IBM Cognos Virtual View Manager
Version 10.2.0

Installation and Configuration Guide

IBM
Product Information

This document applies to IBM Cognos Business Intelligence Version 10.2.0 and may also apply to subsequent releases. To check for newer versions of this document, visit the IBM Cognos Information Centers [http://publib.boulder.ibm.com/infocenter/cogic/v1r0m0/index.jsp].

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Introduction

This documentation contains instructions for installing and configuring IBM® Cognos® Virtual View Manager with IBM Cognos and IBM Cognos Framework Manager.

Virtual View Manager is a server product that helps business users query different and distributed information sources and create a unified view of their business information.

Audience

This documentation is for information technology professionals who want to use IBM Cognos Virtual View Manager to model data resources. Knowledge of relational data sources, hierarchical data sources, and data modeling is recommended.

Finding information

To find IBM Cognos product documentation on the web, including all translated documentation, access one of the [IBM Cognos Information Centers](http://publib.boulder.ibm.com/infocenter/cogic/v1r0m0/index.jsp). Release Notes are published directly to Information Centers, and include links to the latest technotes and APARs.

You can also read PDF versions of the product release notes and installation guides directly from IBM Cognos product disks.

Accessibility features

This product does not currently support accessibility features that help users who have a physical disability, such as restricted mobility or limited vision, to use this product. IBM Cognos HTML documentation has accessibility features. PDF documents are supplemental and, as such, include no added accessibility features.

Forward-looking statements

This documentation describes the current functionality of the product. References to items that are not currently available may be included. No implication of any future availability should be inferred. Any such references are not a commitment, promise, or legal obligation to deliver any material, code, or functionality. The development, release, and timing of features or functionality remain at the sole discretion of IBM.

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academic or public sources, or data used with permission of the copyright holder, for use as sample data to develop sample applications. Product names referenced may be the trademarks of their respective owners. Unauthorized duplication is prohibited.
Chapter 1. What's New?

This section contains a list of new features for this release.

For a list of new features, see “New Features in Version 10.2.0.”

To review a list of environments supported by IBM Cognos products, including information about operating systems, patches, browsers, Web servers, directory servers, database servers, and application servers, access one of the IBM Cognos Information Centers at [http://publib.boulder.ibm.com/infocenter/cogic/v1r0m0/](http://publib.boulder.ibm.com/infocenter/cogic/v1r0m0/)

New Features in Version 10.2.0

Listed are new features since the last release.

**Upgrade of IBM Informix repository software**

In version 10.2.0, the Informix® repository software was upgraded to a newer version of 11.x.

**Use non-root login to install Cognos Virtual View Manager on UNIX**

You can log in as a non-root user to install the IBM Cognos Virtual View Manager software on a UNIX operating system.

Earlier UNIX versions of Cognos Virtual View Manager only supported root user installations. Root user installations are no longer supported with the newer version of Virtual View Manager.
Chapter 2. Prepare to Install

You install IBM Cognos Virtual View Manager in your IBM Cognos environment to enhance performance when querying heterogeneous data sources.

After you complete these tasks, continue with Chapter 3, “Installing and Configuring IBM Cognos Virtual View Manager,” on page 5.

Review the Release Notes Before You Install

Before you install your IBM Cognos product, it is important to be aware of all issues that may affect your installation strategy.

There may be late-breaking issues that were not known when this installation guide was created.

Review the Release Notes before you install your product. The Release Notes contains late-breaking information about known issues, and documentation updates and deprecation notices. The Release Notes are available from the first page of the installation wizard or from the product disc. Release Notes updates are also available on the IBM Cognos Customer Center (http://www.ibm.com/software/data/cognos/customercenter).

Review Supported Environments

To ensure that your product works properly, apply all minimum required operating system patches and use only the versions of other software that are supported for an IBM Cognos product.

To review an up-to-date list of environments supported by IBM Cognos products, such as operating systems, patches, browsers, Web servers, directory servers, database servers, and application servers, visit the IBM Cognos Customer Center (http://www.ibm.com/software/data/cognos/customercenter).

It is important to note that the Linux operating system is available in a number of distributions and supports a number of hardware platforms. Ensure that the combination of the operating system and hardware that you are using is supported.
Verify System Requirements

Use this table to check the minimum hardware and software requirements to install and run IBM Cognos Virtual View Manager component.

Additional resources may be required for distributed or production environments.

*Table 1. System Requirements for IBM Cognos Virtual View Manager*

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating system</td>
<td>Windows, UNIX, Linux</td>
</tr>
<tr>
<td>RAM</td>
<td>200 MB for design and development, 700 MB for deployment</td>
</tr>
<tr>
<td>Disk space</td>
<td>500 MB for the Virtual View Manager installation, 300 MB for the repository database, 500 MB for the cache (recommended only; not required for completing the installation)</td>
</tr>
<tr>
<td>Database</td>
<td>You must have one of the following databases available to store IBM Cognos data in a production environment: Informix, DB2®, Oracle, MySQL, Sybase</td>
</tr>
<tr>
<td>Web browser</td>
<td>For all Web browsers, the following are enabled: cookies, JavaScript For Microsoft Internet Explorer only, the following are enabled: Run ActiveX controls and plug-ins, Script ActiveX controls marked safe for scripting, Active scripting, Allow META REFRESH</td>
</tr>
</tbody>
</table>
Chapter 3. Installing and Configuring IBM Cognos Virtual View Manager

You install IBM Cognos Virtual View Manager in your IBM Cognos environment to enhance performance when querying heterogeneous data sources.

Here is an overview of the installation and configuration process:

• Choose a Virtual View Manager installation option.
  – Install Virtual View Manager Server. Virtual View Manager Server also installs an instance of IBM Informix as the database repository for Virtual View Manager. Informix is installed using default settings.
  – Install Virtual View Manager Studio.
  – Install the Virtual View Manager ODBC driver on each Framework Manager and IBM Cognos report server computer.
  – Optionally, install JDBC Drivers for DB2 and Microsoft SQL Server Data Sources.

  **Note:** JDBC drivers are not included in the IBM Cognos Business Intelligence software.
  
  For more information, see the *IBM Cognos Virtual View Manager User Guide*.

• Create users in the Cognos domain.
• Configure Virtual View Manager.
• Start Virtual View Manager Studio.

For more information about using Virtual View Manager Studio, see the *IBM Cognos Virtual View Manager User Guide* or *IBM Cognos Virtual View Manager Getting Started Guide*.

The Virtual View Manager Windows services and UNIX processes start automatically after the installation has finished. If you experience problems during the installation, check the log files in the `installation_location/logs` directory or the `installation_location/instlogs` directory where you installed Virtual View Manager. You can also check the troubleshooting information in this guide. Otherwise, you can start using Virtual View Manager to access metadata.

For more information about installing or using Informix, see the Informix documentation that is provided with the installation. The Informix documentation is available on the Virtual View Manager installation CD, and it is available after installation in the `installation_location/apps/informix/release` directory.

If you prefer using an Oracle, Sybase, or MySQL database for the repository instead of the Informix database that is installed with Virtual View Manager, you must complete the default installation, then follow the steps provided in the *IBM Cognos Virtual View Manager Administration Guide* to change your repository configuration. Silent mode installation is not applicable for this purpose.

You can also use a transfer specification file as a template to copy IBM Cognos Virtual View Manager components to your computer without being prompted for information.
IBM Cognos and Virtual View Manager

You use IBM Cognos Virtual View Manager to create a view of the database that is optimized for IBM Cognos, and you use Framework Manager to model the database view and create a single business view.

IBM Cognos components, including Framework Manager, use an ODBC interface to access a Virtual View Manager data service. Virtual View Manager Server accesses the data sources through Java Database Connectivity (JDBC), a Java API, ODBC, the OS File System, or SOAP.

The workflow for using Cognos Virtual View Manager is separated into three processes:

- setting up the environment
  This process involves installing and configuring the appropriate software and drivers. The installation also installs IBM Informix and creates a repository to contain your Virtual View Manager content.
- creating a data source using Virtual View Manager Studio
  This process includes accessing and simplifying the metadata using Virtual View Manager Server. For more information, see "Add a Data Source in IBM Cognos Virtual View Manager Studio" on page 25.
- accessing Virtual View Manager views using IBM Cognos
This process involves preparing metadata for reporting in IBM Cognos. For more information, see Chapter 4, “Accessing Cognos Virtual View Manager with Cognos and Cognos Framework Manager,” on page 25.

Installation options for IBM Cognos Virtual View Manager

Before using IBM Cognos Virtual View Manager, you must decide how to install it in your existing IBM Cognos environment.

You can install Virtual View Manager Server and IBM Cognos Business Intelligence on the same computer, or on separate computers. The best distribution option depends on your reporting requirements, resources, and preferences. Configuration requirements differ depending on whether you install all components on one or distribute the components over multiple computers.

For more information about Virtual View Manager components, see the IBM Cognos Virtual View Manager User Guide.

Install IBM Cognos BI and Virtual View Manager Server on One Computer

You can install Virtual View Manager Server on a computer where IBM Cognos Business Intelligence is already installed. Choose this scenario for proof of concept or demonstration environments where the user load is small.

Although you can install Virtual View Manager Server on the same computer as IBM Cognos BI, check your available system resources and user load.

When deciding whether to install both Virtual View Manager Server and IBM Cognos report server components on the same computer, consider the following facts about Virtual View Manager Server and the IBM Cognos server components.

- Each runs in a separate instance of Tomcat
- Each uses a Java Virtual Machine (JVM), which consumes resources at startup
- Each uses its own logging facility

Install IBM Cognos BI and Virtual View Manager Server on Separate Computers

With this option, you might have one or more IBM Cognos services accessing a single instance of Virtual View Manager Server.

In most environments, install Virtual View Manager Server on a computer separate from IBM Cognos BI for better performance and availability. Installing one instance of Virtual View Manager Server ensures that there is only one Virtual View Manager modeling repository and that data is consistent for all IBM Cognos services.

Install IBM Cognos Virtual View Manager Studio

You can install IBM Cognos Virtual View Manager Studio with Virtual View Manager Server or on a separate computer. Cognos Virtual View Manager Studio can be installed only on Windows computers.
Install IBM Cognos Virtual View Manager

Install IBM Cognos Virtual View Manager to provide access to additional data sources, such as LDAP, JDBC, Open XML, and WSDL, or to improve performance when querying data from different data sources.

Prerequisite checklist for installing Cognos Virtual View Manager

- Ensure that Virtual View Manager is not already installed on the computer. You can have only one instance of Virtual View Manager on a computer.
- Ensure that your environment is supported. You can install Virtual View Manager Server on a server running Microsoft Windows, Red Hat Enterprise Linux, Sun Solaris, AIX®, or HP-UX. To view a complete list of environments currently supported by IBM Cognos products, visit the IBM Cognos Customer Center [http://www.ibm.com/software/data/cognos/customercenter/](http://www.ibm.com/software/data/cognos/customercenter/).
- Ensure your Microsoft Windows and UNIX operating system log on password uses a combination of upper and lower case characters, numbers, and symbols. You can not use symbols that conflict with XML escape sequence characters, such as double quotation marks ("), less than symbol (<), greater than symbol (>), and ampersand (&).
- If you are installing on an UNIX or Linux operating system ensure that you are not logged on as the root user.
- Ensure that the ports Virtual View Manager uses are available. The following table lists the default ports used by Virtual View Manager. If you are using any ports other than the ones listed, ensure that you make note of the port for future reference.

<table>
<thead>
<tr>
<th>Port</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9400</td>
<td>Used for IBM Cognos Virtual View Manager Studio requests to Virtual View Manager Server</td>
</tr>
<tr>
<td>9401</td>
<td>Used for the JDBC and ODBC connections</td>
</tr>
<tr>
<td>9402</td>
<td>Used for secure HTTP SSL connections</td>
</tr>
<tr>
<td>9403</td>
<td>Used for secure JDBC driver communications</td>
</tr>
<tr>
<td>9406</td>
<td>Used for input and output requests to the network monitor</td>
</tr>
<tr>
<td>9408</td>
<td>Used for communication with the repository database</td>
</tr>
</tbody>
</table>

Installing IBM Cognos Virtual View Manager on Windows

Follow these steps to install IBM Cognos Virtual View Manager on Windows.

Procedure

1. Log in as a user with administrative access.
2. If you are installing to a directory with other IBM Cognos components, stop the IBM Cognos service.
3. Insert the IBM Cognos product disc or go to the location where the installation files were downloaded and extracted. The Welcome page of the installation wizard appears. If no Welcome page appears, go to the operating system directory and double-click the issetup.exe file.
4. Follow the directions in the installation wizard to copy the required files to your computer.
5. When you reach the Port Information window, use the table in the topic "Install IBM Cognos Virtual View Manager" on page 8 to help you determine whether to change the port numbers.
6. Enter the Password for the user currently logged in. The installation verifies this password against system credentials. By default the currently logged in Windows user name is displayed in the Username text box and is not editable. The user is created in the database and given appropriate permissions to create and update the repository. Virtual View Manager uses the current user name and password to access the Informix repository. Other user names and passwords you use for Virtual View Manager are managed using Virtual View Manager Administrator. As a system user, all policies applicable to system users, such as account lock out and password policies, apply to the database user. If, for example, the current account to login to Windows becomes locked, Virtual View Manager might not work correctly. If the password of the currently logged in username changes, you must update the Virtual View Manager password using the repo_util utility. For more information, see the IBM Cognos Virtual View Manager Administration Guide.
7. Click Finish.

Results
The installation creates your Virtual View Manager repository and starts both the Virtual View Manager service and the Virtual View Manager Server.

Installing IBM Cognos Virtual View Manager on UNIX
Follow these steps to install IBM Cognos Virtual View Manager on a UNIX operating system.

Procedure
1. Log in as a non-root user.
2. If you are installing to a directory with other IBM Cognos components, stop the IBM Cognos service.
3. On HP-UX, set the _M_ARENA_OPTS environment variable as follows:
   
   _M_ARENA_OPTS 1:4
   
   This increases the memory allocation for HP-UX to more closely match that of other UNIX platforms.
4. Mount the CD for your IBM Cognos product using Rock Ridge file extensions. Important: To mount the IBM Cognos CD on HP-UX, do the following:
   • Add the pfs_mount directory in your path. For example,
   PATH=/usr/sbin/:$PATH
export PATH

- To start the required NFS daemons and run the daemons in the background, type bg pfs_mountd and then type bg pfsd
- To mount the drive, type
type bg pfsd

pfs_mount -t rrip <device><mount_dir> -o xlat=unix
For example,
pfs_mount /dev/dsk/c0t2d0 /cdrom -o xlat=unix
You can now install or copy files using an IBM Cognos CD from this drive.
- When the installation is complete, type pfs_umount /cdrom and kill the pfsd and pfs_mountd daemons to unmount the CD.

5. To start the installation wizard, go to the operating system directory on the CD or in the directory where the installation files were downloaded and extracted, and then type
./issetup
6. Follow the directions in the installation wizard to copy the required files to your computer.

Note: The name of the directory where you install Virtual View Manager must be a secured path. Set permissions to 755 octal for the entire path, starting from the “/” to the installation location. For more information about secured paths, see Installation path security requirements (UNIX and Linux) - (http://publib.boulder.ibm.com/infocenter/idshelp/v117/index.jsp?topic= %2Fcom.ibm.sec.doc%2Fids_us_010.htm.)

If you are installing in a directory that already has other IBM Cognos components, you are prompted for the location of a directory in which to store backup copies of the files that are to be overwritten.

7. When you reach the Port Information window, use the table in the topic Install IBM Cognos Virtual View Manager on page 8 to help you determine whether to change the port numbers.
8. Enter your Password.
By default the currently logged in UNIX user name is displayed in the Username text box and is not editable.
Ensure that the password is correct. The installation does not verify whether the values you enter are valid.
This user is given appropriate permissions to create and update the repository. Virtual View Manager uses this user name and password to access the Informix repository. Other user names and passwords you use for Virtual View Manager are managed using Virtual View Manager Administrator.

Results

The installation creates your Virtual View Manager repository and starts both the UNIX process and the Virtual View Manager Server.

Post-Installation Tasks

Some post-installation configuration tasks are required to ensure that IBM Cognos Virtual View Manager works with IBM Cognos Business Intelligence.
You must install the Virtual View Manager ODBC driver on each computer running either the IBM Cognos report server or Framework Manager. You must also install the Windows ODBC driver on the same computer as Framework Manager.

You must update the Sample data sources with the same username and password that you used to install the Cognos Virtual View Manager software. The example resources, ds_inventory and ds_orders, are located in the /shared/examples directory. To update these data sources, log in to IBM Cognos Virtual View Manager Studio.

**Install the Cognos Virtual View Manager ODBC Driver and Driver Manager (UNIX and Linux only)**

You must install the ODBC driver and driver manager on each instance of IBM Cognos report server installed on UNIX or Linux operating system.

This is because IBM Cognos uses the IBM Cognos Virtual View Manager ODBC driver to access Virtual View Manager data sources.

The driver manager routes all IBM Cognos requests to the appropriate ODBC driver to access the data sources. When you add an ODBC DSN using the ODBC Data Source Administrator, you are identifying an ODBC driver to the driver manager. The driver manager then knows that the data source associated with this DSN is accessed through a particular ODBC driver. For more information, see "Add an ODBC Data Source to your Installation” on page 28

For instructions on installing the Virtual View Manager ODBC Driver and driver manager, see the IBM Cognos Virtual View Manager Administration Guide.

After this installation, you can start Virtual View Manager and connect to the Virtual View Manager Server.

**Start the IBM Cognos Virtual View Manager Service or Process**

The service or monitor process starts automatically after the installation.

**Start the Virtual View Manager Service on Windows**

On a Windows operating system, IBM Cognos Virtual View Manager uses a Windows service. Starting the service also starts the Virtual View Manager Server component.

**Procedure**

1. From the Windows Start menu, click Programs, Administrative Tools, Services.
2. Select IBM Cognos Virtual View Manager.
3. Click Action, Start.
   To stop the service, click Action, Stop.

**Results**

Starting the service or monitor process also starts the Virtual View Manager Server. Stopping the service or process also stops the Virtual View Manager Server.
**Start the Virtual View Manager Service on UNIX or Linux**

On a UNIX operating system, the monitor process starts the Virtual View Manager Server.

**Procedure**

1. Go to the `installation_location/bin` directory on the computer where you installed Virtual View Manager Server.
2. Enter the following command:
   
   ```
   ./virtualviewmanager.sh monitor start
   ```

**Results**

Starting the service or monitor process also starts the Virtual View Manager Server. Stopping the service or process also stops the Virtual View Manager Server.

**Start IBM Cognos Virtual View Manager Server**

The IBM Cognos Virtual View Manager server starts automatically after the installation.

On a Windows operating system, the IBM Cognos Virtual View Manager service is configured to automatically start when the computer starts. The IBM Cognos Virtual View Manager service also starts the Virtual View Manager Server.

If you need to start the Virtual View Manager, you can do so from the Start menu on Windows computers and by using the command line on UNIX or Linux computers.

**Start the Server on Windows**

Perform this step to start the server on a Microsoft Windows operating system.

**Procedure**

On the computer where you installed Virtual View Manager Server, click Start, Programs, IBM Cognos Virtual View Manager, Server, Server Start.

This command starts the Virtual View Manager Server. The IBM Cognos Virtual View Manager service must be running before you can start the Server.

**Start the Server on UNIX or Linux**

Perform this step to start the server on a UNIX or Linux operating system.

**Procedure**

On the computer where you installed Virtual View Manager Server, go to the `installation_location/bin` directory, and run the following command:

```
virtualviewmanager.sh server start -user username -password password
```

This command starts the Virtual View Manager Server. The Virtual View Manager monitor process must be running before you can start the Server.

**Change Default User Password in the Cognos Domain**

The first user to log in should be an administrator, and we recommend that the user also change the password for the default user to ensure the security of your IBM Cognos Virtual View Manager content.
The default user for the cognos domain is admin, and the default password is also admin.

**Procedure**

1. Open a Web browser, and enter the following URL for Virtual View Manager Administrator:
   
   `http://server_name:port_number/manager`

   For example, if you are on the same computer as the Virtual View Manager Server, and you have installed it using the default port numbers, the URL would be:
   
   `http://localhost:9400/manager`

   The Virtual View Manager Administrator page log in page appears.

2. Type admin in the **Login** and **Password** boxes.

3. Type cognos in the **Domain** box.

4. Click **Sign In**.
   
   The **Manager Home** page appears.

5. Click the **Users** tab, and click **User Management**.

6. Click the admin user in the **User Name** column.
   
   The **Edit User** dialog box appears.

7. In the **Current Password** box, type admin.

8. In the **New Password** and **Confirm New Password** boxes, type a password for your admin user.

9. Click **OK**.

**Results**

Your admin user password is now changed from the default.

---

**Create Users in the Cognos Domain**

You add users to the IBM Cognos Virtual View Manager domain.

This allows you to:

- enable multiuser modeling
- limit access to Virtual View Manager resources, such as data sources and views
- enable pass-through login for multiple users

After you add users, you can grant them privileges to Virtual View Manager resources.

For instructions on adding users to the cognos domain, see the *IBM Cognos Virtual View Manager Administration Guide*.

**Procedure**

1. Open a Web browser, and enter the following URL for Virtual View Manager Administrator:
   
   `http://server_name:port_number/manager`

   For example, if you are on the same computer as the Virtual View Manager Server, and you have installed it using the default port numbers, the URL would be:
The Virtual View Manager Administrator page log in page appears.

2. Type your user name in the Login box and your password in the Password box.

3. Type cognos in the Domain box.

4. Click Sign In.

   The Manager Home page appears.

5. Click the Users tab, and click User Management.

6. Click Add Virtual View Manager User at the bottom of the table.

   The Add a Virtual View Manager User dialog box appears.

7. Enter a User name, and a password in the New password and Confirm password boxes.

8. In the User Rights section, select a Template for the new user, or select the check boxes for the user rights.

   For more information about the user rights, see the IBM Cognos Virtual View Manager Administration Guide.

9. Click OK.

Start IBM Cognos Virtual View Manager Studio

After the server has started, you can start the IBM Cognos Virtual View Manager Studio.

Procedure

1. On the computer where you installed Virtual View Manager Studio, click Start, Programs, IBM Cognos Virtual View Manager, Studio, Studio.

   The log in dialog box appears.

2. Enter a Username and Password, and select the appropriate Domain.

   If you are logging in for the first time, the default user name and password are both admin.

3. Enter the Server name where the Virtual View Manager Server is installed and running.

   If the server is installed on the same computer as the studio, you can enter localhost.

4. Enter the Port number on which the server is running.

   The default port number is 9400.

5. Click Connect.

   Virtual View Manager Studio opens.

Configuring IBM Cognos Virtual View Manager

When you install IBM Cognos Virtual View Manager, default configuration settings are set.

If you have any reason not to use these default values, you can change them to meet the needs of your reporting environment.

Here are a few examples of the common configuration tasks that you may want to perform:

- change the case sensitivity policy
• change the trailing spaces policy
• enable output for logging (debug output enabled)
• change the location of the temporary file folder
• data access considerations
• enable caching views

When you turn on caching, you can choose between file-based caching or database-managed caching. When you choose file-based caching, the file and the file location are not encrypted. Therefore, you may want to choose “Database Caching” on page 38.

For more information about the configuration settings, see the IBM Cognos Virtual View Manager Administration Guide.

After you configure Virtual View Manager to meet your requirements, you can tune it for performance. See Chapter 5, “Tuning IBM Cognos Virtual View Manager,” on page 37.

Change the Case Sensitivity Policy

Depending on the database that you are using, you may want to change the way Virtual View Manager compares strings.

IBM Cognos Virtual View Manager uses a case-insensitive string comparison by default. The SQL specification encourages the use of case-sensitive string comparisons. Performance may be affected if you change the default Virtual View Manager setting. For more information, see the IBM Cognos Virtual View Manager Administration Guide.

Important: Ensure that the case sensitivity policy of Virtual View Manager matches the policy of your database. Otherwise, you may experience performance issues.

Procedure
1. Start Virtual View Manager Studio.
2. From the Administration menu, click Configuration.
3. In the configuration tree, under Virtual View Manager Server, expand SQL Engine, and SQL Language, and then click Case Sensitivity.
4. Change the setting as required.
5. Click OK.

Change the Trailing Spaces Policy

Depending on the database that you are using, you may want to change the way Virtual View Manager compares strings.

By default, IBM Cognos Virtual View Manager ignores trailing spaces when performing string comparisons. Performance may be affected if you change the default Virtual View Manager setting. For more information, see the IBM Cognos Virtual View Manager Administration Guide.

Procedure
1. Start Virtual View Manager Studio.
2. From the Administration menu, click Configuration.
3. In the configuration tree, under Virtual View Manager Server, expand SQL Engine, and SQL Language, and then click Ignore Trailing Spaces.
4. Change the setting as required.
5. Click OK.

Enable Logging for Debugging
You can enable logging if you require assistance in resolving issues.

By default, debug output is not enabled. To enable debugging, set the Debug Output Enabled property to true. Because enabling this property can produce large files, enable the output only for a specific period and then disable it to prevent performance from degrading.

Procedure
1. Start Virtual View Manager Studio.
2. From the Administration menu, click Configuration.
3. In the configuration tree, under Virtual View Manager Server, expand Configuration, and Debugging, and then click Debug Output Enabled.
4. Change the setting as required.
5. Click OK.

Change the Location of the Temporary File Folder
You can change the location of the temporary file folder if you require encryption or other security for query results and cached data.

The temporary file location is not encrypted.

The amount of disk space used depends on the query characteristics and is dynamic. It is used to keep temporary files, handle large queries, and handle heavy load. We recommend that you have several gigabytes allocated and that you monitor the available free disk space.

Procedure
1. Start Virtual View Manager Studio.
2. From the Administration menu, click Configuration.
3. In the configuration tree, under Virtual View Manager Server, expand Configuration, and Files, then click Temp Directory (On Server Restart).
4. Change the setting as required.
5. Click OK.

Data Access Considerations
Virtual View Manager handles different data source behaviors.

Generally, you should try to match Virtual View Manager settings with the underlying data source to avoid performance issues or data integrity problems.

For information about the configuration settings, see the IBM Cognos Virtual View Manager Administration Guide.
Data Source Settings
For best performance, we recommend certain server settings.

Ensure that these settings are set to true:
- Disable Case Sensitivity Correction
- Disable Ignore Trailing Space Correction
- Push Even If Case Sensitivity Mismatch
- Push Even If Ignore Trailing Space Mismatch

Procedure
1. Start Virtual View Manager Studio.
2. From the Administration menu, click Configuration.
3. In the configuration tree, under Virtual View Manager Server, expand SQL Engine, and Overrides.
4. Change the settings as required.
5. Click OK.

Collation Sequences
When querying heterogeneous data sources, ensure that the collation sequence for each data source that you create in Virtual View Manager is the same.

For example, they all must be either case-sensitive or case-insensitive.

Depending on the data sources involved, collation sequences for different database sources in a query can cause errors or inaccurate query results.

For information about collation sequences, see your database vendor documentation.

Pass-through User Login
You may intend to set up multiple Virtual View Manager users with the intention of passing through data source logins.

You must enable this setting on your data source and clear the Save Passwords check box.

For more information, see the IBM Cognos Virtual View Manager User Guide.

IBM Informix database chunks
When you install IBM Cognos Virtual View Manager server, you also install IBM Informix, which creates a repository for your Cognos Virtual View Manager content. The default configuration for Informix is optimized for general usage and introspection. If you are performing introspection on many resources, you might want to increase the Informix database size by adding more disk for Informix chunks.

Adding chunks to an Informix database on a Windows operating system
If you want to perform a high number of introspections, you might need to add chunks to the Informix database on a Windows operating system.
Procedure
1. Stop the Cognos Virtual View Manager Server.
2. Go to the \vvm_install_location\apps\informix\VVMRepository\dbspaces directory.
3. Create a file with any name. For example, repomaindbs_dat.001.
4. To open the Informix command prompt, click Start > IBM Informix Dynamic Server > VVM Repository option.
5. To set the environment variable, type `set DB_LOCALE=EN_US.utf8`.
6. To add a chunk size of 500 MB to the Informix database, type `onspaces -a repomaindbs -p <vvm_install_location>\apps\informix\VVMRepository\dbspaces\repomaindbs_dat.001 -o 0 -s 500000k`.
7. Start the Cognos Virtual View Manager Server.

Adding chunks to an Informix database on a UNIX operating system

If you want to perform a high number of introspections, you might need to add chunks to the Informix database on a UNIX operating system.

Procedure
1. Stop the IBM Cognos Virtual View Manager Server.
2. Go to the \vvm_install_location\apps\informix\data directory.
3. Create a file with any name. For example, repomaindbs_dat.001.
4. To set permissions to 600 on this file, type `chmod 600`.
5. Export the following variables:
   ```
   export INFORMIXDIR=<vvm_install_location>\apps\informix
   export INFORMIXSERVER=VVMRepository
   export ONCONFIG=ONCONFIG.VVMRepository
   export DB_LOCALE=EN_US.utf8
   ```
6. Go to the <vvm_install_location>\apps\informix\VVMRepository\bin directory.
7. To add a chunk size of 500 MB to the Informix database, type `onspaces -a repomaindbs -p <vvm_install_location>\apps\informix\VVMRepository\data\repomaindbs_dat.001 -o 0 -s 500000k`.
8. Start the Cognos Virtual View Manager Server.

Setting up an unattended installation

Set up an unattended installation and configuration of IBM Cognos Virtual View Manager when you want to install an identical configuration across several computers on your network or to automate the installation process by specifying options and settings for users.

About this task

There are two ways to set up an unattended installation. Both methods use a transfer specification file (.ats) to copy Cognos Virtual View Manager components to your computer without you being prompted for information.

One method allows you to run the installation wizard on your computer. The selections that you make are recorded in a transfer specification file (.ats). You then use this generated .ats file to perform unattended installations across other computers on the network. Alternatively, you can use the default response.ats file to automate the installation. The installer uses the values in the response file rather
than requiring you to interact with it. Before you set up an unattended installation and configuration, ensure that all the system requirements and prerequisites are met and that all third-party products are installed and configured.

To set up an unattended installation and configuration:

**Procedure**

1. Configure a transfer specification file (.ats) to specify installation options.
2. Run the installation tool in silent mode.

**Setting up the installation using a file generated from the installation wizard**

You can install IBM Cognos Virtual View Manager components by using a transfer specification file (.ats) generated from a previous installation.

**About this task**

By default, each time you install Cognos Virtual View Manager components using the installation wizard, the options that you select are recorded in a transfer specification file. Therefore, if you have already installed Cognos Virtual View Manager components on a deployment computer, you can use the generated transfer specification file as a template for unattended installations on other computers.

You can do this by starting the installer from the command line and passing the response file in as an argument. You can determine whether the unattended installation was successful by checking the return status. A value of zero (0) indicates success, and all other values indicate that an error occurred.

**Procedure**

1. Use the installation wizard to install Cognos Virtual View Manager components on one computer.
2. Go to `install_location/instlog` directory.
3. Locate the transfer specification file (.ats) that was generated.
   The filename format is `ts-VVM-version-yyyyymmdd_hhmm.ats`.
4. Copy the transfer specification file to the computer where you plan to install Cognos Virtual View Manager.
5. In a text editor, open the transfer specification file.
6. In the `IBM License Agreement` section, change the `I Agree` property to `y`.
   This action means that you are accepting the license agreement. To read the terms of the license agreement, see the `LA_language_code` and notices files in either of the following locations:
   • On the product disc - in the root installation directory for the operating system.
   • On the computer from which you copied the response.ats file - in the `c10_location\license\product` directory.
7. In the `Title=Password` section, set a machine-compliant password for the `DATABASE_PASSWORD` property.
8. Ensure that there are no spaces on either side of the equal sign (=) for all values set in the transfer specification file.
9. Save the transfer specification file to a local directory.
10. Install Cognos Virtual View Manager:
   - On Microsoft Windows, insert the Cognos Virtual View Manager product disc, open a command prompt window, change to the win32 directory on the Cognos Virtual View Manager product disc, where the installer issetup.exe file is located, and type the following command:
     
     ```
     issetup -s location/filename.ats
     ```
     
     Where location is the directory where you saved the transfer specification file.
   - On UNIX or Linux, open a shell prompt, change to your UNIX or Linux operating system directory on the Cognos Virtual View Manager product disc, for example, aix32, solaris32, hpuxpa32, or linuxi38632, and type the following command:
     
     ```
     ./issetup -s location/filename.ats
     ```
     
     Where location is the directory where you copied the transfer specification file.

11. You should check the log files for error messages. Errors are recorded in the installation directory in the following log file: tl_VVM_versionyyyymmdd-hhmm_summary-error.txt. If errors occur before sufficient initialization occurs, log messages are sent to the following log files in the Temp directory: tl-VVM-versionyyyyymmdd-hhmm.txt.

### Setting up the installation using the default transfer specification file

You can install IBM Cognos Virtual View Manager components by using the default transfer specification file (.ats).

#### About this task

If you do not use the installation wizard to install components, you can use the default transfer specification file named response.ats that is available on the product disc. Use the response.ats file to copy Cognos Virtual View Manager components to several computers without being prompted for information.

You must modify the response.ats file for your environment before you can use it for an unattended installation.

You can determine whether the unattended installation was successful by checking the return status. A value of zero (0) indicates success and all other values indicate that an error occurred.

#### Procedure

1. On the target computer, insert the Cognos Virtual View Manager product disc.
2. Go to the directory for your operating system and in a text editor, open the response.ats file.
   
   Each section in the response.ats file corresponds to a window in the installation wizard.
3. In the License Agreement section, change the I Agree= property to y.
   
   This action means that you are accepting the license agreement. To read the terms of the license agreement, see the LA_language_code and notices files in the root installation directory for the operating system on the product disc.
4. In the **License Agreement > Title=Installation Location** section, set APPDIR to the path of the directory where Cognos Virtual View Manager will be installed on the target computer.

5. In the **Title=Port Information** section, change the default port settings if required.

6. In the **Title=Password** section, set a machine-compliant password for the DATABASE_PASSWORD property. For UNIX operating systems, this password is the same as the Informix user account.

7. If you require only Cognos Virtual View Manager Studio, in the **Component List** section, set the value for VVM_SERVER_APP_VERC to 0. To install the component, type 1.

8. Ensure that there are no spaces on either side of the equal sign (=) for all changes set in the transfer specification file.

9. Save the transfer specification file to a local directory.

10. Install Cognos Virtual View Manager:
    - On Microsoft Windows, insert the product disc, open a command prompt window, change to the win32 directory on the Cognos Virtual View Manager product disc, and type the following command:
      ```
      isssetup -s location/response.ats
      ```
      Where location is the directory where you saved the transfer specification file.
    - On UNIX or Linux, open a shell prompt, change to your UNIX or Linux operating system directory on the Cognos Virtual View Manager product disc, e.g. aix32, solaris32, hpuxpa32, or linuxi38632, and type the following command:
      ```
      ./isssetup -s location/response.ats
      ```
      Where location is the directory where you copied the transfer specification file.

11. You should check the log files for error messages. Errors are recorded in the installation directory in the following log file: tl_VVM_versionyyyy-mmdd-hhmm_summary-error.txt. If errors occur before sufficient initialization occurs, log messages are sent to the following log files in the Temp directory: tl-VVM-versionyyyy-mmdd-hhmm.txt.

### Sample transfer specification file

You can use the default transfer specification file to perform an unattended installation of IBM Cognos Virtual View Manager on different computers.

Below is an example of a transfer specification file (response.ats) that is available with the Cognos Virtual View Manager installation media.

```plaintext
;Licensed Materials - Property of IBM
;BI and PM: Is
;(C) Copyright IBM Corp. 2004, 2011
;US Government Users Restricted Rights - Use, duplication or disclosure restricted
;by GSA ADP Schedule Contract with IBM Corp
[Dialog1]
Title=Welcome to the Installation Wizard
DE=0
EN=1
FR=0
JA=0
ES=0
NL=0
SV=0
FI=0
```
Uninstalling IBM Cognos Virtual View Manager

The uninstall program removes all Cognos Virtual View Manager components from your computer.

On a Windows operating system, you must uninstall IBM Informix before you uninstall Cognos Virtual View Manager. On a UNIX operating system, uninstalling Cognos Virtual View Manager will remove IBM Informix.

Uninstall Virtual View Manager on Windows

Uninstalling does not remove any files that changed since the installation.

For example, configuration and user data files are not removed. Your installation location remains on your computer, and you retain these files until you delete them.
We recommend that you close all programs before you uninstall IBM Cognos. Otherwise, some files may not be removed.

Procedure
1. Stop the IBM Cognos Virtual View Manager service.
2. From the Start menu, click Programs, IBM Informix 11.70.
4. Follow the steps in the uninstall wizard.
5. Open the services file located at <Windows_directory>\system32\drivers\etc and delete the following entries, if they exist.
   *dr_VMMRepository xxxx/tcp*
   *Composite xxxx/tcp*
   Where xxxx is the port number.
6. Delete the following registry keys.
   - On 64-bit Windows: HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Informix
   - On 32-bit Windows: HKEY_LOCAL_MACHINE\SOFTWARE\Informix
7. From the Start menu, click Programs, IBM Cognos Virtual View Manager, Uninstall IBM Virtual View Manager, Uninstall IBM Virtual View Manager. The Uninstall wizard appears.
8. Follow the instructions to uninstall the components.
   The cognos_uninst_log.txt file records the activities that the Uninstall wizard performs while uninstalling files.
   Tip: To find the log file, look in the Temp directory.

Uninstall Virtual View Manager on UNIX or Linux
On a UNIX or Linux operating system, uninstalling Cognos Virtual View Manager removes the IBM Informix software.

Procedure
1. Go to the installation_location/bin directory on the computer where you installed Virtual View Manager Server.
2. Enter the following command to stop the Virtual View Manager service.
   ./virtualviewmanager.sh monitor stop
3. Enter the following command to stop the Informix service.
   ./virtualviewmanager.sh repo stop
4. Go to the installation_location/uninstall directory and type the following command to remove the Cognos Virtual View Manager software.
   ./uninst -u uninstall.ini
5. Follow the prompts to complete the uninstallation.
6. Enter the following command to check that the Informix process is not running.
   ps -ef | grep oninit
   You can stop the oninit process by using the kill command.

Results
Uninstalling does not remove any files that changed since the installation, such as configuration and user data files. Your installation location remains on your computer, and you retain these files until you delete them manually.
Chapter 4. Accessing Cognos Virtual View Manager with Cognos and Cognos Framework Manager

Before you can create models in IBM Cognos Framework Manager and run reports in your portal, you must make the data source available to Framework Manager.

IBM Cognos Virtual View Manager makes additional data sources available to IBM Cognos and improves performance when using heterogeneous data sources.

IBM Cognos Framework Manager sees Virtual View Manager data sources as collections of view. Although it is possible to specify index information on Virtual View Manager views, that information is not imported in IBM Cognos Framework Manager.

After the metadata is available in Framework Manager, you can model the metadata to suit your business needs. For more information about modeling metadata using Framework Manager, see the IBM Cognos Framework Manager User Guide.

Add a Data Source in IBM Cognos Virtual View Manager Studio

Before you can model your metadata, you must create a link between your modeling tool and your database.

You do this by adding a data source.

A data source is the IBM Cognos Virtual View Manager representation of the external, physical data source that is available to the Virtual View Manager Server. The data source is exposed by publishing it to a Virtual View Manager data service.

In IBM Cognos, a data source is a named set of connections to a physical database or other data source. IBM Cognos connects to Virtual View Manager data sources using an ODBC data source connection.

Adding a data source to the Virtual View Manager modeling environment is known as introspection. You must always supply data source authentication when adding a data source.

There are two ways to add a data source: You can add a data source manually and supply all required information, or you can have Virtual View Manager search your network for data sources. You supply the IP connection, and Virtual View Manager Studio scans all commonly used ports and returns a list of all discovered databases.

Note: You cannot use spaces when naming data sources. We recommend that you use underscores instead.

Tip: If you added a new table to the data source and want it to appear in Virtual View Manager Studio, right-click the object and click Add/Remove Resources.
For instructions on adding data sources in Virtual View Manager Studio, see the *IBM Cognos Virtual View Manager User Guide*.

### Securing Data and Metadata with IBM Cognos and IBM Cognos Virtual View Manager

When working with IBM Cognos Virtual View Manager, you can specify security at different levels.

By default, Virtual View Manager provides a domain named cognos to secure the application. An administrator, the admin user, can add other users and set their access permissions. You can also specify metadata and data security in Framework Manager.

You can also limit access by using IBM Cognos to secure a DSN that was created using the administrator user ID and password. If you are using pass-through logins you must ensure that your Virtual View Manager users have user IDs and passwords that are valid on the underlying data source(s).

You must create an ODBC DSN to provide all users connectivity to the Virtual View Manager data source through an ODBC driver. These data sources are local to a computer. All users with the appropriate privileges can access the ODBC data source. The data source name must use fewer than 32 characters.

If you add users to the cognos domain, consider the following:

- You must configure the ODBC DSN to allow specification of a user ID and password. However, it is possible to override this user ID and password in a signon from IBM Cognos. If you enabled pass-through login in Virtual View Manager, you may want to create multiple secured connections with signons within a single data source, or you may prefer to specify a single connection with no signon information and prompt the user at the time of login to provide their credentials. It is required that the credentials provided by the user match the Virtual View Manager security as well as the underlying data source security.

- Access privileges are not inherited. A user must have Read and Select privileges to a Virtual View Manager data service if you are using it for modeling or reporting. For more information, see the *IBM Cognos Virtual View Manager User Guide*.

### Simplifying the Metadata in IBM Cognos Virtual View Manager Studio Before Publishing to IBM Cognos

You may want to simplify your metadata before making it available in IBM Cognos.

This can make modeling easier in IBM Cognos Framework Manager.

In some situations, we recommend that you model your metadata using IBM Cognos Virtual View Manager Studio before publishing to a Virtual View Manager data service. For example, model in Virtual View Manager Studio in the following situations:

- You have heterogeneous data sources that you must combine.
- You want to cache the data.
The data is always modeled the same way, and you want to ensure that it is processed by Virtual View Manager. Examples of this include adding calculations and filters, data that is aggregated for which the details will never be exposed, and creating complex views.

You are publishing stored procedures. Some cursor outputs cannot be detected automatically. You may have to design the cursor manually. See “Result Set Not Shown for Functions and Stored Procedures” on page 52.

You must resolve SQL traps.

Your data structure can be collapsed but it can be done in either Virtual View Manager or Framework Manager. Examples of this include collapsing master/detail facts and collapsing or denormalizing tables with hierarchical relationships or snowflaked dimensions. This data must be collapsed by creating either a Virtual View Manager view or a Framework Manager query subject.

To create keys on all views published to IBM Cognos.

For more information about metadata modeling using Virtual View Manager, see the IBM Cognos Virtual View Manager User Guide.

Create a View

If you want to access and integrate data from multiple data sources, you can create a view.

The view is then published to a IBM Cognos Virtual View Manager data service, making it available to IBM Cognos.

If the data that you want is available from individual tables from a single data source, you can publish the database tables directly. For more information, see the IBM Cognos Virtual View Manager User Guide.

**Note:** You cannot use spaces when naming views. We recommend that you use underscores instead.

Because index and key information is not imported for views, joins must be explicitly defined. A criterion that can be used to detect joins is the Name field.

It is more difficult to detect usage properties because of the absence of index or key information on views. Index and key information is used with data type information to set usage properties automatically. You must specify determinants in the case where there are multiple joins to the query subject at different keys/key combinations. Determinants must be available to ensure that rollups are calculated properly.

We recommend that you simplify your metadata before making it available to IBM Cognos. See “Simplifying the Metadata in IBM Cognos Virtual View Manager Studio Before Publishing to IBM Cognos” on page 26.

For instructions on creating views in Virtual View Manager Studio, see the IBM Cognos Virtual View Manager User Guide.
Create a IBM Cognos Virtual View Manager Data Service

A IBM Cognos Virtual View Manager data service represents tabular data and procedures that were published as a relational schema or as hierarchical XML data.

You must create a catalog and a schema to import views into Framework Manager that were published in Virtual View Manager.

For instructions on creating a Virtual View Manager data service using Virtual View Manager Studio, see the IBM Cognos Virtual View Manager User Guide.

Publish the Data Source

Publishing a data source to a IBM Cognos Virtual View Manager data service makes it available to IBM Cognos Framework Manager and IBM Cognos.

Object references that are published to a Virtual View Manager data service are exposed to IBM Cognos using ODBC. They appear in IBM Cognos Framework Manager as views.

Since published Virtual View Manager data services are actually references to the published Virtual View Manager objects, any change in the Virtual View Manager data source is automatically reflected in the published Virtual View Manager data service.

Tip: To ensure that the updates are shown in IBM Cognos Framework Manager, right-click the query subject and click Update Query Subject, or select Project Synchronization from the menu to update the model. For more information, see the IBM Cognos Framework Manager User Guide.

You must have Read and Select privileges to a Virtual View Manager data service if you are using it for modeling. Access privileges are not inherited. For information about access privileges, see the IBM Cognos Virtual View Manager User Guide.

For views to be accessible for import into Framework Manager, they must be published into the schema level of a Virtual View Manager data service. After selecting the view to publish, click Virtual View Manager Data Services in the resource tree in Virtual View Manager Studio, then click Databases, and navigate down the tree until you locate the data service name, catalog name, and schema name where you want to publish the view. Create this structure if it does not already exist and publish the view at the schema level.

For instructions on publishing tables and views to a Virtual View Manager data service, see the IBM Cognos Virtual View Manager User Guide.

Add an ODBC Data Source to your Installation

You use ODBC to access the IBM Cognos Virtual View Manager data source from IBM Cognos.

Before you can create an ODBC DSN, you must have the appropriate permissions for the Virtual View Manager configuration files and libraries.
Add an ODBC Data Source to your Installation for Windows

On a Windows operating system, use the ODBC Data Source Administrator to add a system data source.

Procedure
1. Click Start, Settings, then Control Panel.
2. Double-click Administrative Tools, and then double-click Data Sources (ODBC).
   The ODBC Data Source Administrator dialog box appears.
3. Click the System DSN tab.
   Although Virtual View Manager data sources can be accessed using a User DSN, you must create a System DSN for use with IBM Cognos.
4. Click Add, click the Virtual View Manager driver for the version you are using, and then click Finish.
   The Virtual View Manager ODBC Driver Configuration dialog box appears.
5. Enter the appropriate information, considering the following:
   • You cannot have a System DSN and a User DSN with the same name.
   • By default, Virtual View Manager uses port 9401 and the cognos domain. If Virtual View Manager did not encounter conflicts with these settings during the installation, use these values for the Port and Domain settings.
   • By default, the Virtual View Manager host value is set to localhost.
   • You must create a system data source name to provide all users connectivity to the Virtual View Manager data source through an ODBC driver. These data sources are local to a computer. This means that all users with the appropriate privileges can access a system DSN. The data source name must have fewer than 32 characters.

   Tip: Click Refresh for the schema name to be automatically located.

Add an ODBC Data Source to your Installation for UNIX or Linux

On a UNIX or Linux operating system, use the command line utility named driverConfig to add an ODBC DSN.

The data source associates a particular ODBC driver with the data you want to access through that driver.

Procedure
1. On the computer where the Virtual View Manager ODBC driver is installed, go to the directory installation_location/apps/odbc.
   Before you can create an ODBC DSN, you must have the appropriate permissions for the Virtual View Manager configuration files and libraries. For information about setting environment variables, see the IBM Cognos Virtual View Manager Administration Guide.
2. Run the following command:
   driverConfig
   The Main Menu for the driverConfig utility appears.
3. At the prompt, type 3
4. At the prompt, type 1
   The Create DSN menu appears.
5. At the **DSN name** prompt, type the DSN name for your data source and press Enter.

6. At the **driver** prompt, press Enter to accept the default driver name.

7. At the **host** prompt, type the IP address of the computer where Virtual View Manager is installed and running and press Enter.

8. At the **port** prompt, type the port number and press Enter.
   The default port number is 9401.

9. At the **username** prompt, type the username for this DSN and press Enter.

10. At the **password** prompt, type the password and press Enter.

11. At the **domain** prompt, type the domain name and press Enter.
    The default domain name is cognos.

12. At the **datasource** prompt, type the name of your data source and press Enter.

13. At the **catalog** prompt, type the name of the catalog and press Enter.

14. At the **y/n** prompt, type y and press Enter.

15. Repeat steps 3 to 14 for each ODBC DSN that you want to add.

16. At the main menu, type 0 and enter the appropriate information, considering the following:
   - By default, Virtual View Manager uses port 9401 and the cognos domain. If Virtual View Manager did not encounter conflicts with these settings during the installation, use these values for the **Port** and **Domain** settings.
   - You must create an ODBC DSN to provide all users connectivity to the Virtual View Manager data source through an ODBC driver. These data sources are local to a computer. Ensure that all UNIX or Linux accounts have the appropriate rights set. The data source name must have fewer than 32 characters.
   - The IBM Cognos daemon must have Read and Execute permissions for the Virtual View Manager configuration files and library files to run with the ODBC driver.

17. Press Enter to exit.

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**Accessing an IBM Cognos Virtual View Manager Stored Procedure in IBM Cognos**

To access a stored procedure from IBM Cognos, you must complete steps in Virtual View Manager and Framework Manager.

First, you must create a procedure and publish it to a data source in IBM Cognos Virtual View Manager Studio. Then import the data source into Framework Manager. The output parameters for a stored procedure must be mapped before publishing to the data source.

You can map the output parameters using a Virtual View Manager Studio feature called Design By Example. Using this feature, you can identify any potential cursor outputs for a stored procedure. Cursors can be identified by executing the stored procedure. Design By Example invokes the stored procedure and then discovers the outputs. When you have executed this step, the stored procedure can be saved and published to the data source.

For instructions on importing a data source, see “Add a Data Source in IBM Cognos Virtual View Manager Studio” on page 25.
Access a Stored Procedure in Virtual View Manager Studio

Follow these steps in Virtual View Manager Studio.

Procedure
1. In Virtual View Manager Studio, create a new data source that contains the stored procedure.
   For instructions on creating data sources, see the IBM Cognos Virtual View Manager User Guide.
2. Open the desired stored procedure from the data source.
3. Select the Design Mode check box.
   For instructions on editing input and output values for a stored procedure, see the IBM Cognos Virtual View Manager User Guide.
4. Click the Design By Example button on the toolbar. The Design By Example dialog box appears.
5. After the input and output parameters have been mapped as required, click OK to accept the new definition and save changes to the stored procedure.
6. Publish your query to a data service available in Framework Manager.
   For instructions on publishing a query, see the IBM Cognos Virtual View Manager User Guide.

Access a Stored Procedure in Framework Manager

Follow these steps in Framework Manager.

Before you begin

Complete the procedure in “Access a Stored Procedure in Virtual View Manager Studio” first.

Procedure
1. Run the Metadata Wizard to select the data source that contains the stored procedure.
2. Select the stored procedure from the list of objects and import it into your model.
3. Open the stored procedure query subject.

Note: It is possible to edit the parameters for the stored procedure and specify default parameter values in Framework Manager. Modifications may be applicable for the size, scale and type properties in cases where they cannot be retrieved from the data source. However, we highly recommend that you check the original source to ensure that all properties are mapped correctly, and that this exercise is performed by an administrator who is familiar with that source.

Accessing a WSDL Service from IBM Cognos

To access a WSDL service from IBM Cognos, you must complete steps in Virtual View Manager and Framework Manager.

Create a view based on the WSDL source and publish it to a data source in Virtual View Manager Studio, then import the data source into Framework Manager.
Access a WSDL Service in Virtual View Manager Studio

Follow these steps in Virtual View Manager Studio.

Complete these steps before completing the procedure in “Access a WSDL Service in Framework Manager”

Procedure
1. Create a new WSDL data source, referencing the URL of the WSDL service.
   For instructions on creating data sources, see the IBM Cognos Virtual View Manager User Guide.
2. Create an XSLT transformation using the newly defined WSDL data source.
   For instructions on creating a transformation, see the IBM Cognos Virtual View Manager User Guide.
3. Create a new view and drag the transformation into the view. For WSDL sources that contain input parameters, add virtual columns to the SQL definition in this view to pass parameters to the web service from Framework Manager.
   For instructions on creating a view, see the IBM Cognos Virtual View Manager User Guide. For more information on adding virtual columns, see the IBM Cognos Virtual View Manager Reference Guide.
4. If the view in the previous step was modified to insert virtual columns, create a second view based on the first view so the virtual columns become part of the projection list. This allows Framework Manager to detect the new columns in the Query Subject.
5. Test the view.
6. Publish the view to a data source available in Framework Manager.
   For information about publishing a resource, see the IBM Cognos Virtual View Manager User Guide.

Access a WSDL Service in Framework Manager

Follow these steps in Framework Manager.

Before you begin

Complete the procedure in “Access a WSDL Service in Virtual View Manager Studio” first.

Procedure
1. Import the data source to which you published your view.
2. Select the new view and import it into your model.
   For more information, see “Create a Data Source Connection in IBM Cognos.”

Create a Data Source Connection in IBM Cognos

Before you can create models in IBM Cognos Framework Manager, you must define the data source connection.

A data source connection supplies the parameters that IBM Cognos needs to connect to the database, such as the location of the database and the time-out duration. A connection can also include credential information and signons.
**Procedure**

1. Log on to IBM Cognos Connection as an administrator.
2. In IBM Cognos Connection, in the upper-right corner, click **Launch, IBM Cognos Administration**.
3. On the **Configuration** tab, click **Data Source Connections**.
   - **Tip**: To remove a data source, select the check box for the data source and click the delete button.
4. Click the new data source button.
5. In the name and description page, type a unique name for the connection and, if you want, a description and screen tip, and then click **Next**.
6. On the **Connection** page, click **IBM Cognos Virtual View Manager (ODBC)**, select an isolation level, and then click **Next**.
   - The connection string page for the selected database appears.
7. Enter any parameters that make up the connection string, and specify any other settings, such as a timeout or a signon.
   - **Tip**: To test whether parameters are correct, click **Test the connection**. If prompted, type a user ID and password or select a signon, and then click **OK**. Because you are testing an ODBC connection to a User DSN, you must be logged on as the creator of the DSN for the test to succeed.
8. Click **Finish**.

**Results**

The data source appears as an entry in the Directory tool in the portal, and can be selected when using the Import wizard in Framework Manager.

For more information about configuring pass-through logins, see “Securing Data and Metadata with IBM Cognos and IBM Cognos Virtual View Manager” on page 26.

For more information about creating data source connections in IBM Cognos, see the **IBM Cognos Administration and Security Guide**.

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**Import the Metadata into IBM Cognos Framework Manager**

IBM Cognos Framework Manager can use the metadata from external data sources to build a project.

You can import metadata into a new project or an existing project.

All objects that are published by Virtual View Manager appear as views in Framework Manager. The index and key information for these views is not
published by Virtual View Manager. For this reason, you cannot import joins and do not need to specify criteria in the Generate Relationships dialog box. Although you can generate relationships using query item names, we do not recommend this because there is insufficient metadata to generate cardinality correctly.

After importing the metadata, all numeric codes appear as measures. This is because the rules that Framework Manager uses to determine the Usage property are based on numeric fields having keys or indexes as identifiers. Numeric fields without keys or indexes are treated as facts.

For instructions on importing metadata into Framework Manager, see the IBM Cognos Framework Manager User Guide.

Enhancing Your Metadata Using IBM Cognos Framework Manager

After the Virtual View Manager data source is available in Framework Manager, examine the metadata carefully to ensure that it is ready to be modeled.

IBM Cognos Framework Manager sees IBM Cognos Virtual View Manager data sources as collections of views that do not contain key or index information.

Tip: If you want to add a column from a table in the data source, go back to Virtual View Manager Studio, add the column, save the data source, and publish. To see the change in Framework Manager, right-click the query subject and click Update Query Subject.

Set the Usage Properties

You must set the usage properties for each query item. The usage property identifies the intended use for the data represented by each query item.

Because the key and index information is not imported for views by Framework Manager, the usage properties may be set incorrectly. For example, all numeric and date codes without key and index information appear as facts. All character data types are set as attributes.

For instructions on setting usage properties and information about the rules governing them, see the IBM Cognos Framework Manager User Guide.

Specify Determinants

Determinants define unique sets within the data and assist in the prevention of double counting.

For example, days roll up to months and months roll up to years. Under normal circumstances, determinants are defined during import using keys and indexes. In the absence of index and key information, you must use determinants to ensure that roll ups are performed correctly.

For instructions on specifying determinants, see the IBM Cognos Framework Manager User Guide.

Verify Relationships and Create Joins

You should verify the relationships and create joins accordingly.
A relationship defines the connection between two query subjects. Without relationships, query subjects are isolated pieces of information. Under normal circumstances, keys, indexes, and names can be used to detect relationships. In the absence of key and index information, only names can be used.

For instructions on verifying relationships and creating joins, see the IBM Cognos Framework Manager User Guide.

**Create the Star Schema Grouping**

A dimensional model often uses a star schema design.

One common form of a star is quantitative, where transactional data is contained in a central fact table. Related dimension tables radiate out from the fact table.

For instructions on creating star schema groupings, see the IBM Cognos Framework Manager User Guide.

**Accessing IBM Cognos Virtual View Manager with Data Manager**

Accessing IBM Cognos Virtual View Manager for access to data in Data Manager is performed in the same way as for other ODBC sources.

For more information on creating a database connection in Data Manager and using this connection for extraction, transformation, and delivery of data, see the IBM Cognos Data Manager User Guide.
Chapter 5. Tuning IBM Cognos Virtual View Manager

After IBM Cognos Virtual View Manager is installed and configured, you may decide to make changes to some of the settings to better suit your environment.

Persistent Caching

IBM Cognos Virtual View Manager can be configured to enable persistent caching.

With persistent caching, the query result set is cached to improve performance or lighten the load on an underlying data source. The cache persists even after the session ends. The Virtual View Manager Server optimizes the running of queries by having the underlying data source do the query computations.

You may want to cache data if

- the query is complex, for example, you may want to use caching to eliminate sub-trees in the query structure
- the query takes a long time to run
- the same data is being queried repeatedly
- the data source is not always available
- the data changes significantly during peak periods

Caching at a specific time means that users can see a consistent view of data when it is changing rapidly.

By default, caching is not enabled. If you enable caching, you can cache the data to a local file or to a database. If you cache the data to a file, the file and the directory where the file is located are not encrypted. Therefore, you may want to consider other methods to secure the folder where the cache file is located.

Only views can be cached. Stored procedures and tables taken directly from the data source cannot be cached unless they are wrapped in a view. Virtual View Manager Server can generate a persistent cache for views that can be refreshed manually from Virtual View Manager Studio or on a scheduled basis.

A user may not be able to identify whether the cached data is current. If the cached data is not current, the query results retrieved from the cache can be meaningless or misleading. Therefore, we recommend that you include a timestamp, such as CURRENT_TIMESTAMP, in the Virtual View Manager view to indicate when the cache data was last refreshed.

If you want to cache an entire data source, create views for each table and apply caching to each view. You can then publish these views to a Virtual View Manager data service, making them available to IBM Cognos.

For instructions on enabling caching in Virtual View Manager Studio, see the IBM Cognos Virtual View Manager User Guide.

File-based Caching

Depending on your usage, file-based caching is typically sufficient.
With file-based caching, the query result set is saved in a local file. The file does not require an administrator to manage it because it is managed automatically on the Virtual View Manager Server.

If a cache refresh is unable to complete, the data is rolled back.

Local caching is not recommended for queries with large result sets. When the query makes a call to the cached data, the file-based cache must scan the data and read every row. If the cache is large, this may detract from the performance enhancements that are typical when using cached data.

The cached data in system files cannot be shared by multiple Virtual View Manager server installations.

You can customize the location of the cached file.

The directory where the system file is located is not encrypted. To secure the cached data, use folder permissions or an encryption file system. For more information, see the Microsoft Windows help.

**Database Caching**

We recommend database caching if your SQL query makes selections against the cached view or when result sets are large.

A database cache can contain indexing, which speeds up data selections. If the cached data is used in a join, the query is processed by the original data source, resulting in improved performance.

If you store a cached view in a database, you must manually create the database table to match the column names and types of the view.

Any available data source with permissions can be a cache container. The account used to update the database table must have insert, update, and delete privileges. The cache should be optimized by your database administrator.

If you want to cache an entire data source, you must create views for each table and apply caching to each view. If the data in a table is volatile, you can schedule automatic or manual updates to refresh the cached data so that users see a consistent view of data.

**Optimize a Query**

A query causes data to be fetched from the appropriate data sources.

Letting the underlying data source process as much of the query as possible minimizes the amount of data returned and improves performance and speed of data retrieval.

IBM Cognos Virtual View Manager Server examines the query and optimizes the relationships in the data source before running it. These optimizations can be viewed in the [query plan](#).

Understanding how a query is processed is crucial to writing good queries. This becomes especially difficult when using queries that span multiple data sources. You may face some of the following issues:
• network latency
• limited capabilities of disparate data sources, such as the fact that .csv files do not support joins
• limited access to data sources, which is dependent on the driver capabilities
• inability to monitor fluctuations in the amount of available data

Virtual View Manager applies rule-based optimizations automatically, requiring no user input. This reduces the number of rows fetched from the data source, which reduces the amount of work done by Virtual View Manager Server and returns the result set as quickly as possible.

Cost-based optimizations analyze the join algorithms to explore the nature of the data. These statistics are used to develop the best possible query plan.

For instructions on optimizing your queries, see the IBM Cognos Virtual View Manager User Guide.

Query Plans

Query plans are generated when any query runs.

Query plans are relationship-based and not flow-based. This means that views can be used to represent business processes, but when the query is run, the view is flattened. The relationships are examined and, using the rules of the underlying data source, an optimized query plan is reassembled before accessing the data source.

When two queries have the same signature, Virtual View Manager Server attempts to reuse the previous query plan, thereby improving performance and decreasing the time to process the query.

Change Connection Pool Properties

When you add a data source, you can change the properties of its connection pool.

A connection pool is a set of database connections that are available for an application to use. There is one connection pool for each data source, and the pool is created on demand.

Before running a command, a connection to a database must be established. Sometimes creating and removing the connection is more costly than running the command. For this reason, connection pools are created to maintain connections. After a connection is created, it is placed in the connection pool for future use. If all the connections in the pool are being used, new connections are automatically created and made available through the pool.

Each data source always has configurable connections open (the connection pool minimum size), a maximum number of allowed connections (the connection pool maximum size), and a timeout period (the connection pool timeout). Connection pools are never removed.

Tip: To release a connection, you must stop and restart the IBM Cognos Virtual View Manager Server.

For information about connection pool properties, see Adding Data Sources in the IBM Cognos Virtual View Manager User Guide.
**Change the Metadata Cache Size**

IBM Cognos Virtual View Manager Server uses a metadata repository to process query requests.

To enhance performance, it maintains a dynamic cache of metadata information during run time. The default size of the cache is sufficient for most installations, but you can change the size of this cache if necessary. We recommend that you set the cache size to approximately the same size as the ALL_RESOURCES system table in Virtual View Manager Server.

**Tip:** To find the size, introspect all data sources to which you connect with Virtual View Manager Server and run a count query.
Chapter 6. Upgrading

New versions of IBM Cognos Virtual View Manager provide enhancements that may affect many components, such as product features and functionality, performance and scalability, and usability.

Because of these improvements, upgrading may not be simple, and should be considered a process that you perform in stages.

Before you upgrade to a new version, you must back up your resources, configuration, and users. Virtual View Manager provides a full server backup feature.

As part of the upgrade process, ensure that your applications work as expected in the new version. Sometimes, changes may introduce unexpected results. It is important to test your applications before you move them.

Upgrading to a new version of Virtual View Manager involves the following:

- Backing up the resources
- Uninstalling the previous version of Virtual View Manager
- Installing the new version of Virtual View Manager
- Importing the resources

For uninstall information, see “Uninstalling IBM Cognos Virtual View Manager” on page 22.

For installation information, see Chapter 3, “Installing and Configuring IBM Cognos Virtual View Manager,” on page 5.

Backing Up the Resources

IBM Cognos Virtual View Manager offers the capability to perform a full server backup.

This capability is available only for those with these administrative rights: Access Tools, Read All Resources, Read All Users, and Read All Config. This option is functionally similar to the backup_export command-line program.

After you back up your resources you can uninstall Virtual View Manager.

Procedure

1. Select the Administration > Full Server Backup menu option.
   The Full Server Backup window opens.
2. Click the Browse button to specify a file to store the exported resource.
   The Save window appears for specifying/locating an export file.
3. Do one of the following:
   - Create a new export file by typing a name for it in the File name field.
     You don't need to specify the filename extension (.CAR) since it is automatically added.
   - Use an existing CAR file; locate it through Browse and click Save.
4. If required, type a description for the export file in the Description box.

**Importing the Resources**

After you install the new version of IBM Cognos Virtual View Manager, you can import the .CAR file that you backed up.

You import CAR files into to replicate Virtual View Manager resources and resource configurations. CAR files are created by export of resources, and they usually contain many object resources or they may even contain a full server backup.

**Procedure**

1. Right-click the desired container into which you want to import a resource, and select Import. Alternatively, select the resource and then the option: File, Import Into <resource>.
   
   The Import into window opens.

2. Use the Browse button to locate and upload the desired CAR file.

3. Select or deselect import options in the Include Resource Information section as required.

4. Select the Show Rebinding Options box for binding a resource to an underlying source for the first time.

5. Click Import to import the resources.

**Migrating an Existing Repository**

You can migrate a previous version of a repository to use it with IBM Cognos Virtual View Manager.

The process for migrating a repository involves the following:

- Creating a CAR file export from Composite Information Server
- Renaming the file name extension to ZIP
- Extracting the contents
- Modifying some of the files in the export
- Recreating a ZIP file, and rename the file name extension from ZIP to CARImporting the CAR file to Virtual View Manager

**Export Your Repository**

Export your repository to a CAR file, change the extension to a ZIP file, and extract the ZIP file.

**Procedure**

1. Export your repository to a CAR file.

   For more information about exporting and importing resources, see the IBM Cognos Virtual View Manager User Guide.

2. Change the extension of your exported file from CAR to ZIP.

   For example, if you named your export file myrepo.car, change the name to myrepo.zip.

3. Extract the ZIP file to a folder.
The folder can contain the following files:

- settings.xml
- users.xml
- metadata.xml
- contents.xml
- binary.xml

You may also have a file named resourcelocks.xml if some resources were locked at the time of the export.

Depending on what was selected during the export, some files may not be in the folder. For example, users.xml will not appear if the option to export users or groups was not selected.

**Modify the File Named settings.xml**

Change the `<ownerDomain>` setting.

**Procedure**

1. Open the file named settings.xml in an XML editor, and change the following line from
   
   `<ownerDomain>composite</ownerDomain>`

   to
   
   `<ownerDomain>cognos</ownerDomain>`

2. Save the file.

**Modify the File Named users.xml**

Change the domainName and type.

**Procedure**

1. Open the file named users.xml in an XML editor, and change the following text from
   
   `domainName="composite"`

   to
   
   `domainName="cognos"`

2. Change the following text from
   
   `type="COMPOSITE"`

   to
   
   `type="COGNOS"`

3. Save the file.

**Modify the File Named metadata.xml**

Change the word "composite" to "cognos" referenced in the text for domain, metadata name, and /users.

**Procedure**

1. Open the file named metadata.xml in an XML editor, and change the following text from
   
   `domain="composite"`

   to
   
   `domain="cognos"`
Modify the File Named contents.xml

Change the userDomain.

Procedure
1. Open the file named contents.xml in an XML editor, and change the following line from
   `<userDomain>composite</userDomain>`
   to
   `<userDomain>cognos</userDomain>`
2. Save the file.

Import the Modified Files to Virtual View Manager

Import the modified files to Virtual View Manager.

Procedure
1. Select the contents of the folder, and create a ZIP file.
   Ensure you select all of the file extracted from the original ZIP file.
2. Change the extension of your exported file from ZIP to CAR.
   For example, if you named your file myrepo.zip, change the name to myrepo.car.
3. Import the recreated CAR file using Virtual View Manager Studio.
   For more information about exporting and importing resources, see the IBM Cognos Virtual View Manager User Guide.
Appendix. Troubleshooting a problem

Troubleshooting is a systematic approach to solving a problem. The goal of troubleshooting is to determine why something does not work as expected and how to resolve the problem.

The first step in the troubleshooting process is to describe the problem completely. Problem descriptions help you and the IBM technical-support representative know where to start to find the cause of the problem. This step includes asking yourself basic questions:

- What are the symptoms of the problem?
- Where does the problem occur?
- When does the problem occur?
- Under which conditions does the problem occur?
- Can the problem be reproduced?

The answers to these questions typically lead to a good description of the problem, which can then lead to a resolution of the problem.

What are the symptoms of the problem?

When starting to describe a problem, the most obvious question is “What is the problem?” This question might seem straightforward; however, you can break it down into several focused questions that create a more descriptive picture of the problem. These questions can include:

- Who, or what, is reporting the problem?
- What are the error codes and messages?
- How does the system fail? For example, is the problem a loop, hang, crash, performance degradation, or incorrect result?

Where does the problem occur?

Determining where the problem originates is not always easy, but it is one of the most important steps in resolving a problem. Many layers of technology can exist between the reporting and failing components. Networks, disks, and drivers are only a few of the components to consider when you are investigating problems.

The following questions help you to isolate the problem layer:

- Is the problem specific to one platform or operating system, or is it common across multiple platforms or operating systems?
- Is the current environment and configuration supported?

If one layer reports the problem, the problem does not necessarily originate in that layer. Part of identifying where a problem originates is understanding the environment in which it exists. Take some time to completely describe the problem environment, including the operating system and version, all corresponding software and versions, and the hardware. Confirm that you are running within an environment that is supported; many problems can be traced back to incompatible levels of software that are not intended to run together or have not been fully tested together.
**When does the problem occur?**

Develop a detailed timeline of events leading up to a failure, especially for cases that are one-time occurrences. You can most easily develop a timeline by working backward: Start at the time an error was reported (as precisely as possible, even down to the millisecond), and work backward through the available logs and information. Typically, you need to look only as far as the first suspicious event that you find in a diagnostic log.

To develop a detailed timeline of events, answer these questions:

- Does the problem happen only at a certain time of day or night?
- How often does the problem happen?
- What sequence of events leads up to the time that the problem is reported?
- Does the problem happen after an environment change, such as an upgrade or an installation of software or hardware?

**Under which conditions does the problem occur?**

Knowing which systems and applications are running at the time that a problem occurs is an important part of troubleshooting. These questions about your environment can help you to identify the cause of the problem:

- Does the problem always occur when the same task is being performed?
- Does a certain sequence of events need to occur for the problem to occur?
- Do any other applications fail at the same time?

Answering these types of questions can help you explain the environment in which the problem occurs and correlate any dependencies. Remember that just because multiple problems might have occurred around the same time, the problems are not necessarily related.

**Can the problem be reproduced?**

Problems that you can reproduce are often easier to solve. However, problems that you can reproduce can have a disadvantage. If the problem as a significant business impact, you do not want it to recur. If possible, re-create the problem in a test or development environment, which typically offers you more flexibility and control during your investigation. Answer the following questions:

- Can the problem be re-created on a test system?
- Are multiple users or applications encountering the same type of problem?
- Can the problem be re-created by running a single command, a set of commands, or a particular application?

**Searching knowledge bases**

You can often find solutions to problems by searching IBM knowledge bases. You can optimize your results by using available resources, support tools, and search methods.

**About this task**

You can find useful information by searching the information center for IBM Cognos, but sometimes you need to look beyond the information center to resolve problems.
Procedure

To search knowledge bases for information that you need, use one or more of the following approaches:

- Find the content that you need by using the IBM Support Portal.
  The IBM Support Portal is a unified, centralized view of all technical support tools and information for all IBM systems, software, and services. The IBM Support Portal lets you access the IBM electronic support portfolio from one place. You can tailor the pages to focus on the information and resources that you need for problem prevention and faster problem resolution. Familiarize yourself with the IBM Support Portal by viewing the demo videos (https://www.ibm.com/blogs/SPNA/entry/the_ibm_support_portal_videos) about this tool. These videos introduce you to the IBM Support Portal, explore troubleshooting and other resources, and demonstrate how you can tailor the page by moving, adding, and deleting portlets.

- Search for content about IBM Cognos by using one of the following additional technical resources:
  - IBM Cognos BI APARs (problem reports)
  - Searching technotes
  - IBM Cognos forums and communities
  - Cognos Customer Center

- Search for content by using the IBM masthead search. You can use the IBM masthead search by typing your search string into the Search field on any ibm.com page.

- Search for content by using any external search engine, such as Google, Yahoo, or Bing. If you use an external search engine, your results are more likely to include information that is outside the ibm.com domain. However, sometimes you can find useful problem-solving information about IBM products in newsgroups, forums, and blogs that are not on ibm.com.

  **Tip:** Include “IBM” and the name of the product in your search if you are looking for information about an IBM product.

Getting fixes

A product fix might be available to resolve your problem.

Procedure

To find and install fixes:

1. Determine which fix you need [Fix Central](http://www.ibm.com/support/fixcentral/) (opens in new window).
2. Download the fix. Open the download document and follow the link in the “Download package” section.
3. Apply the fix by following the instructions in the “Installation Instructions” section of the download document.
4. Subscribe to receive weekly email notifications about fixes and other IBM Support information.

Contacting IBM Support

IBM Support provides access to a variety of IBM resources for help with software questions.
Before you begin

After trying to find your answer or solution by using other self-help options such as technotes, you can contact IBM Support. Before contacting IBM Support, your company must have an active IBM maintenance contract, and you must be authorized to submit problems to IBM. You should also have the following information at hand:

- Your customer identification number
- Your service request number, if it is an ongoing service request
- The phone number where you can be reached
- The version of the software you use
- The version of the operating environment you use
- A description of what you were doing when the problem occurred
- The exact wording of any error messages that display
- Any steps you took to attempt to solve the problem

For information about the types of available support, see the Support portfolio topic in the Software Support Handbook (opens in new window).

Procedure

Complete the following steps to contact IBM Support with a problem:

1. Define the problem, gather background information, and determine the severity of the problem. For more information, see the Getting IBM support (opens in new window) topic in the Software Support Handbook.
2. Gather diagnostic information.
3. Submit the problem to IBM Support in one of the following ways:
   - Using IBM Support Assistant (ISA): Use this feature to open, update, and view an Electronic Service Request with IBM. Any data that has been collected can be attached to the service request. This expedites the analysis and reduces the time to resolution.
   - Online through the IBM Support Portal (opens in new window): You can open, update, and view all your Service Requests from the Service Request portlet on the Service Request page.
   - By phone: For the phone number to call, see the Directory of worldwide contacts (opens in new window) web page.

Results

If the problem that you submit is for a software defect or for missing or inaccurate documentation, IBM Support creates an Authorized Program Analysis Report (APAR). The APAR describes the problem in detail. Whenever possible, IBM Support provides a workaround that you can implement until the APAR is resolved and a fix is delivered. IBM publishes resolved APARs on the IBM Support Web site daily, so that other users who experience the same problem can benefit from the same resolution.

Exchanging information with IBM

To diagnose or identify a problem, you might need to provide IBM Support with data and information from your system.
In other cases, IBM Support might provide you with tools or utilities to use for problem determination.

**Sending information to IBM Support**

To reduce the time that it takes to resolve your problem, you can send trace and diagnostic information to IBM Support.

**Procedure**

To submit diagnostic information to IBM Support:

1. Open a problem management record (PMR). You can use the [IBM Support Assistant](opens in new window) or the [IBM Service Request tool](opens in new window).
2. Collect the diagnostic data that you need. Diagnostic data helps reduce the time that it takes to resolve your PMR. You can collect the diagnostic data manually or automatically.
3. Compress the files by using the TRSMAIN or AMATERSE program. Download the free utility from the IBM to the IBM Cognos BI system and then install the utility using the TSO RECEIVE command.
4. Transfer the files to IBM. You can use one of the following methods to transfer the files to IBM:
   - [The Service Request tool](opens in new window)
   - Standard data upload methods: FTP, HTTP
   - Secure data upload methods: FTPS, SFTP, HTTPS
   - Email

If you are using an IBM Cognos product and you use ServiceLink / IBMLink to submit PMRs, you can send diagnostic data to IBM Support in an email or by using FTP.

All of these data exchange methods are explained on the [IBM Support site](opens in new window).

**Receiving information from IBM Support**

Occasionally an IBM technical-support representative might ask you to download diagnostic tools or other files. You can use FTP to download these files.

**Before you begin**

Ensure that your IBM technical-support representative provided you with the preferred server to use for downloading the files and the exact directory and file names to access.

**Procedure**

To download files from IBM Support:

1. Use FTP to connect to the site that your IBM technical-support representative provided and log in as anonymous. Use your email address as the password.
2. Change to the appropriate directory:
   a. Change to the /fromibm directory.
      ```
      cd fromibm
      ```
   b. Change to the directory that your IBM technical-support representative provided.
Subscribing to Support updates

To stay informed of important information about the IBM products that you use, you can subscribe to updates.

About this task

By subscribing to receive updates, you can receive important technical information and updates for specific Support tools and resources. You can subscribe to updates by using one of two approaches:

RSS feeds and social media subscriptions

The following RSS feeds and social media subscriptions are available for IBM Cognos BI:

- RSS feed for a developerWorks® forum
- Subscription to Cognos Support notebook blog
- RSS feed for the Support site for IBM Cognos Business Intelligence

For general information about RSS, including steps for getting started and a list of RSS-enabled IBM web pages, visit the IBM Software Support RSS feeds site.

My Notifications

With My Notifications, you can subscribe to Support updates for any IBM product. You can specify that you want to receive daily or weekly email announcements. You can specify what type of information you want to receive, such as publications, hints and tips, product flashes (also known as alerts), downloads, and drivers. My Notifications enables you to customize and categorize the products that you want to be informed about and the delivery methods that best suit your needs.

Procedure

To subscribe to Support updates:

1. Subscribe to the Product RSS feeds.
2. To subscribe to My Notifications, begin by going to the IBM Support Portal and clicking My Notifications in the Notifications portlet.
3. If you have already registered for My support, sign in and skip to the next step. If you have not registered, click Register now. Complete the registration form using your email address as your IBM ID and click Submit.
4. Click Edit profile.
5. Click Add products and choose a product category; for example, Software.
6. In the second list, select a product segment; for example, Data & Information Management.
7. In the third list, select a product subsegment, for example, Databases.
8. Select the products that you want to receive updates for.
9. Click Add products.
10. After selecting all products that are of interest to you, click Subscribe to email on the Edit profile tab.
11. Select Please send these documents by weekly email.
12. Update your email address as needed.
13. In the Documents list, select the product category; for example, Software.
14. Select the types of documents that you want to receive information for.
15. Click Update.

Results

Until you modify your RSS feeds and My Notifications preferences, you receive notifications of updates that you have requested. You can modify your preferences when needed (for example, if you stop using one product and begin using another product).

Cognos Virtual View Manager Log Files

Log files can help you troubleshoot problems by recording the activities that take place when you work with a product.

IBM Cognos Virtual View Manager provides log files about installation, system events, and user activities. These log files are located in the installation_location\logs folder. For more information, see the IBM Cognos Virtual View Manager Administration Guide.

IBM Informix software fails to install on a server that has antivirus software

When installing IBM Cognos Virtual View Manager on a server that is configured with antivirus software, the Informix software might fail to install or the Informix service might fail to start.

Before installing the Cognos Virtual View Manager software, confirm the following settings in your antivirus software:
• The ports that Cognos Virtual View Manager uses are available.
• Cognos Virtual View Manager and Informix binaries are set to be trusted.

For more information, see Table 2 on page 8.

Data Sources Appear Empty After Importing into IBM Cognos Framework Manager

After importing metadata from a IBM Cognos Virtual View Manager data source, the data source appears empty in Framework Manager.

In Virtual View Manager, when you publish the data source to a Virtual View Manager data service, you must publish at the schema level of the data service, as described in Publish the Data Source” on page 28. Otherwise, the data source appears empty in Framework Manager.
If the data source appears empty, go back to Virtual View Manager Studio and republish the data source to the schema level of a Virtual View Manager data service. You must re-import the metadata into the Framework Manager project.

**Result Set Not Shown for Functions and Stored Procedures**

IBM Cognos Virtual View Manager Studio exposes functions and stored procedures to Framework Manager as procedures that may contain only the return value from the procedure or view.

To see the full result set in Framework Manager, the cursor outputs must be identified.

In some cases, the cursor outputs for functions and stored procedures cannot be detected automatically. If the result set does not appear when you run a function or stored procedure, you can use the Design By Example function in Virtual View Manager Studio to design a cursor that defines the result set that the user wants to see.

For information about designing a cursor using Design By Example, see the *IBM Cognos Virtual View Manager User Guide*.

**Web API Error When Trying to Open IBM Cognos Virtual View Manager Studio**

You try to open IBM Cognos Virtual View Manager Studio and see a Web API Error. The server appears to be started.

On startup, the Virtual View Manager server requires a few minutes to initialize before you can use it.

**Metadata Synchronization Problems Between IBM Cognos Virtual View Manager and IBM Cognos Framework Manager**

If changes are made to a IBM Cognos Virtual View Manager data source while you are connected, IBM Cognos Framework Manager is not automatically updated.

As a result, you will see errors if you try to model data in IBM Cognos Framework Manager that no longer exists or was renamed.

If the existing Virtual View Manager views were changed, you can update the query subject in Framework Manager to refresh the data.

If new views or tables were added, you must re-import the metadata into your IBM Cognos Framework Manager project to refresh the data.

**Supported SQL Syntax**

If you attempt to use SQL syntax that is not currently supported by IBM Cognos Virtual View Manager, error messages appear.

For information about the SQL syntax currently supported by Virtual View Manager, see the *IBM Cognos Virtual View Manager Reference Guide*.
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