hostname\administrator ServicePassword=admin

Example 3. Install Vantage services, Vantage files, and the Vantage database to the default locations. Vantage client applications will not be installed.

- Services will use the local administrator in this example.
- Modify the *ServiceAccount* and *ServicePassword* values as required:

  C:\Temp>Vantage_8.0_Setup.exe /install /quiet /installdatabase InstallFeatures=FacilityFeatures ServiceAccount=hostname\administrator ServicePassword=admin

Example 4. Install Vantage services, Vantage files, the Vantage database, and Vantage client applications to the default locations.

- Services will use the local administrator in this example.
- Modify the *ServiceAccount* and *ServicePassword* values as required:

  C:\Temp>Vantage_8.0_Setup.exe /install /quiet /installdatabase InstallFeatures=VantageFeatures ServiceAccount=hostname\administrator ServicePassword=admin

Example 5. Install Vantage services, Vantage files and the Vantage client applications to the default locations. The Vantage database will be installed to a location defined by *DatabaseDir*.

- Services will use the local administrator in this example.
- Modify the *ServiceAccount* and *ServicePassword* values as required:

  C:\Temp>Vantage_8.0_Setup.exe /install /quiet /installdatabase DatabaseDir=D:\SampleDatabaseDir InstallFeatures=VantageFeatures ServiceAccount=hostname\administrator ServicePassword=admin

Example 6. Install Vantage services and files to the default locations. The database will be installed to a location defined by *DatabaseDir*. Vantage client applications will not be installed in this example.

- Services will use the local administrator in this example.
- Modify the *ServiceAccount* and *ServicePassword* values as required:

  C:\Temp>Vantage_8.0_Setup.exe /install /quiet /installdatabase DatabaseDir=D:\SampleDatabaseDir InstallFeatures=FacilityFeatures ServiceAccount=hostname\administrator ServicePassword=admin

Upgrading and Modifying Vantage

This chapter explains how to upgrade an existing Vantage installation from a prior version, how to update components, and how to modify an installation. These topics are discussed:

- Upgrading from a Previous Version
- To upgrade Vantage from any prior version, follow this procedure to uninstall all components except the domain database before installing the new version:
- Installing the Upgrade
- Updating Vantage Between New Versions
- Using ComponentPac Management to Update Actions
- Updating Individual Components
- Moving the Vantage Domain Database
- Adding a Server to a Vantage Domain
- Adding a Lightspeed Server to an Existing Vantage Domain

Upgrading from a Previous Version

If this is a new Vantage installation, skip this chapter and go to the Installing Vantage chapter.

To upgrade Vantage from any prior version, follow this procedure to uninstall all components except the domain database before installing the new version:

1. Back up your Vantage database by using the Vantage Management Console Domain Management/Backup feature. You may also want to export all workflows, catagories, nicknames, labels, variables, scripts, and other custom components.
2. Log into Vantage Workflow Designer Domain Job Status and stop all jobs or allow all jobs to complete.
3. Close all Vantage client programs and Web applications using this domain.
4. For each computer with Vantage client programs installed in this domain, log in with a local administrator account and perform the following steps:
   a. Open Control Panel > Programs and Features > Uninstall Programs.
   b. Select Vantage Client Applications (if present) and click Remove or Uninstall.
   c. Uninstall all Vantage update packs that are installed: Select each Vantage update pack in reverse sequential order (latest to oldest), and click Remove or Uninstall. Perform this step for all installed update packs.
5. On the server hosting Vantage Web apps, use the Control Panel uninstall tool (see Step 4) to select Vantage Web Applications and click Remove or Uninstall.
6. On the servers hosting the Telestream Media Transcode and Analysis engine, log in with a local administrator account and follow these steps:
   a. Select Start > Administrative Tools > Services to display the Services window.
   b. Right-click and select Stop for the following services: Vantage Analysis service and the Vantage Transcode service.
   c. In the Control Panel uninstall tool (see Step 4), select Telestream Media Transcoding & Analysis Engine and click Remove or Uninstall.
7. On the Vantage database server log in with a local administrator account, and using the Control Panel uninstall tool (see Step 4), follow these steps:

Note: Subsystems (IPP, QuickTime, etc.) that have been installed during Vantage installation are not removed, and Vantage domain data and media you have created are not removed.

---

   a. Select Vantage and click Remove or Uninstall. This removes Vantage, but your Telestream folder, including your Database folder and files, remain in place so your Vantage configuration is preserved.
   b. Leave MS SQL Server in place—do not uninstall it.

Note: If you want to change the Microsoft SQL edition (for example, from Express to Standard), or if you want to move the Vantage domain database to a different server,

complete the Vantage installation, and then see Moving the Vantage Domain Database.

At this stage, the Vantage software has been removed, but your database contents and service configuration files and the SQL Server are still intact. When you install the latest Vantage, you can reuse these database files and let Vantage upgrade them. Continue now with the next topic, Installing the Upgrade.

Installing the Upgrade

The following procedure upgrades an older Vantage version to a new one.

CAUTION: Upgrade all components. Upgrading only selected components can result in component mismatches, causing a non-functioning Vantage system. If you have any questions, contact Telestream Vantage Support.

1. Log in to the Vantage server with a local administrator account, and make sure that virus-checking software and Windows Firewall are off. (See *Anti-Virus Software Recommendations* and Firewall Guidelines for details))
2. To protect your data, use the Vantage Management Console to back up your database using the Domain Management/Backup feature to create a backup file. (See Backing up the Existing Database for instructions.)
3. Stop any active jobs or allow them to complete. Workflows should be deactivated. Close any open Vantage apps.
4. Run the *Vantage_8.0.exe* file and click Install to extract and run the Vantage _8.0_Setup installer.
5. When the Welcome dialog appears, click Next to display the license agreement.
6. License Agreement—Click *I Accept* if you agree to the license terms, and then click Next.
7. Select *Custom Install* and select check boxes to install the desired Vantage features, and click Next.
8. When Ready to Install appears, click *Install* to begin installation, which takes a few minutes. Progress is displayed as the installation takes place.

Note: The Vantage Setup program checks for an existing SQL Server installation, and if found, Setup skips the installation of SQL Server. If SQL Server is not found, SQL Server 2016 SP1 Express will be installed. Similarly, if no Vantage database is found, a new one is installed. If a Vantage database is found, it is upgraded; upgrading preserves workflows, design items, job history, catalogs, stores, application configurations, user settings and licenses.

9. Click Next when the installer indicates it is finished.
10. When installation is complete, click Finish to quit.

11. The installer displays *Installation was successful!* (or indicates errors if unsuccessful). Click Done to close the installer application. Database installation is complete.
12. If you are upgrading a Vantage Array, you have just completed the database server upgrade. Next, upgrade any other servers in the next step.
13. Repeat these steps for any other servers in the Array, such as servers hosting the transcoding engine, services, and web applications. When you run the installer on each server, select the components to install corresponding to the components you are replacing on that server.
14. When all servers and components have been upgraded, the upgrade is complete.
15. Test your workflows to make sure all required items to run the workflows are still present and the workflows still run as expected.

Note: Existing workflows do not require updating to run as they did on earlier Vantage releases. However, you might need to re-create some aspects of existing workflows to take advantage of new user interface components. For example, new options in Flip actions do not display automatically after upgrading. Refer to the *Vantage User Guide* for details about enabling new features in actions and workflows.

Note: If your ComponentPacs from an earlier Vantage version reside in a custom location *other than* C:\Program Files (x86)\Telestream\Vantage\ComponentPacs, you may need to copy the 8.0 ComponentPacs from *C:\Program Files (x86)\Telestream\Vantage\ComponentPacs* to your custom location. Then you will need to use the ComponentPac Management in the Vantage Management Console to install the 8.0 ComponentPacs.

You can see or change the location in which ComponentPacs reside using *ComponentPac Management* > *ComponentPac storage location* in the Vantage Management Console.

Updating Vantage Between New Versions

Between version upgrades, Telestream may issue *update packs* for the current Vantage version to replace selected components for the purpose of adding small features, bug fixes or improving performance. The Update Pack installers are designed to install smoothly with minimal impact to the overall installation.

To locate and install Vantage update packs, do the following:

1. Go to the Telestream Vantage download Web site:

   http://dynamic.telestream.net/downloads/download-vantage.asp?prodid=vantage
2. Review the Vantage download page to determine if there are any update packs that should be installed.
3. If there is an update pack to install, review the release notes that accompany the update and install the update pack according to your requirements and the instructions in the Release Notes.

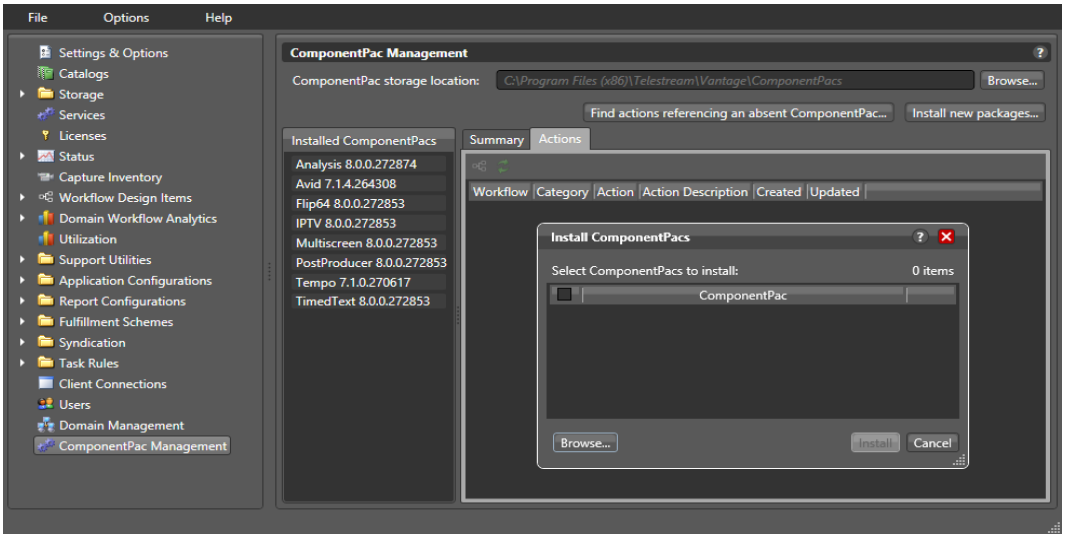
Using ComponentPac Management to Update Actions

ComponentPacs are uniquely numbered and versioned software libraries that have replaced the component patches previously distributed for updating these specific transcoding-related actions:

- Analyze
- Capture
- Chronicle
- Compose
- Conform
- Flip 64
- IPTV Flip
- Multiscreen Flip
- Tape Capture
- Tempo
- Timed Text Flip

These libraries install into an existing Vantage Framework using the ComponentPac Management feature of the Vantage Management Console (below). They must be stored in a central location accessible to all machines in a Vantage Array.

Please note that if a change is required within the Vantage framework to non-transcoder service components, those updates are still made using a Vantage patch or update pack, not a ComponentPac. Note also that the Flip, Identify, and Examine actions are not managed by the ComponentPac feature.



Installing ComponentPacs

Installing new ComponentPacs as explained below makes them available for use but does not affect existing jobs, actions, or workflows until you explicitly upgrade them.

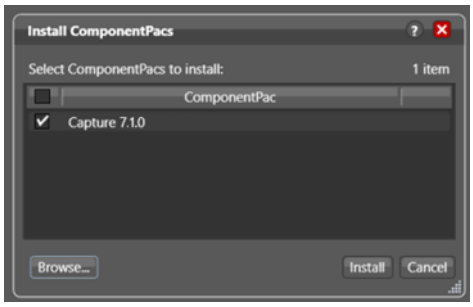
1. Obtain the new ComponentPac from Telestream.net or Telestream Support and place it in a folder accessible by the Vantage Management Console.
2. Open the Vantage Management Console, and click ComponentPac Management in the left column. Installed ComponentPacs, if any, are listed in the Installed ComponentPacs list on the right.
3. In the right panel Storage Location field, enter or browse to specify a path to a central *ComponentPac storage location*. This is where new downloaded packages will be stored and installed from. If you do not specify a path, the default location is used: C:\Program Files (x86)\Telestream\Vantage\ComponentPacs\.

Note: For an all-in-one (single node) installation, the ComponentPac storage location can be a local path. For a multi-node installation (Vantage array), the ComponentPac storage location must be accessible to the Vantage services on all Vantage servers (via a UNC path or a SAN drive letter with appropriate permissions).

One convenient way to securely install ComponentPacs from a share is to use Vantage Authorization credentials. To do this, create a share for a single user which is a different login than the logins to Windows or Vantage. (Shares can be created for single or multiple users or groups, and the user can be the same or different from the Windows user login.) Then in the Vantage Management Console, go to Settings & Options > Authorization and add the credentials for the share user. Next, restart the services to recognize the new credentials, and then test share access. You can now use the share as your ComponentPac central storage location.

---

4. Click the *Install new package* button.
5. Browse to where you downloaded the ComponentPac. Click on the ComponentPac to install, and click Open. (Skip if the ComponentPac is already present.)



6. Check the desired ComponentPac in the *Install ComponentPacs* window, and click *Install* to install and register the package with the domain.
7. When installation finishes and the package appears in the Installed ComponentPacs list, restart all affected services on all nodes to deploy the pacs. ComponentPacs are unpacked and made ready for use when the Vantage services targeted by the ComponentPac are restarted. Unpacked pacs are stored in C:\Program Files (x86)\Telestream\Vantage\Components\ on each Vantage service node.

Notes:

1. New actions and workflows created in the Workflow Designer use the latest installed ComponentPac. However, existing actions and workflows must be selected and upgraded to use the latest ComponentPac. If they are not upgraded, they will continue to use the ComponentPac with which they were created. See the *Vantage User Guide* for detailed action and workflow upgrade instructions.
2. In Vantage version 7.0, existing actions and workflows use the latest installed ComponentPac if the ComponentPac used to create them is no longer present. You may need to recreate the action if the latest ComponentPac does not support the action's outdated settings. If the missing ComponentPac is reinstalled, the actions will resume use of that ComponentPac.
3. Starting with Vantage 7.0 Update Pack 1, workflows created with a previous version of Vantage (such as Vantage 6.3) use the earliest ComponentPac installed. When you upgrade a workflow created with an older Vantage version to Vantage 7.0 or later, the actions are tied to the latest ComponentPacs currently installed.
4. The Session Log available in the Workflow Designer Job Status or Domain Job Status panel lists which ComponentPac was used for a completed job.
5. If a Vantage service is unable to unpack a ComponentPac (such as when the Vantage service does not have the appropriate user credentials to access the file location of where the ComponentPac file resides), an entry is added to the service trace log to record the issue.
6. If you convert a single-node Vantage domain to a multi-node Vantage domain and if the installed ComponentPacs reside in a local path, the ComponentPacs must be copied or moved to a shared folder location and re-installed or re-registered.
7. If you have deployed a new database or replaced an existing database with a new one using the Database Deployment Utility, the domain will not have any ComponentPacs installed. When you run the Vantage Setup installer to install Vantage components and services after deploying the database, the major ComponentPacs will be installed. If you do not run the Vantage Setup installer after database deployment on the database server, or if you wish to install additional ComponentPacs, use the Vantage Management Console > ComponentPac Management feature to install the ComponentPacs as described in the preceding steps.
8. Upgrading Vantage via an update pack, such as 7.0 UP1, may cause ComponentPac actions to be shown as eligible for upgrade even though a new ComponentPac has not been installed. This is normal behavior for update packs. You can upgrade the ComponentPac actions or not, as you prefer.
9. Attempting to install a future ComponentPac that doesn't match the current Vantage version fails to install the ComponentPac and displays an error message: “ComponentPacs built for a future release of Vantage are not supported, and will not be installed.”

Upgrading Actions and Workflows

When upgraded, existing actions and workflows can use the latest installed ComponentPacs, framework upgrades, or component patches. These instructions briefly explain how to upgrade existing actions and workflows. See the *Vantage User Guide* for detailed action and workflow upgrade instructions.

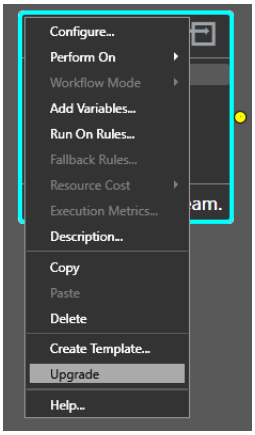
Note: Once an action is upgraded it can't be directly downgraded. However, you can restore workflows to their pre-upgraded state by importing the automatic backup copy that Vantage places in the C:\VantageWorkflowBackup directory (local to the Workflow Designer client). Beginning with Vantage 7.0 UP1, a log file describing the upgrades is also included in that directory.

Note: If you want to change the location of automatic ComponentPac backups, open the Vantage Management Console, select *Settings and Options*, and browse for a new *Location for workflow backups*.

Note: During service startup, if multiple ComponentPacs are available, the service uses the highest-versioned ComponentPac to populate the action template in the database. This process updates default action configurations and also ensures that newly created actions will always use the latest ComponentPac.

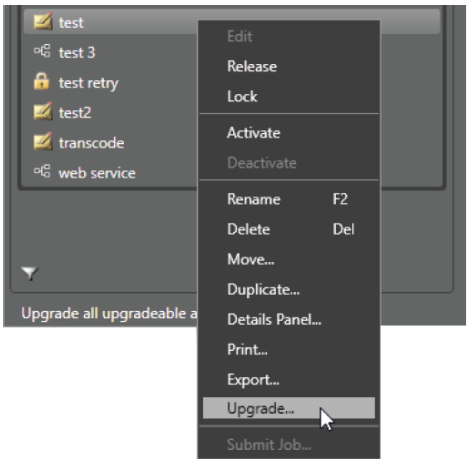
Upgrading an Action

To upgrade an action in Workflow Designer, right-click the action in its workflow and select *Upgrade* from the context menu.



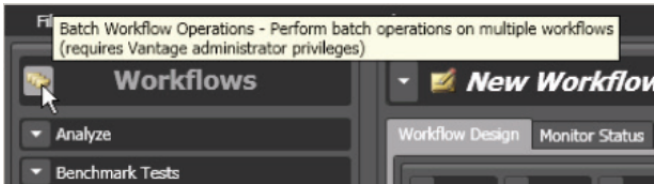
Upgrading a Workflow

To upgrade a workflow in Workflow Designer, right-click the workflow in the workflow list on the left, and select *Upgrade* from the context menu.



Upgrading Workflow Batches

To upgrade workflows in batches or all at once, click the Batch Workflow Operations button in the upper left corner of the Workflows list, or select File > Batch Workflow Operations > Check for Upgrades.



Locking Against Upgrades

You can also lock workflows to protect against upgrades until you are ready, providing Secured Version Control. To do so in the Vantage Workflow Designer right-click the workflow in the workflow list and select Lock. You can also select Lock for multiple workflows using the Batch Workflow Operations dialog.

Removing ComponentPacs

To remove old ComponentPacs:

1. Open the Vantage Management Console, and click ComponentPac Management in the left column. Installed ComponentPacs are listed in the Installed ComponentPacs list on the right.
2. Click the package you plan to uninstall and check the Actions panel for affected workflows and actions.

   Export all workflows that reference the ComponentPac you want to uninstall (to back them up), and then delete the workflows in Vantage.
3. Click the Uninstall button in the ComponentPac Management window while the package to be removed is selected.

Note: The Uninstall button appears *only* when a package is not used by any actions.

---

4. After uninstallation completes, restart the affected Vantage services. If the Workflow Designer was open, close it and reopen so all the changes to take effect.

The selected old package is removed and no longer appears in the ComponentPac Management list.

Updating Individual Components

At times, you may be instructed by Telestream Support to update specific components that are not handled by the ComponentPac feature.

CAUTION: Updating individual components should be done only as recommended by Telestream. Upgrading only selected components can result in component mismatches, causing a non-functioning Vantage system. If you have any questions, contact Telestream Vantage Support before updating.

The *Vantage_8.0_Setup.exe* installer (extracted to the C:\Vantage8.0 folder when you run the *Vantage_8.0.exe* archive file) allows you to add (or re-install) individual Vantage components (services, clients, T&A Engine) as your needs change. You can rerun the installer, select *Modify* at the first screen, and check the components you want to add.

The following instructions explain how to install individual components:

- Updating the Vantage Domain Database
- Updating Vantage Server Components
- Updating Vantage Clients on Client Workstations
- Updating Vantage Web Applications
- Moving the Vantage Domain Database

Updating the Vantage Domain Database

The following procedure guides you in updating your Vantage database without removing or changing your SQL Server version.

To update the Vantage domain database, follow these steps:

1. Log in to the target server with a local administrator account, and make sure that virus-checking software and Windows Firewall are off.

Note: For additional information on Vantage use with anti-virus software, see *Anti-Virus Software Recommendations*. For more information on Vantage use with the Windows Firewall, see Firewall Guidelines.

---

2. To protect your data, open the Vantage Management Console and back up your database using the Domain Management/Backup feature to create a backup file. See Backing up the Existing Database if you need detailed instructions.
3. Run the *Vantage-8.0-Database-Deployment-Utility.exe* installer.
4. When the Welcome dialog appears, click Next to display the license agreement. Click *I Accept* if you agree to the license terms, and then click Next.
5. Select *Upgrade existing database* when the Database install mode dialog appears, and click Next.

   This instructs the Vantage installer to upgrade your database and preserve information for workflows, design items, job history, catalogs, stores, application configurations, user settings and licenses.
6. When the Destination Folder dialog appears, accept the default folder or click Change to select an alternate directory on another drive; then click Next.
7. When the Ready to Install Vantage Domain Database dialog appears, click *Install* to begin database installation. This process takes a few minutes to complete.

   The Vantage installer upgrades your database and preserves information for workflows, design items, job history, catalogs, stores, application configurations, user settings and licenses.

Note: Existing workflows do not require updating to run as they did on earlier Vantage releases. However, you might need to re-create some aspects of existing workflows to take advantage of new user interface components. For example, new options in Flip actions do not display automatically after upgrading. Refer to the *Vantage User Guide* for details about enabling new features in actions and workflows.

---

8. When installation is complete, click Finish to quit.

Updating Vantage Server Components

The following procedure updates or modifies the existing Vantage installation to add or remove components. If you are upgrading from one version of Vantage to another, do not use this procedure; instead see Upgrading from a Previous Version.

Note: If you plan to update Vantage and Vantage Web Applications on the same server, you can avoid a Vantage service restart by first updating Vantage Web Applications. See *Updating Vantage Web Applications*. After installing the Web Apps, return here and continue this procedure.

---

1. Log in to the target server with a local administrator account, and make sure that virus-checking software and Windows Firewall are off.

Note: Telestream recommends not using anti-virus software on Vantage servers. If you use anti-virus software, you should identify Vantage as a safe/trusted application. See *Anti-Virus Software Recommendations* and Firewall Guidelines.

---

2. Run the *Vantage_8.0_Setup.exe* installer extracted previously to the C:\Vantage8.0 folder.
3. Select *Modify which products and features are installed*. (This option is presented only if you use the installer originally used to install Vantage, which you should be careful to do. You should not use a newer installer unless instructed by Telestream.)
4. Select *Custom Install*.
5. Check the boxes for all Vantage components on this server that you want to install, and uncheck any you want to remove, and click Next.
6. When the *Ready to Install* dialog appears, click *Install* to begin installation. This process takes a few minutes and shows progress as it runs.

   If Intel Performance Primitives (IPP) is not present, it is installed. For existing installations, it should already be present.

   If QuickTime is not installed (it should be), the installer installs it for you. If you need to install it manually, use this link to download it: QuickTime version 7.6.9.
7. When installation is complete, click Finish to close the installer.

Note: For an All-in-One Single Node installation, Vantage creates a temporary storage area on the local hard drive, and creates a default Vantage catalog in the database.

---

8. Open the Vantage Management Console, select Services in the left panel, and verify that the services you installed are Online and those you removed are Offline.
9. If you changed the clients, verify that the icons on the desktop changed accordingly.

Updating Vantage Clients on Client Workstations

The following procedure explains how to update Vantage clients installed on client machines. To update clients on Vantage Servers, see Updating Vantage Server Components. These client programs can be updated:

- Vantage Management Console (VMC)
- Vantage Workflow Designer
- Vantage Dublist Portal
- Vantage Workflow Portal

You can use either the *Vantage 8.0 Client Applications.msi* installer or the *Vantage_8.0_Setup.exe* installer (extracted to the C:\Vantage8.0 folder when you run the *Vantage_8.0.exe* archive file) to update clients on client machines. When installing on client machines, the client installer is recommended because it downloads faster and takes up less space during installation than the Vantage installer.

Note: Do not mix installers. Whether you use the Vantage installer or the client installer to install the clients, use the same installer for all subsequent client installation changes on that machine. Mixing installers may produce unexpected results.

Using the Client Installer to Install or Update Clients

Install or update Vantage clients using the *Vantage 8.0 Client Applications.msi* installer:

1. Use Windows Control Panel Programs and Features to uninstall existing clients.
2. Run the *Vantage 8.0 Client Applications.msi* installer as an administrator.
3. Accept the license, and select the installation location.
4. Check the clients you want to install and uncheck those you want to remove.
5. Follow the installer steps to complete the installation.

Note: If you simply want to add or remove existing applications, the client installer allows you to Change, Repair, or Remove. These options are presented if you leave the applications in place before running the installer. If you choose Change, applications you check will be installed, and applications you uncheck will be removed.

Using the Vantage Installer to Install or Update Clients

Install or update Vantage clients as follows using the *Vantage_8.0_Setup.exe* installer:

1. Use Windows Control Panel Programs and Features to uninstall existing clients.
2. Run the *Vantage 8.0 Setup.exe* installer as an administrator.
3. Select Single Node Install.
4. Select Custom Install.
5. Check the clients you want to install and uncheck those you want to remove.
6. Browse to select where to install the clients.
7. Follow the installer steps to complete the installation.

Updating Vantage Web Applications

Vantage Web Applications may be installed as part of a Vantage Array and may be updated separately or as part of an array upgrade.

Note: If you are updating the Vantage Web Applications on a server that also hosts Vantage services, the Vantage Web Applications upgrade will stop those services, which will interrupt Vantage operation. Plan to upgrade the Vantage Web Applications when the upgrade will cause the least interruption to Vantage users. This is not an issue when the Vantage Web Applications are installed on a dedicated server.

If you are updating the Vantage Web Applications from version 3.0 or later to 8.0, you do not need to repeat the IIS and .NET server preparation described for new installations. To update Vantage Web Applications, do the following:

1. Uninstall the Web Apps using the Windows Programs and Features Control Panel.
2. Download and run one of these installers as an administrator:
   - Vantage main installer: *Vantage_8.0_Setup.exe* (extracted to the C:\Vantage8.0 folder when you run the *Vantage_8.0.exe* archive file).
   - Vantage Web Applications installer *VantageWebApplicationsSetup.exe*

   To run the EXE as an administrator, right-click and choose "Run as Administrator".

   Note: The *Vantage_8.0_Setup.exe* will remove the Web apps if you run it after installing them. Finish installing all Vantage components on the server before you install the Web Apps.
3. When the Welcome Window appears, click Next.
4. Read the license agreement, and if you accept the terms, click *I Agree*, and Next.
5. If using the *Vantage_8.0_Setup.exe* installer, select Array Installation, select Custom Install, scroll the list, and select Web Applications.
6. When the Select Installation Address dialog appears, set the Application Pool selection to .NET 4.5 for Server 2012, and click Next.
7. Click Install to start the installation.
8. When the Installation Complete dialog appears, click Finish.
9. If Vantage services were running before the Vantage Web Applications upgrade, restart those services using Vantage Management Console > Services or the Microsoft Services tool (Start > Administrative Tools > Services).

Note: If you experience any problems with the upgrade, refer to *Troubleshooting Vantage Installation*. For information on the browser requirements for Vantage Web Applications, see Vantage Web Applications Browser Requirements in *Before You Install Vantage*.

Moving the Vantage Domain Database

You might want to move the Vantage domain database because:

- You are upgrading SQL Server from Express to Standard
- You are upgrading SQL Server from an older version to a newer one
- You are moving the database from one server to another

Note: If you are moving the database in conjunction with a Vantage upgrade, you should complete the upgrade prior to moving the database.

Note: This guide does not provide instructions for moving a mirrored database. Consult your database administrator or contact your Telestream representative regarding installation service options.

To move a Vantage domain database, follow the procedures in the following topics in the sequence presented:

1. Preparing for the Move
2. Backing up the Existing Database
3. Removing the Vantage Domain Database
4. Removing Microsoft SQL Server
5. Installing SQL Server Standard
6. Installing the Vantage Domain Database
7. Restoring the Vantage Domain Database Backup
8. Finishing the Move

Note: This procedure backs up the database, moves the database to a different SQL Server version and/or server, and restores the database. Vantage does not support a Vantage restore from a version 3 Vantage database to a version 4 domain.

Preparing for the Move

If you are upgrading SQL Server, it is recommended that you back up the Vantage domain database, but it is not required. However, if you are moving the Vantage domain database to a new server, you must backup the database, as the backup file will be used to restore the domain on the new server.

To back up the existing Vantage domain database so that it can be transferred to the new database later, follow these steps:

1. Use Vantage Workflow Designer to deactivate all active workflows to prevent new jobs from starting.
2. Use the Job Status Views tab in Vantage Workflow Designer, the Vantage Job Status Views web application, or Vantage Dashboard to either determine when all jobs are complete or stop any jobs in process or in waiting.
3. If you are moving the database to another server, do the following:
   a. Take note of any Storage, Variables, and/or Qualification Rules settings for each service. (In the Vantage Management Console, select Services. In the service panel, click each service and check the tabs at the bottom of the window.)

      When you move the Vantage domain database from one server to another, the Storage, Variable, and Qualification rule configuration for each service is lost. Write down any configuration that you want to transfer to the new server.

Note: The service Storage, Variable, and Qualification Rule configuration is not lost when you change the SQL Server version on a server. Skip to Step 4 if you are not moving the Vantage domain database to a different server.

---

   b. In the Vantage Management Console, remove all services from the Vantage domain (refer to *Managing Services* in the *Domain Management Guide* for details).

Note: The default Vantage user account is *Administrator* with no password. This account has administrative privileges.

---

   c. In the Vantage Management Console, select Licenses in the components panel.
   d. On the Licenses tab, select all licenses and click the Delete button ✕.

Note: To add the licenses back a the end of this procedure, you will need access to the license files. If you do not know where these files are, locate them now before you delete them from the existing database.

---

4. If you are changing the Microsoft SQL version on a server (and not moving the database to another server), place all services in Maintenance Mode (refer to *Managing Services* in the *Domain Management Guide* for details).

Backing up the Existing Database

If you are upgrading SQL Server, it is recommended that you back up the Vantage domain database. If you are moving the Vantage domain database to a new server, you must backup the database, as the backup file will be used to restore the domain on the new server.

To back up the existing Vantage domain database so that it can be transferred to the new database later, follow these steps:

1. In the Vantage Management Console, select the domain you want to modify, select Domain Management in the components panel, click Backup, and use the file save dialog to save the backup file to a safe location.

   You will need to access the backup file to restore the Vantage domain database after you move it.
2. Close all Vantage clients, including Vantage Workflow Designer, Vantage Web Applications, Vantage Workflow Portal, and Vantage Management Console.

Removing the Vantage Domain Database

The Vantage Domain Database may or may not be present as a separate entry in the Windows Control Panel Programs and Features window, depending on how it was originally installed.

In either case, the Domain Database must be removed using one of the following procedures:

If the Domain Database is present in the Control Panel list, remove it as follows:

1. Log in to the server with a local administrator account.
2. Open the control panel tool to remove programs in your operating system:

   Control Panel > Programs and Features > Uninstall Programs.
3. Select Vantage Domain Database and click Remove or Uninstall.

If the Domain Database is *not* present in the Control Panel list, remove it as follows:

1. Log into the server with a local administrator account.
2. Open the control panel tool to remove programs in your operating system:

   Control Panel > Programs and Features > Uninstall Programs.
3. Select Vantage and click Change.
4. Deselect the check box for Vantage Domain Database and continue with removal.

Removing Microsoft SQL Server

When you are upgrading Microsoft SQL Server or moving the Vantage domain database to another server, you may want to remove the old version of SQL Server.

To remove Microsoft SQL Server, follow these steps:

1. Log in to the server with a local administrator account.
2. Open the control panel tool for removing programs:
   Control Panel > Programs and Features > Uninstall Programs.
3. Select Microsoft SQL Server and click Remove or Uninstall.

Note: If you are prompted to stop the SQL Server (VANTAGE) service, go to Start > Services and stop the service before clicking Retry to continue with uninstalling.

Note: If you have multiple instances (for example SQLEXPRESS and VANTAGE), you will need to remove them both.

---

4. Select Microsoft SQL Server Native Client and click Remove or Uninstall.

Note: Uninstalling the SQL Server does not delete your Vantage workflows, resources, or transaction history. It leaves your domain database files intact in [Install_Drive]:\Program Files\Telestream\Vantage\Database. For information on removing the database files, see *Uninstalling Vantage from a Server* in the *Removing Vantage* chapter of the *Domain Management Guide*.

At this point, the SQL Server is removed but the database files and any Vantage services and clients that were installed on the server remain installed. The domain cannot resume operation until the SQL Server is reinstalled on this server or set up on another server.

Installing SQL Server Standard

Please see *Installing SQL Server Standard* in the *Vantage Installation Guide* or the *Vantage Domain Management Guide*. After installing SQL, continue with the next topic below.

Installing the Vantage Domain Database

This task installs the Vantage domain database instance. Follow these steps:

1. Log in to the database server with a local administrator account, and make sure that virus-checking software and Windows Firewall is off.

Note: To effectively operate Vantage services with other networked devices or systems, you must turn off Windows Firewall.

---

2. Stop the SQL Server Agent Service in Start > Services, if it is running.
3. Run the *Vantage_8.0_Setup.exe* installer (extracted to the C:\Vantage8.0 folder when you run the *Vantage_8.0.exe* archive file) and choose to install only the Domain Database for your single node or array installation.
4. License Agreement—When the license agreement appears, read the Vantage Software License Terms and Conditions, and click I Accept if you agree to the license terms. Click Next.
5. Database Install Mode—Click *Install new database* and click Next to continue.
6. Destination Folder—Accept the default folder or click Change to select an alternate folder. Click Next.
7. Ready to Install Vantage Domain Database—Click Install to begin database installation. This process takes a few minutes to complete.
8. Completed—When installation is complete, click Finish.

If you are upgrading SQL Server on the same server, the upgrade is almost complete. Vantage should have discovered the old database files. Now you need to finish the process as described in *Finishing the Move*.

If the old database files are not found, or if you are installing the Vantage domain database on a different server, restore the database from the backup file as described in *Restoring the Vantage Domain Database Backup*.

Restoring the Vantage Domain Database Backup

To restore the Vantage domain database using the backup file you previously created, follow these steps:

1. Start the Vantage Management Console on any Vantage server in the domain.

Note: If you have moved the Vantage domain database to a new server, the name of the Vantage domain changed to the name of the new host server.

---

2. In the Vantage Management Console, select the domain to modify (File > Change Vantage Domain), select Domain Management in the left components panel, click Restore..., and select the file to restore. For more information, refer to the *Database* chapter of the *Domain Management Guide*.

Finishing the Move

To finish the move, you must enable the services you disabled when preparing for the move. If you moved the Vantage domain database to another server, you must also install Vantage licenses. To return Vantage to operation, follow these steps:

1. If you changed the Microsoft SQL version on a server (and did not move the database to another server), do the following:
   a. Remove all services from Maintenance Mode. (In the Management Console, select Services in the left panel, Ctrl-click to select all services in the right panel, right-click to select Exit Maintenance Mode, and click OK.)
   b. Skip to Step 4.
2. If you moved the Vantage domain database to a different server, activate Vantage Domain licenses as follows:
   a. In the Vantage Management Console, open the domain you want to modify, and select Licenses in the components panel.
   b. On the Licenses tab, click the Add License button and use the open file dialog to select the license file.

      If your domain has multiple license files (for multiple features), repeat this step for additional licenses.
3. If you moved the database to another server, update the configuration of services as follows:
   a. In the Vantage Management Console, open the domain you want to modify, and select Services in the components panel.
   b. In the Services panel, click the Add Service button and use the dialog to select a service to add.
   c. If any Storage, Variables, and/or Qualification Rules settings were configured for the service, add them now.
   d. Repeat this step for each service until all services are updated.
4. Use Vantage Workflow Designer to reactivate all workflows.

Adding a Server to a Vantage Domain

The table below lists the types of servers you might want to add to a Vantage domain and shows where you can find instructions for adding these servers.

Server Type	Instructions
Vantage Lightspeed server	A Vantage Lightspeed server can be added to a Vantage domain that uses Vantage version 4.0 or later. When you add a Vantage Lightspeed server to a Vantage domain, the Lightspeed server must be running the same Vantage version as the Vantage domain. The Vantage Lightspeed server ships with an installed Vantage domain database, and all Vantage services on the Lightspeed server are assigned to that Vantage domain database. To add the Vantage services on the Lightspeed server to the existing domain, use the Vantage Management Console to reassign the services. After you reassign the Vantage services, Telestream recommends that you remove the Vantage domain database on the Lightspeed server so that the old Vantage domain is no longer advertised to Vantage client programs and Web applications. To remove the Vantage domain database from the Lightspeed server and reassign services, see *Adding a Lightspeed Server to an Existing Vantage Domain*.
Vantage domain database server	A Vantage domain can host one Vantage domain database, which can be installed on a single or mirrored database server. If your Vantage domain has a Vantage domain database on a single database server, you can do the following: • Move the Vantage domain database to another server as described in Moving the Vantage Domain Database. • Add a database server to mirror the current server. This guide does not provide instructions on setting up a mirrored database server. Consult your database administrator or contact your Telestream representative regarding installation service options.
Vantage array server	Additional Vantage array servers add more throughput capacity to your Vantage domain. When you add a Vantage array server to a Vantage domain, the server must be running the same Vantage version as the Vantage domain. For instructions on adding a Vantage array server, see *Installing Vantage Array Components* in the *Domain Management Guide*.

Server Type	Instructions
Vantage Web Applications server	For instructions on adding a Vantage Web Applications server, see *Installing and Configuring Vantage Web Applications* in the *Domain Management Guide*.
Vantage store	You can add multiple Vantage stores to a domain. A Vantage store can reside on a dedicated server or with Vantage services. For instructions on setting up a Vantage store, see *Setting Up a Vantage Store* in the *Domain Management Guide*.

Adding a Lightspeed Server to an Existing Vantage Domain

This topic describes how to add a Lightspeed server to an existing Vantage domain. A Vantage domain can host just one Vantage domain database. When you add a Lightspeed server to an existing domain, Telestream recommends that you remove the Vantage domain database and SQL Server on the Lightspeed server so that Vantage does not advertise the unused Vantage domain on the Lightspeed server, and so that memory used by the SQL Server becomes available for Vantage use.

Note: The Lightspeed server and the existing Vantage domain must be using the same Vantage release, which must be Vantage 4.0 or later.

To add a Lightspeed server to an existing Vantage domain, follow the procedures in the following topics in the sequence presented:

1. Moving Licenses to Another Domain
2. Moving Vantage Services to Another Domain
3. Setting the Vantage Windows Log On ID for a Service
4. Removing the Vantage Domain Database
5. Removing Microsoft SQL Server

Moving Licenses to Another Domain

Any purchased licenses that have been added to the Lightspeed server should be removed from the Lightspeed server so they can be added to the existing domain. Most Vantage domains have a single license that contains multiple license options. However, Vantage can accept and combine license options in multiple license files. In most cases, you need to remove the license from the Lightspeed server and contact Telestream to arrange a Lightspeed server update to the license for the existing domain.

To delete licenses from the Lightspeed server and add them to the existing Vantage domain, do the following:

1. In the Vantage Management Console, open the domain for the Lightspeed server, and select Licenses in the components panel.

Note: The default Vantage user account is *Administrator* with no password. This account has administrative privileges.

---

2. Place all services in Maintenance Mode. (In the Management Console, select Services in the left panel, Ctrl-click to select all services in the right panel, right-click to select Enter Maintenance Mode, and click OK.)
3. On the Licenses tab, select all licenses and click the Delete button .

Note: To add licenses to the other domain, you will need access to any license files sent from Telestream or an updated license file for the other domain.

---

4. In the Vantage Management Console, open the domain to which you want to add the licenses, and select Licenses in the components panel.
5. If you are updating the license for the existing domain, do the following:
   a. Select the license you are updating and click the Delete button .
   b. Click the Add License button and use the open file dialog to select the updated license file.
6. If you are adding licenses to the existing domain, click the Add License button and use the open file dialog to select a license file.

   Repeat this step for additional licenses.
7. Take all services out of Maintenance Mode. (In the Management Console, select Services in the left panel, Ctrl-click to select all services in the right panel, right-click to select Exit Maintenance Mode, and click OK.)

Moving Vantage Services to Another Domain

To move services from the Lightspeed server domain to the existing Vantage domain, do the following:

1. In the Vantage Management Console, open the existing domain to which you want to add the Lightspeed server services.
2. Select Services in the component (left) panel.
3. Click the Add Service button to display the Select Service dialog.

   The Select Service dialog lists all Vantage services running in this subnet, and the list includes unassigned services and services running on other Vantage domains.
4. Select one or more Lightspeed server services to add to this domain, and click OK to add them.

   Services are identified by name, machine, and Vantage domain. Use the machine name to identify the services on the Lightspeed server. To select multiple services, use shift-click to select a series of services, or use option-click to select individual services.
5. If you are moving a service from one domain to another, the Vantage Management Console displays the Reassign Services window. Click OK to add them to this domain.

Setting the Vantage Windows Log On ID for a Service

On the Lightspeed server, the default log on ID for each Vantage service is the *Local System account*. This log on ID provides access to files on the local server only. If a service requires access to files on another server, the Local System account cannot provide that access; rather, the service must be able to log onto the other server with an account the other server recognizes and grants privileges to.

To give Vantage services access to input folders, output folders, Vantage stores or other files on another computer, you must do the following:

- Create a Vantage Windows user ID for the service
- Grant access on the target servers to the Vantage Windows user ID for the service.

For more information, see *Windows Authentication Guidelines* in the *Domain Management Guide*.

Within a single service, the Windows log on ID for that service must be the same on all Vantage servers in the domain. For example, all Analysis services within the domain must use the same log on ID. However, the Catalog service, which does not access files, can remain set to use the Local System account.

To change the log on ID for a Vantage service, do the following for that service on each Vantage server in the array:

1. In the Vantage Management Console, click Services in the left panel.
2. Select a service in the list (Shift-click or Ctrl-click to select multiple services).

3. Click the Change Service Logon button or right-click and select Change Service Log On. A dialog opens, requesting the logon.
4. Select Local System account to use the account currently accessing Vantage from your local machine, or select *This account* and fill in the user name and password for the account that has access to the desired network location.
5. Click OK. A message confirms that the logon is changing.

Note: Changing a service logon restarts that service. Also note, when changing the logon for multiple services simultaneously, some services may not restart properly. If this occurs, go to Start > Services on the server, select the affected services, and click (or right-click) Restart to manually restart the services.

---

6. Grant file access to the new user on all Vantage servers that the service must access.

Removing the Vantage Domain Database

The Vantage Domain Database may or may not be present as a separate entry in the Windows Control Panel Programs and Features window, depending on how it was originally installed.

In either case, the Domain Database can be removed using one of the following procedures:

If the Domain Database is present in the Control Panel list, remove it as follows:

1. Log on to the server with a local administrator account.
2. Open the control panel tool to remove programs in your operating system:

   Control Panel > Programs and Features > Uninstall Programs.
3. Select Vantage Domain Database and click Remove or Uninstall.

If the Domain Database is *not* present in the Control Panel list, remove it as follows:

1. Log onto the server with a local administrator account.
2. Open the control panel tool to remove programs in your operating system:

   Control Panel > Programs and Features > Uninstall Programs.
3. Select Vantage and click Change.
4. Deselect the check box for Vantage Domain Database and continue with removal.

Removing Microsoft SQL Server

To remove Microsoft SQL Server, follow these steps:

1. Log into the server with a local administrator account.
2. Open the control panel tool to remove programs (Control Panel > Programs and Features > Uninstall Programs).
3. Remove Microsoft SQL Server as follows:
   a. Select Microsoft SQL Standard and click Remove or Uninstall.
   b. Click Remove.
   c. Click OK.
   d. Select the Vantage instance, and click Next.
   e. Click Select All, and click Next.
   f. Click Next.
   g. Click Remove.
   h. Click Next.
   i. Click Close.

Note: If you are prompted to stop the SQL Server (VANTAGE) service, be sure to do so in the Services control panel, before proceeding by pressing Retry.

Note: If you have multiple instances (SQLSTANDARD and VANTAGE for example), you will need to remove them both.

---

4. Select Microsoft SQL Server Native Client and click Remove or Uninstall.

Note: Uninstalling the Vantage Domain Database or the SQL Server does not delete your Vantage domain database files containing your workflows, resources, and transaction history. It leaves those files intact in [Install_Drive]:\Program Files\Telestream\Vantage\Database. If you reinstall SQL and the Domain Database application later, you can attach these files and restore your previous Vantage domain.

Removing Vantage

The following topics describe how to remove the Vantage software and associated third party software:

- Uninstalling Vantage from a Server
- Uninstalling Vantage Clients from a Workstation
- Removing ComponentPacs

Uninstalling Vantage from a Server

Each Vantage server may host some or all of the software components listed in the following procedure. You can use this procedure whether you are removing all of Vantage or individual components.

To completely uninstall Vantage or to uninstall specific components, follow these steps:

1. Log into the server with a local administrator account.
2. In the Vantage Workflow Designer, stop all jobs.
3. In the Vantage Management Console, stop all services. Also if you intend to reinstall or upgrade Vantage, use the Backup function to save your domain database to a backup file. This protects your data in the event of a problem with re-installation. (You can skip this step if you are only removing the Web Applications.)
4. Open the Windows Control Panel and start the Uninstall Programs tool.
5. Using the Control Panel, right-click each of the following Vantage programs in the order listed below and select Uninstall to remove them:

- Vantage Web Applications
- Vantage update packs in reverse sequential order
- Telestream Media Transcode and Analysis engine
- Vantage
- Vantage Domain Database

Note: Subsystems (IPP, QuickTime, etc.) that have been installed during Vantage installation are not removed, and Vantage domain data and media you have created are not removed.

Note: If your domain has a mirrored database server, be sure to disable mirroring and stop the SQL Server Agent service, before proceeding.

---

6. Use the Control Panel tool to remove Microsoft SQL Server Express or Standard:
   a. Select Microsoft SQL Express or Microsoft SQL Standard and click Remove or Uninstall.
   b. Follow the prompts until removal is complete.
   c. Optional step—Click the refresh button in the Control Panel to update the display, which will clear some of the SQL Server components from the display.
7. In the Control Panel tool, select Microsoft SQL Server Native Client and click Remove or Uninstall.

Note: Uninstalling the database does not delete your Vantage workflows, resources, or transaction history. It leaves your database files intact in [Install_Drive]:\Program Files\Telestream\Vantage\Database. This allows you to re-attach a Vantage domain

database and return Vantage to a previous state when re-installing or upgrading Vantage. In the event of any problems, you also have the backup you created earlier.

8. To permanently delete all Vantage files, use Windows Explorer to delete the following directory:

   [Install_Drive]:\Program Files (x86)\Telestream\Vantage

CAUTION: Deleting these files permanently destroys the Vantage domain database including the domain configuration, workflows, and history. If you created a backup file earlier using the Vantage Management Console or if you create one now, you can preserve the domain for re-installation later.

Uninstalling Vantage Clients from a Workstation

On workstations, the Vantage client programs are the Vantage Management Console and Vantage Workflow Designer. Vantage Workflow Portal (VWP) and Vantage Dublist Portal can also be installed on a workstation.

To completely uninstall Vantage from a workstation, follow these steps:

1. Open the Control Panel Uninstall Programs tool in your operating system:
2. If the Vantage client software is installed, select Vantage Client and click Remove or Uninstall.
3. If the Vantage Workflow Portal is installed, select Vantage Workflow Portal and click Remove or Uninstall.

Removing ComponentPacs

To remove old ComponentPacs:

1. Open the Vantage Management Console, and click ComponentPac Management in the left column. Installed ComponentPacs are listed in the Installed ComponentPacs list on the right.
2. Click the package you plan to uninstall and check the Actions panel for affected workflows and actions.

   Export all workflows that reference the ComponentPac you want to uninstall (to back them up), and then delete the workflows in Vantage.
3. Click the Uninstall button in the ComponentPac Management window while the package to be removed is selected.

Note: The Uninstall button appears *only* when a package is not used by any actions.

---

4. After uninstallation completes, restart the affected Vantage services. If the Workflow Designer was open, close it and reopen to all the changes to take effect.

The selected old package is removed and no longer appears in the ComponentPac Management list.

Troubleshooting Vantage Installation

Use this topic to install, upgrade, or scale Vantage, and configure it for operation.

Note: To obtain the Vantage installation software, go to www.telestream.net/telestream-support/vantage/support.htm. At this same location, you can browse the Vantage Web library, user's guides, application notes, and other documents.

The following topics describe how to install and upgrade Vantage components:

- Troubleshooting Vantage Installation
- Troubleshooting Vantage Web Applications

Troubleshooting Vantage Installation

Possible installation issues and solutions are explained in the following topics.

Database Deployment Utility

Action Templates and Schemes Do Not Work Correctly

If Vantage action templates and fulfillment schemes do not deploy properly, it may be because you assigned the Vantage services to the host name of the database server before using the Database Deployment Utility.

To resolve this issue, use the Microsoft Services Console to restart the Vantage services after the database is deployed. Also close and reopen the Vantage Management Console and Workflow Designer.

Verifying DTC Service Settings

During installation, Vantage configures and starts the Distributed Transaction Coordinator (DTC) Windows service. There is no need to verify DTC configuration and operation after the install, but if you suspect that the DTC service has stopped or the DTC configuration has changed, you can use the information in this topic to verify the DTC status and configuration.

Vantage uses DTC for communication between services and the SQL Server database to guarantee that messages are processed as atomic messages (that is, the entire message is successfully processed or the database state is reverted to the pre-message state). This guarantees that services do not duplicate jobs and that jobs do not register in a partial or incomplete state in the database.

In a Vantage domain, DTC must be running and correctly configured on each Vantage database server and Vantage server, or Vantage services cannot communicate with the Vantage domain database, and the domain stops operation.

To verify operation and configuration, use the procedures in the following topics:

- Verifying DTC Operation
- Verifying the DTC Configuration

Verifying DTC Operation

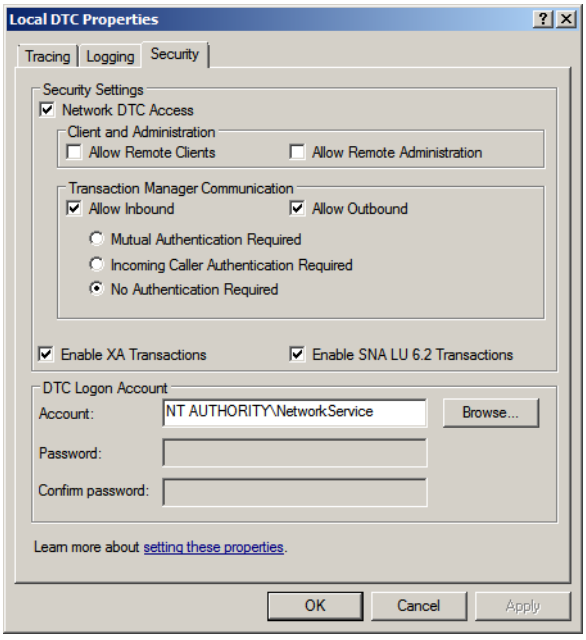
To verify that the DTC is running, do the following:

1. In Windows, select Start > Administrative Tools > Services.
2. Verify or set the startup type for Distributed Transaction Coordinator to Automatic.
3. If you need to change the startup type, do the following:
   a. Right-click on the Distributed Transaction Coordinator service and select Properties to display the Properties window.
   b. Select Automatic from the Startup Type dropdown and click OK.
4. If the DTC service is not running, right-click on the service name and select Start.

Verifying the DTC Configuration

To verify that DTC is configured correctly, do the following:

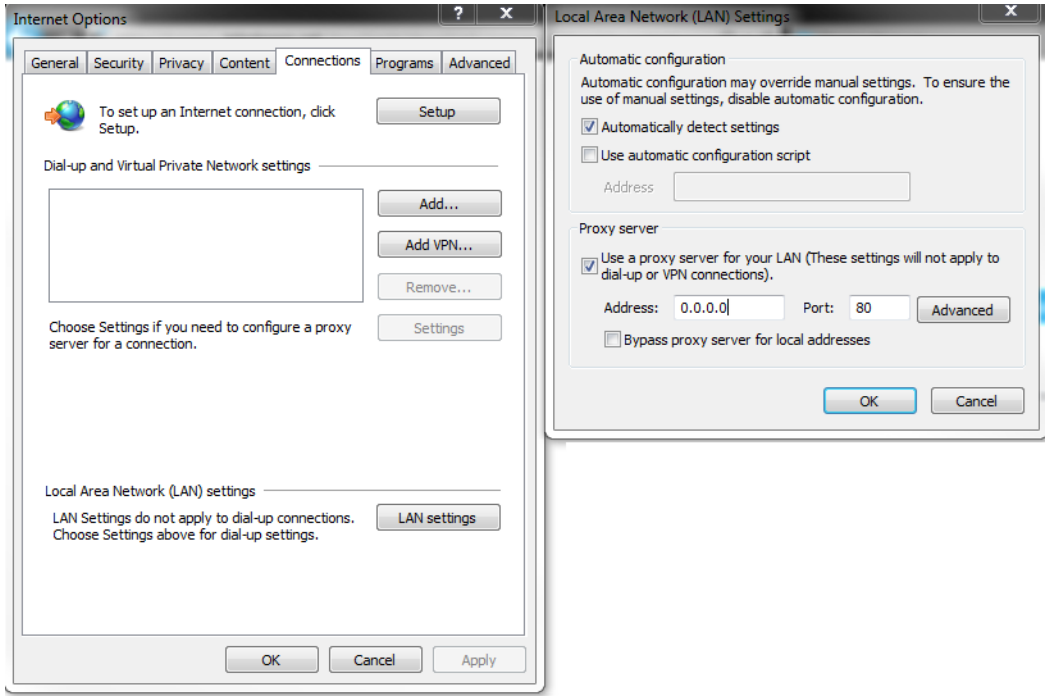
1. In Windows, select Start > Administrative Tools > Component Services.
2. In the left panel, navigate to Component Services >Computers > My Computer > Distributed Transaction Coordinator.
3. In the right panel, right-click Local DTC and select Properties.
4. Click the Security tab.
5. To enable transactions to properly flow from one machine to another, set the Security configuration settings as shown in the figure below, and click OK.



Note: You have to restart the database instance in order for SQL to receive notification of the changes to the DTC. You can restart the database by restarting the server that the database is on.

License Cannot Be Activated Offline

Occasionally the Vantage Management License console may not allow you to activate a license offline. You can defeat the online licensing process and force the offline licensing window to appear by setting the Internet Explorer proxy to a false address as shown below or physically disconnecting the Internet from the computer.



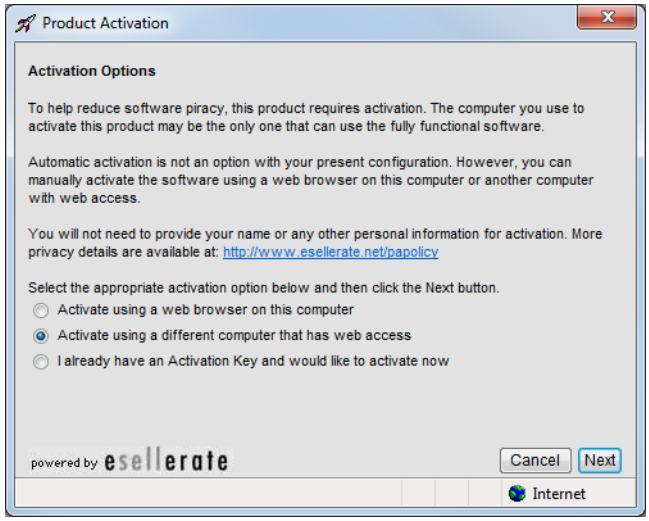
Now when you attempt to activate a license, you will see a dialog showing that there is no Internet connection.

Click Cancel to open the product activation window.

Now you can follow the manual activation process on this computer using the Internet connection and browser of another computer. See the *Vantage Installation Guide* or the *Vantage Domain Management Guide* > *Installation* chapter > *Activating a Vantage License Offline* topic for details about activating without an Internet connection to the Vantage computer.

To activate your license with a different computer, do the following:

1. Click Cancel to continue. Vantage displays the Product Activation dialog:



Troubleshooting Vantage Web Applications

The following are some symptoms and remedies that apply to troubleshooting the installation of the Vantage Web Applications:

- Web Apps can't be accessed by the browser or not all applications show up.

  Refresh the Vantage domain by clicking *Change Domain* in the upper right corner and selecting the desired domain from the list.

- If you experience any of the following issues, run the ASP.NET registration tool (aspnet_regiis.exe) to fix the .Net installation:
  - HTTP 500.19 error appears in the browser when you attempt to access the Vantage Web Applications after a new install.
  - Your Web applications do not display correctly or do not allow you to log in.
  - When running Vantage Web Applications Setup.exe, if the Select Installation Address page does not default to ASP.NET for the Application Pool AND if .NET Framework 4.8 is already installed, run the aspnet_regiis.exe registration tool and then run *Vantage Web Applications Setup.exe* again.

    This is the Windows Command Prompt command to run aspnet_regiis.exe:

    C:\Windows\Microsoft.NET\Framework\v4.0.30319\aspnet_regiis.exe –i

    Note that the path varies slightly depending on the Windows/.NET versions.

    For more information about using aspnet_regiis.exe, refer to the Microsoft MSDN Web site.

- In some browsers, the Web Workflow Portal preview player space bar may not function as expected to pause or play video. This functionality is part of the browser's implementation of the media player. Try using different browsers to find the one that provides the best playback experience in your environment.
- The appearance of captions in the Web Workflow Portal preview player may vary depending on your browser. Try different browsers to find the one that best meets your needs.
- On occasion, when using the Web Workflow Portal preview player in Internet Explorer, if you jump to the end of a clip and then scrub backward followed by stepping forward, you may see a skew or jitter in the frame step capability. This is an artifact of the Internet Explorer HTML5 player.
- Telestream has occasionally observed the Web Workflow Portal media player displaying an incorrect frame number even though the frame position is correct when playing to the end of a clip in the Chrome browser. If this anomaly is problematic, Telestream suggests switching to another supported browser.
- The Web Workflow Portal HTML5 preview player requires Windows Desktop Experience in order to run. Ensure that Desktop Experience is enabled and up-to-date.
- When using the Web Workflow Portal in the Safari browser with the Copy Binder configuration, the Submit button does nothing when the user attempts to submit the portal configuration and a binder. Disabling Block Popup Windows in the Safari Preferences > Security > Web Content menu resolves this issue.