merative™

Merative Social Program Management 8.1

Cúram Business Intelligence
IBM Cognos Deployment Guide

Note

Before using this information and the product it supports, read the information in

Edition

This edition applies to Merative™ Social Program Management 8.0.0, 8.0.1, 8.0.2, 8.0.3, and 8.1.

Contents

1 Deploying Business Intelligence on IBM® Cognos

You can deploy Business Intelligence and Analytics content by using IBM® Cognos®. The default Cognos® content database is recommended. A detailed path through the installation process for IBM® Cognos® for use with Business Intelligence and Analytics is provided.

1.1 Introduction

About this Document

This guide describes how to deploy Business Intelligence and Analytics content using IBM® Cognos, if required - these tools are licensed separately by IBM® Cognos.

Prerequisites

This guide is intended for any reader who will be deploying BIA content using Cognos.

Intended Audience

This guide is intended for developers who are working on deploying BIA Reporting content on Cognos. It provides details on how to work with Cognos within the BIA Reporting framework.

Prerequisites

A working knowledge of Cognos is required. The reader should also have an understanding of Data Warehousing concepts and techniques.

1.2 Cognos Reporting Environment

Artifacts such as Cognos reports can be viewed/edited only with the purchase of a valid Cognos customer license. Should you wish to expand your use of such artifacts by developing your own, you should first contact your local Cognos representative.

The following sections provide information about how to configure and set up Cognos.

Installing Cognos

The following describes the Cognos reporting setup on a windows machine, **we recommend you use the default Cognos content database.** Ensure that any previous Cognos installations have been uninstalled first.

A web server must also be set up on the machine. The web server used was IIS v5.1 but other web servers should also work.

To install Internet Information Services (IIS) go to add/remove programs in Control Center and click on add/remove windows components on the left side and check the IIS option and install.

Note: After completion of the 'Configure the web server' section, the user should be able to open the Cognos page when the Cognos service has been started. Open web browser and type "http://computername/cognos10". The Welcome screen opens. This confirms that the installation process was successful.

Java Environment Updates Pre-Installation

About this task

Cognos is shipped with a Java JRE version that is not compatible with the Reporting Environment. Therefore, if Cognos is going to be installed on the same machine as the Reporting Environment, you must do the following:

Procedure

1. Remove the JAVA_HOME environment variable as this can cause problems.
2. Once Cognos is installed, re-create the JAVA_HOME environment variable.e.g C:\Program Files\Java\jdk1.5.0_06

Results

Note: If Cognos is being installed on its own machine then you do not need to set a Java Home as Cognos can use the version that it comes with.

Install the Server Component

Procedure

1. Insert the CD IBM Cognos 10 Business Intelligence Server and install the server.
2. We recommend that you use the Cognos content database
3. Proceed through the steps and when choosing the Component Selection, maximize 'IBM Cognos Business Intelligence' and ensure all the following have a tick to the left of them:

   - Application Tier Components
   - Gateway
   - Content Manager
   - Cognos Content Database

   indicating they are selected.

Install the Framework Manager

Procedure

1. Insert the CD IBM Cognos 10 Business Intelligence Modeling and install the Framework Manager.
2. We recommend that you to use the same installation path for Framework Manager as used for Cognos Server.

Java Environment Update Post-Installation

In order for Cognos to work, copy the contents of the %COGNOS_HOME%/bin/jre/version.xx/lib/ext directory to the JAVA_HOME/jre/lib/ext directory but do not overwrite any existing.jar files.

Configure the web server

About this task

Internet Information Services(IIS) needs to be installed before starting this step. To install IIS go to add/remove programs in Control Center and click on add/remove windows components on the left hand side and check the IIS option and install.

Procedure

1. Open Windows explorer, Right click on "My computer" and select "Manage".
2. In the new window expand and select Services and Applications --> Internet Information Services --> Default Web Site.
3. Create a Virtual directory by right clicking on Default Web Site --> New --> Virtual Directory.
4. The virtual directory must be by name **cognos10** pointing to the location c10_location/webcontent with read permissions.
5. A second virtual directory should be created within cognos10(right click on Cognos10 New-->Virtual Directory) as **cgi-bin** pointing to the location c10_location/cgi-bin with execute permissions.

Deploying BIA Reporting to Cognos

This section details the user about the steps needed to connect to the BIA Reporting Environment.

Prepare the Cognos content for deployment

About this task

Cognos content must be deployed to the Cognos deployment folders before any Reports can be viewed in Cognos. The "appbuild cognos.all" command copies files to a deployment preparation location "%reporting_dir%\build\cognos, these files are then copied to the Cognos deployment folder, e.g. to the %cognos_home%\webcontent\samples folder.

Procedure

1. Start a DOS command shell
2. Navigate to Reporting\components directory run **appinit.bat**

Prepare the Cognos content for deployment - Same Machine

About this task

If Cognos is installed on the same machine as the build environment then execute the following steps:

Procedure

1. Add COGNOS_HOME to the environment.variables in BIApplication.properties. Set the COGNOS_HOME variable to the parent of the webcontent folder. if you have C:\Program Files\cognos\c10\webcontent, then set COGNOS_HOME= C:\Program Files\cognos\c10.
2. Run "appbuild cognos.all" from %reporting_dir%\components\core. This will copy the deployment files to %cognos_home%\webcontent\samples.

Prepare the Cognos content for deployment - Remote Machine

About this task

If Cognos is on a remote server carry out the following steps:

Procedure

1. Share the directory %Cognos_home% folder on the Cognos server.
2. Map a network drive from the Reporting machine to the shared location on the Cognos server.
3. On the Reporting server create a COGNOS_HOME variable and point this to the mapped network drive.

Prepare the Cognos content for deployment - Shared Directory Issues

About this task

If for any reason it is not possible to share the directory on the Cognos server then the following manual steps must be completed:

Procedure

Copy everything from %reporting_dir%\build\cognos on the machine with the build environment to %Cognos_home%\webcontent\samples on the Cognos server.

Update the Cognos Configuration

About this task

Steps to setup Cognos Configuration.

Procedure

1. Open the Cognos configuration window, Start -> Programs -> IBM Cognos10 -> IBM Cognos Configuration.
2. Select Environment option in the left hand pane.
3. Set the value of Deployment file location as C:\Program Files\cognos\c10\webcontent \samples\deployment directory.
4. Save the changes.
5. Start/Restart the Cognos Services by selecting menu option, Action -> Start/Restart

This section shows the steps to open a project in Framework Manager.

Procedure

1. To open Framework Manager, Start -> Programs -> IBM Cognos10 -> Framework Manager.
2. Select "Open a project".
3. Select the required cpf file.
4. Click on Open.

Setup of Cognos connection to datamarts using DB2.

About this task

Note: - Follow below steps when DB2 and Cognos are installed in the same machine.

Procedure

1. Open web browser and type "http://computername/cognos10".If the Welcome screen opens then click the link to "Administer IBM Cognos Content" from the Administration section.
2. Select Configuration tab and "Data Source Connection" from the left hand pane.
3. Select "New Data Source" icon.
4. Mention the datasource name as **'curamreporting'** (do not change the datasource name), and let the location be default one. If the datasource name already exists then click on 'curamreporting' and select the "Connection" Icon and enter the Connection Name and click Next.
5. Select "DB2" from the drop down list of TYPE and set "Isolation level" to default.
6. Click Next
7. Enter "datamart" in DB2 Database name.(Assuming that user had created the database by name Datamart)
8. Check all option under "Signons".
9. Enter "db2admin" for the Username and Password.
10. Click on "Test the connection" link.
11. Click Test. Should be able to see the test succeeded, else go back to previous page and check the Login details.
12. Click Close, will take you to the previous page.
13. Click Next.
14. Set the Commands page to default.
15. Click Finish.

Setup of Cognos connection to datamarts using Oracle.

About this task

Note: - Follow below steps when Oracle and Cognos are installed in the same machine.

Procedure

1. Open web browser and type "http://computername/cognos10".If the Welcome screen opens then click the link to "Administer IBM Cognos Content" from the Administration section.

2. Select Configuration tab and "Data Source Connection" from the left hand pane.

3. Select "New Data Source" icon.

4. Mention the datasource name as **'curamreporting'** (do not change the datasource name), and let the location be default one. If the datasource name already exists then click on 'curamreporting' and select the "Connection" Icon and enter the Connection Name and click Next.

5. Select "ORACLE" from the drop down list of TYPE and set "Isolation level" to default.

6. Click Next

7. Enter the Sql * Net connect String as (DESCRIPTION=(ADDRESS_LIST=(ADDRESS=(PROTOCOL=TCP)(HOST=system name)(PORT=1521)))(CONNECT_DATA=(SERVICE_NAME=orcl)))

8. Check all option under "Signons".

9. Enter the Userid and password. e.g., datamart and p.(Assuming user by name 'Datamart' is already created with password "p")

10. Click on "Test the connection" link.

11. Click Test. Should be able to see the test succeeded, else go back to previous page and check the Login details.

12. Click Close, will take you to the previous page.

13. Click Next.

14. Set the Commands page to default.

15. Click Finish.

Importing Reports.

Procedure

1. Open web browser and type "http://computername/cognos10".If the Welcome screen opens then click the link to "Administer IBM Cognos Content" from the Administration section. If the Cognos Connection page appears, click the 'Launch' menu and scroll down to the 'IBM Cognos Administration' option.

2. Select Configuration tab.

3. Select Content Administration from the left hand pane.

4. Select "New Import" icon from icons list (4th icon in list at top right corner of the Cognos page).

5. Select the deployment file from the list and click Next.

6. Set the name as default and click Next.

7. Check each of the following:

   - The Deployment File
   - Disable after import
   - Include report output versions

     - Replace existing entries
   - Include run history

     - Replace existing entries
   - Include schedules

     - Replace existing entries

and click next.

8. Check each of the following:

   • Include data sources and connections

       • Replace existing entries

   and click next

9. Set the General option to default and click Next.
10. Review the Summary. Click Next.
11. Select "Save and Run Once" in the Action page.
12. Click on Finish.
13. Select "Upgrade all report specifications to the latest version".
14. Click on Run
15. Check the view option and click OK to see the details for Import.
16. After a few seconds, the user should be able to see the deployed file in the Administration page.
17. Click on "Home" Icon to start accessing the reports.

Uninstalling Cognos (upgrading to a newer version)

About this task

To date we have found that there is no upgrade for Cognos, i.e. Cognos recommend an uninstall and complete reinstall.

We have found that if you do not follow the following process when un-installing Cognos you may have issues starting the Cognos services.

Procedure

1. To Uninstall Cognos(whatever the version is) click on Start -> Programs -> IBM Cognos 10 -> Uninstall IBM Cognos 10 -> Uninstall IBM Cognos 10. Select all in the wizard and follow the steps.
2. If the Cognos directory is still present on disk delete it manually
3. Uninstall IIS and reboot - then remove the directory C:\Inetpub otherwise you will get port conflicts as IIS remembers that the Cognos port was used previously.
4. Delete your JAVA_HOME environment variable - this forces the Cognos installer and runtime system to use the pre-packaged version of java that is shipped with Cognos.

Directory Structure & Artifacts

This section contains the recommended directory structure for Cognos artifacts.

..\Cognos

These 4 subfolders are recommended:

• Cubes - Any cubes of data are placed here.

- Deployment - All.zip files are place here. Static reports are exported from Cognos into zip files.
- Images - Images files are placed here. Images files must be copied to the "%COGNOS_HOME%\webcontent\samples\images" folder.
- Metadata - Framework manager meta data is placed here.

These folders will contain the Cognos meta data and content.

1.3 Developing With Cognos for an Upgrade

Overview

BIA Reporting upgrades provide enhanced functionality and bug fixes. As such, it is beneficial for a project to implement a BIA Reporting based solution in such a way as to facilitate taking on a new release of the framework. To support an upgrade, there are a number of steps that should be taken before development is started. These steps include understanding the BIA Reporting directory structure, implementing source code control, and using prefixes for all new artifacts.

At the start of a project, as well as throughout the life cycle of a project, the way in which custom functionality is developed greatly impacts the success of an upgrade. Building custom functionality basically comes down to modifying instances of BIA Reporting source artifacts or creating new instances of these artifacts.

Starting a new project with BIA Reporting

There are a number of steps that should be taken before development is started to ensure successful BIA Reporting upgrades. These steps include understanding the BIA Reporting directory structure, implementing source code control, and using prefixes for all new artifacts.

Understand the BIA Reporting directory structure

Knowledge of the BIA Reporting directory structure is required to understand where development artifacts are located, how they are organized, and where to store changes to these artifacts. Note that to access the BIA Reporting directory structure, you must first install the development version of BIA Reporting.

Use Prefixes

It is advisable that you prefix all new source Cognos artifacts with a relevant acronym or abbreviated word. Use the same acronym or abbreviated word throughout. As the project progresses, this will make project additions to core artifacts more obvious. This distinction becomes very useful as the development effort grows. Generally most projects will be described by some kind of acronym. This acronym is a good candidate to use as the prefix.

BIA Reporting Source Artifacts

The method in which a project develops custom functionality greatly impacts the success of an upgrade. Building custom functionality basically comes down to modifying instances of BIA

Reporting source artifacts or creating new instances of these artifacts. BIA Reporting source artifacts can be grouped into server and client development artifacts.

New/Changed Cognos Content

Do not change any existing Cognos artifacts directly. When developing Cognos reports ensure that these reports are exported to a separate deployment package (zip) to the sample reports provided. When developing with Framework manager create a new project for any new or changed artifact meta data, you can import/reference the sample project provided when building framework manager meta data and deploying to Cognos packages.

1.4 Troubleshooting

Introduction

This chapter details possible troubleshooting tips and fixes that the user may find helpful for the Cognos reports shipped with the application.

CFG-ERR-0106 Error When Starting the IBM Cognos 10 Service in IBM Cognos Configuration

Condition

Build **client.birt** fails to run.

Cause

When starting the IBM Cognos 10 service, the following error is received:

```
CFG-ERR-0106 IBM Cognos Configuration received no response from
    the IBM Cognos 10 service in the allotted time.
    Check that IBM Cognos 10 service is available and properly
    configured.
```

The IBM Cognos 10 service might need more time to start.

Remedy

Procedure

1. Extend the start time by configuring the *ServiceWaitInterval* and *ServiceMaxTries* properties in `c10_location/configuration/cogconfig.prefs`. *ServiceWaitInterval* represents the time interval, in milliseconds, at which Cognos Configuration checks the progress of the start request. By default, its value is 500. *ServiceMaxTries* represents the number of times that Cognos Configuration checks the progress of the start request. By default, its value is 360.
2. Open `c10_location/configuration/cogconfig.prefs` in an editor. This file is created automatically the first time you open Cognos Configuration.

3. Add the following code to the file:

```
ServiceWaitInterval=number of milliseconds ServiceMaxTries=number of times
```

Add the numeric values that correspond to your configuration needs.

4. Save the file. Using Cognos Configuration, start the Cognos 10 service.

UDA-SQL-0432 Unable to locate the gateway 'cogudaor'.

Condition

When setting up of a Cognos connection to datamarts using Oracle the following error is received:

```
QE-DEF-0285 Logon failure.
     QE-DEF-0325 The cause of the logon failure is:
     QE-DEF-0068 Unable to connect to at least one database
 during
     a multi-database attach to 1 database(s) in:
     UDA-SQL-0432 Unable to locate the gateway 'cogudaor'.
```

Cause

The machine where Cognos is installed must have the ORACLE run time client installed on it.

Cognos Report Error

Condition

Recommended. The shortdesc element is optional and can be either on its own or inside an element..

Cause

Required. Clearly state the symptoms of the problem.

The model or package */content/package[@name='core case datamart']/ model[@name='2007-01-25T11:44:31.291Z']* does not exist or you are not allowed to use it because of security settings.

<tsCauses>Optional. Clearly state the causes of the problem.</ tsCauses><tsEnvironment>Optional. Describe any environmental details that are not already in the title or short description.</tsEnvironment><tsDiagnose>Optional. Clearly state the steps necessary to diagnose the problem. Optionally, include appropriate response role elements. Alternatively, imbed a task topic or conref that provides the steps to diagnose the problem.<tsUserResponse>Optional. When you have particular actions that are performed by particular users, use one or more of the ts*Response elements.</tsUserResponse></tsDiagnose>

The report needs to be rebound to its report package. Either open the report in Report Studio and from the file menu select package, choose the right package and save the report. Or for example select the "core case datamart" folder on the Cognos home page, select "more" on the right hand side of any report, select "Set properties" then "link to package" and rebind to the correct package.

Remedy

Procedure

sss

Setup of Cognos connection to Datamarts using Oracle

Condition

Cause

After following the 'Setup of Cognos connection to datamarts using Oracle' steps, and when opening http://computername/cognos10, the following error is received:

```
Error 401 - unauthorized access to this page
```

Go back to the 'Configure the webserver' step (part 4), right click on the virtual directory 'cognos10' previously created, choose properties and tick all the following boxes:

- Script source access
- Read
- Write
- Directory Browsing
- Log visits
- Index this resource

After clicking OK, complete the 'Update the Cognos Configuration' steps. Then proceed through the steps in 'Setup of Cognos connection to datamarts using ORACLE' and once complete, undo the changes made to the properties by going back to the cognos10 properties and only have the following box's ticked:

- Read
- Log Visits
- Index this resource

Recomplete the *Update the Cognos Configuration* steps.

Remedy

Procedure

sss

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