Version 2 Release 1

IBM i2 Enterprise Insight Analysis Deployment examples

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Note

Before using this information and the product it supports, read the information in "Notices" on page 23.

This edition applies to version 2, release 1, modification 7 of IBM® i2® Enterprise Insight Analysis (product number 5725-G23) and to all subsequent releases and modifications until otherwise indicated in new editions. Ensure that you are reading the appropriate document for the version of the product that you are using. To find a specific version of this document, access the Installing and Deploying section of the IBM Knowledge Center, and ensure that you select the correct version.

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Contacting IBM Support

IBM Support provides assistance with product defects, answers FAQs, and helps users to resolve problems with the product.

About this task

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 or organization must have an active IBM software subscription and support contract, and you must be authorized to submit problems to IBM. For information about the types of available support, see the Support portfolio topic in the *Software Support Handbook*.

Procedure

To contact IBM Support about a problem:

1. Define the problem, gather background information, and determine the severity of the problem. For more information, see the Getting IBM Support topic in the *Software Support Handbook*.
2. Gather diagnostic information.
3. Submit the problem to IBM Support in one of the following ways:
   - Online through the IBM Support Portal at Support Portal. You can open, update, and view all of your service requests from the Service Request portlet on the Service Request page.
   - By phone. For the phone number to call in your region, see the Directory of worldwide contacts web page at https://www.ibm.com/planetwide/

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 website daily, so that other users who experience the same problem can benefit from the same resolution.

Deployment patterns and examples

Deploy the components of Enterprise Insight Analysis for your chosen deployment pattern. Use the deployment pattern flowcharts to understand the order in which to deploy each component.

The components that you need to deploy differ depending on the deployment pattern that you are using, and the features that you would like to take advantage of. To determine the pattern that best suits your needs, see the Deployment patterns overview.

Using your deployment toolkit

The deployment toolkit contains scripts and components that you need to deploy and maintain i2 Analyze. Configuring components within the toolkit allows you to consistently deploy to the same locations with the same settings.

IBM i2 Analyze can be deployed both as a part of IBM i2 Enterprise Insight Analysis and as a standalone product. To support both these mechanisms, there are two types of i2 Analyze deployment toolkit available. The core difference between the two types of deployment toolkit, is the inclusion of additional components to help connect i2 Analyze to Cognos for deployments that require the i2 Analyze Onyx services.

Directories

The deployment toolkit contains files in several directories. On most occasions, you need to interact with only three of the directories:

Directory	Contents
`examples`	The `examples` directory contains the configurations that you use to create example deployments.
`configuration`	The `configuration` directory contains files that you must update with information specific to your deployment. **Note:** When the deployment toolkit is first installed, this directory does not exist, rather it is expected that you select one of the example configuration files to create this directory.
`scripts`	The `scripts` directory contains the `setup` script that you use to create, deploy, and upgrade i2 Analyze.

The `configuration` directory contains files that you must update with information specific to your deployment. When you have provided this information, you can use the `setup` script to administer your i2 Analyze deployment.

The `setup` script

The `setup` script completes specific actions that are called tasks. For a list of available tasks and other information, on the i2 Analyze server, open a command prompt and navigate to `toolkit\scripts`, then run one of the following commands:

`setup -h`

The `-h` argument displays the usage, common tasks, and examples of use for the `setup` script.

`setup -a`

The `-a` argument displays the same content as when you use `-h`, and a list of additional tasks.

`setup -dh`

The `-dh` argument displays the help information for data access points.

Note: On Linux, whenever you run the `setup` script from the `toolkit/scripts` directory, you must prefix the script with `./`. For example, `./setup -t deploy`.

Deployment process

Before you start a deployment of i2 Analyze, it is important to understand the process that is used. Use the following information to ensure that you choose the correct deployment method for your system.

Deployment methods

The i2 Analyze `setup` script provides a number of methods to deploy i2 Analyze. This flexibility is included so that you can build up a configuration incrementally to match your production environment.

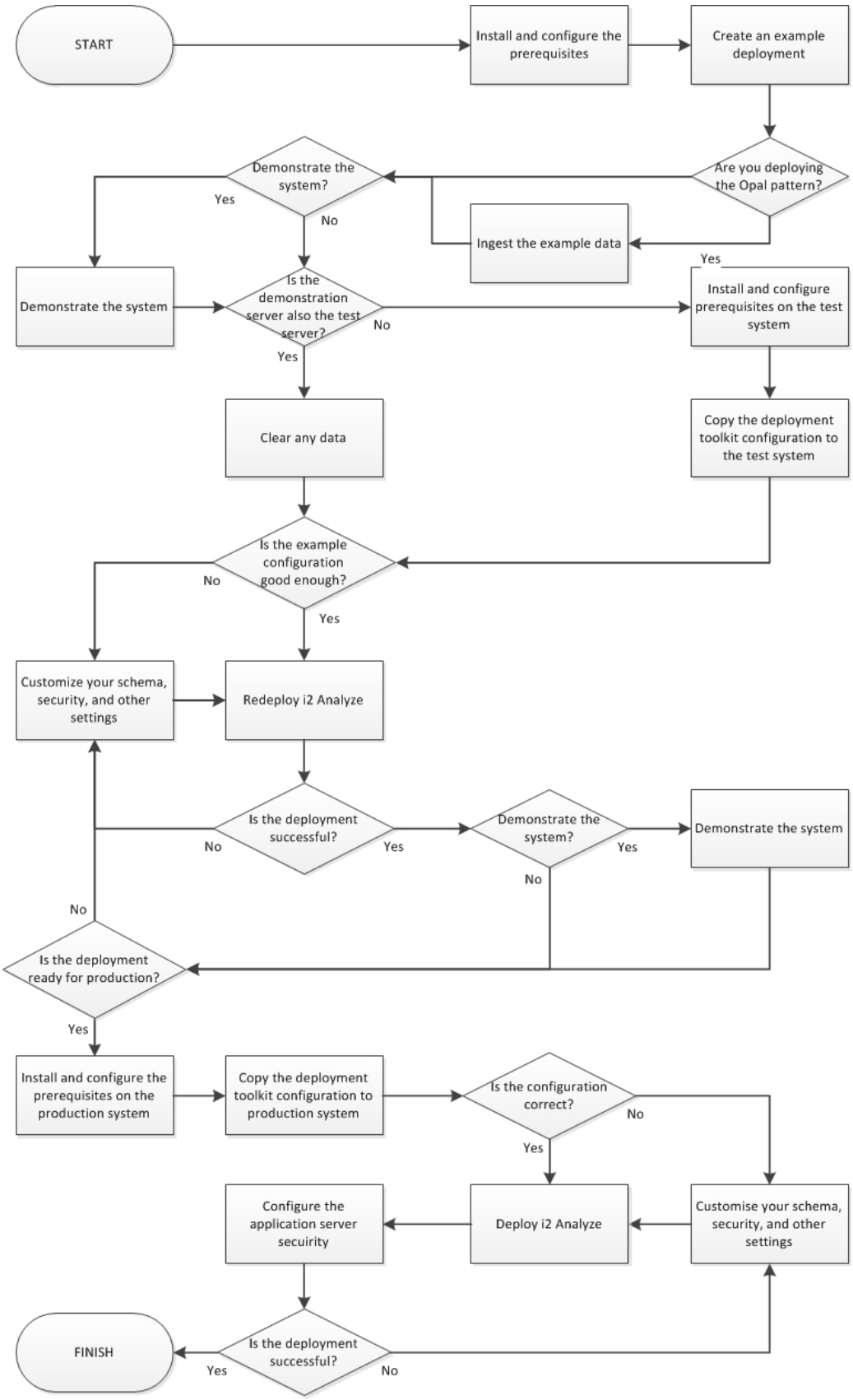
To build up your environment, create an example deployment first. An example deployment demonstrates a running system, which enables you to verify that your prerequisites are set up correctly. An example deployment uses default configuration values, example security, an example schema and charting scheme, and uses a basic user registry that contains a demonstration user account.

Create an example deployment that matches your deployment pattern. For more information about the deployment patterns, see Deployment patterns overview.

After you deploy the example system, additional configuration can be carried out to create a system that matches the requirements of your organization. At this stage, you can redeploy i2 Analyze after every change so that you can continually test the deployment. You can clear any data from the system, at any time, before you redeploy i2 Analyze.

After you complete the configuration of your deployment, and you are satisfied that the system matches your requirements, you can deploy i2 Analyze with the tested configuration on to a production system. For a production system, you must configure the application server security for the users in your environment.

The following flowchart shows the suggested workflow for deploying i2 Analyze:


START
Install and configure the prerequisites
Create an example deployment
Are you deploying the Opal pattern?
Demonstrate the system?
Yes
No
Ingest the example data
Demonstrate the system
Is the demonstration server also the test server?
No
Yes
Yes
Install and configure prerequisites on the test system
Clear any data
Copy the deployment toolkit configuration to the test system
Is the example configuration good enough?
No
Yes
Customize your schema, security, and other settings
Redeploy i2 Analyze
Is the deployment successful?
No
Yes
Demonstrate the system?
Yes
No
Demonstrate the system
No
Is the deployment ready for production?
Yes
Install and configure the prerequisites on the production system
Copy the deployment toolkit configuration to production system
Is the configuration correct?
No
Yes
Configure the application server secuirity
Deploy i2 Analyze
Customise your schema, security, and other settings
FINISH
Is the deployment successful?
Yes
No

Deployment sequence

Use the deployment toolkit to complete the actions for the deployment. By building up the deployment incrementally, you can tailor your system to the individual requirements of your organization, before you deploy into a production environment.

Create an example deployment

The following list is an outline of the steps that you follow to deploy an example deployment, from preparing the environment to connecting the first user:

1. Install the prerequisite software.
2. Create the configuration directory.
3. Provide the user names and passwords that the deployment process requires.
4. Create the example deployment.
5. Connect to i2 Analyze as a user, and test that the application can be accessed.

An example deployment demonstrates whether your prerequisites are set up correctly, and provides an opportunity to demonstrate the system without the need for further configuration.

Configure i2 Analyze

You can use the deployment toolkit from the example deployment as a starting point for creating a custom configuration.

After you have an example deployment, customize the configuration files to match your requirements:

1. Configure the environment.
2. Create an i2 Analyze security schema for your environment.
3. Select or create an i2 Analyze schema and charting scheme for your data.
4. Set the i2 Analyze application global properties.
5. Configure the application server security for your environment.
6. Connect to i2 Analyze as a user, and test that the application can be accessed.

At this stage, i2 Analyze can be redeployed after every change, so that you can test the deployment. If you want to make changes to the structure of your data, or the permissions that are used to access that data, you must clear the data and the search indexes before you redeploy.

Migrate i2 Analyze

When you have completed customizing the deployment, you can migrate i2 Analyze to a different system by completing the following sequence:

1. Install the prerequisite software.
2. Copy the deployment toolkit from the original system to the new system.
3. Change the host names and any other specific settings for the new environment.
4. Run the script to deploy i2 Analyze.
5. Configure the application server security for your environment.
6. Connect to i2 Analyze as a user, and test that the application can be accessed.

Selecting the type of example deployment

Depending on the starting toolkit that you use there are several example configurations that are available. To reduce the amount of configuration that you need to complete, select the deployment example that is closest to your final deployment.

In the IBM i2 Analyze deployment toolkit, the following example configurations are included:

analysis-repository

Preconfigured to deploy a system that uses an Analysis Repository. By default this configuration deploys with the law enforcement schema in US English, but you can specify different schemas or locale codes as parameters if required. This example contains the configuration information for:

- creating an Analysis Repository

information-store-opal

Preconfigured to deploy a system that uses an Information Store, accessed using the i2 Analyze Opal services. By default this configuration deploys with the law enforcement schema in US English, but you can specify different schemas or locale codes as parameters if required. This example contains the configuration information for:

- creating an Information Store configured to use the i2 Analyze Opal services

In addition, in the IBM i2 Enterprise Insight Analysis deployment toolkit, the following example configurations are also included:

ar-information-store-opal

Preconfigured to deploy a system that uses an Information Store, accessed using the i2 Analyze Opal. By default this configuration deploys with the signals intelligence schema in US English, but you can specify different schemas or locale codes as parameters if required.

This example contains the configuration information for:

- creating an Information Store configured to use the i2 Analyze Opal services
- creating an Analysis Repository

information-store-onyx

Preconfigured to deploy a system that uses an Information Store, accessed using the i2 Analyze Onyx services. By default this configuration deploys with the signals intelligence schema in US English, but you can specify different schemas or locale codes as parameters if required.

Note: The reports that are included in this example configuration are designed to use the signals intelligence schema. In order to use the i2 Analyze Onyx services with a different schema, you will need to modify the reports.

This example contains the configuration information for:

- creating an Information Store configured to use the i2 Analyze Onyx services
- creating an Analysis Repository

In order to deploy this example, additional configuration is required to enable the Cognos reports to be set up correctly. As no direct path is available for deploying this example, follow the instructions in the “Enabling the Information Store to use the Onyx services” on page 13 section to deploy this example.

It is possible to change the type of your deployment after you have selected and deployed your examples, by adding the appropriate data stores, and configuration files. For information on modifying the shape of your deployment after selecting an example, see Adding additional data sources.

Deploying your example

When you have decided on the type of starting deployment that you require, you can configure and deploy your example. Follow the instructions that are relevant to your example.

Deploying the Analysis Repository

Create an example deployment with the Analysis Repository data store. After you deploy the Analysis Repository, you can connect to it by using the Intelligence Portal and Analyst's Notebook Premium.

Before you begin

Install IBM i2 Analyze, and any software prerequisites. For more information, see Installing IBM i2 Enterprise Insight Analysis.

About this task

Create an example deployment of i2 Analyze with the Analysis Repository that uses DB2 as the database management system. The i2 Analyze toolkit contains an example configuration for the deployment. The `deployExample` task generates the default values, provides the JDBC driver, and deploys the platform.

An example deployment demonstrates a working i2 Analyze system. An example user is created so that you can log in.

In an example deployment, i2 Analyze runs with the example security schema and matching WebSphere Application Server Liberty profile security groups and users. The example user has the following credentials:

- The user name is `Jenny`
- The password is `Jenny`

An example deployment uses the `law-enforcement-schema.xml` schema as the i2 Analyze schema with the associated `law-enforcement-schema-charting-schemes.xml`.

Procedure

1. Create the configuration directory:
   a) Navigate to the `\toolkit\examples\configurations\analysis-repository` directory.

      This directory contains the preconfigured files that you require to deploy a system that uses the Analysis Repository to store data. The data can be accessed using both the Intelligence Portal as a thin web client and Analyst's Notebook Premium as a rich desktop client.

   b) Copy the `configuration` directory to the root of the toolkit.
      For example: `C:\IBM\i2analyze\toolkit\configuration`
2. Specify the credentials to use for the deployment.

   For more information about credentials, see .
   a) Using a text editor, open the `toolkit\configuration\environment\credentials.properties` file.
   b) Enter the user name and password to use with the database.
   c) Enter the password to use to encrypt LTPA tokens.
   d) Save and close the `credentials.properties` file.
3. Run the setup script to create the example deployment.
   a) On the i2 Analyze server, open a command prompt and navigate to the `toolkit\scripts` directory.

b) To deploy the example, run the following command:

```
setup -t deployExample
```

c) To start the WebSphere Application Server Liberty profile server, run the following command:

```
setup -t start
```

d) Start, or restart, the HTTP server that hosts the reverse proxy.

What to do next

Deploy any other components that are required for the deployment pattern. After you deploy all the components that you require, test your deployment by connecting a client to your deployment. For more information, see "Connecting clients" on page 22.

After you test your deployment, configure the deployment to match your requirements. For more information, see Configuring IBM i2 Analyze.

Deploying the Information Store

Create an example deployment that includes the Information Store that is connected to use the i2 Analyze Opal services. After you deploy the Information Store, you can access the data that it contains by using Analyst's Notebook Premium.

Before you begin

Install IBM i2 Analyze, and any software prerequisites. For more information, see Installing IBM i2 Enterprise Insight Analysis.

About this task

Create an example deployment of i2 Analyze with the Information Store. The i2 Analyze toolkit contains an example configuration for the deployment. The `deployExample` task generates the default values, provides the JDBC driver, and deploys the platform.

An example deployment demonstrates a working i2 Analyze system. An example user is created so that you can log in.

In an example deployment, i2 Analyze runs with the example security schema and matching WebSphere Application Server Liberty profile security groups and users. The example user has the following credentials:

- The user name is `Jenny`
- The password is `Jenny`

An example deployment uses the `law-enforcement-schema.xml` schema as the i2 Analyze schema with the associated `law-enforcement-schema-charting-schemes.xml`.

Procedure

1. Create the configuration directory:
   a) Navigate to the `\toolkit\examples\configurations\information-store-opal` directory.

      This directory contains the preconfigured files that you require to deploy a system that uses the Information Store to store data. The data can be accessed using Analyst's Notebook Premium as a rich desktop client.

b) Copy the `configuration` directory to the root of the toolkit.
For example: `C:\IBM\i2analyze\toolkit\configuration`.

2. Specify the credentials to use for the deployment.

   For more information about credentials, see *Modifying the credentials* in *Configuring a deployment before going live*.

   a) Using a text editor, open the `toolkit\configuration\environment\credentials.properties` file.

   b) Enter the user name and password to use with the database.

   c) Enter the user name and password to use with the Solr index.

   d) Enter the password to use to encrypt LTPA tokens.

   e) Save and close the `credentials.properties` file.

3. Run the setup script to create the example deployment.

   a) On the i2 Analyze server, open a command prompt and navigate to the `toolkit\scripts` directory.

   b) To deploy the example, run the following command:

   ```
   setup -t deployExample
   ```

   c) To start the WebSphere Application Server Liberty profile server, run the following command:

   ```
   setup -t start
   ```

   d) Start, or restart, the HTTP server that hosts the reverse proxy.

4. Optional: To populate your Information Store with the provided example data, run the following command:

   ```
   setup -t ingestExampleData
   ```

What to do next

For the Opal experience, deploy Analyst's Notebook Premium and connect to your deployment. For more information, see Installing IBM i2 Analyst's Notebook Premium and Connecting IBM i2 Analyst's Notebook Premium to IBM i2 Analyze.

After you test your deployment, configure the deployment to match your requirements. For more information, see Configuring IBM i2 Analyze.

Deploying both the Analysis Repository and the Information Store

Create an example deployment with the Analysis Repository, and Information Store with Opal services. The example uses an example i2 Analyze schema that is designed for signals intelligence data.

Before you begin

Install IBM i2 Enterprise Insight Analysis, and any software prerequisites. For more information, see Installing IBM i2 Enterprise Insight Analysis.

About this task

Create an example deployment of i2 Analyze with the Analysis Repository and the Information Store. In this example, the Information Store is used with the Opal services. The `deployExample` task generates the default values, provides the JDBC driver, and deploys the platform.

Example data is provided, which you can ingest into the Information Store.

An example deployment demonstrates a working i2 Analyze system. An example user is created so that you can log in.

In an example deployment, i2 Analyze runs with the example security schema and matching WebSphere Application Server Liberty profile security groups and users. The example user has the following credentials:

- The user name is `Jenny`
- The password is `Jenny`

These example deployments use the `sigint-schema.xml` schema as the i2 Analyze schema with the associated `sigint-schema-charting-schemes.xml`.

Setting up the Opal and Onyx configuration

If you would like to set up an Information Store that uses the i2 Analyze Opal services along with the Analysis Repository, use the `ar-information-store-opal` configuration example.

Procedure

1. Create the configuration directory:
   a) Navigate to the `toolkit\examples\configurations\ar-information-store-opal` directory.

      This directory contains the preconfigured files that you require to deploy the example system.

   b) Copy the `configuration` directory to the root of the toolkit.
      For example, `C:\IBM\i2EIA\toolkit\configuration`.
2. Specify the credentials to use for the deployment.

   For more information about credentials, see *Modifying the credentials* in *Configuring a deployment before going live*.

   a) Using a text editor, open the `toolkit\configuration\environment\credentials.properties` file.
   b) Enter the user name and passwords to use with the databases.
   c) Enter the user name and password to use with the Solr index.
   d) Enter the password to use to encrypt LTPA tokens.
   e) Save and close the `credentials.properties` file.
3. Run the setup script to create the example deployment.
   a) On the i2 Analyze server, open a command prompt and navigate to the `toolkit\scripts` directory.
   b) To deploy the example, run the following command:

```
setup -t deployExample -sn sigint-schema.xml
```

c) To start the applications, run the following commands:

```
setup -s opal-server -t start
setup -s onyx-server -t start
```

d) Start, or restart, the HTTP server that hosts the reverse proxy.

4. Populate your Information Store with the provided example data:

```
setup -s opal-server -t ingestExampleData -e signal-intelligence-data-set-1
```

What to do next

Connect a client to test the deployment of Enterprise Insight Analysis. For more information, see Connecting clients.

Setting up the Onyx only configuration

If you would like to set up an Information Store that uses the i2 Analyze Onyx services along with the Analysis Repository, use the `information-store-onyx` configuration example. This example cannot be deployed until the configuration is extended to use the i2 Analyze Onyx services.

Procedure

1. Create the configuration directory:
   a) Navigate to the `toolkit\examples\configurations\information-store-onyx` directory.

      This directory contains the preconfigured files that you require to deploy the example system.

   b) Copy the `configuration` directory to the root of the toolkit.
      For example, `C:\IBM\i2EIA\toolkit\configuration`.
2. Open a command line and navigate to the `toolkit\scripts` directory. Using an account with administrator permissions, run the following command to set default values in the configuration:

```
setup -t generateDefaults
```

3. In the `toolkit\configuration\environment` directory, verify that the default values in `http-server.properties` are correct for your environment.
4. In the `toolkit\configuration\environment\onyx-server` directory, verify that the default values in `environment.properties` are correct for your environment.
5. Ensure that the `db2jcc4.jar` file is in the `toolkit\configuration\environment\common\jdbc-drivers` directory.
6. Using a text editor, open the `toolkit\configuration\environment\credentials.properties` file:
   - Populate the values of the `db.write1.user-name` and `db.write1.password` properties with the user account credentials that you want the i2 Analyze deployment scripts to use to authenticate with the Analysis Repository database.
   - Populate the values of the `db.infostore.user-name` and `db.infostore.password` properties with the user account credentials that you want the i2 Analyze deployment scripts to use to authenticate with the Information Store database.
   - Populate value of the `ltpakeys.password` property, with the value that is used to encrypt the LTPA keys file.

7. Copy the `toolkit\configuration\examples\security-schema\example-dynamic-security-schema.xml` file to the `toolkit\configuration\fragments\common\WEB-INF\classes` directory.

Enabling the Information Store to use the Onyx services
The IBM i2 Enterprise Insight Analysis installation includes configuration example files. You can use these example files to setup an example deployment that contains the Information Store with the Onyx services.

About this task

The following tasks guide you through the process of deploying and configuring the key components of a deployment that uses the Onyx services to connect to the Information Store:

- i2 Analyze
- IBM Cognos Analytics, or IBM Cognos Business Intelligence

Before you begin, you must install the prerequisite software. For more information, see:

- Installing IBM i2 Enterprise Insight Analysis
- Installing IBM Cognos

Use the following steps to deploy all the components of the example deployment on a single server. The example files include an example schema, and compatible Cognos reports.

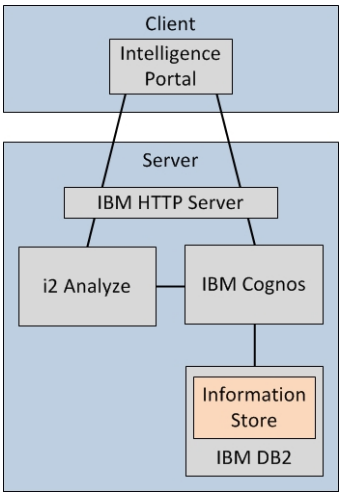


Figure 1: An example Onyx pattern deployment that uses a single server.

After you test your deployment, configure the deployment to match your requirements. To configure a deployment, see *Configuring Enterprise Insight Analysis*.

Configuring Cognos
Enterprise Insight Analysis uses Cognos reports to query and retrieve search results from the Information Store. To deploy Cognos with Enterprise Insight Analysis, you must complete specific configuration steps that differ from a standard deployment of Cognos.

Before you begin

Important: Before you configure Cognos, ensure that you have access to an authentication provider, such as a Lightweight Directory Access Protocol (LDAP) server. The authentication provider must be able to provide an account to Enterprise Insight Analysis to access the Cognos SDK.

You must know the details of your authentication provider so that you can specify the details when you configure Cognos.

About this task
Copy the required IBM DB2 drivers and the Enterprise Insight Analysis Morphlet into the IBM Cognos installation directories.

Then, complete the following procedure to configure the Cognos environment properties for Enterprise Insight Analysis.

Configure Cognos with the settings for your authentication provider. For more information, see Configuring IBM Cognos Components to Use an Authentication Provider.

Procedure

1. Copy the `db2jcc4.jar` and `db2jcc_license_cu.jar` drivers from the `java` directory of the DB2 installation to the `drivers` directory of the Cognos installation.

   Note: For Cognos 10.2.2, copy the drivers into the `webapps\p2pd\WEB-INF\lib` directory.

   Note: The default DB2 installation path is `/opt/ibm/db2/V`*`version`* (where *version* is the DB2 version number) on Linux operating systems and `C:\Program Files\IBM\SQLLIB` on Windows operating systems.
2. Deploy the Enterprise Insight Analysis Morphlet by copying the `i2.xts` file from the `i2EIA \cognos` directory in the Enterprise Insight Analysis Integrated Components to the `templates \ps\portal` directory of the Cognos installation.
3. Start IBM Cognos Configuration.
   - On Linux operating systems, open a command line, navigate to the `bin64` directory of the Cognos installation, and enter the following command:

     ```
     ./cogconfig.sh
     ```
   - On Windows operating systems, click **Start** > **IBM Cognos Configuration**.
4. Modify the Cognos® environment configuration. In the Explorer pane, click **Environment**.
   a) Set the **Report server execution mode** property to **64-bit**.

      In a 64-bit Cognos installation, both 32-bit and 64-bit versions of the report server component are provided. The 32-bit version is enabled by default.
   b) Modify each URI property so that the host name section of the URI does not contain *localhost*, but the network host name of your server. Each URI must use a network host name.

      To ensure the validity of cookies, use a fully qualified domain name that is shared between the i2 Analyze server instance and Cognos. For example, *`host_name.my.domain.com`*.

5. Enterprise Insight Analysis requires authenticated access to the Cognos SDK. Complete the following steps to configure Cognos to connect to the external authentication service that provides the account that you want Enterprise Insight Analysis to use to access the Cognos SDK:
   a) In IBM Cognos Configuration, in the Explorer pane, click **Security**.
   b) Right-click **Authentication** and select **New resource** > **Namespace**.
   c) Enter a name for your authentication namespace, for the example, use `EIAA`. Then, select the appropriate namespace type from the list, and click **OK**.
   d) In the Explorer pane, under **Authentication**, click the new authentication provider resource that you created. For the **Namespace ID** property, specify a unique identifier for the namespace.
   For the example, use `EIAA`.
   e) Populate or modify any other values to match your authentication namespace.
6. If you are using Cognos Analytics, specify the subset of URLs for which cookies are valid.
   a) In the toolbar, click **Actions** > **Edit Global Configuration**.
   b) In the **General** tab, set the value of **Path** to the base URL for your deployment. If you installed Cognos in the default directory, the value is /analytics.
7. If you are using Cognos Analytics, set the IBM Cognos Application Firewall validation to false.
   a) Click **IBM Cognos Application Firewall**.
   b) Set **Enable CAF validation** to false.
8. Test and start the Cognos services:
   a) In the toolbar, click **Actions** > **Test**.
   Cognos Configuration tests the connections to content store and other resources, and the namespace configuration.
   b) Start the Cognos service, click **Actions** > **Start**.

   For more information about testing and starting the Cognos services, see Start the Application services components.

Configuring the IBM HTTP Server for Cognos
Modify the IBM HTTP Server configuration to provide access to Cognos directories.

Procedure

1. Using a text editor, open the `httpd.conf` file in the `conf` directory of the IBM HTTP Server installation.
2. Modify the server configuration for your version of Cognos. For examples of the server configuration, see "IBM HTTP Server configurations for Cognos" on page 16.
3. Optional: To add images to reports in Cognos Report Studio, configure Web Distributed Authoring and Versioning (WebDAV) on your web server. No images are included in the example files.

   For information about configuring WebDAV, see Configuring WebDAV to view and browse images.
4. Restart IBM HTTP Server.

IBM HTTP Server configurations for Cognos
The following configuration values are used by IBM HTTP Server to enable access to Cognos directories.

IBM HTTP Server configuration for Cognos Analytics
At the end of the `httpd.conf` file, add the following configuration to define aliases for the `bi`, `cgi-bin`, and `webcontent` directories:

```
LoadModule proxy_module modules/mod_proxy.so
LoadModule proxy_http_module modules/mod_proxy_http.so

<Location /analytics/bi>
    RequestHeader set X-BI-PATH /analytics/bi/v1
    Header always unset X-Frame-Options
    ProxyPass http://host_name.my.domain.com:9300/bi
    ProxyPassReverse http://host_name.my.domain.com:9300/bi
    ProxyPassReverseCookieDomain "." "my.domain.com"
</Location>

ScriptAlias /analytics/cgi-bin "installation_path/cognos/analytics/cgi-bin"

<Directory "installation_path/cognos/analytics/cgi-bin">
    Header always unset X-Frame-Options
    AllowOverride None
    Options None
    <!--Require all granted-->
</Directory>

Alias /analytics "installation_path/cognos/analytics/webcontent"
<Directory "installation_path/cognos/analytics/webcontent">
    Options Indexes MultiViews
    <!--Require all granted-->
</Directory>

<Location /analytics/cgi-bin/mod2_2_cognos.dll>
    SetHandler cognos-handler
    <!--Require all granted-->
</Location>
```

Where *installation_path* is the Cognos installation location. Ensure that you use forward slashes (/) in all file paths, for both Linux and Windows paths.

Where *hostname* is the fully qualified domain name of the i2 Analyze server.

Note: If you are using IBM HTTP Server 9.0 or later, uncomment out the `Require all granted`.

Note: `analytics` is the default value for the **Gateway URI** and **Controller URI for gateway** properties in IBM Cognos Configuration.

Note: For a Linux deployment, in the previous configuration change `mod2_2_cognos.dll` to `mod2_4_cognos.so`. You must also add the following configuration to the `httpd.conf` file:

```
LoadModule expires_module modules/mod_expires.so
LoadModule filter_module modules/mod_filter.so


LoadModule cognos_module "/opt/ibm/cognos/analytics/cgi-bin/mod2_4_cognos.so"

<IfModule mod_expires.c>
    <FilesMatch "\.(jpe?g|png|gif|js|css|json|html|woff2?|template)$">
        ExpiresActive On
        ExpiresDefault "access plus 1 day"
    </FilesMatch>
</IfModule>

 <IfModule mod2_4_cognos.c>
    CGIBinDir "installation_path/cognos/analytics/cgi-bin"
 </IfModule>

 <Directory installation_path/cognos/analytics>
    <IfModule mod_deflate>
        AddOutputFilterByType DEFLATE text/html application/json
          text/css application/javascript
    </IfModule>
    Options Indexes MultiViews
    AllowOverride None
    <!--Require all granted-->
</Directory>
```

Note: If you are using IBM HTTP Server 9.0 or later, uncomment out the `Require all granted`.

IBM HTTP Server configuration for Cognos 10.2.2

At the end of the `httpd.conf` file add the following configuration to define aliases for the `cgi-bin`, `webcontent/documentation`, `webcontent`, `webcontent/samples`, and `v5dataserver/XQE/Logs` directories:

```
ScriptAlias /ibmcognos/cgi-bin "installation_path/c10_64/cgi-bin"
<Directory "installation_path/c10_64/cgi-bin">
    Header always unset X-Frame-Options
    Header always set X-Frame-Options "ALLOW-FROM http://host_name/"
    Options FollowSymLinks
    AllowOverride FileInfo

    <!--Require all granted-->
</Directory>
Alias /ibmcognos/help "installation_path/c10_64/webcontent/documentation"
<Directory "installation_path/c10_64/webcontent/documentation">
    Options Indexes FollowSymLinks MultiViews IncludesNoExec
    AddOutputFilter Includes html
    AllowOverride FileInfo
    <!--Require all granted-->
</Directory>
Alias /ibmcognos "installation_path/c10_64/webcontent"
<Directory "installation_path/c10_64/webcontent">
    Options Indexes FollowSymLinks MultiViews IncludesNoExec
    AddOutputFilter Includes html
    AllowOverride FileInfo
    <!--Require all granted-->
</Directory>
Alias /samples "installation_path/c10_64/webcontent/samples"
<Directory "installation_path/c10_64/webcontent/samples/">
    Options Indexes FollowSymLinks MultiViews IncludesNoExec
    AddOutputFilter Includes html
    AllowOverride FileInfo
    <!--Require all granted-->
</Directory>
Alias /XQElogs "installation_path/c10_64/v5dataserver/XQE/Logs"
<Directory "installation_path/c10_64/v5dataserver/XQE/Logs">
    Options Indexes FollowSymLinks MultiViews IncludesNoExec
    AddOutputFilter Includes html
    AllowOverride None
    <!--Require all granted-->
</Directory>
```

Where *installation_path* is the Cognos installation location. Ensure that you use forward slashes (/) in all file paths, for both Linux and Windows paths.

Where *hostname* is the fully qualified domain name of the i2 Analyze server.

Note: If you are using IBM HTTP Server 9.0 or later, uncomment out the `Require all granted`.

Note: `ibmcognos` is the default value for the **Gateway URI** and **Controller URI for gateway** properties in IBM Cognos Configuration.

Deploying the Cognos reports and visualizations
Using IBM Cognos Administration, you need to deploy the sample reports and visualizations. There are named reports for each type of search request, and reports for the more complex Expand and Find Path analytics.

Procedure

1. Browse to the `i2EIA\cognos` directory.
2. Copy the `EIAA_Samples.zip` and `Visualizations.zip` files to the `deployment` directory of the Cognos installation. Do not extract the contents of the files.
3. In IBM Cognos Configuration, verify that the Cognos services are running.
4. In a web browser, start IBM Cognos Administration.
5. On the **Configuration** tab, click **Content Administration**. Then, on the toolbar, click the **New Import** icon.
   a) On the "**Select a deployment archive**" page, select **EIAA_Samples** and click **Next**.
   b) On the "**Specify a name and description**" page, ensure that the name of the package is set to `EIAA_Samples` and click **Next**.
   c) On the "**Select the public folders and directory content**" page, select the **eia** directory, and then click **Next**.
   d) On the "**Specify the general options**" page, keep the default settings and click **Next**.
   e) On the "**Review the summary**" page, check the settings and click **Next**.
   f) On the "**Select an action**" page, select **Save and run once** and click **Finish**.
   g) On the "**Run with options**" page, select **Now** and click **Run**. Then, click **OK** to import the reports.
6. Click the **New Import** icon and repeat the process to import the visualizations that are included with the reports. On the "**Select a deployment archive**" page, ensure that you select **Visualizations**. Ensure that all the visualizations are imported into Cognos.

   Note: The reports and visualizations are automatically imported into the locations that are required by Enterprise Insight Analysis. If you move your Cognos reports to a different directory or modify the directory structure, the reports might not run because the package mapping is embedded within the report definition.
7. To import the graphics that are used in the visualizations:
   a) Copy the `webcontent.zip` file from the `i2EIA\cognos` directory to a suitable location.
   b) Extract the contents of the `webcontent.zip` file to the `webcontent` directory of the Cognos installation, retaining the directory structure in the compressed file.

   Note: If you want to modify the example reports or create more, the model for IBM Cognos Framework Manager is provided in the `i2EIA\cognos` directory. To work with the model, you must download and install IBM Cognos Framework Manager.

Deploying i2 Analyze
When you deploy a system that includes an Information Store with the Onyx services, you must complete specific configuration steps that differ from a standard i2 Analyze deployment.

Procedure

1. Using a text editor, open the `toolkit\configuration\fragments\cognos-connector\WEB-INF\classes\ApolloServerSettingsDaodMandatory.properties`. Populate the values for the following properties:

- CognosURL
- CognosSDKURL
- CognosSDKAuthenticationNamespace
- CognosSDKUserID
- CognosSDKPassword

Note: The CognosSDKPassword value, stored in the ApolloServerSettingsDaodMandatory.properties file is not encoded after you deploy i2 Analyze. After you deploy i2 Analyze, remove the value from the file.

2. In a command line, navigate to the toolkit\scripts directory. Using an account with administrator permissions and with permissions to create and modify the database, run the following command:

```
setup -t deployExample -s onyx-server
```

3. Restart the IBM HTTP Server that hosts the reverse proxy.

What to do next

Set up the WebSphere Application Server Liberty user registry, then configure the connection between Cognos and the Information Store database.

Setting up the user registry

To allow users to log in to i2 Analyze, they must be members of groups. An example user registry is provided, which matches the names of the groups that are defined in the example security schema.

Procedure

1. To set up security, open a command line and navigate to the toolkit\scripts directory. Using an account with administrator permissions, enter the following command to stop the application server:

```
setup -t stop
```

2. Using an XML editor, open the basic registry file, deploy\wlp\usr\shared\config\user.registry.xml. Configure users and groups that define the user access levels to items in i2 Analyze.

For example:

```
<basicRegistry id="basic" realm="WebRealm">
    <user name="Jenny" password="{xor}FToxMSY="/>
    <group name="Analyst">
        <member name="Jenny"/>
    </group>
    <group name="Clerk">
        <member name="Jenny"/>
    </group>
    <group name="Controlled">
        <member name="Jenny"/>
    </group>
    <group name="Unclassified">
        <member name="Jenny"/>
    </group>
    <group name="Security Controller">
        <member name="Jenny"/>
    </group>
    <group name="Administrator">
        <member name="Jenny"/>
    </group>
</basicRegistry>
```

In this example, the user name is *Jenny* and the password is *Jenny*.

For more information about setting up security, see *Configuring an Analysis Repository Deployment* and Configuring a basic user registry for Liberty.

3. In a command line, navigate to the `toolkit\scripts` directory. Using an account with administrator permissions, enter the following command to start i2 Analyze with the WebSphere® Application Server security settings:

```
setup -t start
```

4. Start, or restart, the IBM HTTP Server that hosts the reverse proxy.

Configuring the connection between Cognos and the Information Store
In IBM Cognos Administration, configure the connection to the Information Store database.

Procedure

Complete the following steps to configure the connection to the Information Store database.

1. In IBM Cognos Administration, on the **Configuration** tab, click **Data Source Connections**.
2. On the toolbar, click the **New Data Source** icon.
3. Enter the name for the data source: `EIAA_InformationStore`. Then, click **Next**.
4. In the **Type** menu, select **IBM DB2**. Then, click **Next**.
5. Specify the **DB2 database name**, this value is the name of the Information Store database that is specified in the `<database>` element for the Information Store in the `topology.xml` file. For example, `ISTORE`.
6. Specify the **DB2 connect string**, for example `jdbc:db2://`*`host_name`*`:`*`port`*. Where *host_name* is the host of your Information Store database, and *port* is the port number that the database is listening on.

7. In the **Signon** pane, select **Password**. Then, specify the **User ID** and **Password** of a user that can connect to the Information Store database.
8. Click **Test the connection** to verify that Cognos can connect to the Information Store database. If the connection is successful, `Succeeded` is displayed in the **Status** column of the **Test the connection** pane. Then, click **Next**.
9. In the "**Specify the IBM DB2 connection string**" page, specify the **Server name**, **Port number**, and **Database name** with the values for your Information Store database. Then, click **Finish**.

What to do next

Connect a client to test the deployment of Enterprise Insight Analysis. For more information, see Connecting clients.

Configure your example deployment to match your requirements. For more information, see Configuring IBM i2 Analyze.

Connecting clients

When your example deployment has completed, you can connect to your data store using one of the supported clients.

Before you begin

- You must have at least one user set up within the application server that has permission to access items in i2 Analyze.
- You must have started i2 Analyze.

Procedure

To use Analyst's Notebook to connect, follow the instructions in Connecting IBM i2 Analyst's Notebook Premium to IBM i2 Analyze.

Opening the Intelligence Portal

You can open the Intelligence Portal from any client computer with access to the HTTP server that hosts the reverse proxy. Ensure that you can access the Intelligence Portal, and create, browse, and search for data in the Analysis Repository.

Procedure

1. Open a web browser, and navigate to `http://`*`host_name`*`/apollo` (where *`host_name`* is the fully qualified domain name or IP address of the HTTP server).
   i2 Analyze displays a login dialog.
2. Enter the name and password of a user who is registered in the application server.
3. Create, browse, and search for data, to ensure that the application is running.

   Note: When you create test items, ensure that the permissions are set up so that you have access to view them.

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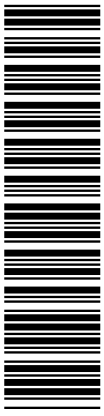

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