QueryVision SharePoint Web Parts for IBM Cognos

INSTALLATION & CONFIGURATION GUIDE

Version 2019.1

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1. INTRODUCTION

The following guide covers the installation, deployment and usage of QueryVision's SharePoint Web Parts for Cognos.

The Web Parts mentioned in the guide are fully packaged Web Parts which integrate IBM Cognos 10.X or IBM Cognos Analytics 11 functionality directly within a SharePoint 2010, 2013 and 2016 application. You can use these web parts to enhance your overall end user experience, by presenting a customized portal or series of portals that are dedicated to specific reports, dashboards, or business processes.

2. WHAT'S NEW

For an overall view of What's New for QueryVision SharePoint Web Parts for Cognos 2016.1 – see QueryVision Web Parts for Cognos - Whats New

For release specific information see QueryVision Web Parts for Cognos - Version 2016.1 Readme

From the perspective of this guide, the following is new or changed:

2.1 QueryVision Web Parts V 2019.2.0

- Validated and tested with 11.0.13 (Long Term Support release for 11.0.X – will be maintained until Nov 1, 2021) and 11.1.2 (current 11.1.X release)

- Update for rendering individual ICA 11 interactive Reports (vs. 10.2.2/static/non-interactive configured reports) and ICA 11 Dashboards in the Cognos Component Web Part as IBM has changed the URLs used to render those Cognos objects directly (vs. navigating and running via the ICA 11 UI. This changes how you set up the Cognos Component web part for those object types (see later in this document).

- Updates to property render reports built on non-Framework Manager based data sources (which can be done for non-interactive reports which are rendered with the Report Viewer WebPart)

- Update Service Account support to 11.X and other web part changes (no feature/function changes)

- Report Viewer - Support for extracting report parameters from the SharePoint Web Page URL query string to run one or more reports on the page – Contact QueryVision for more information.

- Report Viewer - Bug Fix to avoid asking for report parameters via SDK call during user operations (restricted to running in authoring mode (web part editing mode). This was causing report execution performance and timeout issues for heavily loaded servers

2.2 QueryVision Web Parts V 2016.1

- **Configuration Files** - QvtConfig.xml

  ◊ Existing QueryVision installations will have to re-apply configuration changes from their current QvtConfig.xml file to the new 2016.1 version

  ◊ Configuration for ICA 11 servers adds an additional AccessURI parameter and is impacted by the changes to the ICA 11 Architecture impacting the use of the Gateway component

- **SharePoint 2016** – there are no SharePoint 2016 specific installation or configuration changes required (vs. SharePoint 2013)

- **Web Part behavior changes for ICA 11** – The Content Manager Browser, Report Viewer, Favorites and Cognos Component web parts have ICA 11 specific features and behavior when connected to ICA 11 (vs. IC 10.x)

- **SSO Dynamic authentication updates** – which version of components for SSO authentication need to be selected based on the JRE that IBM Cognos is using (see QueryVision SSO Dynamic Trusted Sign On Provider Guide)

2.3 QueryVision Web Parts V 2015.1

Version 2015.1 introduced Autosizing toolkit capabilities, which are optional extensions for the QueryVision Report Viewer web part and any SharePoint page with QueryVision (or other vendor's) web parts to optimize the report height and width for embedded SharePoint content.

This includes additional components to install and configure.

See the QueryVision Report Autosizing Guide for details and the following video Introducing Autosizing (YouTube)

3. LATEST GUIDES

The latest versions of this guide and the installation guide can be found on the queryvision.com web site here:

- QueryVision SSO Dynamic Trusted Sign On Provider Guide

- QueryVision Web Parts Installation Guide

4. PREREQUISITES

- IBM Cognos 10.X, IBM Cognos Analytics 11.X

- Microsoft SharePoint 2010, SharePoint 2013 or SharePoint 2016

5. INSTALLATION

5.1 Installation Overview

Installation of the QueryVision SharePoint web parts for IBM Cognos requires installation of software components and files on:

- All SharePoint Web Front End (WFE) servers in a SharePoint installation or "Farm"

- Optionally (requires for Single Sign On) on each Cognos application server (or Gateway server)

Information required before installation:

- Understand the network topology for SharePoint and Cognos servers are configured within the network:

    ◊ Use of network software and hardware components: Firewalls, load balancers, application management or authentication management (e.g. Citrix NetScaler)

    ◊ Use of HTTP/HTTPS for each "link" between network components

    ◊ Organization of servers within SharePoint and Cognos (for multi-server installations)

- Identify which SharePoint Web Site(s) to install the components to on the SharePoint WFEs

    ◊ Identify the folder locations on the WFEs for the virtual directory structure for each target web site.

    The following is a typical location:
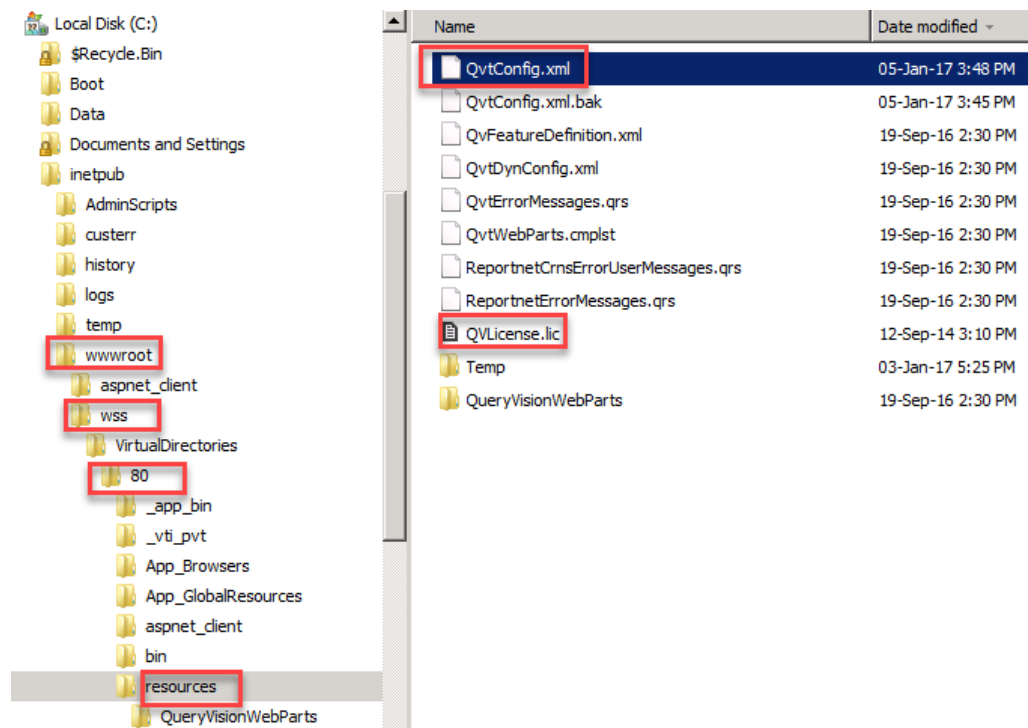
- Collection IBM Cognos installation and configuration information

    ◊ Identify which IBM Cognos servers have the Content Manager (CM) installed

    ◊ Identify information from Cognos Configuration for the target IBM Cognos installation

You will need to launch:

and get information from here:
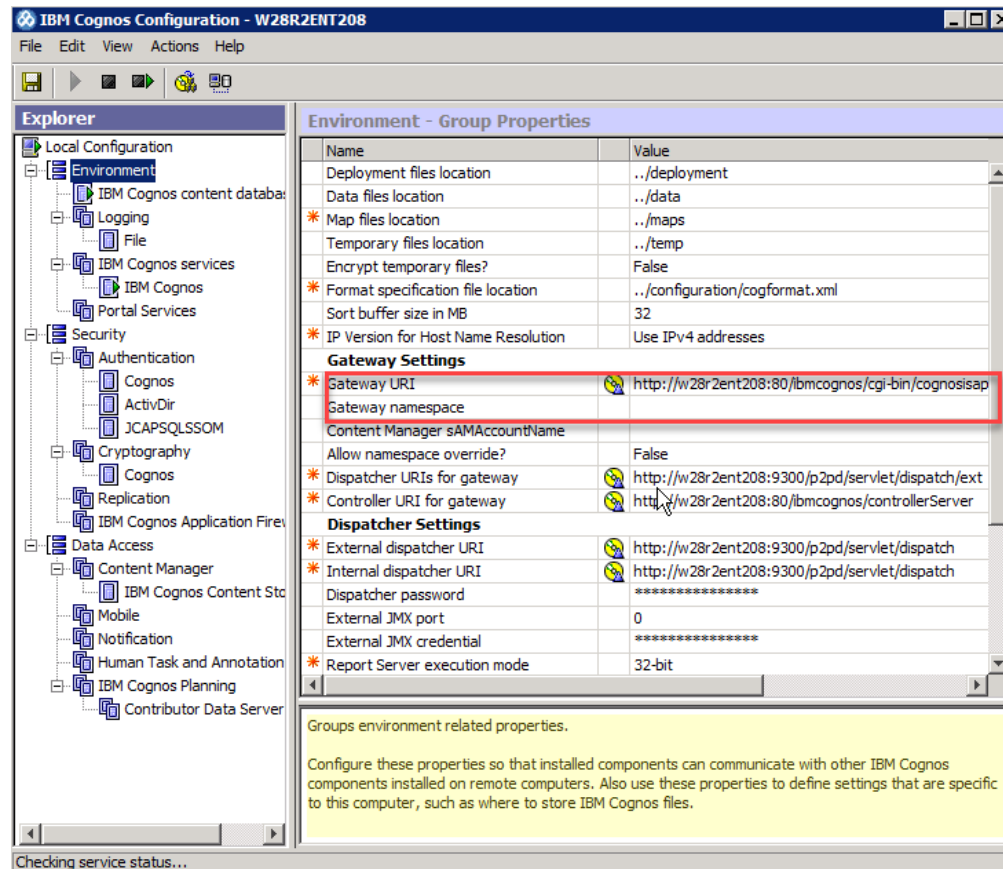
◊ Identify the installation location of the IBM Cognos BI Server software on the Cognos Servers (CM) installed

The following is a typical location, highlighting some key folders:
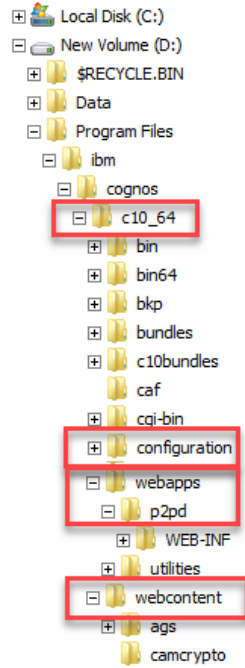
◊ Understand how Cognos Authentication is currently configured:

- ♦ Cognos Authentication Namespaces to be used for SharePoint applications

- ♦ User authentication

  - ❖ challenge/response

  - ❖ Single Sign On – and how this is achieved (NTLM, Kerberos))

- Ensure you have a valid license file from QueryVision (QvLicense.lic)

- Permissions

  ◊ Cognos

  - ♦ Permission to open and capture information from Cognos Configuration

  - ♦ Permission to add and modify files on Cognos servers

  ◊ SharePoint

  - ♦ Administration in SharePoint to add Web Part "Solutions" to the WFE

  - ♦ Administration on the SharePoint WFE to ensure at least **read privileges** for SharePoint users for the target web site virtual directory structure. This is required for the QueryVision web part configuration files (e,g, QvtConfig.xml) and the license file (QvLicense.lic).

5.2 Licensing

QueryVision Web Parts will not run without a license file. This includes needing a Trial license for initial evaluation. See the **Licensing** section later in this document.

5.3 Extract Files from Archive

The main installation program is packaged within a self-extracting archive. If you have downloaded this file you will need to save this file in a location in order to run the Setup program.

Run the extraction by double-clicking on the file and then choosing the location to save the setup files.

Please note that this step of the install does not install web parts onto your SharePoint Server. Deployment of web parts is a separate step that is covered later in this document.

5.4 Preparing for Install

Please ensure the following before attempting to run the install.

- You must install the software directly on the Windows Server that SharePoint is installed upon.
- Ensure that you are logged in as an Administrator of the Windows machine.

5.5 Install

To start the installation, run **Setup.exe**.

Choose your Installation Directory and whether you want shortcuts to show up for all users or only yourself. Follow the rest of the on screen instructions to complete the installation.

5.6 Uninstall

Prior to uninstall, save copies of the QvtConfig.xml or QvLicense.lic if required as files as these will be deleted as part of the uninstall process.

To uninstall, go to the Control Panel Add/Remove Programs, select QueryVision Web Parts and select "Remove".

Note: Using the uninstall program simply removes the installed files from your computer. It does not remove web parts from your SharePoint server. You must use the stsadm tool or other standard SharePoint Administration tools to remove the web part package from each server that you have deployed to.

6. DEPLOYMENT AND CONFIGURATION

6.1 Deploying Web Parts to your SharePoint Server

A standard Web Part Package is shipped as part of the install. This file is in the form of a WSP (web part solution package) file. You can find this package in the following location:

 <install folder>\Package

Locate the appropriate package file that is appropriate for your installation. For SharePoint 2007, this is "QuerVision.WebParts.Install.2007" and for SharePoint 2010/2013/2016 it is "QuerVision.WebParts.Install.2010"

In order to Deploy (install) web parts onto your SharePoint Server you must use the STSADM.exe utility, which ships as part of your standard SharePoint install. This guide does not attempt to document the entire usage of the STSADM utility. You can find the full documentation on using this utility in your Windows SharePoint Services Administrator's Guide. Typing "stsadm –h" will also give you a full description of the syntax of this tool.

QueryVision Web Parts have been designed to be deployed to the BIN directory of a particular virtual web server. Installing them into the Global Assembly Cache (GAC) is not recommended.

Steps for Deployment:

1) Locate your STSADM.exe utility.

This is typically located here:

> "C:\Program Files\Common Files\Microsoft Shared\Web Server Extensions\15\BIN\stsadm"

> Note that the sub-folder "15" may be different, depending on the version of SharePoint (2007, 2010, 2013, 2016).

Open a command prompt in that location.

2) Use the following command to ADD the web part solution onto your server.
For SP2007
stsadm -o addsolution -filename "<QueryVision Install Location>\Package\QueryVision.WebParts.Install.2007.wsp"

For SP2010/SP2013/SP2016
stsadm -o addsolution -filename "<QueryVision Install Location>\Package\QueryVision.WebParts.Install.2010.wsp"

*Note: By default the QueryVision Install Location will be "C:\Program Files\QueryVision\QueryVision SharePoint WebParts\"

3) Force the Timer Job to run using the command
stsadm -o execadmsvcjobs

Note: This should not be required for SharePoint 2010/2013/2016. If in doubt, use the two SharePoint Administation pages discussed in **6.3 Aids for monitoring Deploy or Remove**, below

4) Use the following command to DEPLOY the package to your Web Application (URL).

For SP2007
stsadm -o deploysolution -name QueryVision.Webparts.Install.2007.wsp -immediate -allowCasPolicies -url <YourWebApplicationURL> -allowgacdeployment

For SP2010
stsadm -o deploysolution -name QueryVision.Webparts.Install.2010.wsp -immediate -allowCasPolicies -url <YourWebApplicationURL> -allowgacdeployment

For SP2013/2016
stsadm -o deploysolution -name QueryVision.Webparts.Install.2010.wsp -immediate -url <YourWebApplicationURL> -allowgacdeployment -allowFullTrustBinDlls

*Notes:

♦ Typically your application url will be http://YourServerName

♦ When installing on SP 2013/2016, assemblies are automatically installed into the GAC rather than a standard /bin installation. You will receive a message about this after deploying. No further action is required.

♦

♦ If you receive and error about duplication they add "-force" to the above command:

> <…> - allowgacdeployment -force

5) Force the Timer Job to run using the command
stsadm -o execadmsvcjobs

Note: This should not be required for SharePoint 2010/2013/2016. If in doubt, use the two SharePoint Administation pages discussed in **6.3 Aids for monitoring Deploy or Remove**, below

6) Finally you will have to ACTIVATE the web part features, which adds items to your web part gallery. Enter the following command.
stsadm -o activatefeature -name QueryVisionWebParts -url <YourWebApplicationURL>

Note that you will need to do steps 4 to 6 for each SharePoint site/application

6.2 Remove Web Parts from your SharePoint Server

To remove (undeploy, retract) web parts from your SharePoint Server the operation is essentially the reverse of the deploy steps listed earlier.

Steps for Removal:

1) Locate your STSADM.exe utility and open a command prompt in that location.

2) You will have to DEACTIVATE the web part features, which adds deactivates web parts in the "site collection features" list. Enter the following command.
stsadm -o deactivatefeature -name QueryVisionWebParts -url <YourWebApplicationURL>

*Note: Typically your application url will be the http address for the installed site
http://YourServerName (e.g. http://<server>:16853)

3) Force the Timer Job to run using the command
stsadm -o execadmsvcjobs

Note: This should not be required for SharePoint 2010/2013/2016. If in doubt, use the two SharePoint Administation pages discussed in **6.3 Aids for monitoring Deploy or Remove**, below

4) Use the following command to Retract the package to your Web Application (URL).

For SharePoint 2007
stsadm -o retractSolution -name QueryVision.Webparts.Install.2007.wsp -immediate -url <YourWebApplicationURL>

For SharePoint 2010/2013/2016
stsadm -o retractSolution -name QueryVision.Webparts.Install.2010.wsp -immediate -url <YourWebApplicationURL>

5) Force the Timer Job to run using the command
stsadm -o execadmsvcjobs

Notes:

♦ This should not be required for SharePoint 2010/2013/2016. If in doubt, use the two SharePoint Administation pages discussed in **6.3 Aids for monitoring Deploy or Remove**, below

♦ You will need to complete steps 1 to 5 for each SharePoint site/application

6) Use the following command to DELETE the web part solution onto your server.

For SharePoint 2007
stsadm -o deletesolution -name QueryVision.WebParts.Install.2007.wsp

For SharePoint 2010/2013/2016
stsadm -o deletesolution -name QueryVision.WebParts.Install.2010.wsp

*Note: By default the QueryVision Install Location will be "C:\Program Files\QueryVision\QueryVision SharePoint Webparts\"

7) SharePoint will not remove the web parts from the Site Web Parts Gallery automatically. For each application go the

Site Settings > Galleries > Web Parts (this will be slightly different for each version of SharePoint)

http://teams:5555/_catalogs/wp/Forms/AllItems.aspx

locate and remove the following web parts by clicking on the "edit" icon beside the name and then selecting delete:

Type	Web Part	Edit
	CMTreeWP.dwp	
	CognosReportDropDownList.webpart	
	DropDownListFilterProvider.webpart	
	QVCogComponentsViewer.webpart	
	QVCRNAuthenticationWP.dwp	
	QVCRNFavoriteListViewer.dwp	
	QVCRNSsoAuthenticationWP.dwp	
	QvCRNSvcAcntAuthenticationWP.dwp	
	QVReportViewer.webpart	

6.3 Aids for monitoring Deploy or Remove

Aids for monitoring the installation and removal process, the following web pages will show the status of the web parts:

- Site Collection Features – this will show which features are active for the Site, including the QueryVision Web Parts. If the web parts are active, there will be two "buttons" one showing "active" (status) and another (gray) showing "Deactivate", which can be clicked to deactivate.

   If not activated there will be single button showing "Activate". This can be clicked to Activate.

   This page can be located by Site Settings\Site Collection Features. An example of the URL (for SP 2016) is:

   http://w12r2sp161/_layouts/15/ManageFeatures.aspx?Scope=Site

   From the site where the web parts are installed, select Site Settings-> Site Collection Adminstration -> Site collection features

- Solution Management – monitor the status of the QueryVision Web Parts deployment:

   The status that you will see are:

   ◊ Deployed – when the web parts are fully deployed and ready for activation, or have been activated

   ◊ Retracting – the QueryVision Web Parts are in the process of being removed from the site

   ◊ Not-Deployed – the QueryVision Web Parts are not deployed. This status will be shown when

      ♦ Initially installed, but not deployed

      ♦ After completion of retraction

◊ The solution will be removed from the list after the deletesolution step

An example of the URL (for SP 2016) for the Solution Management URL (from the Central Admin site) is:

http://w12r2sp161:2016/_admin/Solutions.aspx

Starting from Central Admin (e.g. SP 2016) -> System Settings -> Farm Management - > Manage Farm Solutions

6.4 Configuration

6.4.1 QvtConfig.xml - the QueryVision Application Configuration File

A configuration file: QvtConfig.XML, is installed into the web application directory when you deploy the web part solution (in the previous step). This file needs to have key settings configured prior to correct operation and connection to Cognos Servers.

The changes required are changes or additions in XML, which can be made with any text editor, but will be simpler with an XML editor if available. It is highly recommended that you back up the original copy of QvtConfig.XML prior to making changes.

Important Note: The original version of this file can be found on your web server, where you deployed to. If your web application is http://YourSharePointServer, then you will typically find the file in the "C:\inetpub\wwwroot\resources" folder. It may also be in "C:\Inetpub\wwwroot\wss\VirtualDirectories\80\resources", where "80" is your port number.

As mentioned you should make a backup copy of this file before making changes. It is recommended that you also make a backup of the file AFTER you make changes, since re-deploying the solution will overwrite this file.

6.4.1.1 REQUIRED SETTING CHANGES

6.4.1.1.1 Section Key="CrnServerConfig"

This section of the QvtConfig file determines connection and related configuration for Cognos 10.x and 11.x Servers. **In general these items do not need to be changed.**

Multiple Cognos Servers can be defined (e.g. multiple <CrnServer> XML sections)

NOTE: If you are unsure of your Cognos settings, you can obtain them from your Cognos Administrator.

6.4.1.1.2 CrnServer

You will require the following information from Cognos Configuration:

1. The "Gateway URI" (found under Gateway Settings on the Environment tab)
2. The "Dispatcher URI for External applications" (found under Other URI Settings on the Environment tab)
3. The Namespace Name and Namespace ID (found under the Security / Authentication tab)

Step 1: Configure the Gateway URIs

Note: *The example URIs shown as examples assume that IBM Cognos 10.X or IBM Cognos Analytics 11.X was installed using the default Virtual Directory structure and names as defined in IBM documentation for IIS.*

10.X

Locate the first <AccessURI> section with the <Name>Gateway URI</Name>.

```
<AccessURI>
<Name>Gateway URI</Name>
<URI>http://YourCognos8ServerName/ibmcognos/cgi-bin/cognos.cgi</URI>
<BaseURI>http://YourCognos8ServerName/ibmcognos</BaseURI>
</AccessURI>
```

◊ **Name** – Do not change this name, this is for internal use.

◊ **URI** – Change this setting to correspond to your Gateway URI server name. This should be the exact URI as defined in Cognos Configuration for your GatewayURI. (Do not use "Localhost"). The use of cognos.cgi or alternatives such as cognosisapi.dll is dependent on your configuration

◊ **BaseURI** – the root web directory where Cognos 8 was installed. By default, this is simply http://YourCognosServerName/Cognos8

A complete example of all the AccessURIs for IBM Cognos 10.x (including the Dispatcher URI, covered, below) is:

```
<AccessURIs>
  <AccessURI>
    <Name>Gateway URI</Name>
    <URI>http://w12r2ca111:80/ibmcognos/cgi-bin/cognosisapi.dll</URI>
    <BaseURI>http://w12r2ca111:80/ibmcognos</BaseURI>
  </AccessURI>
  <AccessURI>
    <Name>Dispatcher URI for external applications</Name>
    <URI>http://w12r2ca111:9300/p2pd/servlet/dispatch</URI>
    <BaseURI>http://w12r2ca111:9300</BaseURI>
  </AccessURI>
</AccessURIs>
```

11.X

IBM Cognos Analytics 11 has changed how the Gateway and IIS need to be configured which requires an additional Access URI. Note that for QueryVision Web Parts, use of the "optional" Gateway is required.

In addition, the Gateway URI required may not be the one shown in Cognos Configuration (see section **6.4.4 IBM Cognos Analytics 11.X - Cognos Configuration Changes** later in this document)

◊ The Gateway URI (a shown above in 10.X) needs to be configured to the following.

```
<Name>Gateway URI</Name>
<URI>http://YourCognos8ServerName:port/ibmcognos/bi/v1/disp</URI>
<BaseURI>http://YourCognos8ServerName:port/ibmcognos/bi </BaseURI>
```

An example of the URL is: http://w12r2ca111:80/ibmcognos/bi/v1/disp

Notes:

♦ The port is the IIS port (e.g. 80), not the Tomcat port (9300)

◊ In addition to the "Gateway URI" AccessURI, an additional AccessURI block is required for CA 11, which is required for SSO Authentication

```
<AccessURI>
  <Name>CA Athentication Gateway URI</Name>
  <URI>http://server:port/ibmcognos/cgi-bin/cognosisapi.dll</URI>
```

```
      <BaseURI>http://server:port/ibmcognos</BaseURI>
   </AccessURI>
```

An example of the URI is: http://w12r2ca111:80/ibmcognos/cgi-bin/cognosisapi.dll

Note: this example applies to Microsoft IIS. For linux or other platforms cognos.cgi (or equivalent) will be required in place of cognosisapi.dll.

A complete example of all the AccessURIs for ICA 11 (including the Dispatcher URI, covered, below) is:

```
<AccessURIs>
  <AccessURI>
    <Name>Gateway URI</Name>
    <URI>http://w12r2ca111:80/ibmcognos/bi/v1/disp</URI>
    <BaseURI>http://w12r2ca111:80/ibmcognos/bi</BaseURI>
  </AccessURI>
  <AccessURI>
    <Name>CA Athentication Gateway URI</Name>
    <URI>http://w12r2ca111:80/ibmcognos/cgi-bin/cognosisapi.dll</URI>
    <BaseURI>http://w12r2ca111:80/ibmcognos</BaseURI>
  </AccessURI>
  <AccessURI>
    <Name>Dispatcher URI for external applications</Name>
    <URI>http://w12r2ca111:9300/p2pd/servlet/dispatch</URI>
    <BaseURI>http://w12r2ca111:9300</BaseURI>
  </AccessURI>
</AccessURIs>
```

Step 2: Configure the Dispatcher URI for external applications

Locate the first <AccessURI> section with the <Name>Dispatcher URI for external applications</Name>.

```
<AccessURI>
   <Name>Dispatcher URI for external applications</Name>
   <URI>http://CognosDispatchServer:9300/p2pd/servlet/dispatch</URI>
   <BaseURI>http://CognosDispatchServer:9300</BaseURI>
</AccessURI>
```

- **Name**– Do not change this name, this is for internal use.

- **URI** – Change this setting to correspond to your Dispatcher URI server name. This should be the exact URI as defined in Cognos Configuration for your Dispatcher URI for External Applications. (Do not use "Localhost").

- **BaseURI** – By default, this is simply "http://YourCognosServerName:9300"

Step 3: Configure Application Settings

Locate the following sections which appear directly below the previous AccessURI section.

```
<CognosVersion>10.0.0.0</CognosVersion >
<LogicalName>Localhost</LogicalName>
<DisplayName>My Server - Localhost</DisplayName>
<Authentication>Account</Authentication>
<SetBrowserPassport>PassportInUrl</SetBrowserPassport>
```

- **CognosVersion** – the software version of the Cognos Server (10.1, 10.2, 10.2.1, 11.0.3 etc.). Note that the value found in the cmplst.txt file (ask your Cognos Administrator for this information) in the Cognos root folder installation is the build number, not the version number.

  To map Build number to Version number (e.g. the build for Cognos 10.2.2 FP2 is 10.2.6102.54 - what is required is **10.2.2** – the fix pack is not required (e.g. 10.2.2 is

sometimes referred to as 10.2.2.5)), see the official list of Version vs. Build numbers: How to determine the Service Pack of the Cognos Business Intelligence product installed

However, you may not know the version. A quick way to determine your Cognos version can be done by doing the following:

◊   Ask your cognos administrator for a copy of the file cmplst.txt from the root installation folder:

♦   IBM Cognos 10.X – example: C:\Program Files\ibm\cognos\c10_64

♦   IBM Cognos Analytics 11.X example: C:\Program Files\ibm\cognos\analytics

◊   For IBM Cognos 10.X an alternative is:

♦   Access Cognos Connection and log in.

♦   Assuming you have the address bar visible click on the URL (as shown below)
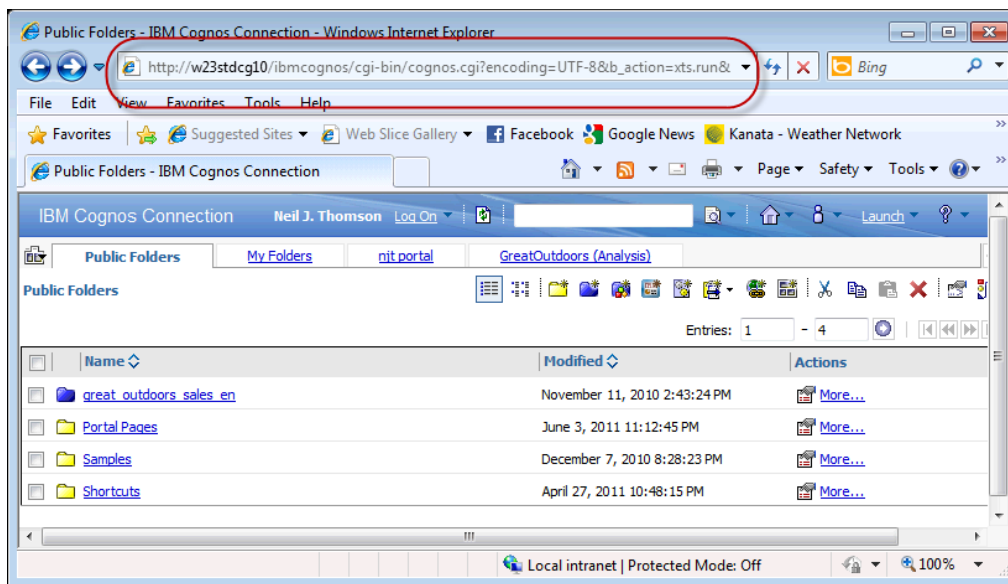
And append the following after the "?"

b_action=cmplst

This will cause the component list with version information to be presented:
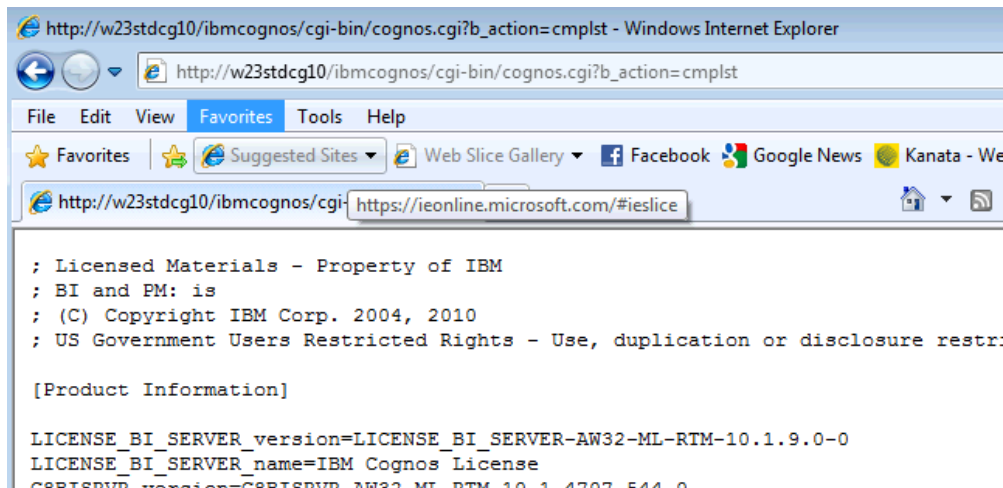
You can then search in the file to find the current version information by searching within this web page for C8BISRVR. You are looking for an entry which includes the version and build number:

C8BISRVR_version=C8BISRVR-AW32-ML-RTM-10.1.4707.544-0

If you have updated your installation with a Fix Pack, then the latest version information will be included under a section call [Product Update Information] such as the following:

```
[Product Update Information]

C8BISRVR_UPDATE_NC_10.1.4707.1052_version=C8BISRVR-AW32-ML-RTM-
10.1.4707.1052-0
```

Note that the two examples above were taken from the same cmplst web page.

To map to build number to the version number see the following: [How to determine the Service Pack of the Cognos Business Intelligence product installed](#)

- **Logical Name** used internally displayed to the user when logging into a Cognos 8 server

- **DisplayName** – This value can be set to the same name as the logical name

- **Authentication** – the authentication model that Cognos is using – as shipped: Account

  Permitted Values:

  ◊ "Anonymous " - allows for Anonymous access (no credentials required for login)

  ◊ "Account" – Cognos requires user ID and Password

  ◊ "AccountAnonymous" – Cognos supports both Anonymous and ID/Password login

  ◊ "SSODynamic" – For use with the Single Sign on Web Part (see Advanced Authentication)

  ◊ "SSORemoteUserLookup" - For use with the Single Signon Web Part (see Advanced Authentication)

  ◊ "SSORemoteUserFixed" - For use with the Single Signon Web Part (see Advanced Authentication)

- **SetBrowserPassport** – the technique that QueryVision Web Parts use to establish the Cognos "Passport" (session authentication token) in the user's browser.

  Note: this does not apply for Single Sign-On (SSO) Authentication.

  Permitted Values:

  ◊ SetCookie – on authentication, the Web Part calls to the setCookie.jsp file on the Cognos Server or on a Cognos Gateway. See "Login Access Files" later in this document.

  ◊ PassportInUrl – the Passport is passed in URLs sent to the Cognos server (does not require installing the setCookie.jsp file

Note: *The preferred solutions to use the "PassportInUrl" option. SetCookie is currently only recommended for use with IBM Cognos Analytics 11.X when authenticating users with the QueryVision Cognos Authentication (challenge user for id/pwd) web part or Service Account web part and making extensive use the Cognos Component web part to access the ICA 11 portal interface*

Step 4: Configure the Namespace settings

Locate the following section directly below the previous section you edited.

```xml
<NameSpaces>
  <NameSpace>
    <Name>YourNamespaceName</Name>
    <DisplayName>Custom Display Name</DisplayName>
    <NameSpaceID>YourNamespaceID</NameSpaceID>
    <NetbiosDomain>FriendlyNetbiosDomainName</NetbiosDomain>
    <Default>True</Default>
  </NameSpace>
</NameSpaces>
```

It is necessary to specify the namespaces for each Cognos server.

The following needs to be supplied, which echoes what is entered in the Cognos Configuration Authentication section.

Note that a <Namespace> entry will be required for each Namespace that you want to login to on each Cognos Server. Note that you do not need to include the "Cognos" namespace, nor all namespaces – only those you want to expose for your users.
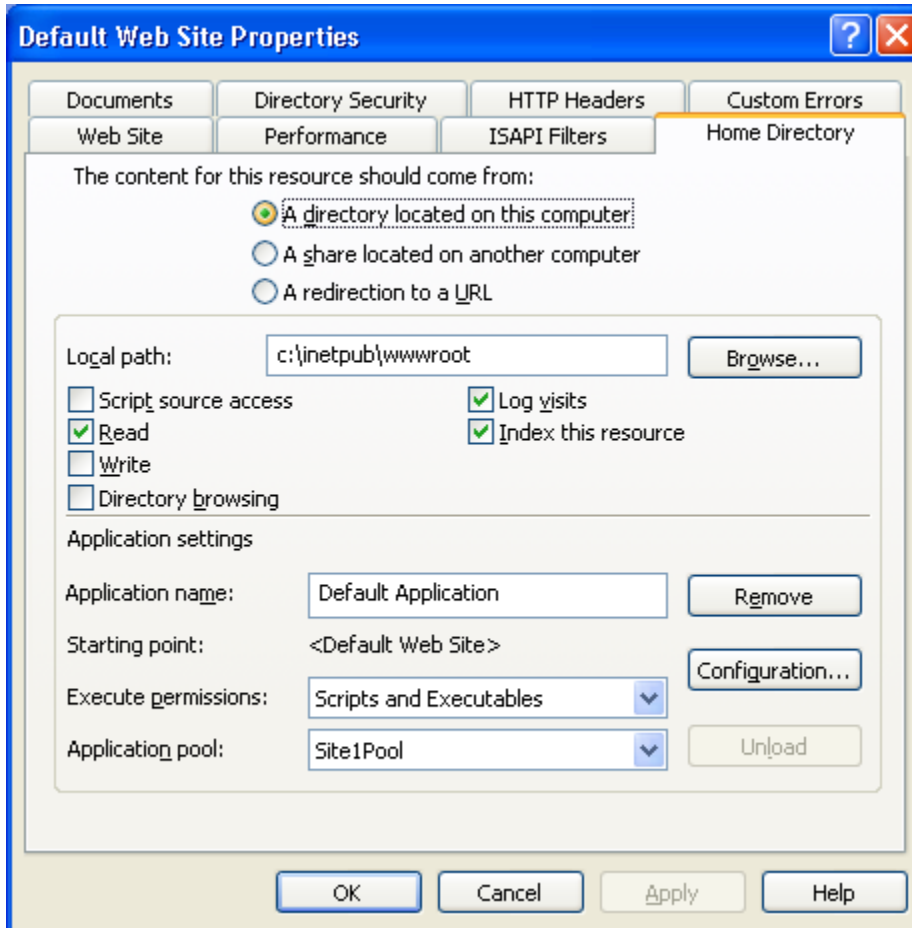
◊ **Name** – as defined in the entry for Cognos Configuration under Security/Authentication (see the Cognos Connection example screen snapshot, above (e.g. development.queryvision.com)

◊ **DisplayName** – the name to display to the user on login (e.g. Development)

◊ **NameSpaceID** – as shown in Cognos Configuration.

◊ **NetbiosDomain** – Required for Advanced Single Signon options. If this Namespace corresponds to an Active Directory domain. Enter in the Domain name associated with this namespace. For further information see Advanced Authentication.

◊ **Default** – is this the default namespace – normally True, <u>only one entry can be True</u>.

6.4.1.2 SAVING THE QVTCONFIG.XML FILE

As mentioned previously after you have finished making your changes to this configuration file:

If you are unsure of this directory you can use IIS Manager to locate it by selecting the Web Site you deployed to and then selecting the Home Directory Tab.

The physical folder is located in the "Local Path" field

6.4.2 Copy Login Session Access File to your Cognos Server

6.4.2.1 LOGIN ACCESS FILES

The following step is optional. It is only required if you have changed the default setting of your QVTConfig.xml parameter <SetBrowserPassport> to be "SetCookie" if you encounter problems using the default setting of "PassportInUrl". This is mentioned earlier in this document.

In order to allow seamless interaction between the Cognos SDK and browser calls directly to the Cognos server (through URLs), it is necessary to install a Java Server Page (JSP) on your Cognos Server.

When you setup this JSP access properly you will only ever be challenged once in a session for your credentials.

- Make a copy of the file *<QueryVision Install Directory>\Configuration\setCookie.jsp* (by default this will be found in \Program Files\QueryVision\ QueryVision SharePoint Webparts\Configuration).

- On your Cognos server locate the following directory:

  - *<Cognos Install Directory>.. \ webapps \ p2pd*

- Copy the setCookie.jsp file into this directory.

- Note: you will have to have the proper account privileges on the CRN server to complete this task.

6.4.2.2 SINGLE SIGN ON ACCESS FILES

There are numerous Single Signon options available within the product, and configuration of these options depends on your Cognos and SharePoint environment. Please refer to the Advanced Authentication section at the end of this document for further instructions, once you have completed the rest of the setup.

6.4.3 Setting Up Code Access Security

Note: When installing on SharePoint 2013/2016 the following section is not required. QueryVision assemblies will be installed into the GAC by default (as per Microsoft recommendations), therefore the policy file adjustment is not required.

For SharePoint 2007 & 2010 you must still follow the steps below.

Code Access Security (CAS) is a feature that is part of the .NET Common Language Runtime that allows you to grant or deny execution permission to an assembly.

The QueryVision assemblies therefore need to be granted the right to execute within your security policy file for your Virtual Web server.

Furthermore, since these web parts access the Cognos Server you will have to also grant the "WebPermission" right, within the same policy file.

6.4.3.1 LOCATE YOUR CAS POLICY FILE

You should first determine the policy file that is currently in use. Typically this file is set in the web.config file that is in the virtual directory that you installed your Web Part into.

1. Open the web.config file (e.g.
   c:\inetpub\wwwroot\wss\VirtualDirectories\<site>\web.config)

2. *Locate the section <trust >. This section will name the level of trust and policy that is currently in place.*
   For instance, `<trust level="WSS_Minimal" originUrl="" />`means that the WSS_Medium policy is currently in effect.

3. Now you must locate the actual policy file. First locate the section called <SecurityPolicy> within the same web.config file. Look for the same name that you located in the previous step. For example the policyFile value points the location of this file:
   `<trustLevel name="WSS_Minimal" policyFile="C:\Program Files\Common Files\Microsoft Shared\Web Server Extensions\12\config\wss_minimaltrust.config" />`

4. Once you have located the correct file you are ready to make changes to this policy file. You can open and edit this file with any text editor, such as Notepad or Wordpad. **Make sure that you make a backup of the Policy File before you make any changes.**

5. Once you have made a backup open the policy file for editing and proceed to the next step.

6.4.3.2 GRANTING QUERYVISION WEB PARTS EXECUTE PERMISSION

You must now grant execute permission for QueryVision Web Parts within your policy file.

1. Open the following your policy file within a text editor.
2. Locate the following lines within your policy file
   `<CodeGroup class="UnionCodeGroup" version="1" PermissionSetName="queryvision.webparts.install.wsp-xxxxx">`

   Where xxxxx is a unique alphanumeric identifier.

3. Change the value for the PermissionSetName to "FullTrust" so that it looks like the following
   `<CodeGroup class="UnionCodeGroup" version="1" PermissionSetName="FullTrust">`

4. Save and close the Policy File.

5. Ensure that SharePoint re-processes the Policy file by using IIS Manager to restart ("bounce") the application pool for the SharePoint application where QueryVision's WebParts have been installed (recycle in the screen shot, below).
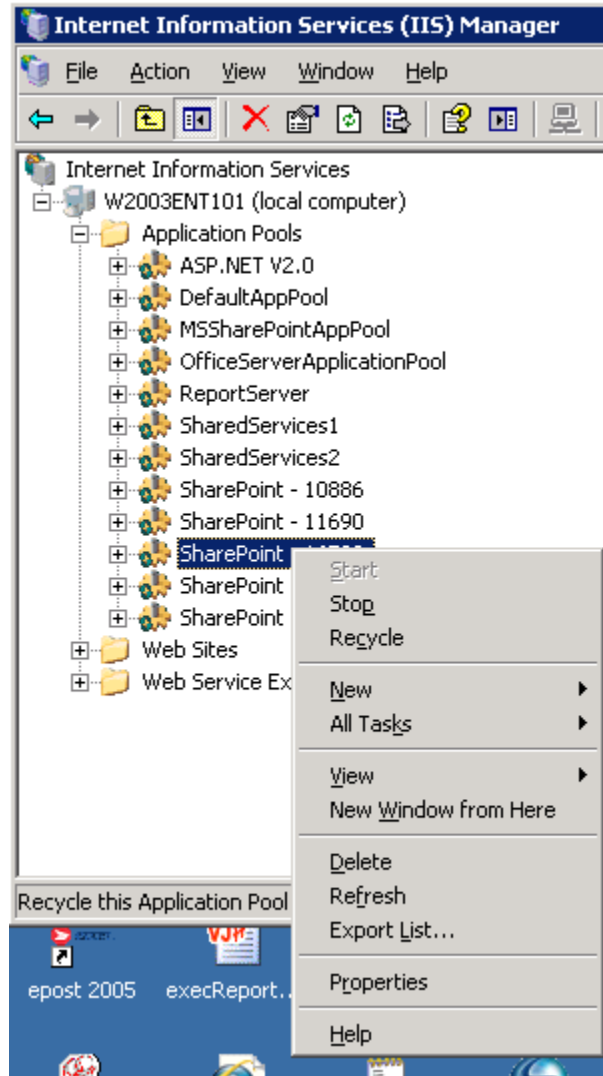
6.4.4 IBM Cognos Analytics 11.X - Cognos Configuration Changes

It is highly recommended to be familiar with the IBM Cognos Analytics Gateway installation, configuration, etc. as outlined here:

- QueryVision Guide to Installing and Configuring Cognos Analytics 11

For IBM Cognos Analytics 11, when configured for SSO with IIS, the default Gateway URL shown in Cognos Configuration/Environment section points to the non-Gateway URL (e.g. the "Glass" authentication URL on the Application Server).

http://localhost:9300/bi/v1/disp

It is recommended that be changed to point to the IIS location:

http://server:port/ibmcognos/bi/v1/disp

where the port is the web server (e.g. Microsoft IIS) port (e.g. 80), not the Cognos Tomcat port (e.g. 9300)

For example:

http://w12r2ca111:80/ibmcognos/bi/v1/disp

Regardless of whether this is changed in Cognos Configuration or not, the value that QueryVision Web Parts require in QvtConfig.xml for the AccessURL:Gateway URL for your Cognos Server is this one:

http:// server:port/ibmcognos/bi/v1/disp

6.5 Configuring for HTTP/SSL

Support for HTTPS/SSL is provided automatically if a server's Access URI for external application is defined with an https:// address. For example:

```
<AccessURI>
    <Name>Dispatcher URI for external applications</Name>
    <URI>https://YourCognosServer:9300/p2pd/servlet/dispatch</URI>
    <BaseURI>https://YourCognosServer:9300</BaseURI>
</AccessURI>
```

Intelligent defaults are provided for each of the following settings. To override the default settings, add this section to the server configuration section as shown in the provided QvtConfig.xml file. Only the specific parameters which need to be overridden need to be included.

```
<WebSvcCommOptions>
  <CertificateHandlerDotNetVersion>
    2
  </CertificateHandlerDotNetVersion>
  <ServicePointIdleTime>1000000</ServicePointIdleTime>
  <KeepAlive>false</KeepAlive>
  <ProtocolVersion>1.0</ProtocolVersion>
  <Send100ContinueHeader>false</Send100ContinueHeader>
  <Proxy>http://SomeProxy.htm</Proxy>
  <SecurityProtocol>Ssl3</SecurityProtocol>
</WebSvcCommOptions>
```

Parameters:

- CertificateHandlerDotNetVersion

  SSL certificate handler values:

  ◊ 1 (.net 1.0 compatible handler)

  ◊ 2 (.net 2.0+ compatible handler) – default

- ServicePointIdleTime

  Service point idle time in milliseconds.

  ◊ [Windows]default is 100000 which is 100 seconds

- KeepAlive

  ◊ false

  ◊ true - [Windows] default

- ProtocolVersion

  ◊ 1.0

  ◊ 1.1 - [Windows] default: 1.1

- Send100ContinueHeader

send the 100 continue http header.

- ◊ false
- ◊ true – [Windows] default

- Proxy

    Provide if a proxy use, do not include or leave blank if not used.

    - ◊ http://SomeProxy.htm or https://SomeProxy.htm

- SecurityProtocol

    - ◊ Ssl3
    - ◊ Tls
    - ◊ Ssl3Tls (which is both)

    Default is Windows OS version dependent

Special note – Encryption Strength

For Cognos 8.4.1 and earlier, the default Cognos Server support for encryption to support HTTPS/SSL only supports 56 bit encryption. The standard for Windows Vista/Windows 2008 or later requires higher encryption. The symptoms is that if the SharePoint Server or Cognos Server are installed on Windows Vista, 2008 or later, then HTTPS will fail.

For Cognos 8.4.1 this is resolved by using the Cognos Enhanced Encryption Module (CEEM). In Cognos 10, the standard encryption includes CEEM capabilities and levels of encryption.

7. LICENSING

7.1 License Duration

QueryVision Web Parts need a license in order to operate. This can be one of the following types:

- Trial License – permits operation for a limited (e.g. 30 days) period with a Trial License Message to users

- Subscription License – functionally the same as the Trial license, without the Trial License message, but for a longer period (e.g. 12 months) which needs to be renewed at the end of the subscription period

- Permanent License – enables the product with time limit

7.2 License Scope

Trial licenses allow unlimited installation and operation for the Trial period

Subscription and Permanent Licenses are governed by where they can be installed on production servers

- Enterprise – allow unlimited installation and operation on production servers

- SPFarm – allows unlimited installation and operation within a specified SPFarm.

    To be provided with a SPFarm license, the customer is required to supply the SPFarm ID so that it can be incorporated into the license file. The Farm ID can be obtained with the following SharePoint [PowerShell] Management Shell commands on any server on the target SharePoint Farm:

        $SPFarm = Get-spfarm

$SPFarm.ID

- Server – specifies the number of SharePoint Web Front End servers licensed. This will be the number of production servers plus one or two spare which allows for retiring/replacing servers due to maintenance (e.g. production servers = 5 + 2 spare = 7 maximum).

  Servers must be specified by either machine name or by IP address within an XML file with the name ServerList.lic which co-resides with the main license file QvLicense.lic, The following is a sample with 2 servers, one specified with the machine name and the other via IP address.

```xml
<?xml version="1.0"?>
<ServerList xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns="http://www.example.org/ServerList">
  <Server>
    <Identifier>w28r2ent207</Identifier>
    <IdentifierType>MachineName</IdentifierType>
  </Server>
  <Server>
    <Identifier>10.25.33.225</Identifier>
    <IdentifierType>IPAddress</IdentifierType>
  </Server>
</ServerList>
```

  The ServerList.lic file can be edited by the customer to change servers as required, but must ensure that the file remains a valid XML file.

7.3 Development & Test

The standard QueryVision license allows for unlimited use of QueryVision Web Parts on Development and Test servers, with a DevTest License with the following properties

- Duration Type – subscription – for the period of the Maintenance contract (e.g. 1 year)

- License Scope – unlimited

7.4 Managing License Files

 Up to 3 files are required to be installed in the same (resources) folder as the QvtConfig.XML configuration file on your SharePoint server.

- QvLicense.lic – your license file.

- QvFeatureDefinition.xml – fixed product configuration file (shipped with product)

- ServerList.lic (only required for a "server" license scope) – your server license file

All three files are human readable XML. However, the QvLicense.lic and QvFeatureDefinition.xml file are protected by an embedded validation property which are established when issued by QueryVision. If these files are altered in any way, the validation will fail and product will cease operation.

To change your license Duration or Scope requires submitting your current QvLicense.lic file, along with a change request, to QueryVision for updating and revalidating.

A new or updated QvLicense.lic file or an updated ServerList.lic can be added to the resources (or replace an existing QvLicense.lic file) which will be detected, processed and activated without having to restart the QueryVision SharePoint Web parts or the SharePoint server on which it is installed.

8. USING WEB PARTS

8.1 Overview

If you have completed all of the previous steps you are now ready to add the QueryVision Web Parts to your SharePoint Portal pages. The following section explains how to add web parts to web part pages, and various options for configuring them. Some of the following documentation assumes that you are familiar with Web Parts and Web Part pages in general.

8.2 Adding Web Parts to a Page

All QueryVision Web Parts can be located in the Virtual Server Gallery of your SharePoint site.

There are various ways of accessing this gallery, one of which is to click on the Modify Shared Page link in any page, click Add Web Parts and then click Browse. This will present you with the various galleries.
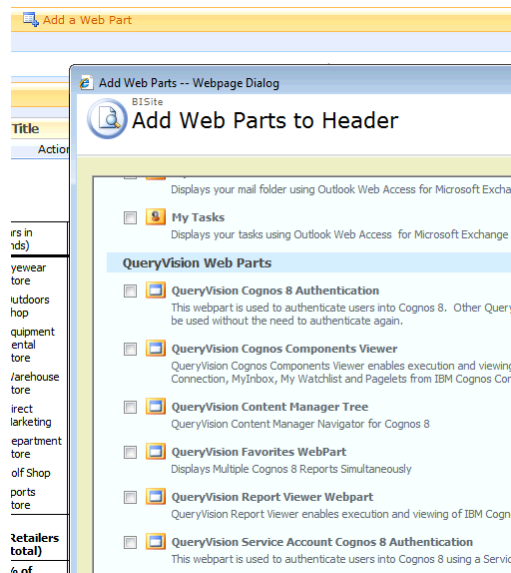
8.3 QueryVision Cognos Authentication Web Part

The QueryVision Cognos Authentication Web Part is used for signing in to your Cognos server(s) via challenging the user to select the Cognos Authentication Namespace and provide their user ID and Password. It is imperative that you have setup the QVTConfig.xml file since this web part obtains all of its CRN Server information from that file.

These settings affect what Servers, Namespaces and Authentication options are presented in the Login web part dialog. Refer to the section in this document entitled *"Setting the QueryVision Application Configuration File"* for more information.

Note that list of Cognos Servers and namespaces for those servers that is presented to the user for selection is determined by the list of servers/namespaces listed in the QvtConfig.xml file.

Properties:

Prompt On Redirect:

By default the Cognos Authentication Web Part will attempt to redirect you back to the page you initially came from before you logged into the system.

This is useful if you want to put a single Cognos Authentication Web Part on a standalone page within your site and have all other QueryVision Web Parts automatically take your users to the Login page if they are not logged in.

After a user logs in, the Cognos Authentication Web Part will take them back to the page they came from automatically.

There is no setup required in the Cognos Authentication Web Part for this functionality to be enabled.

As you will see redirecting to the SharePoint page containing the Cognos Authentication Web Part is a property of each QueryVision Web Part.

If you would like users to be prompted before the redirection you can check the box "Prompt On Redirect".

8.4 QueryVision Single Sign On Cognos Authentication Web Part

The QueryVision Single Sign On Cognos Authentication web part is used in environments where you require seamless authentication (Single Sign On - SSO) based on Windows credentials for logging onto the Cognos server. For this web part to function correctly you must configure your environment to work with delegation. This effectively means that a user's windows credentials must be allowed to pass from the browser to the SharePoint server and then flow through to the Cognos server.

In addition, you must have already configured your Cognos server for Single Sign On using Windows credentials.

Ensure that you have installed the required single sign on Access files on your Cognos Server. There are multiple SSO configuration options which are covered in detail in section **5910 Advanced Authentication**

Properties:

Properties for web parts can be accessed by clicking "Modify Shared/Personal Web Part" from the Title Bar.

The QueryVision properties can be found under the "QueryVision" category on the property sheet.

Cognos Server

The Cognos server property is the server name you are attempting to login to. This refers to the "LogicalServerName" located in your QvtConfig.xml file that you edited earlier.

You can either choose to use the "default server", in which case the server will be controlled through a centralized setting in the QVTConfig.xml file.

If you only have configured one server then this will be the default server automatically. However, if you have setup more than one server you will want to change the following setting in QVTConfig.xml:

1) Locate the appropriate CRNServer section in your QVTConfig.xml file

2) Change the setting to read <DefaultServer>True</DefaultServer>. All other servers should be set to false to work properly.

Alternatively, you can select a specific server name from the select box. In this case the server name is stored as part of the web part properties.

Prompt On Redirect:

The Prompt on Redirect checkbox enables you to prompt a user before they redirected after logging in through the SSO web part. If you do not check this box users will automatically return to their previous page after a successful login.

<u>Logon Automatically</u>

The Logon Automatically checkbox forces the SSO login webpart to login whenever it detects that the user is not logged into the system, without them having to press the "logon" link in the web part manually.

You should only turn this checkbox on once you have tested that the SSO logon web part works correctly, and can connect to the JSP pages. If you have entered in an incorrect URL or server name and turn this option on you may have to remove the webpart from the page or reset its properties in order to continue.

8.5 QueryVision Service Account Cognos Authentication Web Part

For some applications, such as external user access, it is desirable to use a single user id to log into Cognos, without disclosing the user id and password to users. This can be achieved using Service Account Authentication.

The QueryVision Service Account Authentication web part acts like a combination of the Single Sign On Cognos Authentication web part and the Cognos Authentication web part:

- The user is logged into Cognos using a user id, password and Cognos namespace.

- The application administrator selects which user and credentials, through defining available "Service Accounts" in the QvtConfig.xml file, plus selecting which Service Account to use the web part setup.

- For users, the logon will act like the Single Sign On part as the part will transparently logon using the selected Service Account credentials.

For this web part to function correctly you must configure Cognos Server properties and add a ServiceAccountCredentials section to the QvtConfig.xml configuration file.

Service Account Credentials are defined once and can be re-used across multiple Cognos Servers and Cognos Server Namespaces.

Defining ServiceAccounts for a Cognos Server

ServiceAccounts are added to a Cognos Server Namespace in QvtConfig.xml. A service accounts section is required for each Cognos Server Namespace for which you wish to configure to use Service Accounts.

For example:

```
<Section Key="CrnServerConfig" Name="CrnServerConfig" SchemaVersion="2.5">
     ...
  <CrnServers>
    <CrnServer>
       ...
     <LogicalName>logical Cognos server name</LogicalName>
       ...
    <NameSpaces>
      <NameSpace>
         <Name>YourNameSpaceName</Name>
         <DisplayName>YourNameSpaceName</DisplayName>
         <NameSpaceID>YourNameSpaceID</NameSpaceID>
```

```
        <NetbiosDomain>FriendlyNetbiosDomainName</NetbiosDomain>
        <ServiceAccounts>
          <ServiceAccount>
            <Default>True | False</Default>
            <Name>Service Account Display Name</Name>
            <ServiceAccountCredentialName>
              [credential] logical Name
            </ServiceAccountCredentialName>
          </ServiceAccount>
          <ServiceAccount>
            ...
          </ServiceAccount>
        </ServiceAccounts>
      </NameSpace>
```

Each Service Account has up to 3 sub-elements:

- **Default** – optional – can be True or False. The first Default = True will be used as the default if there are multiple

- **Name** – this is the display name that will be shown in the Service Account Web Part tool panel when selecting which credential to be used as the Service Account Credentials.

- **ServiceAccountCredentialName** – references which Service Account Credential to use from the ServiceAccountCredentials section (See below)

Defining ServiceAccountCredentials

The Service Account Credentials are added to the following QvtConfig.xml section:

```
<Section Key="CrnServerConfig" Name="CrnServerConfig" SchemaVersion="X.Y">
  ...
  <CrnServers>
    ...
  </CrnServers>
  <ServiceAccountCredentials>
    ...
  </ServiceAccountCredentials>
</Section>
```

The ServiceAccountCredentials section is structured as follows:

```
<ServiceAccountCredentials>
  <Encrypted>Encrypted Option</Encrypted>
  <ServiceAccountCredential>
    <Name>[credential] logical name</Name>
    <Username>userid</Username>
    <Password>password</Password>
  </ServiceAccountCredential>
  <ServiceAccountCredential>
    ...
  </ServiceAccountCredential>
</ServiceAccountCredentials>
```

The following are the fields:

- **Name** – this is the credential logical name – it must be unique

- **UserName** – the user name as the user would entered for Cognos logon

- **Password** – the user's password as would be entred for Cognos logon

How Credentials are encrypted is governed by the Encrypted element. The possible values for EncryptedOption are:

- **False** – UserName (user id) and Password are in plain text

- **PwdOnly** – only Password is encrypted

- **UidPwd** –Username and Password are encrypted

The **Name** is the logical name assigned to the credential and is the one referenced by the CrnServer/Namespace/ServiceAccount

If **Username** or **Password** are encrypted, the encrypted value will be the value of the Username and Password xml elements, respectively.

QueryVision Service Account Generation Tool

The ServiceAccountCredentials section of the QvtConfig.xml file can be generated by the **QueryVision Service Account Generation Tool (QvtServiceAccountGenerator.exe)**, which is installed by the QueryVision Web Parts installer. The tool can be used on any Windows configuration.

This command line tool can be used in two ways

- Single Credential – where the ServiceAccountCredential Name, Username and Password are included on the command line along with encryption options. The following example encrypts the password only for a single credential.

    QvtServiceAccountGenerator –n someName –u someUserId, -p somePassword –e PwdOnly

- Multiple Credentials – where a csv file and encryption options are provided on the command line, where each row in the csv file provides a Name, Username and Password. The following example encrypts both user id and password for credentials in the csv file someFile.csv.

    QvtServiceAccountGenerator –f someFile.csv –e UidPwd

The following is the usage

```
>QvtServiceAccountGenerator --help
```

```
This generates the ServiceAccountCredentials XML structure required for QvtConfig.xml
  - for a single Service Account Credential, the User ID and Password can be included on the command line:
      > qvtsvcacntgen  -n <credentialName> -u <userID> -p<password> ...
  - a csv file can be used to provide one or more set of Service Account Credentials, with the columns:
      <credentialName>,<userID>,<password>
      > qvtsvcacntgen  -f <csv file name> ...

QvtServiceAccountGeneratorsCmdLine 1.0.0.0
Copyright c  2015

ERROR(S):
  -e/--encrypt required option is missing.

  -n, --credentialName          Logical Credential Name (for use in
                                Server->Namespace->ServiceAccount

  -u, --userID                  Service Account User ID

  -p, --password                Service Account User Password

  -d FILE, --destinationFile=FILE   (Default: .\ServiceAccountCredentials.xml)
                                Service Account Credentials for
                                QvtConfig.xml

  -e, --encrypt                 Required. (Default: False) Encryption
                                option (False, Password Only (PwdOnly),
                                UserID and Password (UidPwd))

  -k, --encryptionKey           Encryption Key

  -f FILE, --inputCsvFile=FILE  csv filename containing source (plain
                                text) credentials

  --help                        Display this help screen.
```

Note: the option to provide an encryptionKey should not be used. A default key is used which is also embedded in the QueryVision Web Parts application. Specifying the encryptionKey with the current release will result in decryption errors on loading QvtConfig.xml.

The output of the QvtServiceAccountGenerator is an XML file (ServiceAccountCredentials.xml) which contains the XML "snippet" for the ServiceAccountCredentials section which needs to be inserted into the QvtConfig.xml file. Example below:

```xml
<?xml version="1.0" encoding="utf-8"?>
<ServiceAccountCredentials>
  <Encrypted>PwdOnly</Encrypted>
  <ServiceAccountCredential>
    <Name>SVC_Acnt_1</Name>
    <Username>nthomson</Username>
    <Password>9fcba3285b953ddb024ae56ea94d7f0b</Password>
  </ServiceAccountCredential>
  <ServiceAccountCredential>
    <Name>SVC_Acnt_2</Name>
    <Username>TestUser1</Username>
    <Password>8eba016808484336dc748969a7c33c04</Password>
  </ServiceAccountCredential>
  <ServiceAccountCredential>
    <Name>SVC_Acnt_3</Name>
    <Username>TestAdmin</Username>
    <Password>2f476363f52733b333f06940ccc93a07</Password>
  </ServiceAccountCredential>
  <ServiceAccountCredential>
    <Name>SVC_Acnt_4</Name>
    <Username>newuser1</Username>
    <Password>63bdd78ce407b1d4a4af86fc6ce70fab</Password>
  </ServiceAccountCredential>
  <ServiceAccountCredential>
    <Name>SVC_Acnt_5</Name>
    <Username>newuser2</Username>
    <Password>c21134200d8cdd6fe9f8f0b87e45a729</Password>
  </ServiceAccountCredential>
</ServiceAccountCredentials>
```

Copy paste the contents of this file - but WITHOUT the first line

```
<?xml version="1.0" encoding="utf-8"?>
```

To the following location in QvtConfig.xml (highlighted in yellow, below). If an existing ServiceAccountCredentials section exists, replace it.
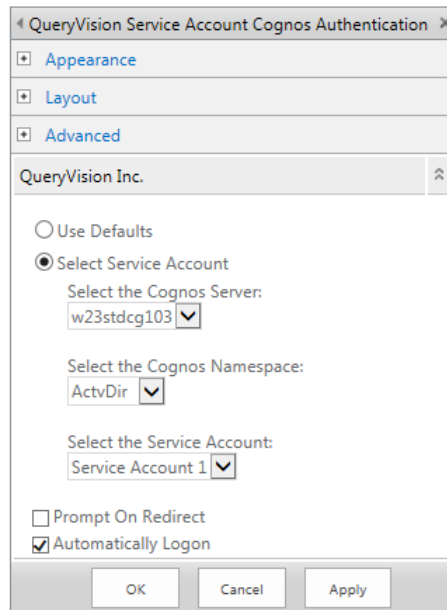
```
<Section Key="CrnServerConfig" Name="CrnServerConfig" SchemaVersion="X.Y">
   ...
   <CrnServers>
      ...
   </CrnServers>
   <ServiceAccountCredentials>
      ...
   </ServiceAccountCredentials>
   </Section>
```

Configuring a Service Account Web Part

Below is the Web Part configuration panel for the Service Account Web Part.

A typical application using Service Account Authentication will configure QueryVision "viewer" web parts on SharePoint pages to redirect to a page containing the Service Account Authentication Web Part. The Service Account Web Part will define the Cognos Server and Service Account to use with Prompt On Redirect (disabled) and Automatically Logon (enabled).

On accessing a SharePoint page with QueryVision components for the first time in a browser session, the browser will briefly redirect to the page containing the Service Account web part, the user will be automatically logged on with the Service Account credentials and redirected back to the original page. Unless the user is logged out (e.g. Cognos logon timeout), the user will not be redirected to the Service Account page for the remainder of their session.

Settings:

- **Selecting the Service Account**

  The QvtConfig.xml configuration file will first be scanned for those Cognos Servers which have at least one Namespace which has at least one Service Account defined. These Cognos Servers and their Namespaces (that have Service Accounts defined) and their

Service Accounts will be presented in the "Select the Cognos Server", "Select the Cognos Namespace" and "Select the Service Account" fields.

◊ **Use Defaults** – Of those Cognos Servers with Namespaces with Service Accounts, the selection will be the default (or first if Default not defined) Cognos Server, it's default (or first) Namespace (with Service Accounts) and it's (or first) default Service Account

◊ **Select Service Account** – allows selection of the Server, Namespace and Service Account

- **Prompt on Redirect** – the typical workflow is to define QueryVision Web Parts such as the Report Viewer to redirect to a defined logon page if the user is not logged in. The option "Prompt on Redirect" will pause after logon and request the user to confirm that they want redirected back to the original page (e.g. the one with the Report Viewer). If not enabled, the user will automatically be redirected after logon. The default is disabled.

- **Automatically Logon** – if enabled, the Service Account Web Part will automatically log the user with the Service Account on accessing the page where the Service Account Web Part is included. The default is enabled.

  You should only turn this checkbox on once you have tested that the Service Account logon web part works correctly.

8.6 QueryVision Content Manager Tree Web Part

The Content Manager Tree presents a Windows Explorer like tree that enables intuitive browsing through the Cognos Content Store. A combination of Public Folders, personal folders (My Folders) and a custom folder can be explored.

Properties:

Properties for web parts can be accessed by clicking "Modify Shared/Personal Web Part" from the Title Bar.

The QueryVision extended Web Parts can be found under the "QueryVision" category on the property sheet.

Login Page Address:

Enter the URL to a SharePoint Web Page on the same site that contains a QueryVision Login Web Part. This enables the Content Browser to redirect to the Login Page if it detects that you are currently not logged into a Cognos Server.

Redirect To Login:

When checked the web part will automatically redirect to the Login Page Address when not logged in.

Login Redirect Delay:

Time in seconds before the web part will redirect to the Login Page.

Display Report Details:

Reports that are saved in the Content Store can have Report Versions and Report Outputs (saved outputs). When Display Report Details is turned on, Report Versions and Report Outputs will display as children of their parent report directly within the tree.

Show Public Folder:

Check this box in order to display the Public Folders node in the tree as a root node.

Show My Folder:

Check this box in order to display the My Folders node in the tree as a root node.

<u>Custom Folder:</u>

You can use this property in order to set a custom starting folder as a root node in the tree. To set the path you simply click within the property's text box and then click the edit button to the right. You will then be able to choose a package or folder as a starting folder.

To delete this node from the tree simply select all the text within the text box and delete it.

Note: You must have at least one root node configured. The Public Folders will display if you do not set any nodes to shown.

8.7 QueryVision Report Viewer Web Part

The Report Viewer enables a user to view a saved output, execute a report, query, analysis or other Cognos document type in HTML or PDF format. Or you can select to display the "Default Output" which will display the latest saved output or run the report if there is no default output.

The Default Action can be set in two ways:

- From the Web Part Editor:

Default Report Execution Mode

HTML
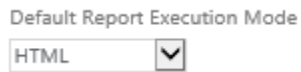
This is the default for the web part, which the user can override if the Show Menu option is enabled (see later in this section)

- From the web part menu (if enabled)
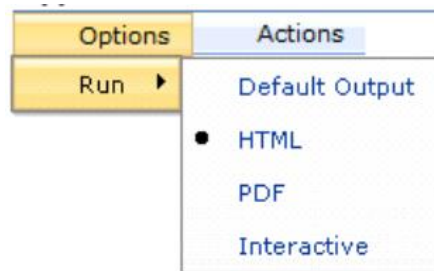
Depending on the Cognos document type, the Actions menu will let the user view reports in different output formats or launch the report in a separate window
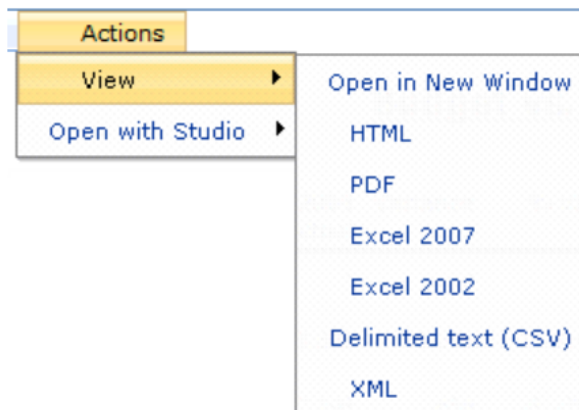
Or launch the document with associated studios:

Note that the studios offered are dependent on the IBM content type (e.g. Query Studio, Report Studio) and version of Cognos (e.g. IBM Cognos Analytics 11)

The Report Viewer works with the following Content Manager objects (Cognos version dependent)

- All output formats (PDF, HTML, Excel, XML), including News Items

- Report, Active Report, Query, Analysis, PowerPlay 8 and Business Insight documents

- All "Report View" types

- Access via Shortcuts

- Cognos Office Documents (Word, PPT, Excel)

- Portal Pages (also known as Portal Tabs or pagelets)

Properties:

Properties for web parts can be accessed by clicking "Modify Shared/Personal Web Part" from the Title Bar.

The QueryVision extended Web Parts can be found under the "QueryVision" category on the property sheet.

Login Page Address:

Enter the URL to a SharePoint Web Page on the same site that contains a QueryVision Login Web Part. This enables the Content Browser to redirect to the Login Page if it detects that you are currently not logged into a Cognos Server.

Redirect To Login:

When checked the web part will automatically redirect to the Login Page Address when not logged in.

Login Redirect Delay:
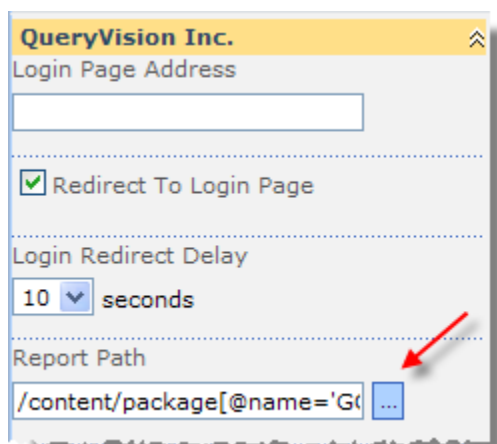
Time in seconds before the web part will redirect to the Login Page.

Report Path:

The Report Path is the "SearchPath" of the report as it is stored in your Cognos Content Store.

You can set this property manually by finding the report of your choice within Cognos connection and then copying and pasting the SearchPath from with Cognos Connection.

Alternatively, you could configure this field by retrieving this path directly. Click the Modify Shared Webpart menu in order to bring up the properties of the web part. Then, click within the Report Path field and then click on the button to the right of the text field. This will launch a navigational panel, where you can pick the report directly.

Lastly, you can also use the Content Browser Web Part to retrieve this path for you. Both the Content Browser and the Report Viewer are connectable web parts. Using this method the Content Browser will active as a provider of the Report Path property and the Report Viewer will act as a consumer.

For more information on connecting web parts refer to the section "Connecting Web Parts" in this document.

Show Toolbar:

This setting controls whether the Cognos toolbar is displayed along with your report.

Show Menu

This will show/hide the Options/Actions

Enable Studios

When this setting is enabled, new menu items will appear under the View menu. This allows a user to open the Cognos content in the appropriate studio (e.g. Report Studio, Analysis Studio or Query Studio). Note that for IBM Cognos 8.3+, the user will only see the studios that they have access permissions for (as set by a Cognos Administrator).

Report Style Properties:

Report Style Properties allow you to set CSS properties using the HTML element *style* attributes for the iframe that contains the Cognos Report within the web part.

Any CSS style property type can be included using the style 'string' format of

<property_name>**:**<property_value>**;**<property_name>**:**<property_value>**;…**<property_name>**:**<property_value>**;**

There are 3 key property types: *overflow*, *width* and *height* which must specified or default values will be added by the Report Viewer web part. The following are the default values

- overflow:auto

- width:100%

- height:700px

The overflow and width values are recommended, the height value is used as the default height for reports without Autosizing enabled (see the document **QueryVision Report Autosizing Guide** for details). It is recommended to specify the height in pixels (e.g. 1250px) vs. percentage (100%).

The default value of the Report Style Properties reflects the individual default properties/values:

overflow:auto;width:100%;height:700px

Default Report Execution Mode:

This sets the default mode that report will run as. Choices are report/document type dependent, of which the following are the complete set.

- Default Output – if outputs are saved for this report/document then the latest version will be displayed. If not, the report will be run with the default output type.

- HTML – the report will be run in HTML format

- PDF – the report will be run in PDF format

As noted earlier in this section, while a user has the SharePoint page with the report viewer open, they can override the default if the menu is enabled. Once the user exits the page it will revert to the tool part editor default once the session is closed (e.g. close browser). Caching by the browser may keep the user selected default active within a session.

Enable Interactive Mode:

No longer used. Recent versions of IBM Cognos 10.X and IBM Cognos Analytics 11.X do not render studios properly when embedded in a SharePoint page – they expect to be run in a separate browser windows

Force Parameter Level:

The report viewer is able to accept parameters from standard "filter web parts" that are built into SharePoint (e.g. Choice Filter Web Part) and then pass these parameters on to reports as report parameters and values. For more information on establishing connections between filter web parts and the Report Viewer Web Part, please see the section entitled "Connecting QueryVision Web Parts". Once you have established a connection between a filter web part and the Report Viewer, the Force Parameter Level setting controls whether or not to run the report or not based on whether the report parameters (written into the report itself) are optional or mandatory.

Force All: will not run the report unless all report parameters that are in the report are passed to the web part.

Force Required Only: Will not run the report unless all mandatory (not optional) reports are passed to the web part. The result is that optional parameters will be prompted for through the standard IBM Cognos report interface (i.e. within the report viewer web part)

Force None: This setting will always attempt to run the report whether or not there are mandatory or optional parameters in the report.

Select Render Target

See section **8.13 Embed, New Window & Redirect options**

8.7.1 Report Viewer support for IBM Cognos Analytics 11

IBM Cognos Analytics 11 has changed support for the studios and report types from 10.X and has introduced the following new or updated types

- Updated "Active" Reports

- New: Interactive Reports

- New: "Exploration" Dashboards

Under the hood, the QueryVision's Report Viewer web part uses what IBM now calls the "Classic" Viewer. It continues to support all the Cognos content types from 10.X and treats the new and updated content as follows:

- Active Reports – as with 10.X launches in a separate browser window

- Interactive Reports – with the new Report authoring tool/studio in ICA 11, a new property runInAdvancedViewer determines whether a report is interactive or non-interactive. By default, any reports imported from 10.X or earlier are identified as non-interactive (runInAdvancedViewer = false).

  All reports (interactive or non-interactive) will be rendered as non-interactive – e.g. clicking on a report element will not pop-up the interactive filtering and modification options.

- "Exploration" Dashboards – the new dashboards cannot be rendered in the Classic Viewer. And with the multi-Cognos version of the QueryVision Web Parts, Dashboard objects will not

be recognized, nor can be selected when navigating the IBM Cognos Content Store with the QueryVision Content Manager Tree or when selecting IBM content from within the Web Part Editor.

To render "interactive" Reports or the new "Exploration" Dashboards in the new "interactive" viewer in the new CA portal, the solution is to configure a QueryVision Cognos Components Web Part. Select the option for either the Analytics Report or Analytics Dashboard and provide the SID (System Unique Identifier) for the Report or Dashboards - which will launch the report or dashboard within the ICA "native" portal.

8.8 QueryVision Favorites Web Part

The QueryVision Favorites WebPart provides Application Authors a way of creating a tabbed dashboard of Reports and other Cognos Content.

Unlike the Cognos Multi-Page portlet component supported by the Cognos SharePoint Web Parts, the QueryVision Favorites Viewer can include Business Insight [Dashboards], Portal Pages, etc.

However, as the intent of the favorites report viewer is to present the latest versions of key reports, portal pages or dashboards, it is designed to either run reports as request time or to present the latest saved output. The following Cognos Content types are not supported by this Web Part. They are supported by the Report Viewer:

- News Items or specific output versions

- Cognos for Microsoft Office Document (initiates a download or launches in a separate browser, so never appears in the viewer)

- Active Report (initiates a download or launches in a separate browser, so never appears in the viewer)

- IBM Cognos Analytics 11.X dashboards or reports in the "interactive" viewer

While the part does not allow users to select alternative output types in a web part menu, this option is available through exposing the IBM Cognos Report Viewer Report Toolbar (an option in the web part properties/settings)

Configuring the Favorites Web Part

Adding the Favorites Web Part to a Page

You can add a web part to a SharePoint page directly from your browser. If you don't have the correct permissions some of these steps might not be possible.

- Click the "Edit Page" button from the SharePoint Page ribbon.
- Then click the "Add a Web Part" link and a gallery of web parts will be listed under the Categories section.
- Choose the QueryVision Web Parts category and you will find a list of all web parts for Cognos.
- Select the Favorites web part and the location you want to insert it on the page

*Edit the Web Part Properties*

On the SharePoint page, select the Page tab, then Edit Page. Once in edit page mode, select the drop down in the top right corner and select to edit web part
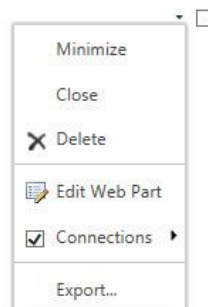
The QueryVision extended Web Parts can be found under the "QueryVision" category on the property sheet.

Adding Reports (and other Cognos Content) to a Tab

Reports can be added to the list through editing the web part, selecting the Favorites List field and clicking the button (…) beside the field.
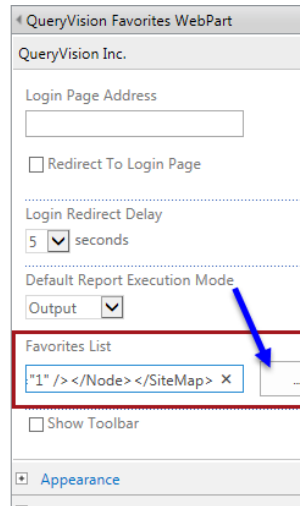
This will provide a panel to add, remove and order Cognos reports and content:
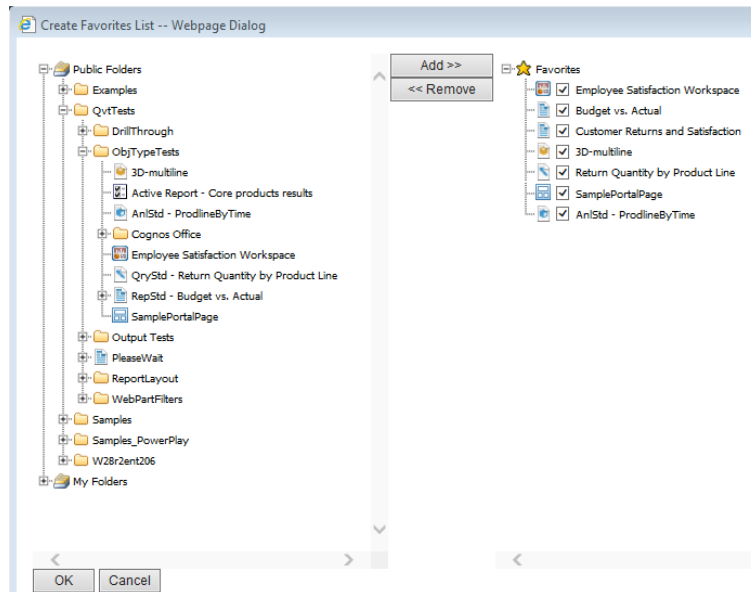
Other Properties

In the screenshots below, it shows Favorites list, which can be used for interactive adding and removing Cognos reports/content and to enable/disable viewing of tabs for each report.

Login Page Address:

Enter the URL to a SharePoint Web Page on the same site that contains a QueryVision Login Web Part. This enables the Content Browser to redirect to the Login Page if it detects that you are currently not logged into a Cognos Server.

<u>Redirect To Login:</u>

When checked the web part will automatically redirect to the Login Page Address when not logged in.

<u>Login Redirect Delay:</u>

Time in seconds before the web part will redirect to the Login Page.

<u>Default Report Execution Mode:</u>

This sets the default mode that report will run as. You can choose between either, HTML, PDF or Output (saved output). Note that saved outputs will retrieve the latest available output.

Interacting with the Web Part

The Favorites list shown in the sidebar allows showing/hiding selected report in a tab (highlighted in red). The report/tab selection list (sidebar) on the left can be shown or hidden by clicking on the sidebar toggle control (highlighted in blue)
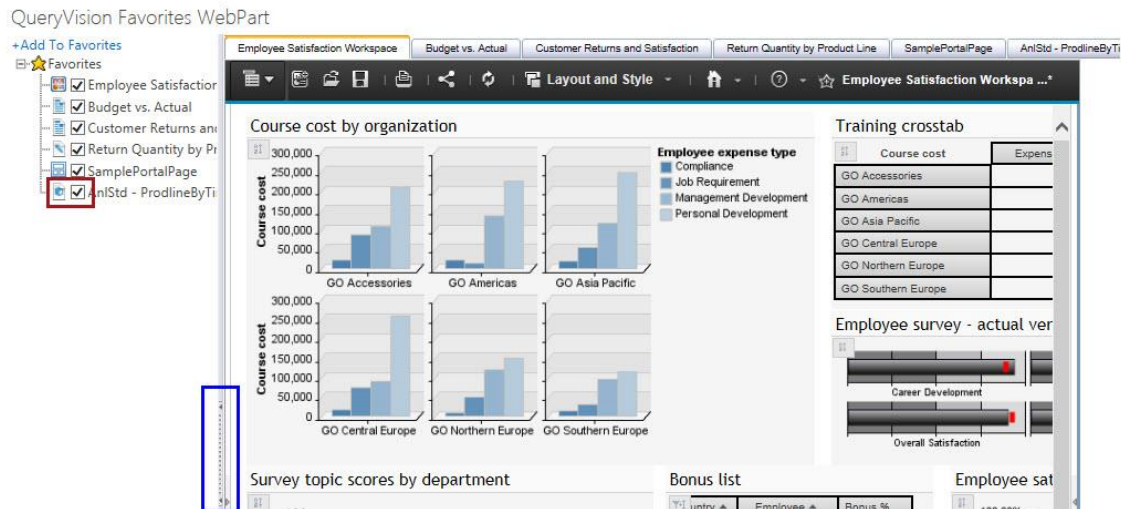
The screenshot below shows the list sidebar hidden.
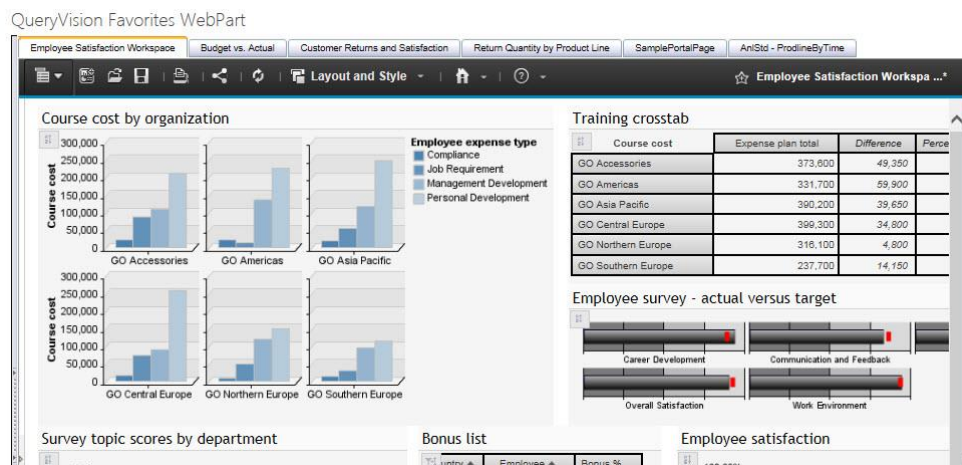
Running Reports

Multiple reports can be run simultaneously by simply checking the checkbox next to the report name. In this case multiple reports will run simultaneously and appear as separate Tabs in the right hand side of the Web Part.

You can set the output format of the report by Right-Clicking on the report name, choosing "Run Report", and then choosing the output format from the context menu. These settings will be saved between sessions.
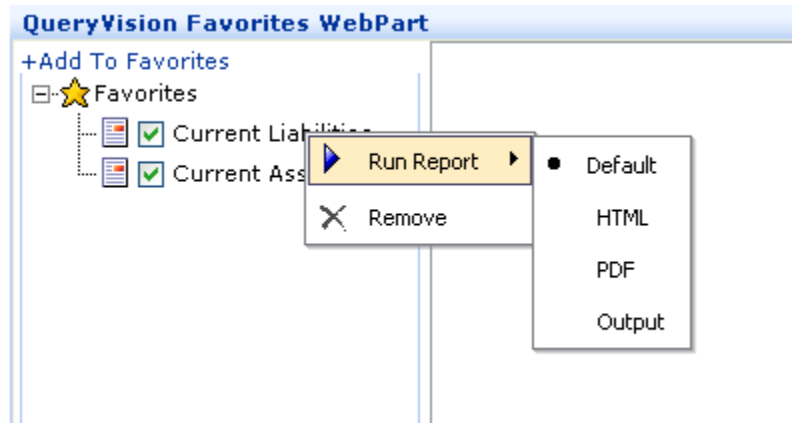
Choosing Default will use the setting that you have chosen in the Web Part properties window.

8.9 IBM Cognos Component Web Part

The Cognos Component Web Part provides web part/page authors with the ability to provided controlled exposure to users for the following Cognos Connection components:

10.X

- Welcome Page – show the Cognos Connection Welcome page

- [Users] Home page – show the home page of the currently logged in user (as defined in Cognos Connection)

- Public Folders – show Public Folders (Cognos Connection)

- A Folder or Package – navigate directly to a specified Folder or Package

- Portal Page (also known as a Portal Tab or pagelet) – display any Portal Page (that the user has permissions for)

- My Folders – show My Folders for the currently logged in user in Cognos Connection

- Search

    ◊ Search (Full Text) is the google like GO! Search that has been integrated into the base platform for Cognos 10.

    ◊ Search (Name or Desc) is the basic search available in all versions of Cognos.

The support for Cognos Components is dependent on the release of Cognos and the version of SharePoint. There are no restrictions for SharePoint 2010. For SharePoint 2013 and 2016, the following table outlines the support available.

IBM Cognos 10.X Version	Cognos Component Viewer	Restrictions
Cognos 10.0.1 to 10.2.0	Disabled	Components Not Available
Cognos 10.2.1, 10.2.2	Enabled	Cognos Connection (including public folders) may render the h3 portion of the header incorrectly. This can be hidden with the Hide Header Element Tags field (above)

11.X

For IBM Cognos 11, list of available options and what they present is dependent on whether the "legacy portal" option is enabled.

See the [QueryVision Guide to Installing and Configuring Cognos Analytics 11](#) on configuring the "legacy portal"

Cognos Component Type	IBM Cognos 10.X	IBM Cognos Analytics 11.0.3	
		Legacy Portal enabled	Legacy Portal NOT enabled
Welcome Page	Cognos Connection Welcome	ICA 11 portal/UI Welcome	ICA 11 portal/UI Welcome
Home Page (1)	Users home page (Cognos Connection)	Users home page (ICA 11 portal/UI)	Users home page (ICA 11 portal/UI)
Public Folders	Public Folders in Cognos Connection	public folders (Team Content) in "legacy portal" (Cognos Connection)	Blank[2]
A Folder or Package	Folder/Package in Cognos Connection	a folder/package in legacy portal	Blank[2]
Portal Page	Selected portal page	Selected portal page	Selected portal page
My Folders	My Folders in Cognos Connection	My Folders in legacy portal	Blank[2]
Search (name/desc)	Name/Description search in Cognos Connection	Name/Description search in legacy portal	Blank[2]
Search (full search)	10.2.2 Full Search	N/A	N/A
Analytics Report	N/A	Report in ICA 11 portal/UI	Report in ICA 11 porta/UI
Analytics Dashboard	N/A	Dashboard in ICA 11 porta/UI	Dashboard in ICA 11 porta/UI

(1) Home Page is dependent on the Home Page capabilities which are different from IC 10.2.2 vs. ICA 11
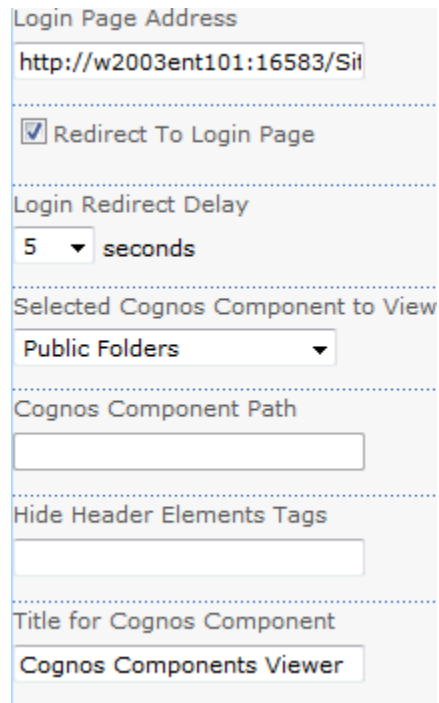
(2) With 11.0.3 there is no display. With 11.0.2 or earlier, it would default to showing the Welcome page

Note that in all cases what the user sees in Cognos Connection or the ICA 11 portal is governed by their Cognos Connection/Cognos BI Platform capabilities and folder/object permissions.

Component Configuration

Properties for web parts can be accessed by clicking "Modify Shared/Personal Web Part" from the Title Bar.

The QueryVision extended Web Parts can be found under the "QueryVision" category on the property sheet.

Login Page Address:

Enter the URL to a SharePoint Web Page on the same site that contains a QueryVision Login Web Part. This enables the Content Browser to redirect to the Login Page if it detects that you are currently not logged into a Cognos Server.

Redirect To Login:

When checked the web part will automatically redirect to the Login Page Address when not logged in.

Login Redirect Delay:

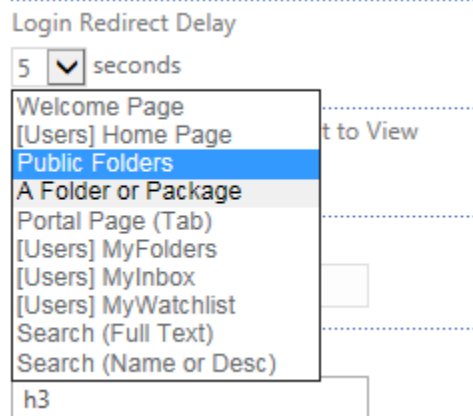Time in seconds before the web part will redirect to the Login Page.

Selected Cognos Component to View:

Select the Cognos component via the Selected Cognos Component to View drop down field

Which expands to the following values:

Cognos Component Path/Cognos Object SID/Cognos Object "Share"

Where the selected Cognos Component is a *Folder or Package* or *Portal Page (tab)*, the search path/location of the Cognos Component must be provided by the *Cognos Component Path* field. The value can be typed in/cut and pasted from Cognos connection or, if you are logged into the Cognos Server, clicking in the text entry area and clicking the browse button to launch a Cognos Explorer
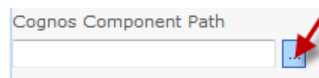
Note that only the specified Cognos Component types will be presented in the Explorer (e.g. Folder or Package or Portal Page). The example below shows Portal Pages
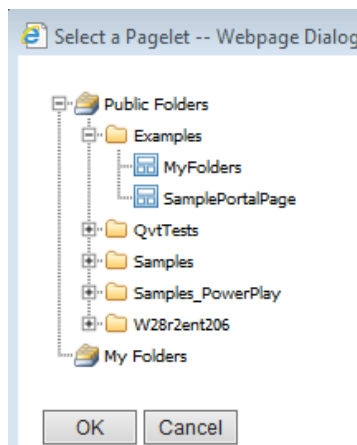
Rendering Cognos Analytics Reports and Dashboards

11.0.11 and earlier

When used with IBM Cognos Analytics 11 and the selected type is "Analytics Report" or "Analytics Dashboard" the title of this field will change to "Cognos Object SID".

To determine the SID for an analytics report or dashboard, use the Properties/Advanced option for the report or dashboard in the ICA 11 portal/UI. For example:

    i3AD362E5C8CC4D1581A347F93FFF95B4

11.0.12 and later (including 11.1.2)

When used with IBM Cognos Analytics 11 and the selected type is "Analytics Report" or "Analytics Dashboard" the title of this field will change to "Analytics Report Share" or "Analytics Dashboard Share".

To determine the "Share" for an analytics report or dashboard, click on the "…" beside the name and select "Share". This will show the following:

Select the text under "Link:" and past into the "Share" text box

For example:

http://w16ca111a/jbmcognos/bi/?pathRef=.public_folders%2FSamples%2FReports%2FCorporate%2Bwebsite%2Bvisits

Controlling the Display of Header Elements

IBM Cognos 10.X or for ICA 11.x for Cognos Components using the "Legacy Portal" the web part can also be configured to hide selected parts of the Cognos Connection component headers. For example:

• Show top header
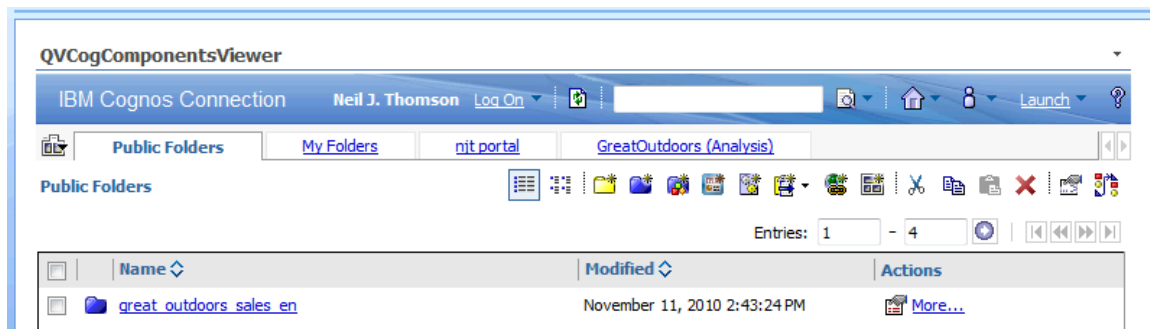
- Hide top header (h1)
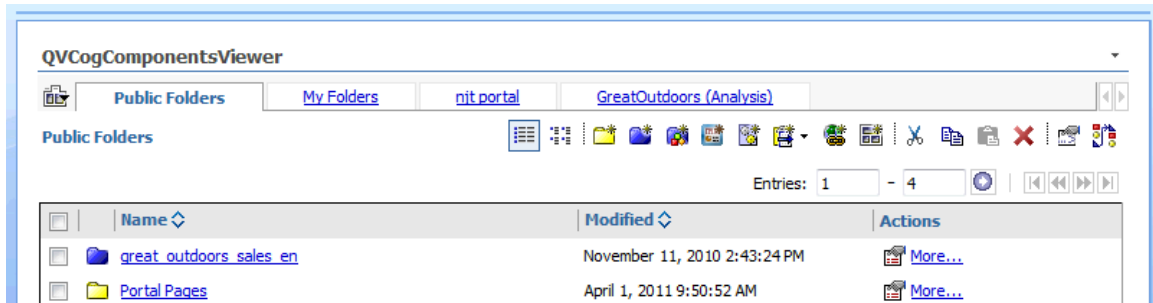
For *Cognos Connection* based components, the following graphically defines what header areas can be hidden:
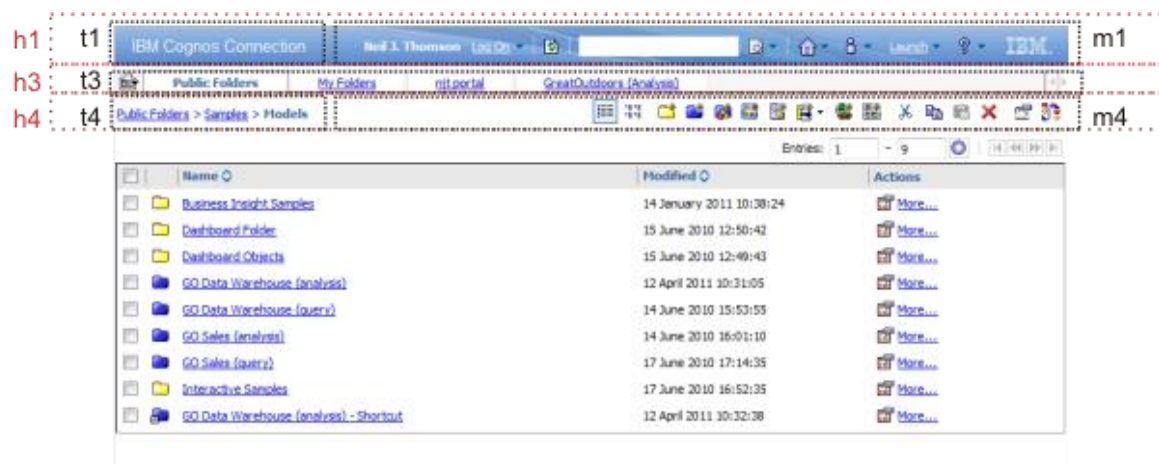
- h1 - top header – this includes:
  - ◊ t1 – hide title
  - ◊ m1 - hide the logon, refresh, search bar, home, personalization, launch and help (m1)
- h3 – hides the header that includes:
  - ◊ t3 – hide the tabs (includes public folders, myFolders, pagelet Tabs)
- h4
  - ◊ t4 – the navigation path/titles (e.g. public folders->go sales and retailers)
  - ◊ m4 – the button toolbar (refresh, cut, paste, new folder, etc.)

You can hide elements by typing in a list (without separators) into the Hide Header Elements Tags area. For example, the following will hide the elements h1 (hides t1 and m1) and m4

   h1m4

Leaving the property blank will show all headers.

Select Render Target

See section **8.13 Embed, New Window & Redirect options**

8.9.1 Cognos Component restrictions for SharePoint 2013/2016

For SharePoint 2010, there are no restrictions on use of Cognos Connection components with the Cognos Component Web Part for any release of IBM Cognos 10.

For SharePoint 2013, which has a requirement of a minimum of IE 8 browser (or compatibility mode), some Cognos Components do not render correctly or render correctly, but controls are do not work properly or are inactive. This is due to IE compatibility constraints with IBM Cognos components. For IBM Cognos version 10.1.0 through 10.2.2 components, all components suffer from unacceptable rendering or controls issues and are disabled. Those for 10.2.1 and higher work correctly, with some exceptions.

Therefore, the following restrictions apply for SharePoint 2013.

Cognos Version	Cognos Component Viewer	Restrictions
10.1.0 to 10.2.0	Disabled	N/A
10.2.1 +	Enabled	Cognos Connection (including public folders) may render the h3 portion of the header incorrectly. This can be hidden with the Hide Header Element Tags field (above)
11.X	Enabled	The list of Cognos Components is different for ICA 11, but there are no restrictions on rendering

8.10 Web Part Connections with QueryVision

SharePoint Web Parts can be connected together in to select and filter values from a Source/Provider web parts to Target/Consumer Web Parts. This is a standardized technology that allows Web Parts from Microsoft, QueryVision or other 3rd party Web Part suppliers to interconnect. There are different types of connections; for which QueryVision supports a Row Provider and Filter Provider connections.

Source/Provider parts:

- QueryVision Content Manager Browser/Navigation Web Part – provides a report link to a QueryVision Report Viewer Web Part (data row interface).

- The QueryVision Drop Down [SharePoint] List Provider Web Part and Cognos Report Drop Down List Provider provide filter values to QueryVision Report Viewer Web Parts or any other Target/Consumer Web Parts that support the Filter Provider type connection (e.g. Excel Web Part)

To connect web parts, simply click on the Page Tab and then Edit Page.
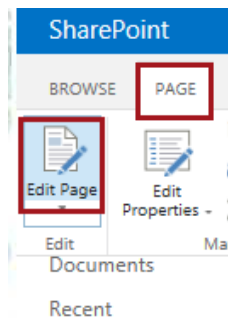
Next, select the Connections option in the menu on the top right area of the part (small wedge pointing down). You will then have a Connection menu option in the Modify Web Part menu for any web part that is "connect-able".

Cognos Report Drop Down List Filter Provider

Product Line
Camping Equipment

Minimize

Close

Delete

Edit Web Part
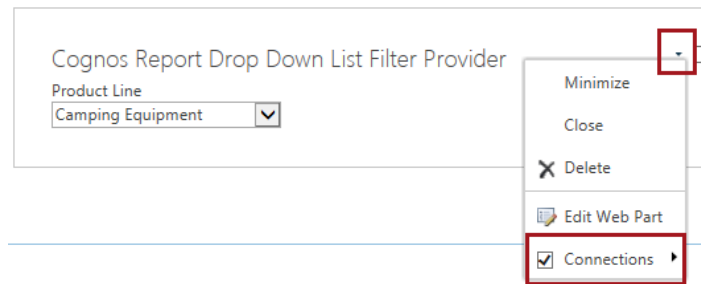
Connections

The list of possible connections that fly out from the right hand side of the Connections menu item will depend on the other web parts on the page and if the connection type is compatible (e.g. filter connection or data row connection)

Note: only users who have been granted rights to connect web parts to be able to achieve this. Please see your SharePoint Administration documentation for more information about connections.

8.10.1 Report Viewer Web Part Connected with Content Manager Browser:

The Report Viewer Web Part has a property named Report Path. This property stores the IBM Cognos Content Store's unique search path for the Report.

If the Report Viewer is used without connecting to a Content Manager Browser, then when it is configured, the Report Path must be specified. This can be done by cut/paste from values for the Report Properties in Cognos Connection. Or it can be done by navigating to a report via the (…) button beside the report path (see the Report Viewer Web Part for more details).

If the Content Manager Browser is connected to a Report Viewer, then the Report Displayed depends on the following:

- Report Viewer/Report Path Defined – The Report Path will provide a default report that is run/displayed on first access to the SharePoint page. If a different report (or other Cognos content type) is selected in the Content Manager Browser, then the Report Viewer will then display that Report.

On initial SharePoint page view:

QueryVision Content Manager Tree

QueryVision Report Viewer Webpart

⊞ 📁 Public Folders
⊞ 📁 My Folders

Options | Actions

📁 Keep this version ▼ | ▶ | 🔳 🔳 🔳 ▼ |

Budget vs. Actual Sales by Retailer

(US Dollars in Thousands)		2010 Budget	2010 Actual	Variance	% Var	2011 Budget	2011 Actual	Varia
Americas	Eyewear Store	-	-	-	-	-	-	
	Outdoors Shop	21,167	23,503	2,336	11.04%	24,208	24,902	
	Equipment Rental Store	3,038	2,149	-889	-29.27%	2,213	3,574	1

After report selected in Content Manager Browser:

- Report Viewer/Report Path non-defined – No report or report output will be displayed until the user selects a report (or other Cognos content type) in the Content Manager Browser.

  On initial SharePoint page view:

  After report selected in Content Manager Browser:

8.11 Filters & the Report Viewer Web Part

QueryVision's Report Viewer web part can be connected to Microsoft supplied and custom "Filter Provider" web parts including the QueryVision Cognos Report Drop Down List Filter Provider and SharePoint List Drop Down Filter Provider. In SharePoint 2013, there are a number of filters supplied with the standard Enterprise SharePoint installation (e.g. Choice Filter, Text Filter, etc.).

As web part connections between (Filter) Providers and Consumers/Targets are standardized, the guidelines provided here apply for connecting any Filter Provider to the QueryVision Report Viewer Web Part.

8.11.1 Filter behavior with the Report Viewer

Multiple Filters, Multiple Reports

The Report Viewer Web Part can accept one or more values from one or more filter parts. In addition, you can connect a single filter part to one or more reports.

So (for example) a report with 5 parameters can have 5 filter providers. A page with 4 Reports can have 2 filters drive one or more of the reports on the page.

For cases where there are multiple filters on a page, you can control default values and filter behavior through the "Filter Actions Button" (SP 2007, SP 2010). Not this has been renamed to "Apply Filters Button" for SP 2013.

Optional/Mandatory Report Parameter Control

You can control whether a Report Viewer will run the report based on whether it has required (non-Optional) parameters defined within the report. You can use the Report Viewer Force Parameter Level to control this behavior.

When parameters are not forced the report viewer will allow the report to run even if parameters are not passed to it. When the report is executed, Cognos will prompt the user for any parameter values that are mandatory and that have not been supplied by filter web parts on the SharePoint page via the Report's Prompt Page (whether authored as part of the Report or automatically – see IBM Cognos documentation on Report Prompts for details).

8.11.2 Filter parameter to Report parameter matching

For all Filters, the parameter name (Filter Name field) assigned to the Filter part is important and it is recommended that it should match that of a parameter in the Cognos Report. However, this is not mandatory. When the report has multiple parameters, you will be asked on connection to specify which report parameter to map the Filter Name (parameter name) to.

For example, the following shows a Report Studio which shows Product, filtered by Product Type. The filter uses a (single value) parameter **productType**. Multiple filter providers can be connected to a Report Viewer web part, each supplying a different parameter.

The following shows a Cognos Report being edited in Report Studio, showing how the parameter definition is defined in a filter (productType).
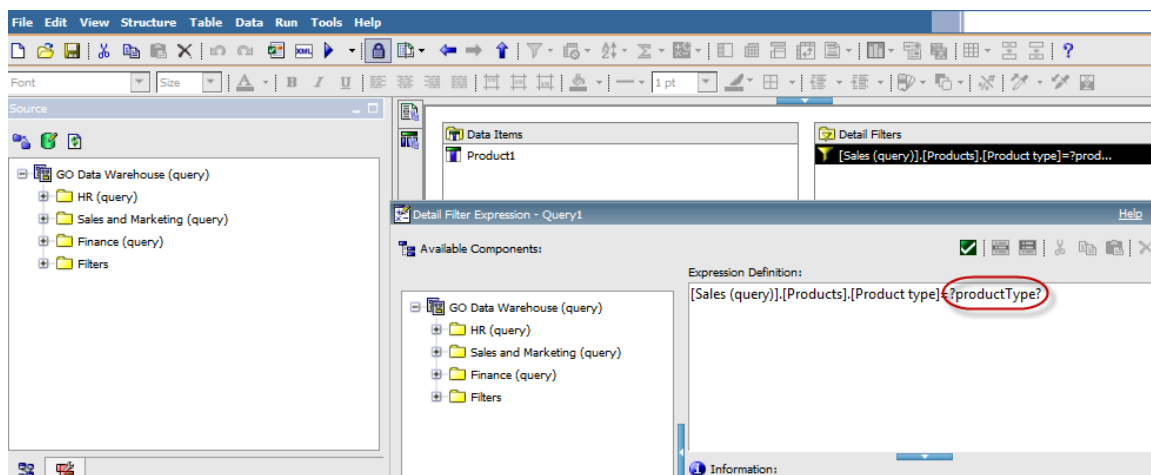
8.11.3 Connecting Filter Providers to a Report Viewer

The following applies to any Filter provider/Report Viewer combination. In this example we'll use the SharePoint "Choice Filter" web part.

Add a Choice Filter web part to the left of a QueryVision Report Viewer web part on a standard web part page. For the Report Viewer, select a report with parameters. In this case we'll pick a report with a single parameter "productline_param" which requires a Product Line value from the Cognos sample databases.

Now open the Choice Filter Web Part Editor by finding and clicking on the down arrow in the top right hand area of the web part and selecting Edit Web Part
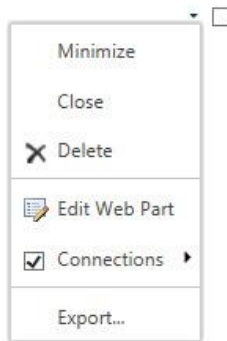
Now we update the following fields (initial view on the left, edited version on the right). The following has been provided:

- Filter Name is the name of the parameter. If no [Web Part] Title is added then the Filter Name will also be the name of the Web Part.

- Filter values for the user to select are listed (one per line) in the dialog box as instructed

- Advanced Filter Options – have checked "Require user to choose a value" and added a "Default Value"

- Title – have added a web part title. For this to appear you need to select "Chrome" from "None" to "Title Only" or "Title and Border". Note that the Title and the Filter Name will be displayed

On clicking OK in the Choice Filter Web Part your web page should look like the following:

Connecting the filter web part to the Report Viewer. While in Page Edit mode right click the Choice Filter part drop down (top right) and select connections
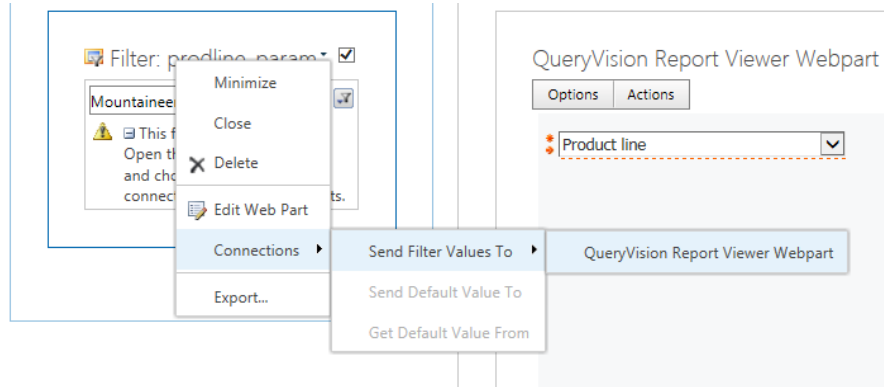
The following shows the "Configure Connection" box that will pop up if the source/provider and consumer/target web parts are compatible.

The parameters the consumer/target can accept are listed in the "Filtered Parameter" drop down list.

The parameter(s) available from source/provider are listed in the "Filter" field.
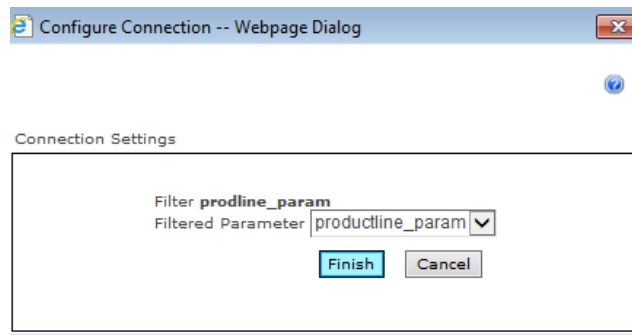
Once connected, selecting the drop down arrow on the Choice Filter will pop up the list of available values and on clicking OK will drive the report.
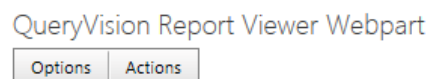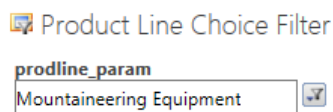
8.11.4 Drop Down [SharePoint] List Filter Provider

Overview

This web part uses an existing SharePoint list to provide a filter value.

QueryVision Drop Down (SharePoint) List Filter Provider Webpart

Product Type

Climbing Accessories ▼

Component Configuration

Adding the SharePoint List Drop Down Filter Web Part to a Page

You can add a web part to a SharePoint page directly from your browser. If you don't have the correct permissions some of these steps might not be possible.

- Click the "Edit Page" button from the SharePoint Page ribbon.
- Then click the "Add a Web Part" link and a gallery of web parts will be listed under the Categories section.
- Choose the QueryVision Web Parts category and you will find a list of all web parts for Cognos.
- Select the "QueryVision Drop Down List Filter Provider Web Part" and the location you want to insert it on the page

Configure Properties

The configuration panel (Edit Page -> Edit Web Part) includes the following settings:

Source SharePoint List Name

ProductTypeList

Display Field Column

ProductTypeDisplayName

Value Field Column

ProductTypeValue

Parameter Name

productType

Caption

Product Type

- **Source SharePoint List Name** – the SharePoint List "Title". This can include any SharePoint list within the same SharePoint Site where QueryVision web parts are installed.

  A typical way to find out if your list will be available to be selected is to go to the Site Contents page for your SharePoint Site – the list should be included in the **List, Libraries, and other Apps** section

  If the web part cannot find the SharePoint list, an error will be displayed for the web part.

- **Display Field Column, Value Field Column** – this supports a number of scenarios

The Display Field Column is the column from the SharePoint list which you want to use to show to the user in the drop down list (e.g. Product Name)

The Value Field Column is the SharePoint List column which contains the value to pass to the Cognos report when the "Display" name for the value is selected in the drop down filter (e.g. Product Part Number)

If either the Display Field Column or Value Field Column values are blank, the web part will use the SharePoint list item "Name" property. What value a SharePoint list assigns to the item/row "Name" property is dependent on the list (e.g. Document Library will assign the file name of the document to the Name property), so if you select this option, ensure that the Name property contains what you expect.

- **Parameter Name** – see **Connecting Filter Providers to a Report Viewer**, above for naming of parameters.

- **Caption** – the label that will be shown as the title immediately atop the drop down list

8.11.5 Cognos Report Drop Down List Filter Provider

Overview

The Cognos Report filter uses a Cognos report to provide values for filtering other Cognos Reports (in a QueryVision Report Viewer) or other SharePoint web parts (e.g. an Excel spreadsheet).

Notes:

- The filter web part will use the credentials/user id of the user logged into Cognos/SharePoint as the user used to run the Cognos report. So values provided in the filter list will be restricted/filtered based on any applicable filters, permissions, etc. that apply to the user.

- The report must be a list (vs. cross tab) report.

Component Configuration

Adding the Cognos Report Drop Down List Filter Web Part to a Page

You can add a web part to a SharePoint page directly from your browser. If you don't have the correct permissions some of these steps might not be possible.

- Click the "Edit Page" button from the SharePoint Page ribbon.
- Then click the "Add a Web Part" link and a gallery of web parts will be listed under the Categories section.
- Choose the QueryVision Web Parts category and you will find a list of all web parts for Cognos.
- Select the "Cognos Report Drop Down List Filter Provider Web Part" and the location you want to insert it on the page

Configuration Properties

The following are the Cognos Report Drop Down List specific configuration properties

Note: To simplify configuration, it is recommended that you be logged in to Cognos via QueryVision web part authentication.

Report Path

ontent/folder[@name='Example

Display Field Column

Product type

Value Field Column

Product type

Parameter Name

productType

Caption

Product Type

Choosing a Report – Report Path

The "Report Path" can be selected by copy/past a Cognos searchPath. For example

/content/folder[@name='Examples']/report[@name='ProductTypesForPromptList']

Or by selecting the Report Path text box, clicking the button to the right of the Report Path and selecting a report from the list in the dialog shown below (e.g. must be logged in)
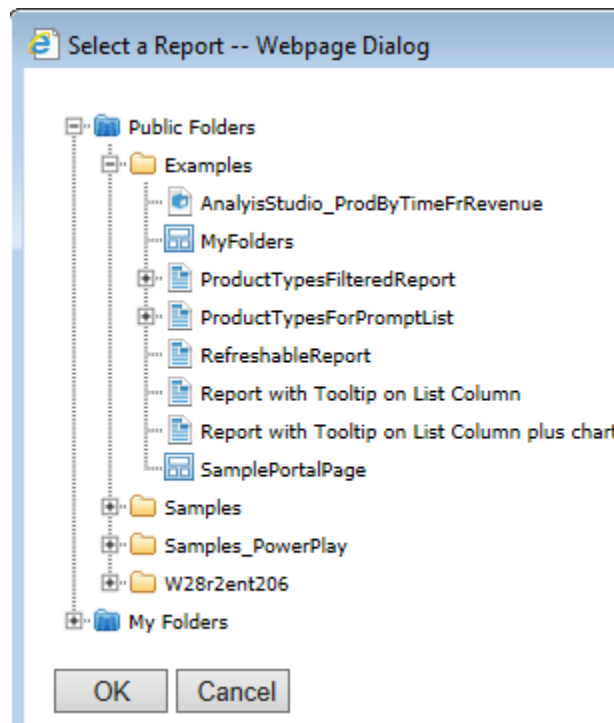
- **Display Field Column** – the Cognos report column used to display selectable filter values in the drop down (e.g. Product Name)

- **Value Field Column** – the Cognos report column used to provide the filter value to the report when the corresponding Display value is selected by the user (e.g. Product Part Number)

- **Parameter Name** – see **Parameter Name matching**, above

- **Caption** – the label that will be shown immediately atop the drop down list

Note: While it is possible to use an existing Cognos Report to provide values for a SharePoint filter, it is recommended to create a specialized "filter" report which only contains a simple list report with the Display and Value columns

8.12 Re-Using Web Parts

In spite of the ease of adding web parts to a page to build an application there are still a number of key areas which need to be configured each time you add a web part to a page:

- Configure the Web Part with its configuration/"Modify Web Part" properties:

   ◊ Set up the authentication page URL, timeouts, etc.

- Setting up the width and height of any web part is a combination of playing with the: Component Style Properties and Web Part Width and Height Adjustments.

   In a nutshell, the Component Style Properties for height and width need to be less than the Web Part properties for height and width.

While setting up an optimal report viewer, portal page, etc. may take a few minutes, to do this for each Cognos based web part in an application can be tedious.

A quick and useful solution is to use SharePoint's feature to export and import web parts – essentially a copy and paste of a fully configured web part.

All QueryVision's Web Parts support export/import, which is documented here How to Export and Import Web Parts in SharePoint

This technique can be used to clone a specific part (e.g. a web part presenting a dashboard) to acting as a template – e.g. exporting a report viewer with width, height and authentication settings – which can speed deploying number of reports in a SharePoint Application by cloning all but the specific report to present.

8.13 Embed, New Window & Redirect options

New for QueryVision version 2016.1

The Report Viewer and Cognos Components web parts offer the option of presenting IBM Cognos content in different Render Targets:
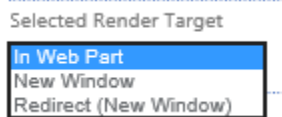
- In Web Part – default – show IBM Cognos content in the web part. This is the behavior for version 2015.1 and earlier

- New Window – when IBM content selected is rendered in a Report Viewer or Cognos Components web part the IBM content will be launched in a new window (typically in a new tab – but based on the browser behavior on "new window").

- Redirect (New Window) – the same as for New Window, but perform a redirect

The functional and workflow difference is as follows:

- In Web Part – the IBM Cognos content is embedded in the SharePoint page within the web part

- New Window/Redirect

  The IBM Cognos content is launched in a separate tab/window – outside of SharePoint – consistent with how it would be presented if using the IBM Cognos Connection (IBM Cognos 10.X) or IBM Cognos Analytics 11 Portal.

  This is useful if

  ◊ The report or dashboard requires a full browser window to be useful for the user

  ◊ There are issues with rendering when embedded in a SharePoint page (see the **QueryVision Web Parts for Cognos - Version 2016.1 Readme** for details)

  The difference between New Window and Redirect:

  ◊ New Window – the SharePoint page with the (say) Report Viewer configured with the New Window option will remain open as well as the new tab/page with the IBM Cognos Content

  ◊ Redirect – The SharePoint page with the (say) Report Viewer configured Redirect option will not remain open (acts like a standard web page redirect)

Some uses of the New Window and Redirect options

- Redirect:

  ◊ A SharePoint web part page in a document library can directly launch IBM Cognos content in a separate tab/page. This leverages the QueryVision authentication options and URL generation to launch IBM Cognos content vs. manually crafting the URLs and developing IBM Cognos/SharePoint authentication.

  ◊ A SharePoint link can be added to a SharePoint navigation side panel that references the SharePoint web part page with a Report Viewer to launch IBM Cognos content in a separate window

- New Window

  ◊ Can be used with a QueryVision Content Manager Tree to launch multiple IBM Cognos reports into separate tabs. An example of this would be a group home page or "topic" page with a main report/dashboard along with a Content Manager Tree/Report Viewer to launch supplemental reports without having to navigate away from the home/topic page.

    In this scenario, the Report Viewer performing the New Window action can be hidden from the user on the page.

  ◊ Can be used for prototyping/developing a Redirect option

9. REPORT AUTOSIZING

Note: A complete guide to QueryVision's Report Autosizing capabilities, including installation and configuration have been moved to a new document which can be found in your QueryVision SharePoint Web Parts installation directory along with samples and code snippets

> *QueryVision Report Autosizing Guide.pdf*

QueryVision's Autosizing capabilities allow Cognos Report Studio to optionally enable individual reports to dynamically resize or specify a fixed height in pixels for SharePoint 2013.

- This is backwards compatible and does not affect the behavior of existing reports or reports that are not enabled for Autosizing.

- Running reports in Cognos Connections, SharePoint

- Prompt pages Autosizing

- Autosizing of multiple reports are supported whether included in multiple QueryVision Report Viewer web parts or in a nested Cognos report scenario

- Dynamic resizing includes support for reports which have drill up/down and drill-through, including to target reports that have dynamic or fixed Autosize options enabled.

10. ADVANCED AUTHENTICATION

The following section details advanced authentication options that are available within the product, specifically for Single Signon.

All previous settings for Single Signon such as editing your QVTConfig.xml file, installing JSP files on the server and configuring the SSO Web Part will usually suffice for most organizations.

10.1 Single Signon (SSO) Options

The requirements of SSO can be broken into three main areas.

1. Logging into Cognos with no Userid or Password challenge

2. Logging into multiple Namespaces with no Userid, Password or Namespace challenge

3. Logging into Cognos with the same credentials that are provided to SharePoint

These variations can all be accommodated to allow QueryVision users to login to Cognos directly through SharePoint with no credentials being asked for and no namespace prompts.

10.2 Basic Requirements & Considerations

SSO from SharePoint to Cognos requires that Cognos must be configured with an Authentication Namespace with Single Signon enabled. In other words, users should not be challenged for credentials when they use a browser to go directly to Cognos Connection.

In the case where multiple namespaces have been configured within Cognos Configuration for a single Cognos gateway, the normal behavior is that users will be challenged to select a namespace against Cognos Connection. However, if a user picks a namespace where Single Signon has been configured correctly, they will not be challenged for a userid or password.

As long as these requirements have been met QueryVision can be configured for SSO with one of its four different options.

In order to determine which SSO configuration options will work in your environment, it is important be able to answer the following questions:

- Do you have a single Namespace or Multiple Namespaces configured within Cognos Configuration?

- Do you have a single namespace or multiple namespaces configured for SSO?

- Do any of your users get challenged by SharePoint for credentials or are they automatically logged on to SharePoint?

10.3 Summary of SSO Options Available

The answers to the above questions will determine which of the four different options you choose to configure within the product. The four different SSO options within the product:

- Standard

- Remote User Fixed

- Remote User Lookup

- Dynamic

Options Available	Single Namespace	Multiple Namespaces	SharePoint Challenge
Standard SSO	Full Support	Prompted Namespace[1]	Client Domain Used[4]
Remote User Fixed	Full Support	Supported for only one Fixed Namespace[2]	Client Domain Used[4]
Remote User Lookup	Full Support	Fully Supported, Namespace Lookup [3]	Client Domain Used[4]
Dynamic	Full Support	Fully Supported, user directed to any namespace through lookup based on server domain	Full Support, SharePoint Server Authenticated Domain used

1. **Prompted Namespace:**

   ◊ Multiple user selectable namespaces and no Gateway Namespace for SSO access - Users will be prompted to select a namespace by Cognos

   ◊ Gateway Namespace specified for SSO Access OR – User will not be prompted.

2. **Fixed Namespace:**

   Users will always be logged into a fixed namespace as defined in the QueryVision configuration file (qvtconfig.xml). Only one namespace is used for SSO through the web parts however, multiple namespaces can be defined in Cognos Configuration.

3. **Namespace Lookup:**

   The appropriate Cognos Namespace to log into is looked up based on the user's client domain.

4. **Client Domain**:

   The client domain refers to the domain that the user is logged onto in relation to Windows desktop. This is not necessarily the same domain as that of SharePoint or Cognos. For instance, an external user of the network could log onto Windows (client) on one domain, then onto SharePoint and Cognos separately. Usually, within one network all of these domains are the same.

5. **SharePoint Server Authenticated Domain**:

   The domain the user is authenticated against as it relates to SharePoint. If SharePoint challenges a user for authentication, this domain refers to the user within that context.

10.4 SSO Setup Instructions

The following instructions presume that installation and configuration instructions noted earlier in this document have already been performed. If you have not performed all of the basic setup instructions, it is recommended that you finish those steps before proceeding any further.

10.4.1 Mandatory Requirements for All Options

Note: The following steps must be performed for all SSO options below to function properly. You must perform the steps in this section regardless of which SSO options you are attempting to setup.

A JSP file and an XML file must be installed / copied onto your Cognos Application Server. The SSO Login web part uses these files directly. Follow these steps to install the JSP file on the Cognos Server.

- Determine if you need to customize the "ssonrd.jsp file. See the section **Single Sign On in complex Network Environments**, below

- Locate the file "ssonrd.jsp" in the following folder on your SharePoint Server: *<install folder>\QueryVision SharePoint Web Parts\Configuration*

- Copy this file to the following location on your Cognos Server: *<Cognos Install Directory\...\webapps\p2pd>*

- This file will now be accessible using through the following URL: http://YourCognosServer:9300/p2pd/ssonrd.jsp

In addition you must copy the file "QvtSsoParams.xml" to the Cognos Server. Follow these steps to install this file:

- Locate the files "QvtSsoParams.xml" in the following folder on your SharePoint Server: *<install folder>\QueryVision SharePoint Web Parts\Configuration*

- Edit this file by replacing the URL to your Cognos Server with the correct one. (e.g. replace the http://YourCognosServer:9300/p2pd/ssonrd.jsp with the proper Server Name for your Dispatcher).

- Copy this file to the following location on your Cognos Server: *<Cognos Install Directory\...\templates\ps>*

Note: *Please ensure that Cognos has at least one Namespace configured with Single Signon enabled. You can do this by opening a web browser and navigating directly to your Cognos Gateway. At this point if you are automatically logged on to Cognos without being challenged for credentials then this requirement has been met. If you are prompted for a namespace but are still logged on to at least one namespace without being prompted then this also is sufficient to proceed.*

File Name	Cognos Server	Destination Folder on Cognos Server
ssonrd.jsp	Dispatcher (Cognos Application Server/Cognos Content Manager Server)	..\webapps\p2pd
QvtSsoParams.xml	Dispatcher (Cognos Application	..\templates\ps

	Server/Cognos Content Manager Server)	

10.4.2 Standard SSO

Authentication Setting:

Within QVTConfig.xml ensure that your <Authentication> value is set as below. You will find this within the CrnServer that you are configuring.

```
<CrnServer>Localhost</CrnServer>
…
<Authentication>Account</Authentication>
```

Namespace Settings:

Your Namespace setting should be setup to correspond to the namespace that is setup for single sign on within Cognos. Remember that to avoid a namespace prompt you can only have a single namespace defined within the Cognos Gateway. The NetbiosDomain is not applicable and can be left alone or made blank.

```
<NameSpaces>
    <NameSpace>
        <Name>YourNamespaceName</Name>
        <DisplayName>Custom Display Name</DisplayName>
        <NameSpaceID>YourNamespaceID</NameSpaceID>
        <NetbiosDomain>FriendlyNetbiosDomainName</NetbiosDomain>
        <Default>True</Default>
    </NameSpace>
</NameSpaces>
```

10.4.3 Remote User Fixed

Authentication Setting:

Within QVTConfig.xml ensure that your <Authentication> value is set as below. You will find this within the CrnServer that you are configuring.

```
<CrnServer>Localhost</CrnServer>
…
<Authentication>SSORemoteUserFixed</Authentication>
```

Namespace Settings:

Your Namespace setting should be setup to correspond to the namespace that is setup for single sign on within Cognos. In this case you can have multiple Namespaces configured on a Cognos Gateway, however you are directing all traffic to only one particular Namespace for authentication. The Namespace that is listed as the "Default" namespace will be used for all SSO interaction. The NetbiosDomain is not applicable and can be left alone or made blank.

```
<NameSpaces>
    <NameSpace>
        <Name>YourNamespaceName</Name>
        <DisplayName>Custom Display Name</DisplayName>
        <NameSpaceID>YourNamespaceID</NameSpaceID>
        <NetbiosDomain>FriendlyNetbiosDomainName</NetbiosDomain>
        <Default>True</Default>
    </NameSpace>
</NameSpaces>
```

10.4.4 Remote User Lookup

This option allows for multiple namespaces defined in Cognos corresponding to multiple Active Directory Domains. Users authenticating in the form of "Domain1/user" will be directed towards "NamespaceA" and "Domain2/user" will be directed to "NamespaceB". Remember that the client domain is being used in this case for the lookup. This is the Domain that users authenticated against for Windows Client (which is not necessarily the same as SharePoint).

Authentication Setting:
Within QVTConfig.xml ensure that your <Authentication> value is set as below. You will find this within the CrnServer that you are configuring.

```
<CrnServer>Localhost</CrnServer>
…
<Authentication>SSORemoteUserLookup</Authentication>
```
Namespace Settings:
Your Namespace setting should be setup to correspond to one or more namespaces that have been setup for single sign on within Cognos. In this case you can have multiple Namespaces configured on a Cognos Gateway, a domain lookup will be matched with the appropriate namespace in Cognos and used for authentication.

The NetbiosDomain must be set to the appropriate matching Domain you wish to authenticate against.

```
<NameSpaces>
     <NameSpace>
        <Name>NamespaceA</Name>
        <DisplayName>Namespace A</DisplayName>
        <NameSpaceID>NamespaceA</NameSpaceID>
        <NetbiosDomain>DomainName1</NetbiosDomain>
        <Default>True</Default>
     </NameSpace>
  <NameSpace>
        <Name>NamespaceB</Name>
        <DisplayName>Namespace B</DisplayName>
        <NameSpaceID>NamespaceB</NameSpaceID>
        <NetbiosDomain>DomainName2</NetbiosDomain>
        <Default>False</Default>
     </NameSpace>
  </NameSpaces>
```

10.4.5 Dynamic

This SSO option is the most flexible option, and supports for multiple namespaces defined in Cognos, which correspond to multiple Active Directory Domains. The context of the user as it exists in SharePoint will be used for Cognos. This means that whoever you logon as for SharePoint will be the same domain/user used to automatically sign on to Cognos.

Due to the complex nature of this option, there are a number of extra steps that are required to have this installed and configured properly.

Install the QueryVision Trusted Signon Provider (TSOP):
Within your QueryVision install directory you will find the following files under the

\Configuration folder, each of these files needs to be installed into specific folders on the

Cognos Server:

File Name	Cognos Server	Destination Folder on Cognos Server
qvtSSODynamic.html	Cognos Application Server &Cognos Content Manager Servers	..\webcontent
JDBC_Config_JCAPSQLSSOM.properties	Cognos Content Manager Servers	..\configuration
CAM_AAA_TrustedSignonJCAPSQLMulti.jar	Cognos Content Manager Servers	..\webapps\p2pd\web-inf\lib

Update for qvtSSODynamic.html for IBM Cognos Analytics 11

While IBM Cognos has always recommended using of cognosisapi.dll vs. cognos.cgi, with IBM Cognos 11, this is effectively a requirement.

For this qvtSSODynamic.html needs to be changed to reflect that.

Look for the lines:

SetC(tsu,uname);

var url='cgi-bin/cognos.cgi?b_action=xts.run&m=portal/bridge.xts&c_env= QvtSsoParams.xml'+'&endpointurl='+encodeURIComponent(endPointUrl)+ '&CAMNamespace='+tsp;

Change *cognos.cgi* to *cognosisapi.dll*

var url='cgi-bin/cognosisapi.dll?b_action=xts.run&m=portal/bridge.xts&c_env= QvtSsoParams.xml'+'&endpointurl='+encodeURIComponent(endPointUrl)+ '&CAMNamespace='+tsp;

Selection of the version of CAM_AAA_TrustedSignonJCAPSQLMulti.jar

QueryVision ships with multiple versions of **CAM_AAA_TrustedSignonJCAPSQLMulti.jar** that map to different Cognos versions and the Java JRE runtime used to run Cognos BI Servers.

To select the appropriate version, please see the document [QueryVision SSO Dynamic Trusted Sign On Provider Guide](#) in the QueryVision Web Part installation folder ../Configuration/Advanced Single Signon/Trusted Signon Provider.

Namespace Definition on Cognos Server:

In order to complete the setup the Cognos server needs to have a special namespace defined which points to the QueryVision Trusted Signon Provider. This provider will handle the brokering as to which namespace to authenticate the user into.

1) Launch Cognos Configuration

2) Under "Explorer" on the left hand side right click the "Authentication" tab under Security, and then choose "New Resource" and then "Namespace".
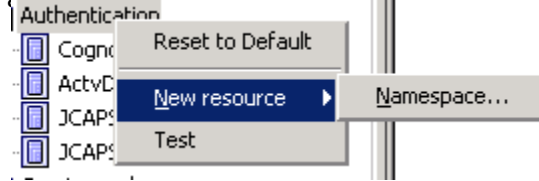
3) For the Name type in "JCAPSQLSSOM" and then choose Custom Java Provider from the drop down list, and click OK.
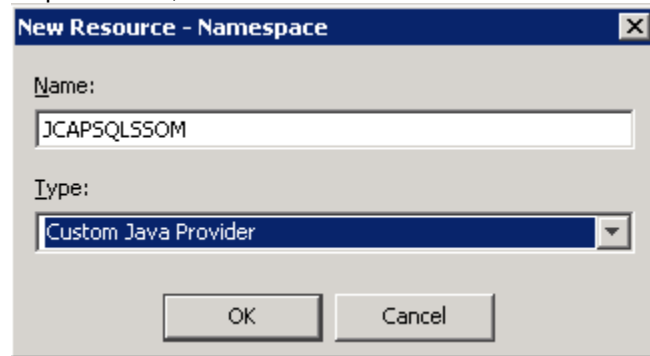
4) Enter the NamespaceID value on the right hand side as "JCAPSQLSSOM"

5) Enter the Java Class Name as "TrustedSignonJCAPSQLMulti"

6) Change the property "Selectable for authentication?" from **True** (default) to **False**

This ensures that Users will not see this namespace when logging in via other SSO or challenge/response authentication paths.

> **NOTE:** *do NOT set the "Gateway namespace" property under the Local Configuration/Environment settings for either the TSOP or other namespace. This will likely result in an "invalid namespace" error when the user attempts to log in via any technique. Set all "Custom Java Provider" namespaces to "Selectable for authentication?" to False*

7) To ensure that JCAPSQLSSOM works, now right click on the name and select Test:
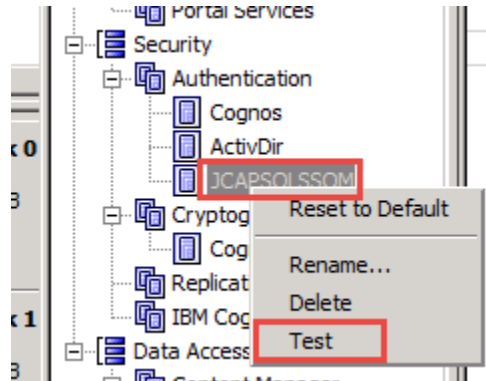
Will be asked for credentials: just enter any text for both User id and Password:

You should see the following result:
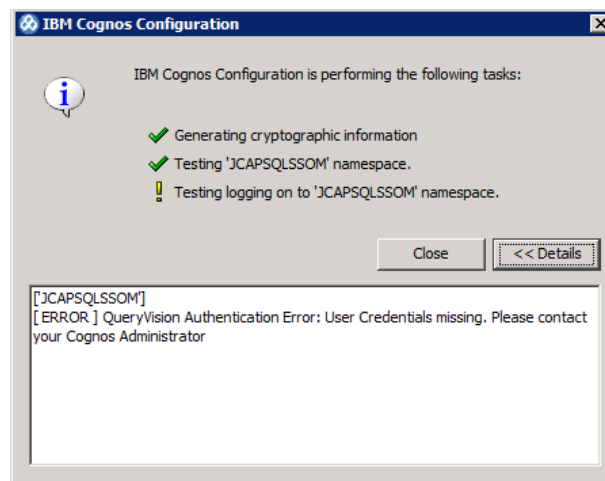
If the line **Testing "JCAMSQLSSOM" namespace** shows a red X and/or the following message in the Details or in the Cognos logs:

["JCAPSQLSSOM"]

[ERROR] AAA-CFG-0008 The handler class 'TrustedSignonJCAPSQLMulti' cannot be loaded.

[ERROR] java.lang.ClassNotFoundException: TrustedSignonJCAPSQLMulti

Then you need to change the version of the **CAM_AAA_TrustedSignonJCAPSQLMulti.jar**. For use of different versions. See the troubleshooting section, below, for details

8) Click Save, to save your new Namespace definition

9) Lastly, you may have to stop and start your Cognos server for the changes to take effect.

Setup a Shared secret:

A shared secret must be setup between the SSO Web Parts on the SharePoint server and the Trusted Signon Provider on the Cognos Server. This ensures that all URLs are encrypted and expire (can only be used for a limited amount of time).

In order, to set up a shared secret you must use the QueryVision Key Generation tool, and then copy this key to both your web part configuration file and your trusted signon provider properties file.

1. Locate the Configuration\Advanced Single Signon\Key Generation Tool folder under your QueryVision Install Directory.

2. Open a Command Line Prompt as Administrator and type "cd" followed by the above directory (e.g. *"cd c:\program files (x86)\QueryVision\QueryVision SharePoint Web Parts\Configuration\Key Generation Tool"*)

3. Type "BcKeyGenerator <<Pass Phrase>>". Where <<Pass Phrase>> is any random alphanumeric string. Note: the pass phrase does not need to be secure, however we suggest something random.

4. A file will automatically be generated within the same directory of the form "bcKey_*datetime*".

5. Open this file in Notepad. You will find your key as a single line of text.

6. Copy this key to the clipboard. Keep this key on hand as you will need to place it into two files.

7. Open your "JDBC_Config_JCAPSQLSSOM.properties" file that you installed on your Cognos Server using any text editor (like Notepad)

8. Locate the entry "bcEncryptKey=" and replace the default key with your new key that you generated. Close and save your .properties file.

9. Open your QvtConfig.xml file on your SharePoint server under the Resources directory where you deployed your web part solution to.

10. Locate the entry <EncryptionKey> and replace the default key with the key you generated. E.g. <EncryptionKey>YourNewKeyValue</EncryptionKey>.

11. Save your file.

Authentication Setting:
Within QVTConfig.xml ensure that your <Authentication> value is set as below. You will find this within the CrnServer that you are configuring.

```
<CrnServer>Localhost</CrnServer>
…
<Authentication>SSODynamic</Authentication>
```

Namespace Settings:
Your Namespace setting should be setup to correspond to one or more namespaces that have been setup for single signon within Cognos. In this case you can have multiple Namespaces configured on a Cognos Gateway; a domain lookup will be matched with the appropriate namespace in Cognos and used for authentication.

The NetbiosDomain must be set to the appropriate matching Domain you wish to authenticate against.

```
<NameSpaces>
    <NameSpace>
        <Name>NamespaceA</Name>
        <DisplayName>Namespace A</DisplayName>
        <NameSpaceID>NamespaceA</NameSpaceID>
        <NetbiosDomain>DomainName1</NetbiosDomain>
        <Default>True</Default>
    </NameSpace>
    <NameSpace>
        <Name>NamespaceB</Name>
```

```
        <DisplayName>Namespace B</DisplayName>
        <NameSpaceID>NamespaceB</NameSpaceID>
        <NetbiosDomain>DomainName2</NetbiosDomain>
        <Default>False</Default>
     </NameSpace>
</NameSpaces>
```

Note: Users authenticating in the form of "Domain1/user" will be directed towards "NamespaceA" and "Domain2/user" will be directed to "NamespaceB". Remember that the client domain is being used in this case for the lookup. This is the Domain that users authenticated against for Windows Client (which is not necessarily the same as SharePoint).

Testing:

You can test your server by logging into different domains / namespaces using different users on the network. You can also test that you can logon to your desktop under one domain (or under a local account) and then logon to SharePoint as a different account. The QueryVision Single Signon web part will now automatically logon as the SharePoint user.

10.4.5.1 TROUBLESHOOTING THE TRUSTED SIGN ON PROVIDER FOR DYNAMIC AND OTHER SSO OPTIONS

Error during Cognos Configuration Authentication namespace test

If you see the following error on doing a Test of the Authentication Namespace in Cognos Configuration or in the Cognos log:

> [ERROR] AAA-CFG-0008 The handler class 'TrustedSignonJCAPSQLMulti' cannot be loaded.

Or when attempting single sign on with the QueryVision SSO Web Part

> Error AAA-AUT-0011 Invalid Namespace selected

Check the version of the **CAM_AAA_TrustedSignonJCAPSQLMulti.jar.**

Please see the document QueryVision SSO Dynamic Trusted Sign on Provider Guide in the QueryVision Web Part installation folder ../Configuration/Advanced Single Signon/Trusted Signon Provider - **QueryVision SSO Dynamic Trusted Sign on Provider Guide .pdf**

Invalid namespace was selected

If you see the following error on attempting single sign on with the QueryVision SSO Web Part, then there may be one of two issues
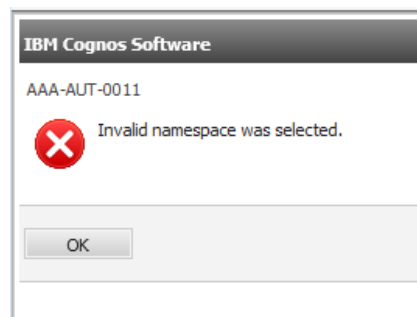
- The **CAM_AAA_TrustedSignonJCAPSQLMulti.jar** is not loading or is not present:

Check with the Cognos Configuration Authentication Namespace test as described earlier.

If the .jar is in the correct location check that you have the right version (covered earlier in this document).

- Custom Authentication Provider namespace in Cognos Configuration is not correctly considered:

    ◊ The **Namespace ID** or **Java class name** are incorrect

    ◊ The **Selectable for authentication** is not set to **True**

*Issues with setting the Cognos Configuration **Gateway namespace** and **Allow namespace override?** properties:*

It is possible to have multiple Authentication Namespaces available within a Cognos Configuration (both "base" namespaces such as on or more Active Directory or LDAP and Custom Authentication Providers/CAPs, such as the SSO Dynamic JCAPSQLSSOM CAP).

To ensure that users of SSO are not challenged to select between namespaces, there are several possible solutions:

- Ensure that Trusted Sign On Provider (TSOP) CAPs are hidden from the user with the Cognos Configuration/Security/Authentication/Authentication Namespace property **Selectable for authentication?** set to **False** (discussed above)

- Set a single Authentication Namespace as the one used for the user of *that* Gateway via the Cognos Configuration/Environment/Gateway Settings property **Gateway namespace** property – specifying the namespace id for the desired namespace.

    In addition, there is the **Allow namespace override?** property

If the **Gateway namespace** is set to a namespace id other than the one for the QueryVision TSOP, then single sign using the TSOP will fail.

The **Allow namespace override?** set to **True** will also cause the TSOP SSO to fail. This property only applies when used with Cognos Portlets, not with standard TSOPs such as the one for SSO Dynamic.

10.5 Single Sign On in Complex Network Environments

From a network configuration perspective SharePoint and Cognos solutions can be complex as both each of SharePoint and Cognos can consist of multiple servers, a mix of http and https, firewalls, load-balancing (software and hardware).

QueryVision provides the following advanced techniques for these environments:

- Managing URL re-writes in the Single Sign On workflow

- Multiple SharePoint Apps sharing a Cognos Server

For an understanding of the SSO workflow and it's components, it is suggested to read the section **Single Sign On In Depth**/**Single Sign On Workflow** later in this document.

10.5.1 Managing the receiving URL for SSO credentials

Problem: QueryVision SSO workflow is not redirecting back to the expected SharePoint web page URL on completion. The base URL visible to the user in their browser is an internal URL not the user/public URL.

The SSO workflow between SharePoint and Cognos consists of a number of redirects from the user's browser from the SharePoint (web) page that contains the QueryVision SSO Authentication Web Part to Cognos for authentication and then returning to the SharePoint page

to allow the SSO web part to accept the Cognos authentication token (in IBM Cognos terms, a "passport").

The SSO web part initiates the redirection workflow by first obtaining the SharePoint web page URL (the "endpoint URL"). This is then passed through the "redirection chain" (along with other parameters) which will, as a final step, redirect back to the originating SharePoint page (the "endpoint URL").

The source of the problem is as follows:

- The "public" URL (the one the user uses to access the SharePoint site and sees as they navigate pages on the SharePoint site), is not necessarily the one used internally by SharePoint itself. In addition, load balancers, the use of SharePoint Alternate Access Maps (AAM), DNS and IIS settings can all be used to "re-write" URLs as a user request flows through to the SharePoint web site and back to the user.

- When the SSO Web Part requests the URL from the SharePoint web page (via the SharePoint APIs), it is returning the "internal" URL for the page, and without mapping the internal URL to the public URL, the SSO workflow will return to the "internal" URL for the SharePoint Web Page that contains SSO Web Part.

This can be resolved leveraging the URL substitution/mapping feature within the QueryVision SSO component **ssondrd.jsp.**

To use the substitution/mapping feature requires editing the ssonrd.jsp file. As shipped, the mapping is disabled through comments:

```
// remove comments from code to activate for AAM type remapping
// does AAM type remapping from internal URI to alternate URI
//in_to_out_URI = new String[][]{
//        {"https://pos.validation.spfarm.intra.com:9653",
"https://pos.validation.spfarm.intra.com"},
//        {"https://pos.validation.spfarm.intra.com:8653",
"https://pos.validation.spfarm.intra.com"},
// };
```

The code specifies a simple 2 dimension array consisting of pairs of strings. The format is that of a Java array:

```
in_to_out_URI = new String[][]{
        {"<string to replace>", "<replacement string>"},
        {"<string to replace>", "<replacement string>"},
        {"<string to replace>", "<replacement string>"}
    };
```

Note that each pair is separated by a comma.

Some examples:

- {"http:", "https:"}

    This will re-write URLs from http:// to https://

- ```
  {"https://pos.validation.spfarm.intra.com:9653",
  "https://pos.validation.spfarm.intra.com"}
  ```

    This will re-write from the internal base url "https://...com:9653" to the public base url "https://...com"

The following shows what the "Active" code should look like (which lines to uncomment):

```
// remove comments from code to activate for AAM type remapping
// does AAM type remapping from internal URI to alternate URI
in_to_out_URI = new String[][]{
      {"https://pos.validation.spfarm.intra.com:9653",
"https://pos.validation.spfarm.intra.com"},
      {"https://pos.validation.spfarm.intra.com:8653",
"https://pos.validation.spfarm.intra.com"},
};
```

Save the updated ssonrd.jsp file and copy this file to the following location on your Cognos Server:

<Cognos Install Directory\...\webapps\p2pd>

10.5.2 Multiple SharePoint Apps sharing a Cognos Server

For QueryVision SSO to work from SharePoint to Cognos, several files must be installed on the IBM Cognos server.

Problem: QueryVision web parts are deployed to multiple SharePoint sites accessing a common IBM Cognos. Each QueryVision deployment may have different ssonrd.jsp configuration requirements due to different URL mapping or versions of SharePoint and/or QueryVision.

The solution is to create independent sets of the QueryVision SSO files, including ssonrd.jsp, on the Cognos server.

There are two scenarios

- For SSO Dynamic mode

- For all other SSO modes, except SSO Dynamic

10.5.2.1 FOR SSO DYNAMIC

There are 4 files involved for each SharePoint site configured to use the QueryVision Web Part Solution

- QvtConfig.xml

- qvtSSODynamic.html

- QvtSsoParams.xml

- ssonrd.jsp

For each "set" copy and rename the files qvtSSODynamic.html, QvtSsoParams.xml and ssonrd.jsp. For example:

- qvtSSoDynamic_2.html

- QvtSsoParams_2.xml

- ssonrd_2.jsp

Now make the following changes in each of the files to update the file name references (e.g. qvtSSODynamic.html -> qvtSSODynamic_1.html)

- QvtConfig.xml

   For the Cognos Server you are accessing in its <CrnServer> section locate the following:

```
<JSPServerFile>
    <Name>ssoDynamic</Name>
```

```
    <Path>qvtSSODynamic.html</Path>
</JSPServerFile>
```

And rename qvtSSODynamic.html to qvtSSODynamic_2.html

- qvtSSODynamic_2.html

  Locate the following code:

  ```
  SetC(tsu,uname);
  var url='cgi-
  bin/cognos.cgi?b_action=xts.run&m=portal/bridge.xts&c_env=QvtSsoParams.xml'+'
  &endpointurl='+encodeURIComponent(endPointUrl)+'&CAMNamespace='+tsp;
  if(retry=='1'){
  url = url + '&retry=1'+'&c_mode=post';
  }
  else {url=url +'&c_mode=post';}
  window.location=url;
  }
  ```

  Rename QvtSsoParams.xml to QvtSsoParams_2.xml

- QvtSsoParams_2.xml

  ```
  <?xml version="1.0" encoding="UTF-8"?>
  <CRNenv c_cmd="http://w28r2ent206:9300/p2pd/ssonrd.jsp">
    <cookies>
        <param name="cam_passport"/>
    </cookies>
  </CRNenv>
  ```

  Rename ssonrd.jsp to ssonrd_2.jsp

And finally, place the updated qvtSSODynamic_2.html, QvtSsoParams_2.xml and ssonrd_2.jsp in the same folders as the originals on the Cognos Server (see earlier in this guide for those locations).

Repeat these steps (with suitably renamed file names and references) for each additional set of IBM Cognos server files required.

You will need to restart your QueryVision web part solution (e.g. iisreset for the IIS server or restart the QueryVision Web Part solution IIS application pool).

10.5.2.2 FOR OTHER SSO MODES

The steps are similar to SSO Dynamic mode, but the change to QvtConfig.xml is different and the need to copy and modify the qvtSSODynamic.html file is not required (it is not used for non-SSO Dynamic modes)

- QvtConfig.xml

  For the Cognos Server you are accessing in its <CrnServer> section locate the following:

  ```
  <SSOBridgeCommand>%3Fb_action%3Dxts.run%26m%3Dportal%2Fbridge.xts%26c_env%3
  DQvtSsoParams.xml%26c_mode%3Dpost</SSOBridgeCommand>
  ```

  Rename QvtSsoParams.xml to QvtSsoParams_2.xml

- QvtSsoParams_2.xml

  Same steps as for SSO Dynamic, above

- ssonrd_2.jsp

  Same steps as for SSO Dynamic, above

And finally, place the updated QvtSsoParams_2.xml and ssonrd_2.jsp in the same folders as the originals (see earlier in this guide for those locations).

Repeat these steps (with suitably renamed file names and references) for each additional set of IBM Cognos server files required.

You will need to restart your QueryVision web part solution (e.g. iisreset for the IIS server or restart the QueryVision Web Part solution IIS application pool).

10.6 Single Sign On In Depth

10.6.1 Single Sign On Workflow

There are two variations on the SSO workflow, shown (in simplified form) to identifies the components, plus their role and location in the sequence.

10.6.1.1 NON-SSO DYNAMIC MODES

For all SSO modes except SSO Dynamic, the following is the workflow:
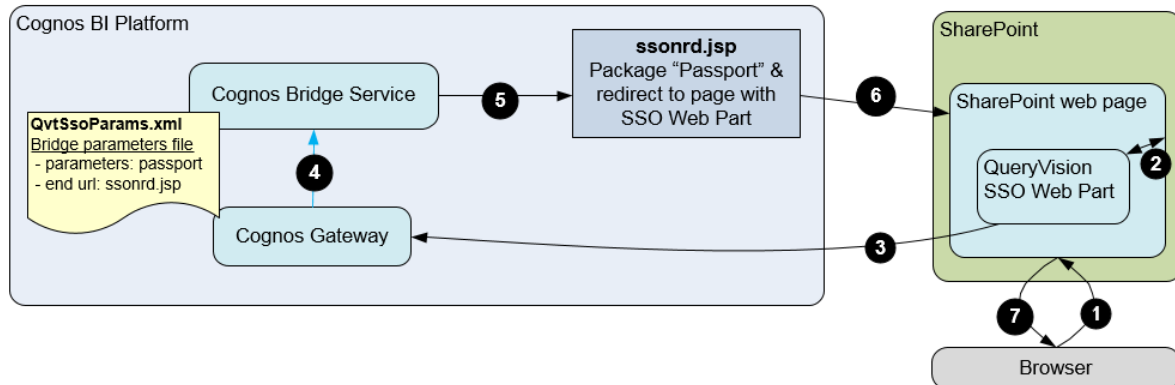
1. The user either goes to the SharePoint web page with the SSO Authentication web part or is directed there if they are not logged onto Cognos.

2. The SSO Web Parts requests the current page URL (the SharePoint "internal" URL is returned) and retrieves user identity, which can be a "windows identity" (e.g. NTLM) or a "claims identity" (e.g. SAML/trusted claim, windows claim, forms claim, …)

3. The SSO Web part builds a redirection request to the Cognos Bridge Service via the Cognos Gateway with parameters including the user identity, and the current page URL (as the "endpoint URL" parameter), which is where the SSO workflow will return to on completion.

4. The Cognos gateway authenticates the user and passes the authentication token (Cognos "passport") to the bridge service using the QvtSsoParams.xml file to provide which properties to pass (passport) and the URL of the web component that the Cognos Bridge Service will redirect to (ssonrd.jsp), plus the "endpoint URL"

5. The ssonrd.jsp packages the passport and redirects to the "endpoint URL"

6. The passport is read from the response by the SSO Web Part

7. The page is updated showing the user logged in and rendered for the user

10.6.1.2 SSO DYNAMIC

For SSO Dynamic, there is an addition component – a handover page (qvtSSODynamic.html), which packages user identity and other parameters into [Browser] Cookies to permit downstream components (including the Trusted Sign On Provider [TSOP]) to access them in the context of the user/browser request.

1. The user either goes to the SharePoint web page with the SSO Authentication web part or is directed there if they are not logged onto Cognos.

2. The SSO Web Parts requests the current page URL (the SharePoint "internal" URL is returned) and retrieves user identity, which can be a "windows identity" (e.g. NTLM) or a "claims identity" (e.g. SAML/trusted claim, windows claim, forms claim, …)

3. The SSO Web part builds a redirection request to the qvtSsoDynamic.html page with parameters including the user identity, and the current page URL (as the "endpoint URL" parameter), which is where the SSO workflow will return to on completion.

4. The qvtSsoDynamic.html packages the parameters as cookies that components on the Cognos server can access (in the Cognos domain) and redirects to the Cognos Gateway requesting the "Cognos Bridge Service"

5. The Cognos gateway delegates request to the Cognos Access Manager to determine if the user/request is authenticated.

6. If the user/request is not authenticated, the CAM directs to the designated (QueryVision supplied) Trusted Sign On Provider which "unpacks" the user identity and authenticates the user (details omitted)

7. Once authentication is complete, control is returned to the CAM

8. The CAM passes the authentication token (Cognos "passport") to the Cognos Bridge Service using the QvtSsoParams.xml file to provide which properties to pass (passport) and the url of the web component that the Cognos Bridge Service will redirect to (ssonrd.jsp), plus the "endpoint URL"

9. The ssonrd.jsp packages the passport and redirects to the "endpoint URL"

10. The passport is read from the response by the SSO Web Part

11. The page is updated showing the user logged in and rendered for the user

11. COGNOS MAINTENANCE MODE & SERVER UNAVAILABLE CONFIGURATION

If a Cognos server is down for planned maintenance or is offline when the user logs in or fails while the user(s) are logged in, users may be presented with highly technical error messages or unexpected behavior by the QueryVision's Web Parts.

To improve the user experience, including better informing them of the SharePoint/QueryVision/Cognos status, a number of dynamically configurable features have been added:

- Maintenance Mode

  If in Maintenance Mode, the QueryVision Web Parts will not attempt to logon to Cognos, presenting the user with a SharePoint Administrator configurable error message.

- Cognos Server Unavailable

  Provide error checking and user friendly messaging for Cognos server availability before attempting to log into Cognos – which is particularly important for Single Sign On.

Maintenance Mode is intended for scheduled maintenance and will immediately halt the logon process for any QueryVision Web Part.

Cognos Server Unavailable functionality and message is intended for unscheduled/unexpected Cognos server down time, ensuring that the user is halted within QueryVision Web Parts before Single Sign On or Challenge/Response logon is attempted and presenting them with a user friendly message.

If Maintenance Mode is enabled, then the Maintenance Mode message and behavior overrides the Cognos Server Unavailable message and behavior.

Maintenance Mode and Cognos Server Unavailable messages to the user(s) and QueryVision Web Part behavior can be configured through properties in the QvtDynConfig.xml file. The QvtCynConfig.xml file allows a SharePoint Administrator to update the file and it will be dynamically read by the QueryVision Web Parts application – avoiding the need to restart the associated SharePoint Application Pool or SharePoint server.

The QvtDynConfig.xml configuration file allows for a Maintenance Mode and Cognos Server Unavailable setting and messages that applies for

- All Cognos Servers

- Individual Cognos servers

  ◊ Applies where multiple Cognos Servers are user selectable

  ◊ Overrides the "all Cognos servers" settings

The following is the "as shipped" QvtDynConfig.xml sections for Maintenance Mode and Cognos Server Unavailable

```xml
<?xml version="1.0" encoding="utf-8"?>
<DynamicConfigurationProperties xmlns="http://tempuri.org/Config2.xsd">
  <DocumentInfo customerName="customerName1" customerDescription="customerDescription" customerVersion="
  <CrnServerSection schemaVersion="1.0">
    <MaintenanceMode>
      <InMaintenance><!-- true | false --></InMaintenance>
      <MaintenanceMessage><!-- maintenance message across all cognos servers --></MaintenanceMessage>
    </MaintenanceMode>
    <CognosServerUnavailable>
      <Message>
        <!-- cognos server not available message across all cognos servers -->
      </Message>
      <AllowManualRedirect><!-- true | false --></AllowManualRedirect>
    </CognosServerUnavailable>                                                    1
    <CrnServers>
      <CrnServer>
        <LogicalName><!-- cognos server logical name as defined in QvtConfig.xml --></LogicalName>
        <MaintenanceMode> <!-- maint mode configuration for a specific cognos server -->
          <InMaintenance><!-- true | false --></InMaintenance>
          <MaintenanceMessage><!-- maintenance message for this cognos server --></MaintenanceMessage>
        </MaintenanceMode>
        <CognosServerUnavailable>
          <Message>
            <!-- cognos server not available message for this cognos servers -->
          </Message>
          <AllowManualRedirect><!-- true | false --></AllowManualRedirect>
        </CognosServerUnavailable>                                                2
      </CrnServer>
    </CrnServers>
  </CrnServerSection>
  <ShrPntSection schemaVersion="1.0">
    <!-- no properties yet defined -->
  </ShrPntSection>
</DynamicConfigurationProperties>
```

The common configuration properties are as follows:

- **Maintenance Mode**

    ◊ **InMaintenance** [True/False (default]

    If True, no web part will attempt to logon or redirect to logon and the Maintenance Message to be displayed

    ◊ **MaintenanceMessage** [string]

    Provides message that will displayed to the user in any QueryVision Web Part if InMaintenance = True

- **CognosServerUnavailable**

    ◊ **Message** [string]

    Provides message that will displayed to the user if the Cognos Server is offline or goes offline while user(s) are logged in. If Maintenance Mode is enabled it overrides the CognosServerUnavailable message and behavior

    ◊ **AllowManualRedirect** [True/False (default]

    If True, will all the user to attempt to redirect to logon

Configuration file settings allow for "base" Maintenance Mode and Cognos Server Unavailable settings, plus optional Cognos Server specific messages and behavior.

Where a single Cognos server is available for users, then only the "base" settings (see green box, labelled "1, above) are required to be set. This is typically the case where Single Sign On authentication is used.

If multiple Cognos servers are selectable by the user, or for optional additional detail, each Cognos Server can have their own Maintenance Mode and Cognos Server Unavailable settings (see blue box, labelled "2", above). If the Cognos Server is known by the QueryVision Web part (e.g. currently only the authentication web parts know which Cognos Server they are attempting to connect to), then it will use the Cognos Server specific settings. Otherwise, the "base" settings will be used.

12. APPENDICES

12.1 Logging

12.1.1 Enabling and configuring

For troubleshooting and monitoring user access and report execution, the QueryVision Web Parts have built in logging, which can be configured through the configuration file QvtConfig.xml.

QvtConfig.xml is shipped with the "working configuration" commented out and the "default as shipped" section active and set with logging set to off

```xml
<level value="Off" />


<?xml version="1.0" encoding="utf-8"?>
  <!-- the following is the Log4Net section as shipped, with the "working
configuration"
      commented out and the active configuration with logging set to off -->

      <!-- COMMENTED OUT example of working Log4Net configuration
      <log4net>
        <appender name="LogFileAppender" type="log4net.Appender.FileAppender">
          <param name="File" value="./Resources/QVTLog.xml" />
          <param name="AppendToFile" value="true" />
          <layout type="log4net.Layout.XmlLayoutSchemaLog4j, log4net" />
        </appender>
        <appender name="UdpAppender" type="log4net.Appender.UdpAppender">
          <param name="RemoteAddress" value="127.0.0.1" />
          <param name="RemotePort" value="8080" />
          <layout type="log4net.Layout.XmlLayoutSchemaLog4j, log4net" />
        </appender>
        <root>
          <level value="Error" />
          <appender-ref ref="LogFileAppender" />
          <appender-ref ref="UdpAppender" />
        </root>
      </log4net>
      -->
      <!-- ACTIVE default as shipped - logging completely off -->
      <log4net>
          <root>
              <level value="Off" />
          </root>
      </log4net>
  </Section>
```

The example below is a working example (the section marked as Active).

Note: in this working example, the location for the logging file (QVTLog.xml) is set to

```
<param name="File" value="E:/temp/QvtLogging/QVTLog.xml" />
```

◊   The path separator is "/", not "\"

◊   The location of the file has been deliberately set to an area on disk where write
    permissions can easily be enabled. Particularly with Windows 2008 or later, the relative
    location "./Resources/QvtLog.xml", which is in the inetpub path, is most likely not enabled
    for QueryVision's application for write permission. The symptoms are that the file is not
    written.

```
<!-- the following is a working example where logging is
     active and the "default as shipped" is commented out -->

<Section Key="Log4Net" Name="Log4Net" SchemaVersion="1.0">
  <!-- ACTIVE example of working Log4Net configuration -->
    <log4net>
      <appender name="LogFileAppender" type="log4net.Appender.FileAppender">
        <param name="File" value="E:/temp/QvtLogging/QVTLog.xml" />
        <param name="AppendToFile" value="true" />
        <layout type="log4net.Layout.XmlLayoutSchemaLog4j, log4net" />
      </appender>
      <appender name="UdpAppender" type="log4net.Appender.UdpAppender">
        <param name="RemoteAddress" value="127.0.0.1" />
        <param name="RemotePort" value="8080" />
        <layout type="log4net.Layout.XmlLayoutSchemaLog4j, log4net" />
      </appender>
      <root>
        <level value="Debug" />
        <appender-ref ref="LogFileAppender" />
        <appender-ref ref="UdpAppender" />
      </root>
    </log4net>
  <!-- COMMENTED OUT default as shipped - logging completely off
  <log4net>
    <root>
      <level value="Off" />
    </root>
  </log4net>
  -->

</Section>
```

12.1.2 Viewing the log file

Log4Net is a port of Log4J for which many log viewers are available to view the results. As
QueryVision is using the xml formatter, the viewer needs to support the Log4 xml format.

QueryVision recommends YALV, which can be found on codeplex https://yalv.codeplex.com/

It requires the .NET 4 framework to be installed, but otherwise does not require a formal
installation, just drop the folder anywhere on disk and click YALV.exe.

The following is a screen shot:

12.2 Direct URLs to IBM Cognos Content

In some cases, even with the QueryVision Web Parts for IBM Cognos, there are cases to be made for using some other simplified approaches using a "raw" URL – in this case a IBM Cognos SDK URL request to run, view or edit IBM Cognos Content.

Some examples include:

- SharePoint link (e,g. in a sidebar) – use this to launch IBM content in a new window (outside of SharePoint)

- Use with a Page Viewer Web Part – a simplified alternative to using QueryVision's Report Viewer or Cognos Component web parts to embed IBM content in a SharePoint Page (e.g. an iframe))

- Use with a Conent Editor Web Part – use to provide a custom HTML list of links to launch IBM Cognos content either embedded in a SharePoint page or to launch in another tab/window

A limit with all URLs in SharePoint is they are limited to 255 characters and IBM Cognos content URLs are frequently well in excess of 512 (e.g. 1130 in the example below), so an indirect mechanism is required. The technique is to set up a .aspx page in the SharePoint Site Asset library and reference it via a URL to the Site Asset library. For example:

http://w12r2sp161/SiteAssets/redirMeta.aspx

Add a SharePoint Link to a sidebar, such is in the following example from the out-of-the-box Team SharePoint template:
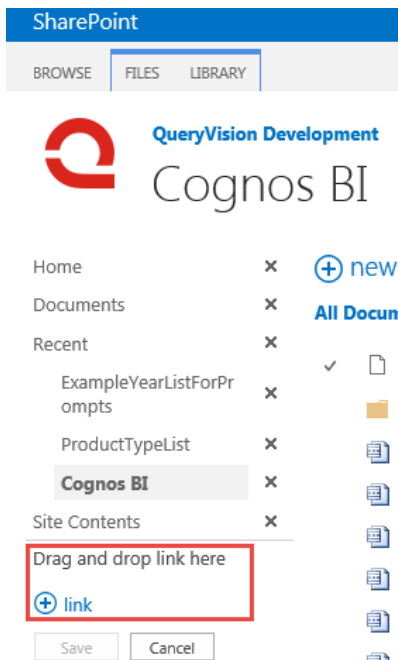
In this case add a link to the redirMeta.aspx page as listed above

A similar approach can be used for the Page Viewer – use the redirmeta.aspx to contain the actual IBM Cognos content URL (example below).

For the Content Editor web part – have the HTML including the IBM Cognos content URLs in a separate text file.

The following is an example taken from IBM Cognos Analytics 11 to launch an interactive report in the new ICA 11 portal. Note that the embedded URL is 1130 chars.

Of course, generating the URL itself requires in depth knowledge of the various IBM Cognos SDK URL reques formats – some of which (including new ICA 11 URLs) are not published by IBM Cognos.

But then that's what QueryVision's Web Parts are for.

<html>

    <body>

        <meta http-equiv="Refresh" content="0; url=http://w12r2ca111/ibmcognos/bi/?perspective=authoring&context={%22perspective%22%3A%22authoring%22%2C%22content%22%3A{%22module%22%3A%22bi%2Fauthoring%2FrsContentView%22%2C%22id%22%3A%22i3AD362E5C8CC4D1581A347F93FFF95B4%22%2C%22isViewer%22%3Atrue%2C%22isNewFromModule%22%3Afalse%2C%22isNewFromPackage%22%3Afalse%2C%22isNewDataSetFromModule%22%3Afalse%2C%22isNewDataSetFromPackage%22%3Afalse%2C%22isTemplate%22%3Afalse%2C%22isDataset%22%3Afalse%2C%22UIProfile%22%3A%22Titan%22%2C%22cmProperties%22%3A{%22runInAdvancedViewer%22%3Atrue%2C%22executionPrompt%22%3Atrue%2C%22permissions%22%3A[%22execute%22%2C%22read%22%2C%22setPolicy%22%2C%22traverse%22%2C%22write%22]%2C%22modificationTime%22%3A%222016-06-24T14%3A28%3A29.733Z%22%2C%22options%22%3Anull%2C%22id%22%3A%22i3AD362E5C8CC4D1581A347F93FFF95B4%22%2C%22type%22%3A%22report%22%2C%22defaultName%22%3A%22Customer%20satisfaction%20and%20returns%22%2C%22version%22%3A3}%2C%22rsFinalRunOptions%22%3A{%22format%22%3A%22HTML%22%2C%22a11y%22%3Afalse%2C%22bidi%22%3Afalse%2C%22runInAdvancedViewer%22%3Atrue%2C%22prompt%22%3Atrue}}}" />

    </body>

</html>

The above example can also be simplified to only include the "<meta …>" statement in the .aspx file