Pilot Data Server Administrator Guide

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Antivirus

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There are general best-practice solutions, these include setting the antivirus software to not scan the systems during operating hours and that the Vizrt components, as well as drives on which clips and data are stored, are excluded from their scans (as previously stated, these measures cannot be guaranteed).

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1 Introduction

The Pilot Data Server acts as an application server for accessing Viz Pilot's database and other services, and enables the use of features including Crop Service, Template Tagging, Update Service, Person Search, search on Viz One, Thumbnail Generator and Timeline Editor in Viz Pilot workflows. It's also required when using Graphic Hub as the Viz Pilot database, and for integrating with Viz Story, Viz Pilot Edge and Template Builder.

> ⚠ **Note:** Viz Story, Viz Pilot Edge and Template Builder all need to be connected to the Pilot Data Server to access the Viz Pilot database.

1.1 Related Documents

The Viz Pilot User Guide provides complete documentation of the Viz Pilot system. For more information and documentation for all Vizrt products, please visit:

- http://www.vizrt.com
- Vizrt Documentation Center

1.2 Feedback

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2 Installation

This section covers:

- Pilot Data Server Requirements
- Installation Prerequisites
- Installing the Pilot Data Server
- Installing the Thumbnail Generator
- Alternative Installations
- Firewall Exceptions
- Antivirus

2.1 Pilot Data Server Requirements

2.1.1 Pilot Data Server

The Pilot Data Server is installed as an application layer on top of the Viz Pilot database. It acts as an application server for accessing the Viz Pilot database and other services. The Pilot Data Server can be used to handle requests from scripts to provide information on data elements, or to provide Preview Servers the information needed to resolve which scene and data is to be rendered by the Preview Server.

- The Script Runner Service comes packaged with the Pilot Data Server.
- Thumbnail Generator is an optional component that can be selected during the Pilot Data Server installation.

⚠ **Note:** Pilot Data Server can be run in a virtualized environment.

2.1.2 Script Runner Service

The Script Runner Service provides a simple way for users to use Update Service without needing to create their own service. See Update Script Editor in the Viz Pilot User Guide.

2.1.3 Thumbnail Generator

Thumbnail Generator is a Windows service that automatically generates thumbnails of data elements when they are created or changed. The thumbnails are stored in the Viz Pilot database. Thumbnail Generator requires a Preview Server, which is used to serve the thumbnails in the data element feed.

2.1.4   Pilot Data Server Specifications

Component	Requirement
Software	Pilot Data Server
Services	Vizrt Pilot Data Server Vizrt Script Runner Vizrt Thumbnail Generator
Operating System	See the Viz Pilot Release Notes

2.2   Installation Prerequisites

Visual C++ Redistributable Packages for Visual Studio 2013

Make sure the package is installed on the same server on which the Pilot Data Server will be installed.

> ⚠ **Note:** If this package is not installed, some software such as Director and Media Sequence may encounter an HTTP 500 issue when connecting to the Pilot Data Server.

The package can be downloaded from the following link: https://www.microsoft.com/en-us/download/details.aspx?id=40784.

2.3   Installing The Pilot Data Server

1. Click the Data Server installer file (*.msi*) to start the *Data Server Setup Wizard*.
2. In the **Welcome** panel, click **Next**.
3. In the **Destination Folder** panel, define the location of the Data Server program files, then click **Next**.

   > ⚠ **Note:** The default location is *%ProgramFiles%\Vizrt\Pilot Data Server*.

4. In the **Setup Database Connection** panel, define the following settings:
   - **Connect string:** Connection string (`<host name>/<service name>`) to the Viz Pilot database.

     > ⚠ **Note:** When installing the Data Server on a new system, the default database configuration setting points to *localhost/vizrtdb*.

   - **Username:** Viz Pilot database username.
   - **Password:** Viz Pilot database password.

> ⚠ **Note:** This allows you to edit all database settings for all clients connected to the same database.

5. Click **Next**.
6. In the **Ready to install** panel, click **Install**.
7. In the **Completed Setup Wizard** panel, click **Finish**.

2.3.1   Silent Installation

Using silent installation the Data Server can be installed without using the installer GUI.

In a command shell, run the following command:

```
msiexec /i VizrtPilotDataServer-x64-x.x.x.x-Release.msi /quiet
```

If necessary to set properties for the silent installer for the base url, base path and secure port, please use the following parameters:

```
BASE_URL=
BASE_PATH=
SECURE_PORT=
```

This is used in the msi installer as:

```
msiexec <application.msi> /qb BASE_URL=http://vizrt.com BASE_PATH=http://vizrt.com
SECURE_PORT=443
```

2.4   Installing The Thumbnail Generator

The Thumbnail Generator (see the Viz Pilot User Guide) can be installed as an optional component during the Pilot Data Server installation. The option for Thumbnail Generator installation is disabled by default. To install it, select the Thumbnail Generator manually when installing the Pilot Data Server.

2.4.1   Silent Installation

Since the Thumbnail Generator is not installed by default, the INSATLLLEVEL =2 needs to be added to the command string for the Thumbnail Generator to be included during a silent Data Server installation:

```
msiexec /i VizrtPilotDataServer-x64-x.x.x.x-Release.msi INSTALLLEVEL=2 /quiet
```

To upgrade an existing Data Server to include the Thumbnail Generator without uninstalling it, the following command needs to be run:

```
msiexec /i VizrtPilotDataServer-x64-x.x.x.x-Release.msi
ADDLOCAL=ThumbnailGeneratorService /quiet
```

2.5 Alternative Installations

- If **Crop Service** installation is required (see the relevant section in the Installation chapter in the Viz Pilot User Guide), it must be installed separately, after the Pilot Data Server.
- If support for **multiple Viz Pilot Database schemas** is required, *separate* Data Servers must be installed on *separate* machines.

2.6 Firewall Exceptions

For the Pilot Data Server to be accessible from other machines, Windows firewall exceptions are required. The Pilot Data Server adds the following inbound rules to the Windows firewall during installation: allow connections on port `8177` , `7373` , and `9876` . These are removed when the Pilot Data Server is uninstalled.

2.7 Antivirus

Vizrt does not recommend or test antivirus systems in combination with Vizrt products, as the use of such systems can potentially lead to performance losses. The decision for the use of antivirus software and thus the risk of impairments of the system is solely at the customer's own risk.

There are general best-practice solutions, these include setting the antivirus software to not scan the systems during operating hours and that the Vizrt components, as well as drives on which clips and data are stored, are excluded from their scans (as previously stated, these measures cannot be guaranteed).

A list of services and folders which should be excluded from scanning can be found below:

Services:

- vizrt_crop_server
- VizrtMist
- vizrt_pilot_data_server
- vizrt_script_runner
- vizrt_thumbnail_generator

Folder:

- *C:\Program Files (x86)\Vizrt*
- *C:\ProgramData\vizrt*
- *C:\Program Files\Vizrt*

Processes:

- PilotCropServiceHost.exe
- PilotDataServerHostService.exe
- PilotScriptRunnerHostService.exe
- PilotThumbnailGeneratorHostService.exe
- caddy-service.exe
- caddy.exe

3 Configuration

This section covers the following topics:

3.1 Connecting To The Viz Pilot Database

The Pilot Data Server requires a connection to a Viz Pilot database with a schema of 5.7 or later. You also need a Pilot Data Server for each database instance, meaning you cannot share a Pilot Data Server. Configure using a full connection string with hostname and SID.

3.2 Setting Up A Pilot Data Server User Account

The Pilot Data Server service can be run from two different user accounts, depending on where it will access files.

> ⚠ **Note:** By default, the Pilot Data Server service will run under the **LocalSystem Account**.

If Pilot Data Server is used without any Object Store storage, or if the Object Store storage is on the same computer as Pilot Data Server

1. Run the Pilot Data Server service under the default **LocalSystem Account**.

If Pilot Data Server requires access to remote files, and the computers are in a domain

1. Create a new **Domain User Account**. This needs to have:
    - Administrator access to the computer that runs Pilot Data Server.
    - Share access on the computer that hosts the Object Store files.
    - File system access to the actual files in the share.
2. Change the service configuration to run the service as the Domain User.
3. Set a complex password for this user, and set it to never expire. If the password expires, the service needs to be reconfigured to run with the new password.
4. Run the Pilot Data Server service under the new Domain User Account.

> ⚠ **Note:** A setup where Pilot Data Server requires access to remote files but the computers are not in a domain is not supported.

3.3 Configuring The Pilot Data Server Port

The default Pilot Data Server port is `8177` . To change the port:

1. On the Pilot Data Server machine, open the configuration file in a text editor: *PilotDataServerHostService.exe.config.*
2. Add or replace the following `<settings>` tag:

```
<applicationSettings>
    <DataServer.Properties.Settings>
        <setting name="Port" serializeAs="String">
            <value>8177</value>
        </setting>
        ...
```

3.4 Configuring The STOMP Port

The default STOMP (Change Notifications API) port is `9876` . To change the port:

1. On the Pilot Data Server machine, open the configuration file in a text editor: *%ProgramFiles%\vizrt\Data Server\PilotScriptRunnerHostService.exe.config.*
2. Replace the following:

```
<setting name="ChangeServerPort" serializeAs="String">
        <value>9876</value>
    </setting>
```

with:

```
<setting name="ChangeServerPort" serializeAs="String">
        <value>7373</value>
    </setting>
```

The port *7373* is used as an example value only.

> ⚠ **Note:** Follow this link to go to the STOMP Protocol Specification.

3.5 Configuring The Script Runner

Script Runner is Viz Pilot's update service that lets you update template data, such as stock values and player statistics, right before going on air.

> ⚠ **Note:** You can write Visual Basic scripts to modify the data; the scripts will run on the Script Runner. It's also possible to create your own external update service. For more information, see External Update Service in the Media Sequencer Manual bundled with the software.

The Script Runner uses **port** *1981* by default. To change the port:

1. On the Pilot Data Server machine, open the configuration file in a text editor: *%ProgramFiles%\vizrt\Data Server\PilotScriptRunnerHostService.exe.config.*
2. Change the port by modifying the following line:

```
<add baseAddress="http://localhost:1981" />
```

3. Save the file.
4. Restart the **Vizrt Script Runner** service from the Windows Services window.

3.6   Configuring The Pilot Data Server For HTTPS

If HTTPS is configured, all endpoints of the Pilot Data Server can be accessed using the HTTPS protocol. To enable it, do the following:

1. Open the configuration file in a text editor as an administrator: *C:\Program Files\vizrt\Pilot Data Server\PilotAppServerHostService.exe.config.*

2. Replace the following:

```
<setting name="SecurePort" serializeAs="String">
    <value/>
</setting>
```

with:

```
<setting name="SecurePort" serializeAs="String">
    <value>7373</value>
</setting>
```

- The port *7373* is here used as an example value only. The port number can be any number from 1024 to 49151. Choose a number that is not already in use.

3. A certificate that is mapped to the port number you provided is required on the PDS host machine. To install a certificate:

- Create a self-signed certificate using the IIS Manager.
- Next, install the certificate into Trusted Root Certification Authorities in the Certificate Manager, which is accessed through **certmgr.msc**.
- You should then copy the Thumbprint of the certificate, which can be found by opening it and checking under "Details", for later use.

- You then need your Application ID, which can be found by entering this command in the command prompt:
  ```
  {{netsh http show sslcert}}
  ```

- Next, enter the following commands with your information in a command prompt with Administrator Privileges:
  ```
  netsh http add urlacl url=https://+:(YOUR PORT NUMBER)/ user=Everyone

  C:\> netsh http add sslcert ipport=0.0.0.0:(YOUR PORT NUMBER) certhash=(YOUR
  CERTIFICATE'S THUMBPRINT) appid={(YOUR APPLICATION ID)}
  ```

4. In the Pilot Data Server configuration, change the value for "data_server_url" to the entire HTTPS pathway, e.g. "https://bgo-eddie-vm:7373/". Alternatively, you may set the "pilot" URL parameter of the URL to Pilot Edge to use the new HTTPS pathway to the Pilot Data Server.

> ⚠ **Note:** Search providers and the Preview Server must also be in HTTPS environments in order for calls to them to work. To enable support for HTTPS requests for the Preview Server, see the Preview Server Administrator Guide.

3.7   Configuring The Pilot Edge Window In Director

Template Builder 1.3 and later lets users choose to open templates in a Pilot Edge window inside Director. Upon startup, Pilot Data Server 8.5 or later creates and optionally auto-populates a database parameter, called *mos_plugin_url*. This URL must contain a URL to Pilot Edge for the feature to work.

3.8   Modifying Database Settings

1. Run the installer, and select the **Change** option.
2. Update the database connection information: Connect string, Username and Password.
3. Click **Close**.
4. **Restart** the service **Vizrt Pilot Data Server** from the Windows Services window.

> 🔴 **IMPORTANT!** If database settings are changed in the configuration files manually, any subsequent changes done through the installer will overwrite the manual changes. It is strongly recommended that users do not manually change anything related to the database in the configuration file.

3.9   Redundancy And Failover

Although Pilot Data Server has been designed without built-in redundancy, it does support being used with off-the-shelf third-party HTTP load balancers. As the name suggests, a load balancer's main function is to distribute requests among multiple servers. Multiple servers provide redundancy, and most load balancers come with an option to only route requests to servers that respond, which provides failover.

Both Barracuda Load Balancer ADC and HAProxy have successfully been used in front of Pilot Data Server.

3.9.1   Load Balancer Quick Setup

Quickly set up a HAProxy load balancer:

Prerequisites

- Two (or more) hosts running Pilot Data Server, connected to the same database. They have host names *pds1.example* and *pds2.example* for the purpose of these instructions. Static IP addresses may be used instead.
- A Linux host that we will turn into a load balancer. It has the host name *proxy.example* for the purpose of these instructions. This is the host used in the installation steps below.

Installation Steps

1. On the Linux host, install HAProxy with the command `sudo apt-get install haproxy`.
2. Edit */etc/haproxy/haproxy.cfg* (for example with `sudo nano /etc/haproxy/haproxy.cfg`) and append the following lines:

```
frontend http-in
    bind :8177
    default_backend servers

backend servers
    server server1 pds1.example:8177 check
    server server2 pds2.example:8177 check

listen stats
    bind :80
    mode http
    stats enable
    stats uri /
```

3. Restart HAProxy with the command `sudo service haproxy reload`.

Notes

- After following the steps above, it should be possible to use *proxy.example:8177* in place for *pds1.example:8177* and *pds2.example:8177*. Check whether the setup works by opening http://proxy.example:8177/ in a browser. The Pilot Data Server index page should load.
- The above configuration also provides a monitoring page at http://proxy.example/ that shows which Pilot Data Server hosts are responding. This will not tell you whether the Pilot

Data Server is working correctly, as hosts still respond when they cannot reach the database, for instance.

4   Use Cases

A Viz Pilot system has the following Pilot Data Server use cases:

- Using the Timeline Editor. See the Timeline Editor section under Newsroom Integration in the Viz Pilot User Guide.
- Using the Update Service. See the Update Script Editor under Template Wizard in the Viz Pilot User Guide.
- Searching for and using images and videos from Viz One.
- Using the person search from the Media tab.
- Adding and updating Tag Settings. Tags are assigned to templates in Template Wizard, and then used in Viz Pilot News to organize templates.
- Using the Crop Service. See the Using Crop Service section under Crop Service and Crop Tool in the Viz Pilot User Guide.

> ⚠ **Note:** Crop Service requires a separate installer. See Crop Service Installation in the Installation section in the Viz Pilot User Guide.

- Using the Pilot Data Server's REST API to allow third-party systems to read and fill templates and data elements from the Viz Pilot database.
- Configuring Order Management. See the Order Management section in Newsroom Integration in the Viz Pilot User Guide.
- The Pilot Data Server exposes all the data needed by the Media Sequencer through its REST interface. It also provides Change Notifications using the STOMP protocol. It's possible to configure Media Sequencer to connect to the Pilot Data Server instead of the Pilot database (this requires Media Sequencer 4.0 or later).

5   Log File

The Script Runner and Pilot Data Server services log warnings and errors to the Windows **Application Event Log**.

The full path of the Pilot Data Server log file is: *C:\ProgramData\Vizrt\Logs\PilotDataServer\server.log.*

⚠ **Note:** The maximum size of the log is 5,000 kB, with one active file and one *.old* file.

The full path of the Script Runner log file is: *C:\ProgramData\Vizrt\Logs\ScriptRunner\scriptrunner.log.*

6   Web Interface

The Pilot Data Server web interface offers access to features including the Service Document, Template and Data Element Feeds, Viz Pilot Settings and REST API documentation.
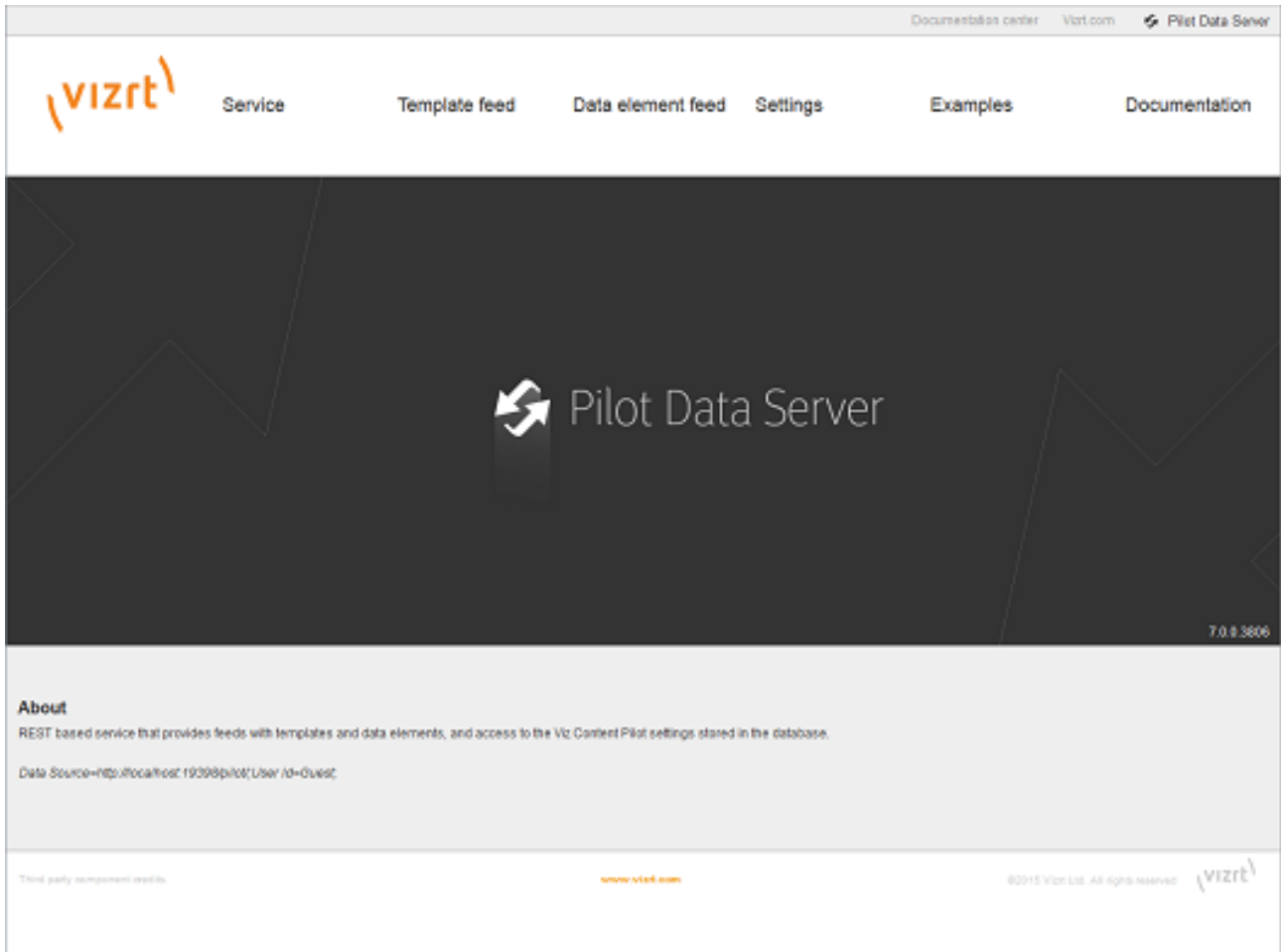
6.1   Accessing The Pilot Data Server Web Interface

· Select the **Pilot Data Server Web Interface** from the Windows Start Menu.
· Alternatively, start the **Pilot Data Server** in a browser, using the host name of the machine running the Pilot Data Server, and port `8177`. For example: http://dataserver.example:8177

6.2   Service

The Service Document resource (for example: *http://<dataserver.example>:8177/service*) is an Atom Service Document that can be used by a client to discover the capabilities of a Pilot Data Server and the locations of the available Atom Publishing Protocol collections hosted on it.

6.3   Template Feed

The Template Feed resource (for example: *http://<dataserver.example>:8177/templates*) is an atom feed that contains entries for each template stored in the Pilot Data Server. Metadata may include details of the template such as description, creation date, link to a thumbnail image and link to the Viz Data Format (VDF) model document describing the template.

6.4   Data Element Feed

The Data Element Feed resource (for example: *http://<dataserver.example>:8177/dataelements*) is an atom feed that contains entries for each data element stored in Pilot Data Server. Metadata may include details of the data element such as description, creation date, link to thumbnails and link to the Viz Data Format (VDF) payload document describing the data element.

6.5   Settings

The Settings page (for example: *http://<dataserver.example>:8177/settings*) is used to configure VCP Parameters and Tag Settings. See Setting Parameters for a full description of the Settings tab.

6.6   Examples

The Examples page (for example: *http://<dataserver.example>:8177/examples*) contains examples on how to interact with the Viz Pilot system.

6.7   Documentation

The Pilot Data Server Documentation page (for example: *http://<dataserver.example>:8177/help*) describes the REST API provided by Pilot Data Server. The page includes information on the Resource Types and Content Types that are used in the interface. The API itself lets you access template information, perform image search and person search, and provides a programing interface for other systems.
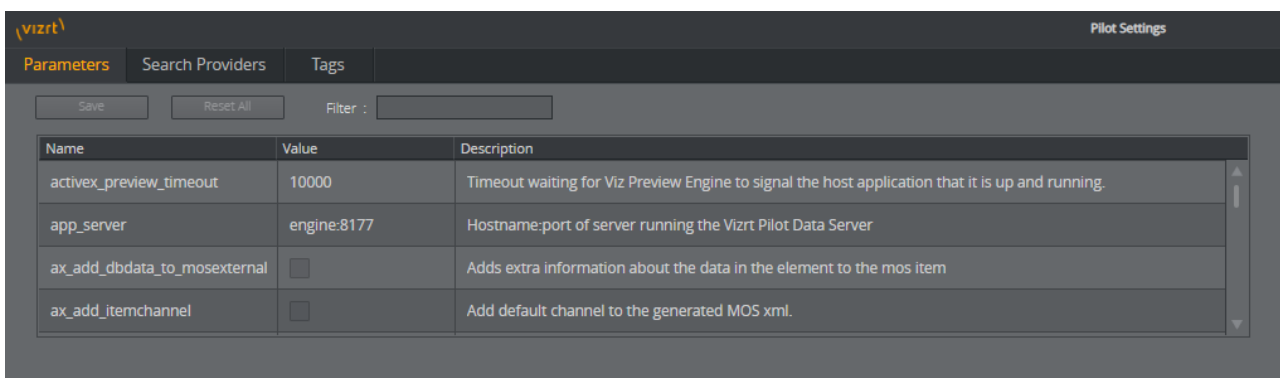
7   Setting Parameters

The Settings tab is used to configure the following values:

· Database Parameters
· Search Providers
· Tag Settings

7.1   Database Parameters

Configure Viz Pilot system application settings in the VCP Parameters tab. A description of useful database parameters is listed here.

Name	Value	Description
activex_preview_timeout	10000	Timeout waiting for Viz Preview Engine to signal the host application that it is up and running.
app_server	engine:8177	Hostname:port of server running the Vizrt Pilot Data Server
ax_add_dbdata_to_mosexternal	☐	Adds extra information about the data in the element to the mos item
ax_add_itemchannel	☐	Add default channel to the generated MOS xml.

7.1.1   Granting Applications Access to Pilot Data Server

1. See how To access the Pilot Data Server Web Interface.
2. Click the **Settings** link.
3. Select the app_server setting and add the parameter for the machine you installed the Pilot Data Server on (for example, <DataServer>:8177).
4. Click **Save.**

This grants all applications with a connection to the database access to the Pilot Data Server.

> ❗ **IMPORTANT!** Firewalls must allow inbound communications on port `8177` .

7.1.2   Granting Applications Access to Preview Server

1. See how To access the Pilot Data Server Web Interface.
2. Click the **Settings** link.
3. Select the preview_server_uri setting and add the parameter for the machine you installed the Preview Server on (for example, http://<hostname>:21098). This machine, with Viz Engine and Preview Server installed, is typically identified as your *frame server*.
4. Click **Save.**

This grants all applications with a connection to the database access to the Preview Server.

7.1.3   Granting Applications Access to Update Service

> ⚠ **Note:** This setting is required if templates run scripts that use Update Service.

1. See how To access the Pilot Data Server Web Interface.
2. Click the **Settings** link.
3. Select the script_runner_uri setting, and add the parameter for the machine running the Update Service (e.g. http://<hostname>:1981).
4. Click **Save.**

This grants all applications with a connection to the database access to Script Runner.

> 🛑 **IMPORTANT!** If you change the *script_runner_uri* parameter (after setting it the first time) you need to restart Media Sequencer for the changes to take effect.

7.1.4   Setting Database Parameters for Crop Service

1. See how To access the Pilot Data Server Web Interface.
2. Click the **Settings** link.
3. Select the crop_service_uri setting and add the parameter for the machine you installed the Pilot Data Server on: http://< **cropservicehostname** >: **8178**/.
4. *Optional*: Set the **MediaSearch_ItemPerPage** = Number of items per page to get from MediaSearch.
5. *Optional*: Set the **croptool_max_image_area** to adjust the maximum size of a cropped image that will be served by the Pilot Data Server. If the image size (*) is larger than croptool_max_image_area, then the image is resized, while still respecting the aspect ratio of the crop. The maximum image size applies even if no cropping is done.
   * Image size = image width x height in pixels.
6. Click **Save**.

7.1.5   Enabling Built-in Object Store Search

The built-in Object Store search is disabled by default. To enable or disable it:

1. See how To access the Pilot Data Server Web Interface.
2. Click the **Settings** link.
3. Select the disable_built_in_vos_search setting:
   · To use built-in Object Store search, set **disable_built_in_vos_search** to false.
   · To use RestVOS search, set **disable_built_in_vos_search** to true.
4. Click **Save.**

7.1.6   Configuring Order Management

This procedure assumes that you have a Viz One system installed and running the Order Management system, see the Order Management in the Newsroom Integration section in the Viz Pilot User Guide. For more information on how to configure order management on Viz One, see the Tasks and Order Management section in the Viz One Administrator Guide.

1. See how To access the Pilot Data Server Web Interface.
2. Click the **Settings** link.
3. Select the order_mgt_uri_template setting and add the address of the Viz One machine which is hosting the order management system, for example: http://<fully-qualified-domain-name-of-viz-one>:8084/tasks/?user={user} &locale=en_US&theme=light#create;tl=work_order;form=create_wo_activex;asset-type=ITEM;upload=true;external-hooks=viznewsroom;closewin=false;set-attr=REQ_TYPE-{asset_type}.

7.2   Search Providers

Both Director and Viz Pilot News get their Viz One connection parameters from the Viz Pilot database. Media Sequencer must be configured using your control application. Asset search providers can be set to active or inactive. Disabling a search provider means that it will not be used when searching for assets in a template.

This section contains the following topics:

- Configuring Search Providers (Viz One)
- Configuring Search Providers (RestVOS)
- Authentication for Feed Browser

7.2.1   Configuring Search Providers (Viz One)

1. See how To access the Pilot Data Server Web Interface.
2. Click the **Settings** link.
3. Click the **Search Providers** link.
4. Under **Asset search providers** click the **Add** button and enter the host's service document **URL**:
   - For Viz One 5.4 and later: https://<viz_one>/thirdparty/.
   - For Viz One 5.3: https://<viz_one>/api/.

   > ⚠ **Note:** Make sure you enter the correct protocol. For example, a Viz One set up on HTTPS requires an **HTTPS** URL.

5. Add a **Short name** such as *VizOne* to help identify the asset's location, for example in search results.

   > ⚠ **Note:** If you change the short name, you need to restart the server for the changes to take effect (see To modify the Pilot Data Server database settings).

   The screenshot below shows the Search Provider Short Name as displayed in search results:
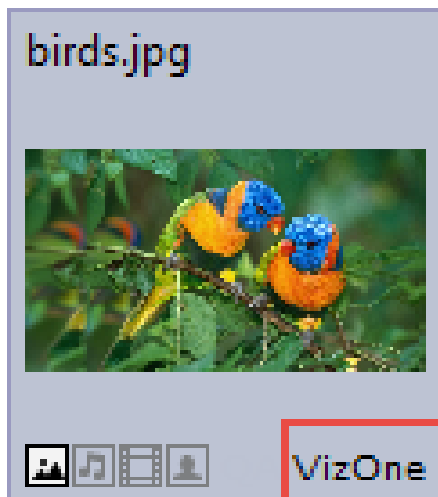
6. Under Pre-authenticated hosts click the **Add** button and enter the host's URL, username and password in order to authenticate your search:
   - URL of the host, for example: https://<viz_one>/.
   - Username and password of the pre-configured user on the Viz One system (configured in the Studio admin web interface).
   - This is required for Viz One (not Object Store).

   > ⬣ **WARNING!** The username and password used here are available in clear text to anyone who has access to the Settings page. The Viz One user entered here should therefore be given as few rights on the Viz One as possible.

7. Click **Save.**

7.2.2   Configuring Search Providers (RestVOS)

By default, Viz Pilot 6.0 and later uses the RestVOS search, and a search provider representing the current Pilot Data Server is configured automatically. This requires that the correct value (a public name that points to the current Pilot Data Server) has been stored in the `app_server` parameter in the database parameters. Changes to this value are picked up during restarts.

The auto-added search provider can be renamed or made active/inactive on the **Search Providers** page. The URI cannot be changed.
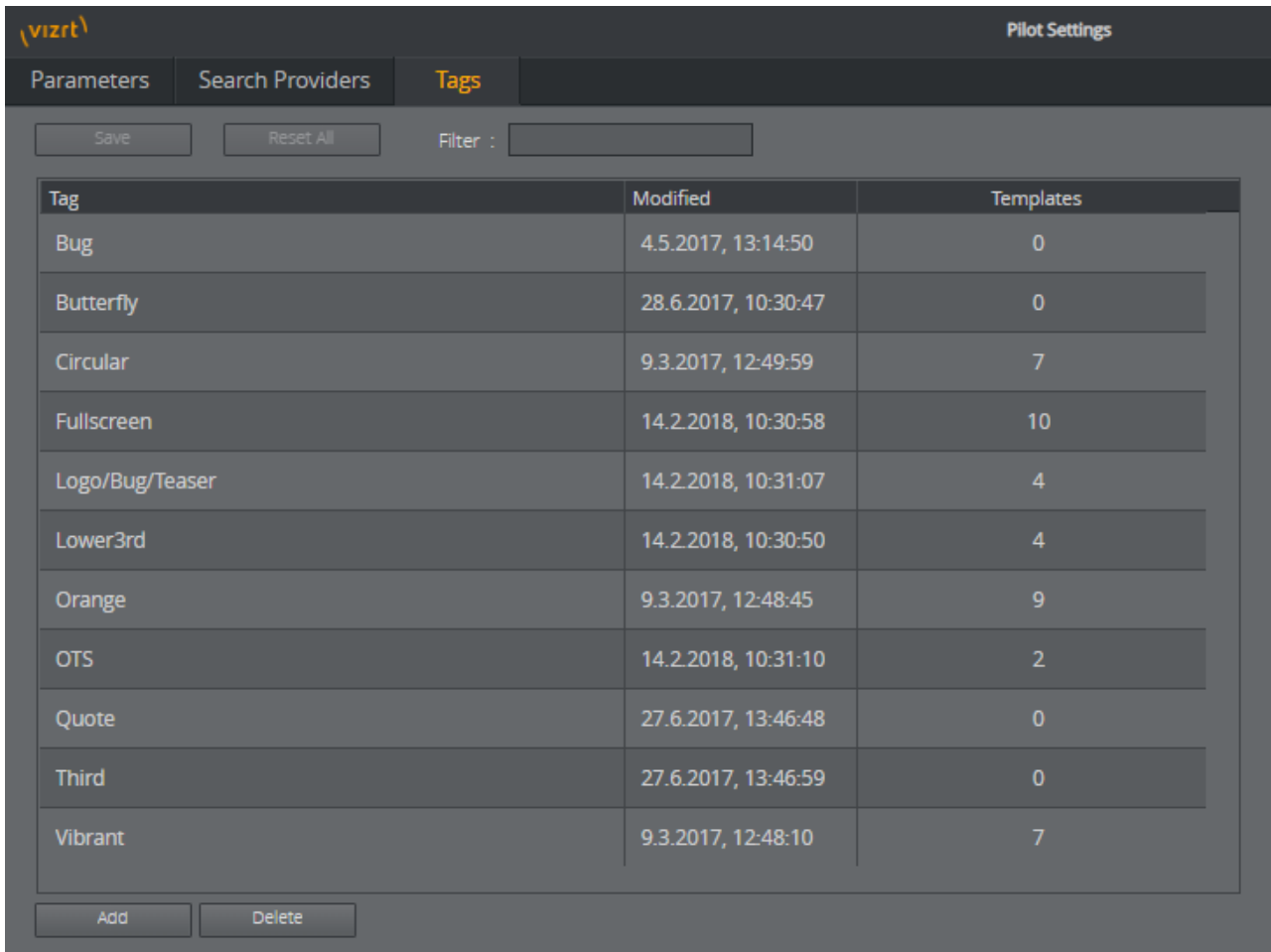
> ⚠ **Note:** Upgrading from Viz Pilot 5.7 to Viz Pilot 6.0 can result in two search providers with the same URL (both the existing and the new provider). Although the new provider is disabled and therefore does not cause an issue, you can delete the old and activate the new provider if you wish to clean up the list.

> ⚠ **Note:** If you change the short name you need to restart the server for the changes to take effect.

7.2.3   Authentication for Feed Browser

The Pre-authenticated hosts configured in the Pilot Data Server also apply to the Feed Browser when hosted in a Viz Pilot system application (see the Feed Browsing section under Newsroom Integration in the Viz Pilot User Guide).

7.3   Tags Settings

The Tags Settings page is used for administering tags. The tags are assigned to templates in Template Wizard, and then used in the newsroom component to organize templates.

7.3.1   Accessing Tags Settings

1. See how To access the Pilot Data Server Web Interface.
2. Click the **Settings** link.
3. Click the **Tags** tab.

7.3.2   Tags Settings Functions

Function	Description
Add tag	Click the **Add** button and enter a name in the **Add a New Tag** dialog.

Function	Description
Rename tag	Click a name in the **Tag** list. Enter a new name and click **Save**.
Reset changes	Click **Reset All** to reset changes.
Delete	Click **Delete** to delete a selected tag. ⚠ **Note:** Deleting a tag does not delete the templates that refer to that tag.
Filter	Type to filter on tag name.

7.4 Database Parameters

You can access all database parameters from the Pilot Data Server's VCP Parameters page (*http://<hostname>:8177/app/DataServerConfig/DataServerConfig.html*).

🔶 **Caution:** Settings should only be changed by administrators.

7.4.1 Viz Pilot Database Parameters

- **activex_preview_timeout:** Sets the timeout in milliseconds waiting for the Viz Preview Engine connection before continuing. The default value is 10000. Can be overridden by the local registry setting PreviewTimeOut (see Registry Settings in Viz Pilot User Guide).
- **allow_subfield_in_view:** Used client-side to determine if subfields can be added to custom layouts. Should be set to true when using Preview Server 4.4.1 or above, and set to false otherwise.
- **app_server:** Sets the Pilot Data Server URI.
- **ax_add_dbdata_to_mosexternal:** Adds extra information about the data in the element to the MOS item.
- **ax_add_itemchannel:** Adds default channel to the generated MOS XML.
- **ax_dataelement_timer_enabled:** Sets the default behavior for showing or hiding the Graphic Event Timing options in the newsroom component when Saving an Element. When enabled it shows the timing editor, and when disabled it hides the timing editor. This setting can be overridden by enabling the *ShowGraphicEventTiming* setting for the Template Information Component in Template Wizard on a template by template basis.
- **ax_disable_clear_layers:** This setting disables the clearing of all layers as the first commands sent when sending to preview.

- **ax_disable_data_overwrite:** When enabled, this setting disables the Save button in the newsroom component - only the **Save As** button is then active. This option also de-selects the *Add to Library* checkbox in the Template Save Dialog Box for all saved elements.
- **ax_disable_dragdrop:** When enabled, this setting disables drag-and-drop in the newsroom component. This option is useful when using a newsroom system that does not facilitate drag-and-drop interaction with plugins.
- **ax_disable_media_drag:** When enabled, this setting disables dragging of media from search results to the rundown. This option is de-selected by default - dragging of media from search results is allowed.
- **ax_disable_overlay_saving:** When enabled, this setting disables saving of overlay timelines for clip assets that have an overlay_timeline link. When a clip is opened from the media tab there will not be any previously saved graphics on the timeline. Overlay saving is enabled by default.
- **ax_dont_fetch_thumbnails:** When enabled, the newsroom component does not fetch thumbnails for the templates and data elements when they are in list view mode, only in *show icons* view.
- **ax_enable_refresh_button:** When enabled, the **refresh** button in the ActiveX external preview form is shown. The preview will be refreshed without resending the data to the preview server.
- **ax_enableMediaSendToRundown:** When enabled, this setting enables the Add to Rundown option in the media search. This is only useful if the newsroom system does not support drag and drop operations.
- **ax_force_detached_pvw:** This setting forces detached snapshot-preview window in Ax/VCP.
- **ax_hide_data_elements:** This setting hides the data element list in the newsroom component.
- **ax_hide_media_tab:** This setting hides the media tab in the newsroom component.
- **ax_include_mosobj_tag:** This setting adds a mosobj node to the generated MOS XML. This is required for some (Dalet) newsroom integrations.
- **ax_mos_edit_save_returns:** ActiveX checks this parameter to determine if it should return to the template list after saving (when editing).
- **ax_preview_host:** Hostname of the Viz Engine used to generate snapshot-preview images and fetch icons from Viz resources (images/geoms/materials etc.). It's also used as the fallback vizhost for the ThumbnailGenerator. Multiple renderers can be defined as a comma-separated string. For example <host>, <host>, ... or <host>:<port>,<host>:<port>, ... If hosts are defined without a trailing port number, it's recommended to set the default port in the Port field. If no port number is set, it will default to 6100.
- **ax_preview_img_protocol:** Request snapshots in different image formats.
- **ax_preview_port:** Port of the Viz Engine used to generate snapshot-preview images, and fetch icons of Viz resources (images/geoms/materials etc). It's also used as the fallback vizhost for the ThumbnailGenerator.
- **ax_ preview_tl_legacy_support:** When enabled, the preview sends values to legacy transition logic location ($other$object) in addition to normal behavior.
- **ax_preview_tl_show_next_sub:** The `\Toggle*continue_noanim` command is used when previewing transition logic.

- **ax_remove_continue_count:** This setting disables the sending of continueCount in mosExternalMetadata.
- **ax_remove_objSlug:** This setting removes objSlug from the generated MOS XML. This is needed when the newsroom component is hosted in AvidCommand.
- **ax_required_version:** The required version of the Vizrt newsroom component for the ActiveX to work. If the newsroom component version is earlier than this, a warning is displayed.
- **ax_savesas_cancels_edit** : Default behavior is: when editing an item already in a script, then clicking **Save As New**, the item in the script is replaced by the new item. Enabling this setting still creates a new graphic but does not replace the original item in the script.
- **ax_show_hints:** Disable this setting to turn off all tooltips in the ActiveX. Tooltips may cause the Dalet newsroom system to crash.
- **ax_showsavechanges_dlg:** This setting asks users if they want to save the currently open data element or template when opening a new one.
- **ax_use_custom_gui_dlg:** This setting embeds Viz Curious Maps Editor (CME) inside the same window as the newsroom component (and is used for this only).
- **clip_default_itemchannel:** If a value is set, the value is used as the default channel for video clips. The value is used in the itemChannel element in the MOS XML and appears in the Viz Trio playlist and in the NCS. This parameter is empty by default. If a video or timeline element is reopened from the NCS rundown, the itemChannel chosen in the rundown is not reset to default again, even if the element is updated and overwritten.
- **compatible:** Version number
- **country_language:** Set the language to use for the country list. English is supported by default.
- **crop_service_uri:** Sets the URL to the image crop service.
- **croptool_max_image_area:** Sets the maximum area of a cropped image in pixels that will be served by the Pilot Data Server. Anything bigger is resized, while still respecting the aspect ratio of the crop. The maximum size applies even if no cropping is done. Image size = width x height in pixels. 0 = disabled.
- **data_server_url:** Hosting URL of Vizrt Pilot Data Server (for example: http://exampleserver.com:8177) or the reverse proxy server pointing to Vizrt Pilot Data Server. May contain base path prefix at the end of the base URL (for example: http://exampleserver.com:8177/pds).
- **delete_data_from_activex:** Enable this setting to allow users to delete data elements from the newsroom component.
- **DELETE_DATA_PASSWORD:** Password protection for data element deletion in the Viz Pilot client. If the value is empty, the delete data elements dialog is not password protected.
- **disable_built_in_vos_search:** This setting disables the built-in VOS search. This should be used to prevent duplicate hits when moving to the new RESTful VOS search.
- **graphic_hub_url:** Host or reverse proxy URL of the Vizrt Graphic Hub API used to provide scenes (for example: http://exampleserver.com:19398/.) If needed, it should contain a base path prefix at the end of the base URL, and an explicit port used, if this differs from the default 19398 port (for example: http://exampleserver.com:80/pilot.)
- **image_order_uri_template:** Placeholder URL template for image orders.
- **image_share:** Specifies the path the image Crop Tool (for templates) uses when saving a cropped image (`<UNC or Windows path>`)

- **live_update_interval:** Update service poll interval in seconds. If the **Update at regular intervals while on air** option is enabled for a template with an update script or external update service, the Media Sequencer invokes the update service repeatedly using the interval specified here. The minimum value is two seconds.
- **MediaSearch_itemPerPage:** The value should correspond to Media Search Items per page.
- **model_uri_template:** URL template for use with the Pilot App Server to get the model document for a template given by its database ID. It's used by the Maps Preview Server, as well as certain external systems. Do not change this value. .
- **mse_script_runner:** This setting can be used to set a different script runner for the MSE. Normally not needed. The default value is blank.
- **order_mgt_uri_template:** URL template used to invoke the order management form.
- **payload_uri_template:** URL template for use with the Pilot App Server to get the payload document for a data element given by its database ID. It's used by the timeline editor in the newsroom ActiveX as well as certain external systems. Do not change this value.
- **preview_server_uri:** Base URL to the Preview Server used when requesting preview images in the timeline editor (for example: http://exampleserver.com:54000). This value is read by the Pilot App Server and published in its service document.
- **schema_build:** Minor build version of the database schema. Do not modify.
- **schema_version:** Major version of the database schema. Do not modify.
- **script_runner_uri:** The URL to the script runner that executes *update scripts* to *data/ payloads*.
- **shared_curious_server:** Sets the Viz World Server IP or hostname for maps. In a multi-server setup, use comma-separated IP/hostnames.
- **show_playlist_element_index:** This setting shows a column in the VCP playlist that displays each item index in the list.
- **slim_mos_xml:** This setting reduces the MOS XML by removing optional tags.
- **spellcheck_dict_filename:** Sets the filename for the dictionary file (*.dic*) and affixation file (*.aff*) for the spell checker. This parameter is mandatory and is *en_US* by default. For example, if *spellcheck_dict_filename* is set to *my-special-en_US*, then the spell checker looks for the two files *my-special-en_US.dic* and *my-special-en_US.aff*. Several spell checking dictionaries are included in the Viz Pilot system installation. The dictionaries are installed in the default location: *%ProgramFiles(x86)%\vizrt\Common\dicts*. Other dictionaries can be downloaded from OpenOffice; however, these must be UTF-8 formatted. Contact your local Vizrt representative if you need to convert and use another dictionary for spell checking purposes.
- **spellcheck_dict_path:** Sets the path to the dictionary files for the spell checker. By default, this parameter is empty, which means the default location is used (*%ProgramFiles(x86)%\vizrt\Common\dicts*). If the files are not located under the default location, use a full path, mapped drive or UNC path.
- **timeline_update_service:** The service document URL for the Timeline Update Service.
- **vcp_schema_name:** For example, PILOT.
- **video_mode:** Video mode for channel. PAL or NTSC.
- **VOS_PASSWORD:** Shows the encrypted version of the VOS password. As this setting contains the encrypted version, it should not be set here, but rather be set using the VOS change password dialog. Setting this to blank disables password protection for VOS settings.

- **vtw_disable_unique_name_check:** Used if you need to save different templates in different concepts with the same name - if you are not using the Template Manager to link several scenes to the same template, but are instead creating several templates. This could be due to incompatible scene structure or similar.
- **vos_allow_edit_from_dll (optional):** Enables or disables the toolbar in Object Store. When disabled, it prohibits registering and editing of images and person information when Object Store is used with Viz Pilot News and Template Wizard. This option can be added to the database. Values are *Y* for allowing edits and *N* for prohibiting edits.

8   RestVOS

8.1   Comparing RestVOS And Conventional VOS Access

- The fundamental difference is in the protocol used to search for images and deliver the results to the client.
- When accessing an Object Store in the conventional Viz Object Store (VOS) way, the client application goes directly to the database and the network share in order to get the data.
- When using RestVOS, the client accesses the same images and storage, but via the Pilot Data Server. This uses the HTTP protocol, the same protocol used when talking to Viz One systems.
- From the point of view of client applications, accessing RestVOS is no different from accessing a Viz One or any other asset search provider.
- The existing Object Store (see the Object Store section in the Viz Pilot User Guide) application is used to manage the images and storage, whether using standard VOS or RestVOS.

8.2   Advantages Of RestVOS

- **Flexibility:** HTTP is an easier protocol to use and manage. By using the Pilot Data Server and the OpenSearch protocol, other applications can also perform the same searches, and there is no need to make the network share available on all clients.
- **Extended features:** Certain features such as Crop Service and Filter Media by Person Name (see the Viz Pilot User Guide), are only available when using RestVOS.
- **Future oriented:** As development on RestVOS continues, features such as load balancing and failover capabilities will be added, which will benefit image transfers. Once direct database access from Viz Pilot News is no longer required, management of Oracle clients will not be needed. Conventional access to VOS will be phased out at some stage.

9 Change Notifications

Change notifications are available through the REST API and the STOMP protocol on the Pilot Data Server.

9.1 REST API

A list of database changes ordered from most recent to oldest:

- Located at http://pdshost:8177/changelog
- Parameters:
    - **startId:** The ID of the least recent change, or -1 for no limit. Default is -1.
    - **lastKnownId:** The ID of the most recent change, or -1 for no limit. Default is -1.

9.2 STOMP API

In a Viz Pilot system, the text-based message Streaming Text Oriented Messaging Protocol (STOMP) is used to subscribe to change notifications from Graphic Hub REST and Pilot Data Server. STOMP provides push notifications of new changes.

- Located at: *stomp://pdshost:9876/?destination=/changelog&lastKnownId=-1*
- Parameters:
    - **lastKnownId:** Mandatory, should be the ID in the STOMP link that is provided by the REST API. For example, when the data stored in the Pilot database changes, a message is delivered to all of the STOMP clients that are subscribed to the server.

> ⚠️ **Note:** The default change notification port for the STOMP protocol is `9876`. Other services using this port may suppress the change notifications.

10   Proxy Support

The Pilot Data Server can be installed along with a proxy/reverse-proxy server. The proxy server must populate the following headers in order for the Pilot Data Server to serve the appropriate hostname, port and protocol in its responses:

- `X-Forwarded-Host`
- `X-Forwarded-Port`
- `X-Forwarded-Proto`

Use a proxy server with the above headers configured. If the `X-Forwarded` headers are not configured in the proxy server, then the proxy server must be configured to pass the `Host` header it received from the client to the Pilot Data Server.

> ✅ **Tip:** Read the relevant proxy server manual for more information about this configuration.

10.1   Using URL Path Prefix Support In Pilot Data Server

The purpose of a URL path prefix is to be able to host a Pilot Data Server with a different hosting URL than the default one. One use case is to make the Pilot Data Server able to work under a reverse-proxy server.

10.1.1   To install a Pilot Data Server with a prefix, execute the the installer as follows:

```
C:\>msiexec /i c:\temp\PilotDataServerInstaller-x64.msi CONNECTION_METHOD="Oracle"
ORACLE_USERNAME="pilot" ORACLE_PASSWORD="pilot" ORACLE_DATA_SOURCE="bgovcp1/vizrtdb"
BASE_PATH="pds" /log install.log
```

Here, the prefix is **pds** which is specified by the BASE_PATH switch.

10.2   Using Base URL Support In Pilot Data Server

If the Base URL switch is used while installing the Pilot Data Server, the host URL will be re-written to the Base URL for every response.

10.2.1   To install a Pilot Data Server with a Base URL, execute the the installer as follows:

```
c:\>msiexec /i c:\temp\PilotDataServerInstaller-x64.msi CONNECTION_METHOD="Oracle"
ORACLE_USERNAME="pilot" ORACLE_PASSWORD="pilot" ORACLE_DATA_SOURCE="bgovcp1/vizrtdb"
BASE_URL="http://something.com/pds" /log install.log
```

The Base URL must be an absolute URL string.

⚠ **Note:** Using Base URL overrides the Pilot Data Server setting Base Path, if the Base Path is set.