



Preview Server Administrator Guide

Version 4.2



Preview Server



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1 Introduction

This is the guide for Preview Server.

This section contains information on the following topics:

- [About the Document](#)
 - [Customer Feedback and Suggestions](#)
 - [Customer Support Requests](#)
-

1.1 About The Document

This manual covers the information needed in order to configure and operate Preview Server.

This section contains information on the following topics:

- [Document Structure](#)
- [Related Documents](#)
- [Conventions](#)

1.1.1 Document Structure

This guide introduces and explains the different aspects of Preview Server.

This section gives an introduction to this document.

Section 2 lists details [about the Preview Server](#) Windows service: main features, known limitations, and the steps in a basic workflow.

Section 3 describes software and hardware [requirements and recommendations](#).

Section 4 provides guidance on how to [install, configure and remove Preview Server](#).

Section 5 describes [how to work with Preview Server](#); step-by-step instructions for various procedures, and also user interface descriptions.

1.1.2 Related Documents

For complementary information, see the following documents:

- *Graphics Plugin for NLE Administrator's Guide*
- *Viz Engine Administrator's Guide*
- *Viz Multichannel User's Guide*
- *Viz Pilot User's Guide*
- *Viz Trio User's Guide*

1.1.3 Conventions

The following typographic conventions are used in this document:


- *Italic is used for non-hyperlink external references, such as related documents, books, or Internet pages. Italic is also used to emphasize words.*
 - The color blue is used for hyperlinked external references, and also internal references to sections or document elements (such as tables or figures) in the current document.
 - **Bold refers to GUI components.**
1. Numbered paragraphs are used to indicate tasks that must be carried out.
-

1.2 Customer Feedback And Suggestions

We encourage suggestions and feedback about our products and documentation.

To give feedback and, or suggestions, please identify your local Vizrt customer support team at www.vizrt.com.

1. Click on **Contact** (top of page).
2. The Vizrt office which is nearest to your location will be shown, or select from the list of Vizrt offices.
3. Click on the **Contact** button for the office you want.
4. Complete the required details in the window that opens.

 **Note:** If this message is for Customer Support, and there is a Support Contract in place, then click on the 'For support requests, please visit our support portal' link in the message window.

A Vizrt representative will contact you as soon as possible.

1.3 Customer Support Requests

Support Requests are supported by Vizrt if customers have a valid Service Agreement in operation. Customers who do not have a Service Agreement and would like to set up a Service Agreement should contact their regional sales representative (see [Customer Feedback and Suggestions](#)).

When submitting a Support Request, relevant and correct information should be given to Vizrt Support, to make sure that Vizrt Support can give the quickest and best solution to your Support Request.

This section contains information on the following topics:

- [Before Submitting a Support Request](#)
- [Submitting a Support Request](#)

1.3.1 Before Submitting a Support Request

Before a Support Request is submitted make sure that you:

Read:

- The relevant User Guide or Guides
- The release notes

and Check:

- That the system is configured correctly
- That you have the specified hardware, tested and recommended versions
Always refer to your Vizrt Service Level Agreement document.


1.3.2 Submitting a Support Request

When completing a Support Request, add as much information as possible.

Content of a Support Request

The report should contain information about these topics:

- **Problem description:** Include a good description of what the problem is and how to reproduce it. Specify your workflow. Remember to use simple English.
- **Screen shots and illustrations:** Use these to simplify the message. These are extremely useful for Vizrt Support.
- **Software configuration:** Add exact versions of software (-build) used. This is also extremely important information.
- **System locale:** Specify the Region and Language settings of the system.
- **System log files:** Send the system log files.
- **Crash log files:** Send the error report and crash log files from the crash (e.g. Viz Trio program folder <viz install directory>).

 **Note:** Check: If the operating system is Windows 7 and up, dump files can be stored at: <userdir>\AppData\Local\VirtualStore\<viz install directory> (check user rights).

- **System Config file:** Send the system config file(s) (e.g. initialization files, Viz Engine config file, and default.xml for the Media Sequencer).
- **Hardware configuration:** Add exact versions of hardware used, especially for Viz Engine.
Optional:
 - **System setup:** Describe differences in the installation, if any, from the recommended setup.
 - **System Network:** Add a description of how the network, bandwidth, routers, and switches are configured.
Always refer to your Vizrt Service Level Agreement document.

To submit the Support Request:

1. On the www.vizrt.com page, click on Support.
2. Click on **Report a case**.
3. Click on **LOG IN** to login to the Customer and Partner portal.
4. At the top of the Case Management page, click on **Report a Case**.
5. In the online form complete the required minimum information (shown by a red asterisk) and click **SAVE**.

6. In the saved Support Case that opens, complete the various text boxes and upload any required documents, files, etc. (see [Content of a Support Request](#)). To **track the status** of open support tickets, login to the Customer and Partner portal. Add information or communicate about the cases directly with the support team.

2 About The Preview Server

Vizrt's Preview Server manages a pool of Viz Engines. Clients, such as Viz Multichannel, Viz Pilot and Viz Trio, can send requests to the Preview Server, asking for available Viz Engines, which may provide frames for thumbnails and snapshots in an ongoing preview process.

As the name implies, the Preview Server provides snapshots of scenes for the clients during the creative preview process. The preview snapshots provide the user an idea about the looks of the graphics when finally played out in high resolution on a Viz Engine.

The Preview Server provides load balancing, and it can be used to create a redundant renderer pool.

The Preview Server is a Windows service. Upon installation, the service is started, and the startup type is by default set to *Automatic*. The service will then start every time the operating system is started, and it will run in the background for as long as Windows is running. For more details, see [To see the status of the Preview Server service](#).

This section contains information on the following topics:

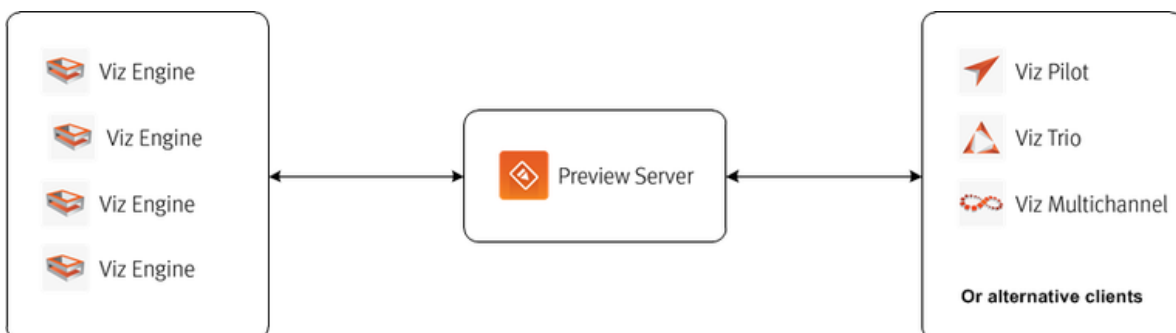
- [New Features in This Version](#)
- [Basic Workflow](#)

2.1 New Features In This Version

For details about the new features in this Preview Server version, see the *Preview Server Release Notes*.

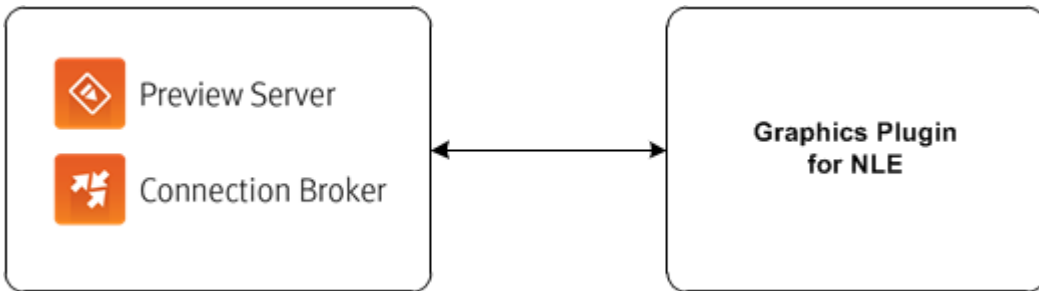
2.2 Basic Workflow

A typical use case is as follows: A Viz Trio user may want to add graphics to a video in Viz Trio's Timeline editor. A video clip is dragged to the timeline, and also one or more data elements (graphics). In the Timeline editor, the graphics elements are added as placeholders on the video timeline. The user wants to display snapshots of the graphics on these placeholders, and hence a Preview Server connection has been set up (for details, see [Configuring Preview Server Settings in Viz Trio](#)). Viz Trio sends a request to the Preview Server, asking for an available Viz Engine that can generate the necessary preview snapshots. The Preview Server passes the task through to a suitable Viz Engine, which in turn generates the snapshots that were requested by Viz Trio.



When used together with Vizrt's control applications Viz Multichannel, Viz Pilot, and Viz Trio, the Preview Server is installed from a stand alone installer.

Alternatively, when used in a workflow together with the Graphics Plugin for NLE, the Preview Server should be installed from a joint installer package, containing both the Preview Server and the Connection Broker.



For more details on this joint Preview Server and Connection Broker setup, see the *Graphics Plugin for NLE Administrator's Guide*.

See Also

- [Common Procedures](#)

3 Requirements And Recommendations

This section contains information on the following topics:

- [Software Requirements](#)
- [Hardware Requirements](#)

See Also


- [Preview Server Release Notes](#)
-

3.1 Software Requirements

- Microsoft .NET Framework 4.5, or later
-

3.2 Hardware Requirements

- Licensed Viz dongles

 **Note:** The Preview Server can run on the same machine as a Viz Engine, but it is recommended to specify additional Viz Engines in order to spread the load.

4 Installation And Configuration

This section contains information on the following topics:

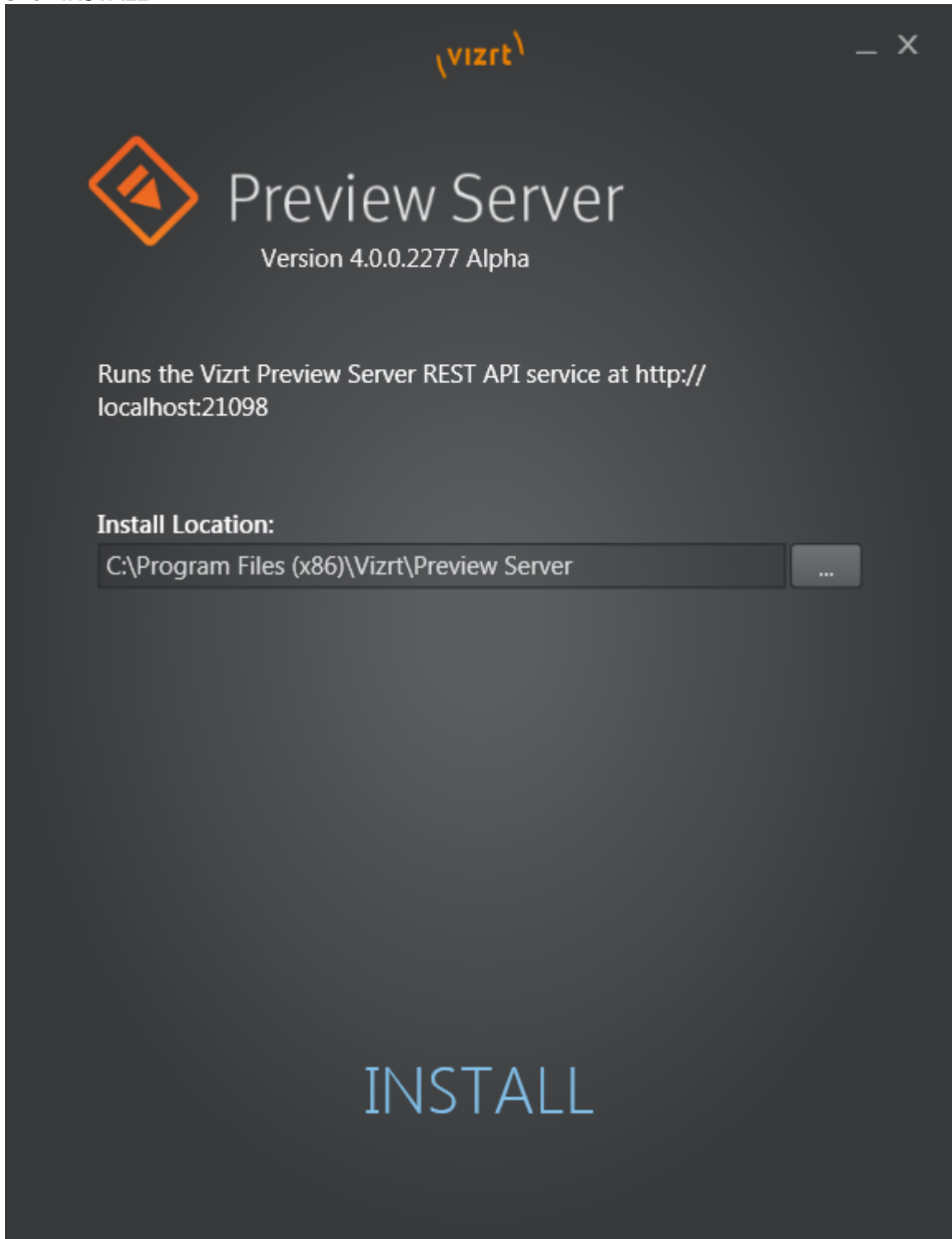
- [Installation](#)
 - [Configuration](#)
 - [Removal](#)
-

4.1 Installation

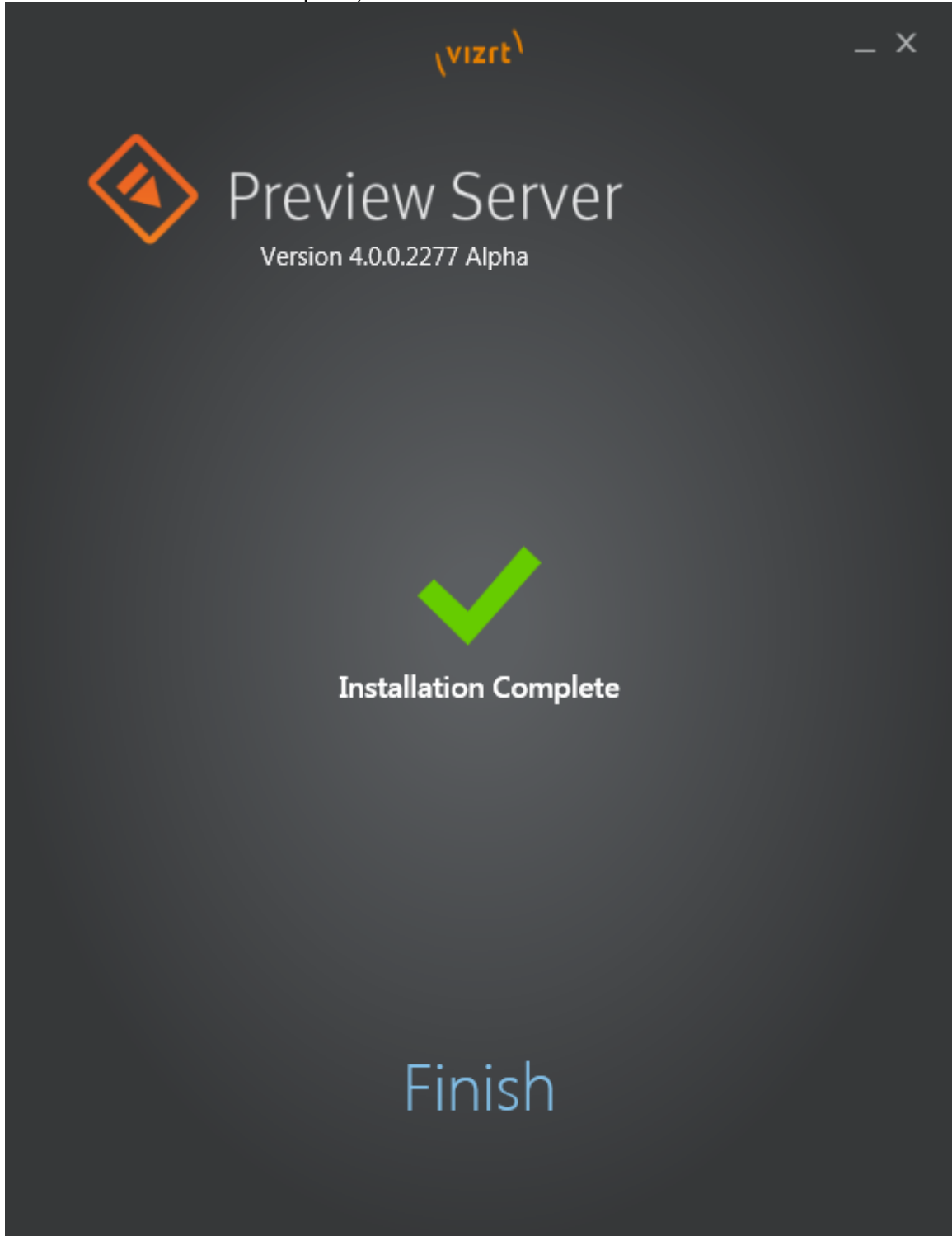
4.1.1 To install Preview Server


1. Run the Preview Server installer file (*.exe) to start the *Preview Server Setup*.
2. Make sure that the **Install Location** is correctly defined.

3. Click **INSTALL**.



4. When the installation is complete, click **FINISH**.



 **Note:** The Preview Server service is automatically started, and the startup type is set to *Automatic*, meaning that the service will start every time the operating system is

started, and then run in the background for as long as Windows is running. For more details, see [To see the status of the Preview Server service](#).

4.2 Configuration

This section contains information on the following topics:

- [Preview Server Service](#)
- [Viz Engines](#)
- [Service Configuration](#)
- [Viz Pilot Data Server](#)
- [Configuring Preview Server Settings in Viz Trio](#)

4.2.1 Preview Server Service

The Preview Server is a Windows Service. It sets up an HTTP REST service on port 21098 on the host it is running on. This service accepts requests for graphical snapshots of playout elements from a Viz Engine.

4.2.2 Viz Engines

The Preview Server can run on the same machine as a Viz Engine (also used for the data element preview in Viz Pilot's newsroom client), but it is also possible to specify additional Viz Engines in order to spread the load. Frame requests will be balanced across available Viz engines in a way that will minimize the memory load of each engine.

The pool of Viz Engines is configured on the [Preview Server Web Interface - Home](#) page.

Scaling of the system should be monitored to avoid excessive client waiting time and potential overload of the Viz Engine(s).

4.2.3 Service Configuration

Modify the Preview Server service's behavior with the following settings in the `PreviewServer.exe.config` file.

`VizEnginePollIntervalMilliseconds`

This setting determines how often a render engine's availability is checked.

`VizEngineTimeoutMilliseconds`

After the specified amount of milliseconds, the render engine list should stop trying to obtain the availability status and declare the engine unresponsive.

`CacheMaxAge`

Frames are cached in memory, allowing quicker responses when requesting frames that have been requested previously. By default, frames are cached for a maximum of one day. This behavior can be changed by modifying this setting, which specifies the maximum number of seconds to retain cached results.

`VizEngineCleanupIntervalMilliseconds`

Once a scene in the Graphic Hub is modified all cached snapshots using that scene must be evicted from the cache. This interval specifies how often the scene modification dates are checked to detect scene changes.

`UseRunLengthEncoding`

It is recommended to switch on run length encoding if relatively high-resolution snapshots are requested.

`CorsAllowedOrigin`

This setting can be used to restrict the allowed cross origin resource sharing pattern that is utilized by the Preview Server.

`DebugMode`

Debug mode enables extended logging for troubleshooting.

`ServicePort`

The service port setting enables changing the port number for regular HTTP requests of the Preview Server service. The service does not accept any HTTP requests if 0 is specified.

`SecurePort`

The secure port setting allows changing the port number for secure HTTPS requests of the Preview Server service. The service does not accept any HTTPS requests if 0 is specified.

`Redraws`

This number specifies how many redraws a renderer has to perform before taking a snapshot of the graphic. Note that increasing this number slows down the overall performance of snapshot requests but it might be required for some scenes e.g. using data pool plugins to render correctly.

`ExternalBaseUrl`

Changes the default URL base for e.g. snapshot requests. This setting will also override possible `Host`, `X-Forwarded-Proto` and `X-Forwarded-Port` headers in requests. An empty string uses the default URL base and enables recognition of such headers in requests.

`AlwaysRunPreviewScript`

If set to `True` it will enable running `OnPreview` script hooks in the scene before taking a snapshot. Note that this might delay snapshot requests for scenes containing such hooks.

`OpenIdConnectServerUrl`

The URL to the OpenId Connect server that is trusted to handle user authentication. When this is set all REST communication with the server must include an `Authorization` HTTP header value with a valid bearer token signed by this OpenId Connect server.

`ValidAudience`

When `OpenIdConnectServerUrl` is set the bearer token must contain this value in its list of valid audiences. Leave empty to allow any authenticated audience.

`AdministrationFromLocalhostOnly`

If set to `True` it will lock down the administration REST APIs (including documentation and web pages) so that they can only be used from the machine this server is running on. By default this is true.

An example Configuration Section:


```

<configuration>
  <applicationSettings>
    <Vizrt.Frames.Properties.Settings>
      <setting name="VizEnginePollIntervalMilliseconds" serializeAs="String">
        <value>5000</value>
      </setting>
      <setting name="VizEngineTimeoutMilliseconds" serializeAs="String">
        <value>1000</value>
      </setting>
      <setting name="CacheMaxAge" serializeAs="String">
        <value>86400</value>
      </setting>
      <setting name="VizEngineCleanupIntervalMilliseconds" serializeAs="String">
        <value>60000</value>
      </setting>
      <setting name="UseRunLengthEncoding" serializeAs="String">
        <value>False</value>
      </setting>
      <setting name="CorsAllowedOrigin" serializeAs="String">
        <value>*</value>
      </setting>
      <setting name="DebugMode" serializeAs="String">
        <value>False</value>
      </setting>
      <setting name="ServicePort" serializeAs="String">
        <value>21098</value>
      </setting>
      <setting name="SecurePort" serializeAs="String">
        <value>4443</value>
      </setting>
      <setting name="Redraws" serializeAs="String">
        <value>0</value>
      </setting>
      <setting name="ExternalBaseUrl" serializeAs="String">
        <value />
      </setting>
      <setting name="AlwaysRunPreviewScript" serializeAs="String">
        <value>False</value>
      </setting>
      <setting name="OpenIdConnectServerUrl" serializeAs="String">
        <value>https://ourstory.vizrt.internal:7500/</value>
      </setting>
      <setting name="ValidAudience" serializeAs="String">
        <value>api.vizrt.com</value>
      </setting>
      <setting name="AdministrationFromLocalhostOnly" serializeAs="String">
        <value>True</value>
      </setting>
    </Vizrt.Frames.Properties.Settings>
  </applicationSettings>
</configuration>

```

4.2.4 Viz Pilot Data Server

For details on how to give all applications with a connection to the Viz Pilot database access to the Preview Server, see the *Data Server* chapter of the *Viz Pilot User's Guide*.

4.2.5 Configuring Preview Server Settings in Viz Trio

If using the Preview Server together with Viz Trio, various Preview Server settings must be defined on the Viz Trio side.

1. In the **Trio Configuration**, navigate to the **Connectivity > Viz One** panel.
2. Enter the hostname and port number in the **Preview Server Host** box (format `hostname:port`). It will then be possible to display snapshots of graphics as video overlays in Viz Trio's Timeline editor.

If the Preview Server should also load the actual thumbnails in the playlist, instead of just showing the default template thumbnails throughout, perform the following steps:

1. In the **Trio Configuration**, navigate to the **User Interface > Page List/Playlist** panel.
 2. Enable the **Use Preview Server to load thumbnails** box.
For more details, see the *Viz Trio User's Guide*.
-

4.3 Removal

4.3.1 To remove Preview Server

This description applies for Windows 10.

1. Open *Apps & features* (**Start > Settings > System > Apps & features**).
2. Select *Vizrt Preview Server*.
3. Click **Uninstall**.

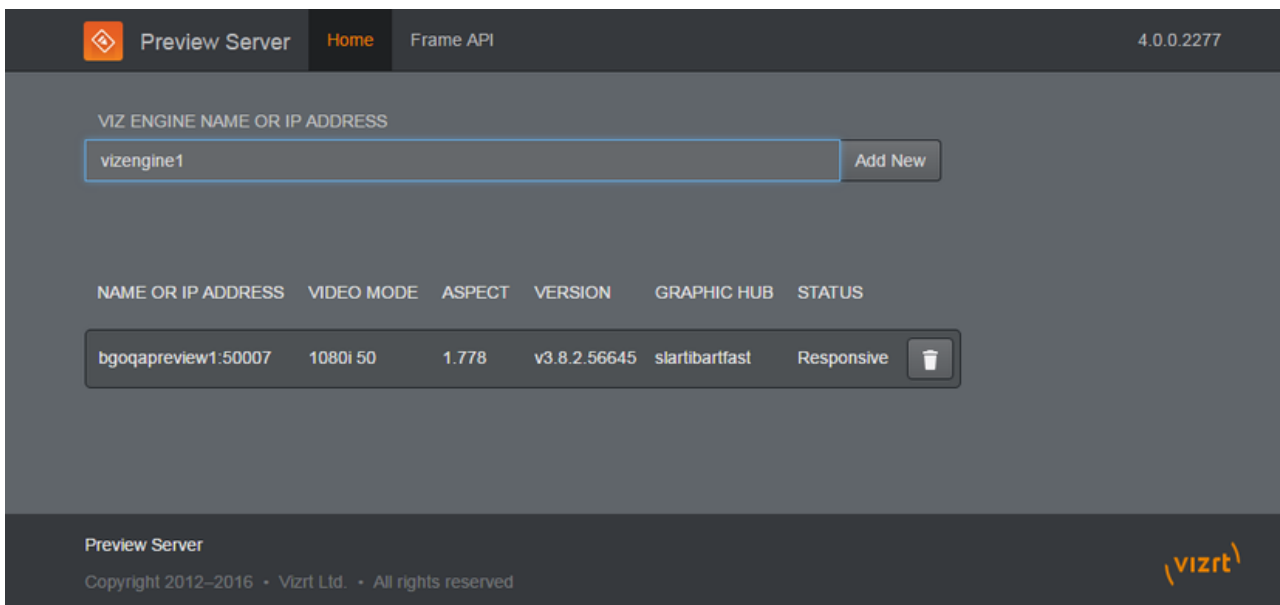
5 Working With Preview Server

This section contains information on the following topics:

- [Preview Server Web Interface](#)
- [Common Procedures](#)

5.1 Preview Server Web Interface

The Preview Server has a web interface for accessing the Preview Server's features.



For details on how to open this interface, see [To see the status of the Preview Server service](#).

The Preview Server web interface contains a menu with links to the following resources:

- [Home](#)
- [Frame API](#)
- [About](#)

5.1.1 Home

From the **Home** page of the [Preview Server Web Interface](#), it is possible to add, monitor and remove Viz Engines from a pool of renderers. The Preview Server can interact with one or more Viz Engines.

See Also


- [Viz Engine Configuration](#)

5.1.2 Frame API

Clicking the **Frame API** link in the [Preview Server Web Interface](#) opens the **REST Frame API** documentation.

This document describes the REST (Representational State Transfer) API over HTTP, provided by the Preview Server for requesting rendered frames from a Viz Engine.

It includes information on the *Resources* and *Data Types* that are used in the interface.

 **Example:** `http://<hostname>:21098/doc/rest_manual`

5.1.3 About

Clicking the *Preview Server* or *version number* link in the [Preview Server Web Interface](#) opens the **About Preview Server** window.

This window contains information about the installed Preview Server version. A link to the list of *third party component credits* is also available here.

5.2 Common Procedures

This section contains procedures related to the following topics:

- [Installation, Configuration, and Removal](#)
- [Startup and Shutdown](#)
- [Viz Engine Configuration](#)

See Also

- [Basic Workflow](#)

5.2.1 Installation, Configuration, and Removal

For details on how to install, configure, and remove the Preview Server service, see the related sections:

- [Installation](#)
- [Configuration](#)
- [Removal](#)


5.2.2 Startup and Shutdown

To access the Preview Server web interface

- Click **Start > All Programs > Vizrt > Preview Server > Preview Server Config**, or

- Double-click the **Preview Server Config** desktop icon (if a shortcut has been created), or
- Navigate to the Preview Server web interface in a browser, using the host name of the machine running the Preview Server, and port *21098*.

 **Example:** `http://<hostname>:21098/`


 **Note:** The default web browser will be used when opening the Preview Server web interface from the Windows Start menu or desktop.

To see the status of the Preview Server service

1. Click **Start > Control Panel > System and Security > Administrative Tools > Services**.
2. Scroll down to the **Vizrt Preview Server** service.
The status of the Preview Server service is listed in the **Status** column.

To start the Preview Server service

1. Perform the steps in [To see the status of the Preview Server service](#).
2. Make sure that the Preview Server status is empty.
3. Right-click the Preview Server entry in the list.
4. From the menu that appears, click **Start**.

 **Note:** Upon installation, the Preview Server service is started, and the startup type is set to *Automatic*. This means that the service will start every time the operating system is started, and it will run in the background for as long as Windows is running. However, if the Preview Server service has been manually stopped, the service can be restarted by following the steps in this procedure.

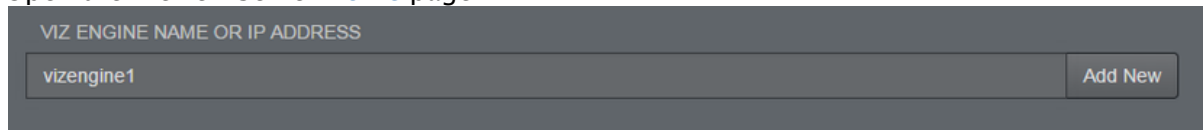
To stop the Preview Server service

1. Perform the steps in [To see the status of the Preview Server service](#).
2. Make sure that the Preview Server status is set to *Started*.
3. Right-click the Preview Server entry in the list.
4. From the menu that appears, click **Stop**.

5.2.3 Viz Engine Configuration

To add a Viz Engine

1. Open the Preview Server [Home](#) page.

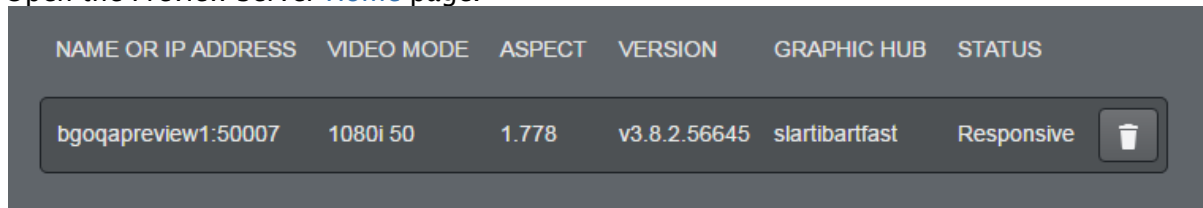



2. Enter the Viz Engine hostname or IP address in the text box.
3. Click the **Add New** button.

⚠ Note: If not specified, the Viz Engine will be added with the default port number *50010*. When using Viz Engines in a so-called dual channel setup, it is possible to run multiple instances of the Viz Engine on a single host. Each instance uses a unique port, which means that two Viz Engines should only be considered duplicates when both the hostnames and port numbers are identical. When referring to Viz Engines in a dual channel setup, type the port number after the host name (for example *VizEngine1:51010*).

To remove a Viz Engine

1. Open the Preview Server [Home](#) page.



NAME OR IP ADDRESS	VIDEO MODE	ASPECT	VERSION	GRAPHIC HUB	STATUS	
bgoqapreview1:50007	1080i 50	1.778	v3.8.2.56645	slartibarfast	Responsive	

2. Click the *trash can* icon next to a Viz Engine entry.

6 Troubleshooting

This section contains typical troubleshooting questions and answers that may arise while installing, configuring or using the Preview Server.

If you do not find answers to your issues, please contact your local Vizrt representative and submit a [Customer Support Request](#).

This section contains information on the following topics:

- [Troubleshooting Tips](#)
 - [Known Limitations](#)
-

6.1 Troubleshooting Tips

6.1.1 Services do not start after installing latest Preview Server

Machines with Apple's Bonjour installed sometimes refuse to install the Preview Server. Uninstalling Bonjour may resolve this installation issue.

6.2 Known Limitations

- It is possible to add the same renderer multiple times on the Preview Server [Home](#) page, if using different spellings. For example, a renderer can be added by entering its hostname, and then, if entering the IP address, the renderer will be added again. Adding the same renderer twice will produce the wrong snapshots.
- Snapshots of scenes with no key defined will result in empty images.
- Adding video mode Viz Engines as renderers could produce incorrect results in scenes using ControlVideo.

See Also

- [Preview Server Release Notes](#)