



Pilot Data Server Administrator Guide

Version PDS-8.4



Pilot Data Server



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Contents

1	Introduction.....	5
1.1	Related Documents.....	5
1.2	Feedback and Suggestions.....	5
2	Installation.....	6
2.1	Pilot Data Server Requirements.....	6
2.1.1	Pilot Data Server.....	6
2.1.2	Script Runner Service.....	6
2.1.3	Thumbnail Generator.....	6
2.1.4	Pilot Data Server specifications.....	6
2.2	To install the Pilot Data Server.....	7
2.2.1	Silent Installation.....	7
2.3	To install the Thumbnail Generator.....	8
2.3.1	Silent Installation.....	8
2.4	Notes.....	8
2.5	Firewall Exceptions.....	8
3	Configuration.....	9
3.1	Connection to Viz Pilot Database.....	9
3.2	Set up the Pilot Data Server user account.....	9
3.3	Configuring the Pilot Data Server port.....	10
3.4	Configuring the STOMP port.....	10
3.5	Configuring the Script Runner.....	10
3.6	Configuring the Pilot Data Server for HTTPS.....	11
3.7	Modify the Pilot Data Server database settings.....	12
3.8	Redundancy and Failover for Pilot Data Server.....	12
3.8.1	Load balancer quick setup.....	12
4	Use Cases.....	14
5	Log File.....	15
6	Web Interface.....	16
6.1	To access the Pilot Data Server Web Interface.....	16
6.2	Service.....	17
6.3	Template Feed.....	17
6.4	Data Element Feed.....	17
6.5	Settings.....	17

6.6	Examples	17
6.7	Documentation	17
7	Setting Parameters	18
7.1	Database Parameters	18
7.1.1	To give applications access to the Pilot Data Server.....	18
7.1.2	To give applications access to the Preview Server.....	19
7.1.3	To give applications access to the Update Service	19
7.1.4	To set the Database Parameters for the Crop Service	19
7.1.5	To enable the built-in Object Store search.....	20
7.1.6	To configure Order Management	20
7.2	Search Providers	20
7.2.1	To configure search providers (Viz One)	21
7.2.2	To configure search providers (RestVOS).....	22
7.2.3	Authentication for Feed Browser	23
7.3	Tags Settings	23
7.3.1	To access the Tags settings	23
7.3.2	Tags Settings functions.....	24
7.4	Database Parameters	24
7.4.1	Viz Pilot Database Parameters	24
8	RestVOS.....	28
8.1	RestVOS versus conventional VOS (Viz Object Store) access	28
8.2	Advantages of RestVOS.....	28
9	Change Notifications	29
9.1	REST API	29
9.2	STOMP API	29
10	Proxy Support.....	30
10.1	URL Path Prefix Support in Pilot Data Server	30
10.2	Base URL Support in Pilot Data Server.....	30

1 Introduction

The Pilot Data Server acts as an application server for accessing Viz Pilot's database and other services. The Pilot Data Server must be installed in order to use features such as 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, or for integrating with Viz Story, Viz Pilot Edge and Template Builder.

1.1 Related Documents

The [Viz Pilot User Guide](#) provides complete documentation of the Viz Pilot system.

Viz Story, [Viz Pilot Edge](#) and [Template Builder](#) all need a connected Pilot Data Server in order to access the database.

For more information about Vizrt products, please visit:

- <http://www.vizrt.com>
 - [Vizrt Documentation Center](#)
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1.2 Feedback And Suggestions

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2 Installation

This section covers:

- [Pilot Data Server Requirements](#)
 - [To install the Pilot Data Server](#)
 - [To install the Thumbnail Generator](#)
 - [Notes](#)
 - [Firewall Exceptions](#)
-

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 may be asked 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, which can be selected during the Pilot Data Server installation.

2.1.2 Script Runner Service

The Script Runner Service provides users with a simple way to use the Update Service without needing to create their own service. See Update Script Editor in the [Viz Pilot User Guide](#).

2.1.3 Thumbnail Generator

The Thumbnail Generator is a Windows service. As data elements are created or changed, it automatically generates thumbnails of them. 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


Component	Requirement
Service(s)	Vizrt Pilot Data Server Vizrt Script Runner Vizrt Thumbnail Generator
Operating system	Refer to the Viz Pilot Release Notes

2.2 To Install 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, and 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 will allow 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**.

2.2.1 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
```

2.3 To Install 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 will be disabled by default. To install it select the Thumbnail Generator manually during the Pilot Data Server installation.

2.3.1 Silent Installation

Since the Thumbnail Generator will not be installed by default, the `INSTALLEVEL=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
```

If a user wants 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
```

2.4 Notes

- 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.

2.5 Firewall Exceptions

In order 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.

3 Configuration

This section describes the configuration of the Pilot Data Server including the following topics:

- [Connection to Viz Pilot Database](#)
- [Set up the Pilot Data Server user account](#)
- [Configuring the Pilot Data Server port](#)
- [Configuring the STOMP port](#)
- [Configuring the Script Runner](#)
- [Configuring the Pilot Data Server for HTTPS](#)
- [Modify the Pilot Data Server database settings](#)
- [Redundancy and Failover for Pilot Data Server](#)

3.1 Connection To 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 Set Up The 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 the Pilot Data Server is used without any Object Store storage, or if the Object Store storage is on the same computer as the Pilot Data Server, then set up as follows:

1. Run the Pilot Data Server service under the default **LocalSystem Account**.
Alternatively, if the Pilot Data Server requires access to remote files, and the computers are in a domain, then set up as follows:
2. Create a new **Domain User Account**. This needs to have:
 - Administrator access to the computer that runs the Pilot Data Server,
 - Share access on the computer that hosts the Object Store files,
 - File system access to the actual files in the share.
3. Change the service configuration to run the service as the Domain User.
4. 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.
5. Run the Pilot Data Server service under the new Domain User Account.

 **Note:** The scenario where the 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 it do the following:

1. On the Pilot Data Server machine, open the configuration file in a text editor:
%ProgramFiles%\vizrt\Data Server\PilotScriptRunnerHostService.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 it, do the following:

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 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

Update Services are mechanisms that allow template data to be updated right before going on air, e.g. stock values, player statistics etc. Viz Pilot's update service is called **Script Runner**.

Note: Customers can write Visual Basic scripts to modify the data, and these will run on the Script Runner. Or the customer can create their own external update service. For more information see External Update Service in the Media Sequencer Manual bundled with the software.

The Script Runner will use **port** 1981 by default. To change this, do the following:

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 service **Vizrt Script Runner** 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 Pilot Edge you must set the "pilot" URL parameter to use the new pathway to the PDS. The parameter must include the entire URL of the HTTPS pathway, such as "<https://bgo-eddie-vm:7373/>".

 Search providers and the Preview Server must also be in HTTPS environments in order for calls to them to work.

3.7 Modify The Pilot Data Server 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.

3.8 Redundancy And Failover For Pilot Data Server

Pilot Data Server has been designed without built-in redundancy, but it does, however, 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.

3.8.1 Load balancer quick setup

These instructions show how to quickly set up a HAProxy load balancer.

Prerequisites

- Two (or more) hosts running Pilot Data Server, connected to the same database. They will 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 will have the host name `proxy.example` for the purpose of these instructions. This is the host that will be 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 will still respond when they cannot reach the database, for instance.

4 Use Cases

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

- 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 is possible to configure the Media Sequencer to connect to the Pilot Data Server instead of the Pilot database. (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

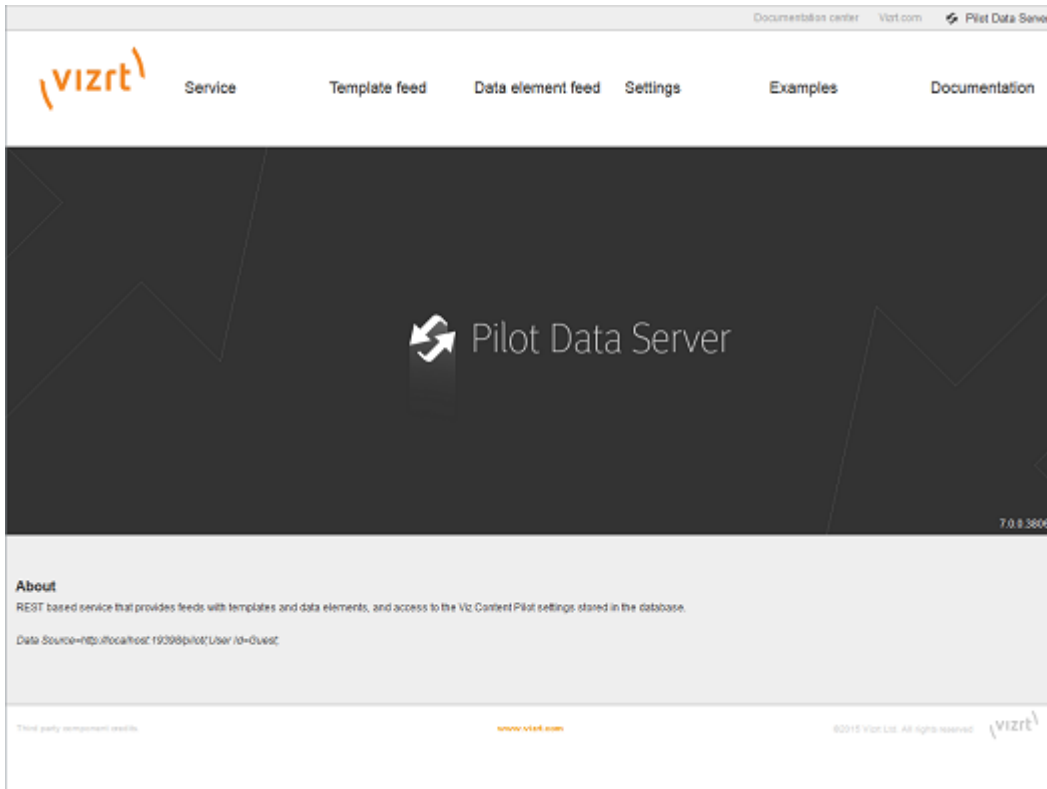
 **Note:** The log has a 5000KB maximum size, with one active file, and one .old file.

The full path of the Script Runner log file is:

- c:\ProgramData\Vizrt\Logs\ScriptRunner\scriptrunner.log

6 Web Interface

The Pilot Data Server has a Web Interface which can be used to access several of the Pilot Data Server's features, including the Service Document, Template and Data Element Feeds, Viz Pilot Settings and REST API documentation.



6.1 To Access 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.
e.g. <http://dataserver.example:8177>

The Pilot Data Server Home page has links to the following resources:

- Service
- Template Feed
- Data Element Feed
- Settings
- Examples
- Documentation

6.2 Service

The Service Document resource (eg. <http://<dataserver.example>:8177/service>) is an Atom Service Document which 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 (eg. <http://<dataserver.example>:8177/templates>) is an atom feed which 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 (eg. <http://<dataserver.example>:8177/dataelements>) is an atom feed which contains entries for each data element stored in the 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 (eg. <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 (eg. <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 (eg. <http://<dataserver.example>:8177/help>) describes the REST API provided by the Pilot Data Server. It includes information on the Resource Types and Content Types that are used in the interface.

The API itself has several features, for example, getting template information, image search and person search, and provides a programming interface for other systems.

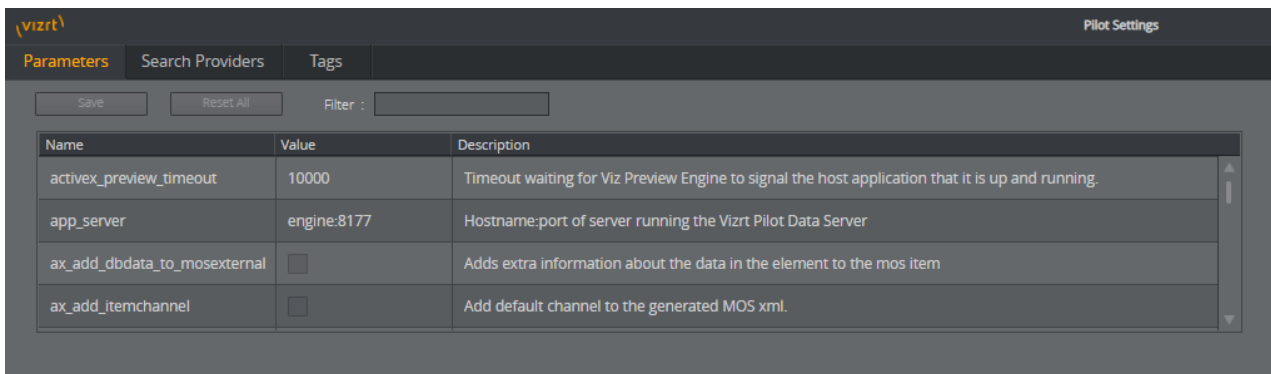
7 Setting Parameters

The **Settings** tab is used to configure the following values:

- Database Parameters
- Search Providers
- Tag Settings

7.1 Database Parameters

In the VCP Parameters tab the user can configure settings for the Viz Pilot system's applications. 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	<input type="checkbox"/>	Adds extra information about the data in the element to the mos item
ax_add_itemchannel	<input type="checkbox"/>	Add default channel to the generated MOS xml.

This section contains the following topics:

- [Database Parameters](#)
 - [To give applications access to the Pilot Data Server](#)
 - [To give applications access to the Preview Server](#)
 - [To give applications access to the Update Service](#)
 - [To set the Database Parameters for the Crop Service](#)
 - [To enable the built-in Object Store search](#)
 - [To configure Order Management](#)
- [Search Providers](#)
 - [To configure search providers \(Viz One\)](#)
 - [To configure search providers \(RestVOS\)](#)
 - [Authentication for Feed Browser](#)
- [Tags Settings](#)
 - [To access the Tags settings](#)
 - [Tags Settings functions](#)

7.1.1 To give applications access to the 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 (i.e. <DataServer>:8177)
4. Click Save
 - This will give 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 To give applications access to the 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 (i.e. http://<hostname>:21098)
 - This machine, with Viz Engine and Preview Server installed, is typically identified as your *frame server*.
4. Click **Save**
 - This will give all applications with a connection to the database access to the Preview Server.

7.1.3 To give applications access to the 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)
 - This setting is needed if templates run scripts that use the update service
4. Click **Save**
 - This will give 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 the Media Sequencer for it to take effect.

7.1.4 To set the Database Parameters for the 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://<croppservicehostname>:8178 /](http://<croppservicehostname>: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 will be 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 To enable the built-in Object Store search

The built-in Object Store search is turned off 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 To configure 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, e.g.:
`http://<fully-qualified-domain-name-of-viz-one>:8084/tasks/?user={user}&locale=en_US&theme=light#create;tl=work_order;form=create_wo_active;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. The 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:

- To configure search providers (Viz One)
- To configure search providers (RestVOS)
- Authentication for Feed Browser

7.2.1 To configure 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**

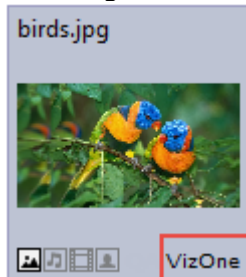
- For Viz One 5.4 and later: `https://<viz_one>/thirdparty/`
- For Viz One 5.3: `https://<viz_one>/api/`

⚠ Note: Make sure you enter the correct protocol. For example, if a Viz One is set up on https it will require an **HTTPS** URL.

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

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 image 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, e.g.: `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 To configure 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 (i.e. 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 (i.e. the one that existed before and the new one). Although the new provider is disabled so it will not interfere, if you want to clean up the list you can delete the old and activate the new provider.

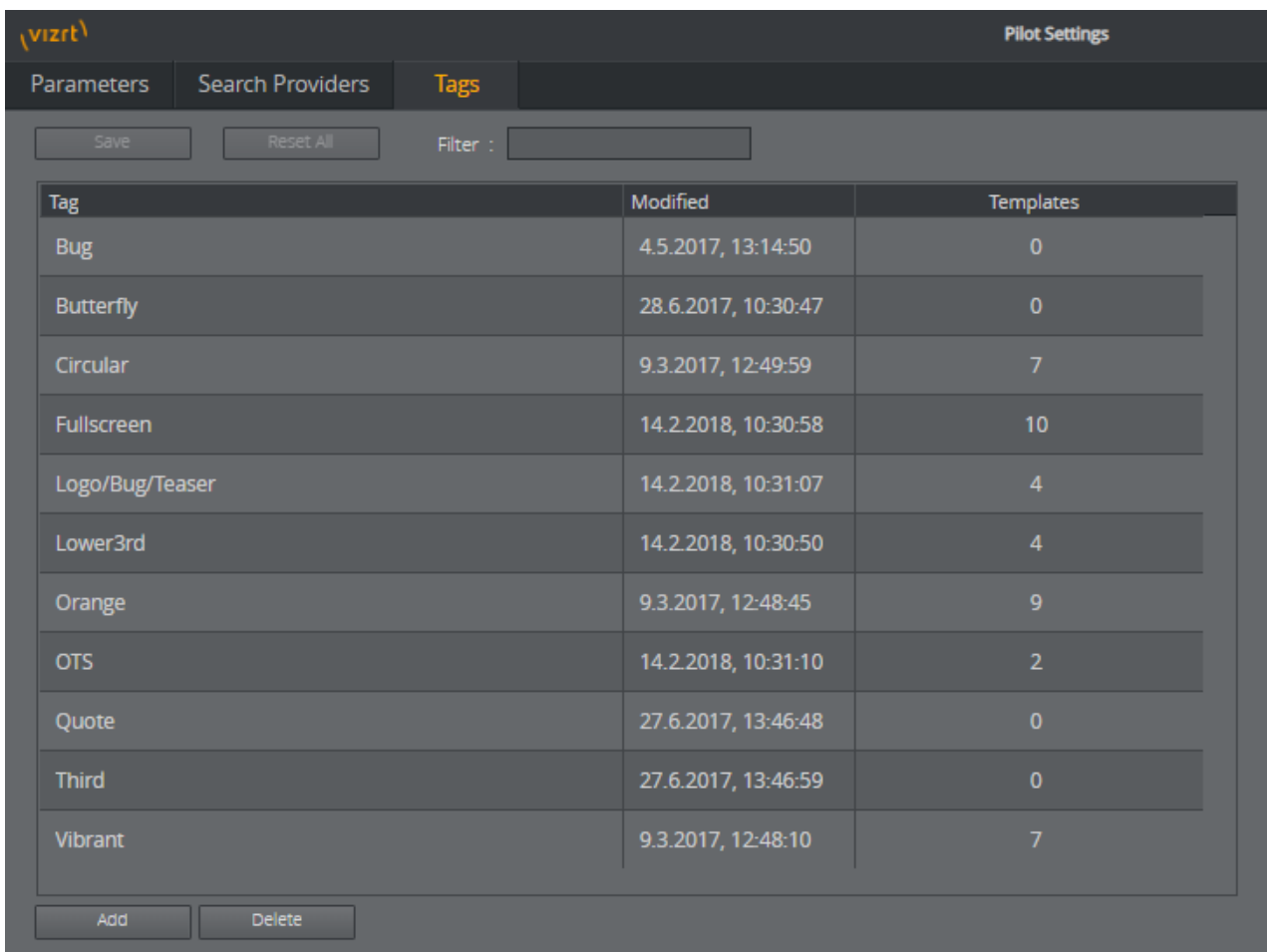
Note: If you change the short name you need to restart the server for the changes to take effect.

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



Tag	Modified	Templates
Bug	4.5.2017, 13:14:50	0
Butterfly	28.6.2017, 10:30:47	0
Circular	9.3.2017, 12:49:59	7
Fullscreen	14.2.2018, 10:30:58	10
Logo/Bug/Teaser	14.2.2018, 10:31:07	4
Lower3rd	14.2.2018, 10:30:50	4
Orange	9.3.2017, 12:48:45	9
OTS	14.2.2018, 10:31:10	2
Quote	27.6.2017, 13:46:48	0
Third	27.6.2017, 13:46:59	0
Vibrant	9.3.2017, 12:48:10	7

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 To access the 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.
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 will 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 (i.e. <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](#)).
- **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:** Add 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 will show the timing editor, and when disabled it will hide 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 to disables the clearing of all layers as the first commands sent when sending to preview.

- **ax_disable_data_overwrite**: When turned on this setting disables the Save button in the newsroom component, hence, only the Save As button is 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 turned on 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 turned on this setting disables dragging of media from search results to the rundown. This option is de-selected by default, i.e. dragging of media from search results is allowed.
- **ax_disable_overlay_saving**: When turned on this setting disables saving of overlay timelines for clip assets that has an `overlay_timeline` link. That is, 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 will 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 turned on the refresh button in the ActiveX external preview form will be shown. The preview will be refreshed without resending the data to the preview server.
- **ax_enableMediaSendToRundown**: When turned on 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 will hide the data element list in the newsroom component.
- **ax_hide_media_tab**: This setting will hide the media tab in the newsroom component.
- **ax_include_mosobj_tag**: This setting will add a `mosobj` node to the generated MOS XML. This is needed for some (Dalet) newsroom integrations.
- **ax_mos_edit_save_returns**: The ActiveX will check 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 is also used as fallback `vizhost` for the ThumbnailGenerator.
- **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 is also used as fallback `vizhost` for the ThumbnailGenerator.
- **ax_preview_tl_legacy_support**: Enabling this setting the preview will send values to legacy transition logic location (`$other$object`) in addition to normal behavior.
- **ax_preview_tl_show_next_sub**: `\Toggle*continue_noanim` command will be 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 will be presented to the user.
- **ax_savesas_cancels_edit:** Default behavior is when you edit an item already in a script, then click "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 can make Dalet newsroom system to crash.
- **ax_showsavechanges_dlg:** This setting will ask 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 will embed Viz Curious Maps Editor (CME) inside the same window as the newsroom component (and only for this).
- **clip_default_itemchannel:** If a value is set, it is used as the default channel for video clips. The value is used in the itemChannel element in the MOS XML and will appear 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 will not be reset to the 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 larger will be resized, while still respecting the aspect ratio of the crop. 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 (e.g. <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 (e.g. <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 of data element deletion in the Viz Pilot client. If the value is empty, the delete data elements dialog will not be password protected.
- **disable_built_in_vos_search:** This setting will disable the built-in VOS search. This should be used to prevent duplicate hits when moving to the new RESTful VOS search.
- **image_order_uri_template:** Placeholder URL template for image orders.
- **image_share:** Specifies the path the image Crop Tool (for templates) should use 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 will invoke the update service repeatedly using the interval specified here. The minimum value is 2 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 is 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 is 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 to be used when requesting preview images in the timeline editor (e.g. `http://exampleserver.com:54000`). This value will be 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 will execute *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 will show a column in the VCP playlist that displays each item index in the list.
- **slim_mos_xml**: This setting will slim down 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 by default is *en_US*. For example, if *spellcheck_dict_filename* is set to *my-special-en_US*, then the spell checker will look for the two files *my-special-en_US.dic* and *my-special-en_US.aff*. Several spellchecking dictionaries have been included as part of the Viz Pilot system's 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 there is a 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**: e.g. 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 using the VOS change password dialog. Setting this to blank will disable password protection of VOS settings.
- **vtw_disable_unique_name_check**: For customers who need to save different templates in different concepts with the same name. In other words, those who 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 etc.
- **vos_allow_edit_from_dll (optional)**: Enables or disables the toolbar in Object Store. When disabled it will disallow 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 edit and *N* for disallowing edit.

8 RestVOS

8.1 RestVOS Versus Conventional VOS (Viz Object Store) Access

The fundamental difference is the protocol used to search for images and deliver the results to the client.

When accessing an Object Store in the conventional 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 that is used when talking to Viz One systems.

From the point of view of the 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:** Some 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


List of database changes ordered from most recent to least recent.

- 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 protocol STOMP (Streaming Text Oriented Messaging Protocol) 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.

 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-mentioned 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.

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 URL Path Prefix Support In Pilot Data Server

To install a Pilot Data Server with a prefix, the installer has to be executed in the following manner:

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

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


10.2 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.

To install a Pilot Data Server with a Base URL, the installer has to be executed in the following manner:

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

The Base URL must be an absolute URL string.

 **Note:** Using Base URL will override the Pilot Data Server setting Base Path if it is set.