This document contrasts the 32 and 64 bit install packages available for IBM Cognos 10.1 General availability and the IBM Cognos 10.1.1 Refresh Pack in order to provide high level guidance to be able to answer the question: “Should I use the 32 or 64 bit IBM Cognos Business Intelligence (BI) install?”

Overview

The IBM Cognos BI Server install package makes up part of the IBM Cognos Business Intelligence Version 10.1 and 10.1.1 product offering. For the purpose of this document the installable components have been simplified and broken into the following two points of interest.

Java and Java Associated Components

The IBM Cognos BI Server installs both Java and associated C++ based components. Although components such as the Dispatcher, Content Manager and the Dynamic Query Mode are Java, these components use the associated C++ components to access external components using non-Java compatible APIs. These Java and associated C++ based components can be run in the supplied Apache Tomcat application server, or any other supported application server.

While Java is intrinsically neither 32 nor 64-bit, the associated C++ based components are. This means that in a 32 bit IBM Cognos BI Server install, the associated C++ based components are
32 bit and therefore require a 32 bit Java runtime environment. Likewise, in a 64 bit IBM Cognos BI Server install, the associated C++ components are 64 bit and therefore require a 64 bit Java runtime environment.

**Report Server Component**

The Report Server consists of the BiBusTKServerMain C++ program which comprises the Report and Batch Service. Depending on the bit depth the Report Service can service Compatible Query Mode requests and pass requests to the Java based Dynamic Query Mode.

**The IBM Cognos BI Server 32 and 64 Bit Install Packages Explained**

The following section will provide an overview of the IBM Cognos 10 and 10.1 install packaged for both 32 and 64 bit depth. Each section will indentify the bit depth of each of the points of interest discussed earlier. It will also provide a list of factors which would force decision to use that particular install package.

**IBM Cognos 10.1 32 Bit BI Server**

This install package contains 32 bit components only. The Java and the associated C++ based components are 32 bit and therefore require a 32 bit Java runtime environment. The Report Server is 32 bit and has the ability to service Compatible Query Mode requests. It also has the ability to pass requests to the 32 bit, Java based Dynamic Query Mode.

**Decision Factors for the 32 bit IBM Cognos Server 10.1 Install**

When using IBM Cognos 10.1, one would choose this install package if:

- They are running a 32 bit operating system.
- They are running a 32 bit application server.
- The security provider is an IBM Cognos Series 7 Namespace.
- The security provider is a SiteMinder Namespace.
- They require access to both the Compatible and the Dynamic Query mode.

**IBM Cognos 10.1 64 Bit BI Server**

This install package contains both 32 bit and 64 bit components. The Java and the associated C++ based components are 64 bit and therefore require a 64 bit Java runtime environment. The Report Service is 32 bit and has the ability to service Compatible Query Mode requests. It also has the ability to pass requests to the 64 bit, Java based Dynamic Query Mode.

**Decision Factors for the 64 bit IBM Cognos Server 10.1 Install**

When using IBM Cognos 10.1, one would choose this install package if:

- They are running a 64 bit operating system.
- They are running a 64 bit application server.
• They require access to both the Compatible and the Dynamic Query mode.
• They require more address space for the Java and the associated C++ components.

IBM Cognos 10.1.1 32 Bit BI Server

Install Package Contents

This install package contains 32 bit components only. The Java and the associated C++ based components are 32 bit and therefore require a 32 bit Java runtime environment. The Report Service is 32 bit and has the ability to service Compatible Query Mode requests. It also has the ability to pass requests to the 32 bit, Java based Dynamic Query Mode.

Decision Factors for the 32 bit IBM Cognos Server 10.1.1 Install

When using IBM Cognos 10.1.1, one would choose this install package if:

• They are running a 32 bit operating system.
• They are running a 32 bit application server.
• The security provider is a SiteMinder Namespace.
• They require access to both the Compatible and the Dynamic Query mode.

IBM Cognos 10.1.1 64 Bit BI Server

This install package contains both 32 bit and 64 bit components. The Java and the associated C++ based components are 64 bit and therefore require a 64 bit Java runtime environment. This install package provides both a 32 and a 64 bit Report Service. The 32 bit Report Service has the ability to service Compatible Query Mode requests. It also has the ability to pass requests to the 64 bit, Java based Dynamic Query Mode. The 64 bit Report Service can only pass requests to the 64 bit, Java based, Dynamic Query Mode. By default the IBM Cognos BI server install is configured to use the 32 bit Report Service. In addition a single IBM Cognos BI server install can either run the 32 bit or the 64 bit Report Service, it cannot run both. Information on how to change the Report Service execution mode can be found within Chapter 7 of the IBM Cognos Business Intelligence Version 10.1.1 Installation and Configuration Guide.

Decision Factors for the 64 bit IBM Cognos Server 10.1.1 Install

When using IBM Cognos 10.1.1, one would choose this install package if:

• They are running a 64 bit operating system.
• They are running a 64 bit application server.
• They require access to both the Compatible and the Dynamic Query mode in combination.

OR

• They require access to only the Dynamic Query Mode.
• They require more address space for the Java and the associated C++ components.
Decision Factors for using the 32 bit Report Service

When using IBM Cognos 10.1.1, one would choose to use the 32 bit Report Service process if:

- They require access to both the Compatible and the Dynamic Query mode in combination due to the different Compatible and Dynamic Query Mode data source conformance.

Decision Factors for using the 64 bit Report Service

When using IBM Cognos 10.1.1, one would choose to use the 64 bit Report Service process if:

- They only require access to the Dynamic Query Mode by only utilizing data sources that fall within its conformance.
- They require more address space for the BiBusTKServerMain process allowing it to render large reports which previously ran out of memory.

Appendix A: Install Package Decision Tree

The following decision tree starts off with the question, “Are you using a 64 bit supported Operating System”. If the answer is no then the IBM Cognos 32 bit install package should be used. If the answer is yes then the next question is “Are you using a 64 bit supported Application Server”. If the answer is no then once again the IBM Cognos 32 bit install package should be used. If the answer is yes then the next question is “Do all the query data sources fall within the IBM Cognos Dynamic Query mode conformance?”. If the answer to that question is yes, then the IBM Cognos 64 bit install package should be used with the 64 bit Report Service configured. If the answer to that is no then an administrator can either use the IBM Cognos 64 bit install configured to use the 32 bit Report Service or, if the infrastructure allows, do two parallel installs of the IBM Cognos 64 bit install, one configured to use the 32 bit Reports Service and the other to use the 64 bit Report Service. In this scenario IBM Cognos Dynamic Query Mode requests will need to be routed to the correct 64 bit Report Service through the use of routing rules.

This decision model is drawn out below,
Decision Model

Are you using a supported 64 bit operating system?

Yes

Use the IBM Cognos 64 bit install package

No

Are you using a supported 64 bit application server?

Yes

Use the IBM Cognos 64 bit install package using the 64 bit report service

No

Do all your query data sources fall within the IBM Cognos dynamic query mode conformance?

Yes

Use the IBM Cognos 64 bit install package using the 64 bit report service

No

Does your infrastructure allow for multiple installs of the IBM Cognos BI server?

Yes

Install two separate installs of the 64 bit install package. Configure one to use the 32 bit report service and configure the other to use the 64 bit report service. Ensure all dynamic query mode packages are routed to the 64 bit report service by setting up routing rules.

No

Use the IBM Cognos 32 bit install package

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