

IBM WebSphere Information Integrator
Content Edition



Installation Guide for Content Integration Server

Version 8.3

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About the Installation Guide for Content Integration Server

Use this book to help you install WebSphere Information Integrator Content Edition.

WebSphere Information Integrator Content Edition provides federated access to all classes of information, which allows global organizations to enable portals, collaborative applications, customer relationship management and other key applications to work with distributed content and work processes throughout the extended enterprise.

The WebSphere Information Integrator Content Edition components are installed when you install WebSphere Information Integrator Content Edition. The term *content integration server* is used in the documentation for WebSphere Information Integrator Content Edition unless references are made to CD labels or specific product components.

This book does not provide specific information about how to install WebSphere Application Server. See your WebSphere Application Server documentation for information about WebSphere Application Server installation.

Who should read this book

Read this book if you want to install the content integration server components and deploy on WebSphere Application Server or WebLogic application server. You should understand how to configure your operating system and have the privileges and authorities of a system administrator. You should review your application server documentation before you install WebSphere Information Integrator Content Edition.

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Chapter 1. Installation overview

When you run the WebSphere Information Integrator Content Edition installation wizard, you can choose which WebSphere Information Integrator Content Edition components and connectors to install. After you install the components and connectors, you must complete additional configuration steps.

Components for WebSphere® Information Integrator Content Edition

WebSphere Information Integrator Content Edition, Version 8.3 includes the following components.

Enterprise Archive

The complete WebSphere Information Integrator Content Edition application, including all enterprise beans, Web applications, and supporting Java™ Archives are bundled into a single Enterprise Archive (EAR) file for easy deployment into a J2EE-compliant application server. The installer creates the EAR file, called VeniceBridge.ear, in the WebSphere Information Integrator Content Edition installation directory.

Enterprise JavaBeans™

The following core components of WebSphere Information Integrator Content Edition, including all connectors to content repositories and workflow systems, are implemented as enterprise beans.

- Access services
- Server result set
- View services
- Connectors

You can use the administration tool to enter the JNDI names and RMI URLs that are required by EJBs as part of content integration server configuration.

Web applications

WebSphere Information Integrator Content Edition includes, at a minimum, the services monitor Web application.

When you install WebSphere Information Integrator Content Edition you can choose to install the Web client and the subscription event services administration application.

Services

The primary components of WebSphere Information Integrator Content Edition, the enterprise beans, are designed to run in a J2EE application server, which provides scalability, portability, fault tolerance, and other benefits to the applications that use content integration server. However, the enterprise bean configuration model recommends that you configure enterprise beans statically, through EJB deployment descriptors, before deploying enterprise beans. When you configure enterprise beans statically, the application must be redeployed any time the application configuration changes. Furthermore, the EJB configuration model places significant restrictions on enterprise beans, for example, disallowing thread management.

To address limitations in the EJB model, and comply with the EJB specification, certain services run outside the EJB container of an application server. In the standard installation, these services run as part of the services Web application and communicate with other content integration server components by using Java Remote Method Invocation (RMI). These services must be available whenever the content integration server client API is used. However, these services can be started and stopped independently of the application server itself.

Services monitor

The services monitor is a simple utility that can monitor the status of various content integration server services. You can use the services monitor to start, stop, or restart services and view status messages.

Administration tool

You can use the administration tool to configure the installed content integration server components. The administration tool is a Java application with a graphical user interface that you can run in stand-alone mode, or when connected to the content integration server configuration server to allow dynamic updates to the configuration. A shell script is used to start the administration tool.

Optional packages

When you install WebSphere Information Integrator Content Edition, you can choose to install the following optional packages that might be necessary, depending on your business needs.

Table 1. Optional packages for content integration server

Optional package	Purpose
Subscription event services	Provides a framework for subscribing to changes in content, folders, work items, and queues.
Web client	A browser-based application that provides access to the features of the content integration server. The Web client also includes Web components that are necessary for developing content-enabled Web applications.

Related concepts

Chapter 4, “Overview of single-server and distributed-server installations,” on page 9

All WebSphere Information Integrator Content Edition components can be installed on a single server or distributed across many servers to support the various system architecture requirements. Performing a distributed-server installation is more complex than performing a single server installation and requires a greater knowledge of J2EE concepts and deployment steps and of WebSphere Information Integrator Content Edition and its components.

Chapter 2. Required software and supported operating systems

Before you install WebSphere Information Integrator Content Edition, ensure that you have the required software and a supported operating system.

Supported operating systems

For application servers that run on Microsoft® Windows® operating systems, content integration server runs on the following operating systems:

- Windows 2000
- Windows 2003

For application servers that run on UNIX®, Linux®, or AIX® operating systems, content integration server runs on the following operating systems:

- IBM® AIX 5.2 (Power 4)
- IBM AIX 5.3 (Power 5)
- Red Hat Enterprise Linux AS 3
- Red Hat Enterprise Linux AS 4
- Solaris 9
- SUSE LINUX Enterprise Server 9 (SLES9)

Required levels of Java

Content integration server will run on any 1.4.2 compatible Java Virtual Machine (JVM) but is supported only on certain platforms. Specific connectors often require access to native libraries and are limited to certain platforms where those native libraries are available.

WebSphere Information Integrator Content Edition fully supports the EJB architecture and requires an application server that is compatible with EJB 2.0. WebSphere Information Integrator Content Edition can run on the following application servers:

- IBM WebSphere Application Server, Version 5.1.1.3
- IBM WebSphere Application Server, Version 6.0.0.2
- IBM WebSphere Application Server, Version 6.0.1
- WebLogic Application Server, Version 8.1 (SP4)

Specific application servers often require specific hardware platforms and Java VM versions.

Content integration server requires the following minimum levels of Java infrastructure for complete functionality.

Java 2 Enterprise Edition (J2EE) Version 1.3-compliant application server, including:

- Enterprise JavaBeans 2.0
- Java Message Service 1.0
- Java Server Pages 1.2

Java Servlets 2.3

Java 2 Standard Edition (J2SE) with Java Management Extensions (JMX)
JMX 1.0

Java Virtual Machine (JVM) 1.4.2 or later

Related reference

Chapter 3, “Hardware requirements,” on page 7

Processor, memory, and disk space requirements depend on your operating systems and how you plan to use content integration server. Custom applications, high volume, or large document or image sizes might require additional memory or processor capabilities. Your application server might impose additional minimum processor, memory, and disk space requirements.

Supported connectors and required versions of repositories

WebSphere Information Integrator Content Edition provides connectors that enable access to a variety of content repositories. Each connector supports the specified versions of the associated repository.

WebSphere Information Integrator Content Edition connectors support these repositories and versions:

IBM DB2® Content Manager

IBM DB2 Information Integrator for Content (formerly known as Enterprise Information Portal), version 8.2 or later if you are using IBM DB2 Content Manager 8.2. (Not required for IBM DB2 Content Manager 8.3.)

IBM DB2 Content Manager, Version 8.2 or later.

IBM DB2 Content Manager OnDemand

IBM WebSphere Information Integrator for Content 8.2 Fix Pack 8, with IBM OnDemand 7.1 Connector.

IBM WebSphere Information Integrator for Content 8.3.

IBM Lotus® Domino® Document Manager

Lotus Notes®: refer to your IBM Lotus Domino Document Manager documentation for the supported versions of Lotus Notes.

IBM Lotus Domino Document Manager 6.5.1.

Domino Document Manager Desktop Enabler for Domino Document Manager 6.5.1. (You must install this product on the server with the Lotus Domino Document Manager connector.)

IBM Lotus Notes

Lotus Notes client 5.0.5 or later.

Lotus Domino Server 5.0.5.

IBM Lotus Notes 6

Lotus Domino Server 6.0.

IBM WebSphere MQ Workflow

IBM MQSeries® Version 5.3 and IBM WebSphere MQ Workflow 3.6 including the Java client API (fmcojapi.jar).

IBM WebSphere Portal Document Manager

WebSphere Application Server 5.1.1.3 and WebSphere Portal Server 5.1.0.1.

WebSphere Application Server 6.0.1 and WebSphere Portal Server 5.1.0.1.

Documentum

Documentum Foundation Classes version 4.2.x to connect to Documentum 4.2.x.

Documentum Foundation Classes version 5.2.5 to connect to Documentum 5.2.5 or 4.2.x.

Documentum Foundation Classes version 5.3 to connect to Documentum 5.2.5 or 5.3.

FileNet BPM

FileNet BPM 3.0 and 3.5.

FileNet CS and FileNet IS

FileNet IDM Client 3.3 FP1.

FileNet IS 3.6 and 4.0.

FileNet CS 5.3 and 5.4.

FileNet Image Services Resource Adapter

FileNet Images Services Resource Adapter Version 3.2 or later.

FileNet P8 Content Manager

FileNet P8 Content Manager 3.0 and 3.5.

Hummingbird® DM

Hummingbird DM 5.1.0.5 SR4.

Interwoven TeamSite

Interwoven TeamSite 5.5.2 and 6.5.1.

Microsoft NTFS

Windows NTFS-based file system (Windows 2000, Windows Server 2003). FAT and FAT32 file systems are not supported.

Microsoft Indexing Service. Microsoft Indexing Service is normally installed by default in the Windows 2000 and Windows Server 2003 operating systems.

OpenText Livelink

OpenText Livelink API Version 9.5.

Relational Database Management System (RDBMS)

Any relational database management system that has a JDBC 2.0-compliant driver.

Stellent

Stellent Content Server 5.1.1.

Related concepts

Connectors

Related reference

Chapter 3, "Hardware requirements," on page 7

Processor, memory, and disk space requirements depend on your operating systems and how you plan to use content integration server. Custom applications, high volume, or large document or image sizes might require additional memory or processor capabilities. Your application server might impose additional minimum processor, memory, and disk space requirements.

Chapter 3. Hardware requirements

Processor, memory, and disk space requirements depend on your operating systems and how you plan to use content integration server. Custom applications, high volume, or large document or image sizes might require additional memory or processor capabilities. Your application server might impose additional minimum processor, memory, and disk space requirements.

Disk space requirements for the WebSphere Information Integrator Content Edition

500 MB

Browser client (viewer applet or Web client) for content integration server

128 MB of free RAM

Intel® Pentium® III 500 MHz or higher (or RISC equivalent)

Image size, color depth, and format conversions can significantly increase the required memory and processing capability of the client computer.

Disk space requirements for Information Center and other documentation (for all supported languages)

250 MB

Java client for content integration server

256 MB of free RAM

Intel Pentium III 500MHz or higher (or RISC equivalent)

Java developer workstation for content integration server

256 MB of free RAM

Intel Pentium 4 1.4 GHz or higher (or RISC equivalent)

Server (workgroup development) for content integration server

1 GB of free RAM

Dual Intel Pentium Xeon 1 GHz or higher (or RISC equivalent)

Related concepts

“Supported connectors and required versions of repositories” on page 4
WebSphere Information Integrator Content Edition provides connectors that enable access to a variety of content repositories. Each connector supports the specified versions of the associated repository.

Related reference

Chapter 2, “Required software and supported operating systems,” on page 3
Before you install WebSphere Information Integrator Content Edition, ensure that you have the required software and a supported operating system.

Chapter 4. Overview of single-server and distributed-server installations

All WebSphere Information Integrator Content Edition components can be installed on a single server or distributed across many servers to support the various system architecture requirements. Performing a distributed-server installation is more complex than performing a single server installation and requires a greater knowledge of J2EE concepts and deployment steps and of WebSphere Information Integrator Content Edition and its components.

A single-server installation requires the fewest steps and provides quick access to all key WebSphere Information Integrator Content Edition features, including access to your supported content management system. In a single-server installation, WebSphere Information Integrator Content Edition and the application server are installed on the same server and WebSphere Information Integrator Content Edition is deployed as an application in the application server.

The following figure shows a single-server configuration.

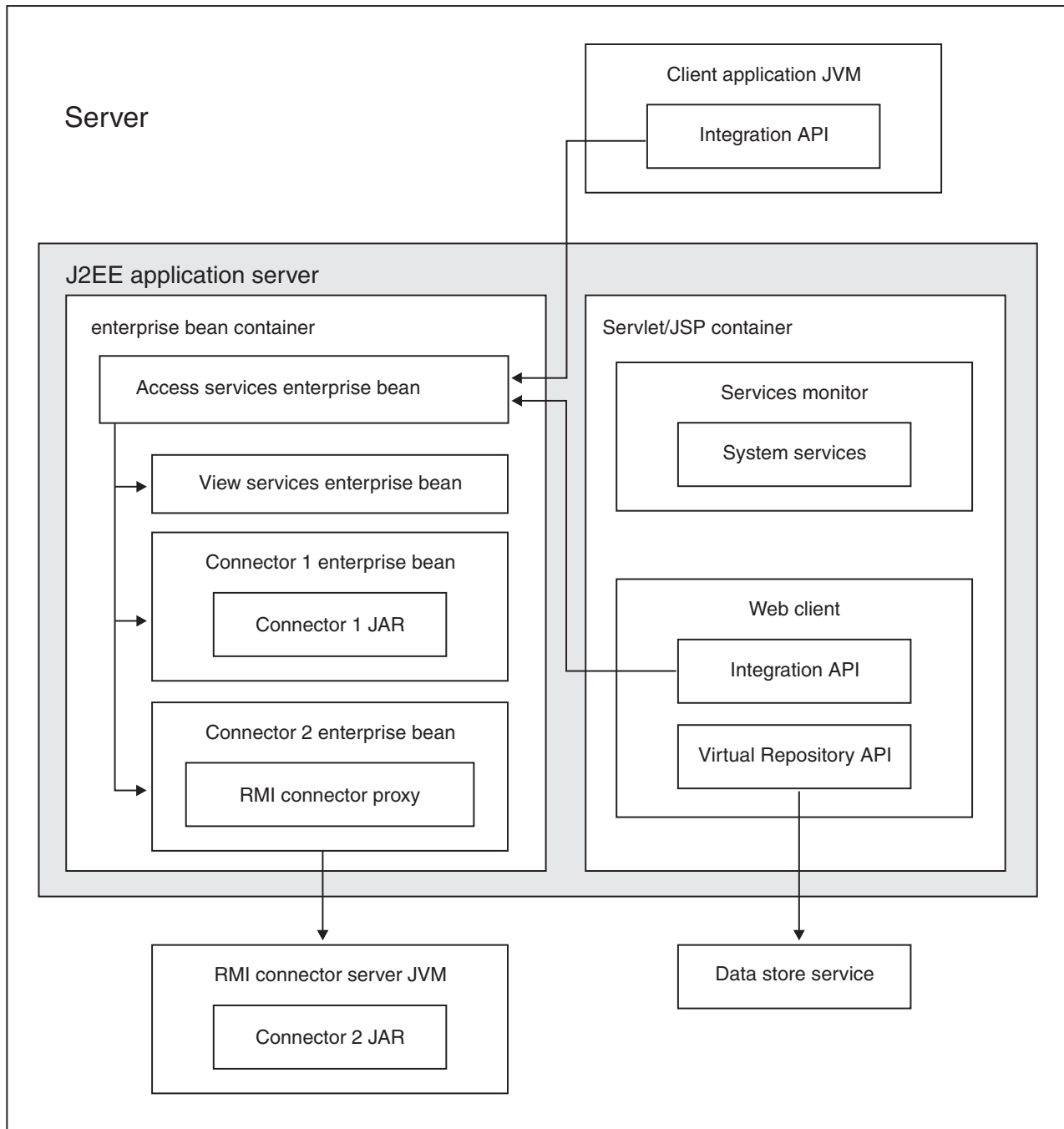


Figure 1. Single-server configuration

System architecture considerations, such as connectors that are supported only on a particular operating system or supporting certain scalability models, might require a distributed-server installation. You might need a distributed-server install in the following situations:

- Connector servers are separate from content integration server access services, and run in a J2EE application server or the RMI proxy connector server. This scenario can support high volumes or a specific platform that is required by a connector.

- A separate cluster of presentation servers run a custom Web application that uses content integration server and virtual repository APIs. This scenario can support scaling a custom application independently of content integration server.
- A separate cluster of application servers with view services are deployed to support high volumes of server-side conversion and image processing requests.
- A highly redundant, fault tolerant environment with fail-over clusters for a custom Web application and the access services and connector enterprise beans, and redundant, distributed content integration server services processes. This scenario can help ensure that the application continues to run, even in the event of a hardware or software component failure.

The following figure shows WebSphere Information Integrator Content Edition components in a distributed-server configuration.

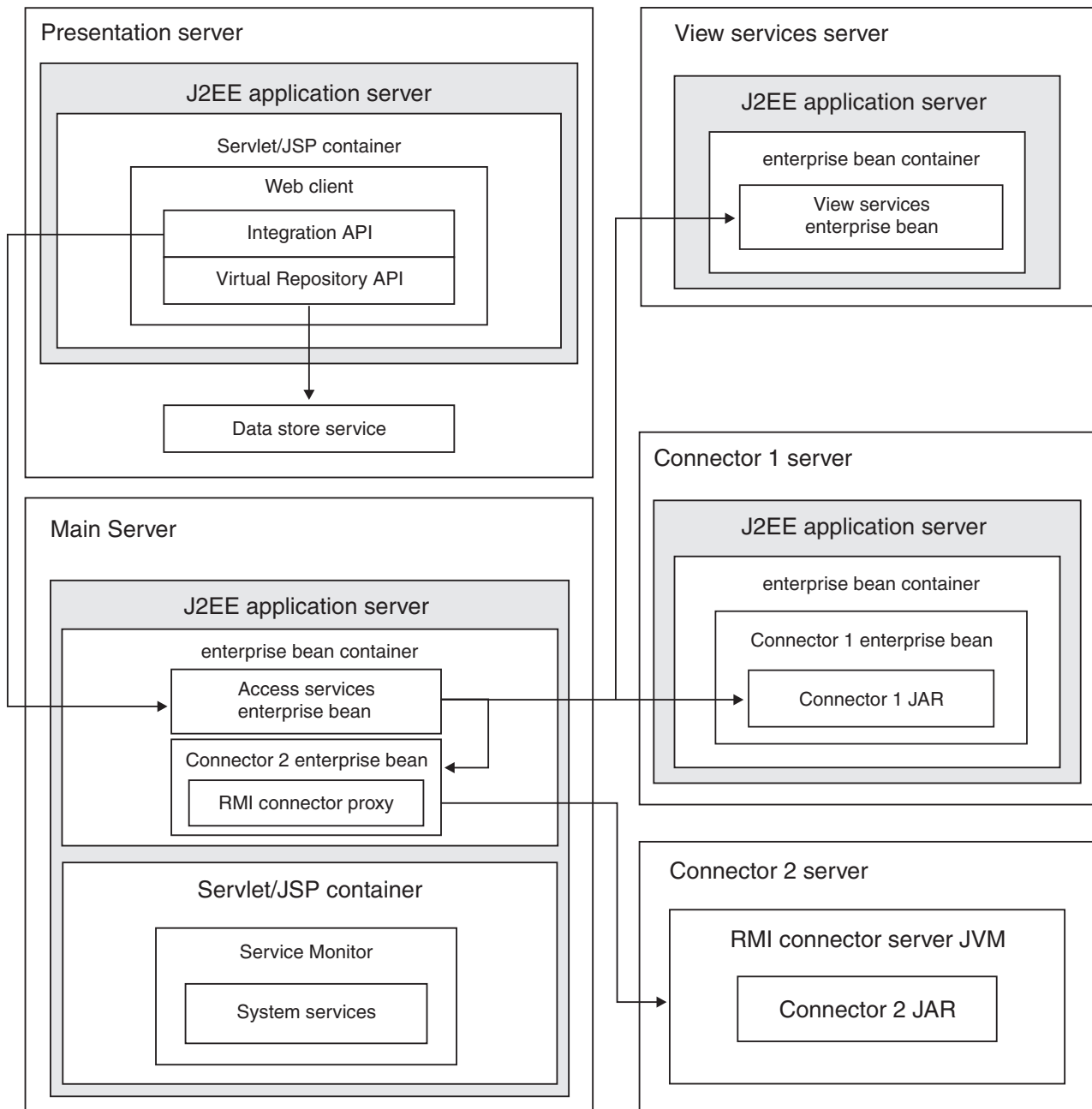


Figure 2. Distributed-server configuration

Related concepts

Chapter 1, "Installation overview," on page 1

When you run the WebSphere Information Integrator Content Edition installation wizard, you can choose which WebSphere Information Integrator Content Edition components and connectors to install. After you install the components and connectors, you must complete additional configuration steps.

Related tasks

Chapter 5, "Installing WebSphere Information Integrator Content Edition on a single server," on page 13

A single server installation requires the fewest steps and provides access to all of the key WebSphere Information Integrator Content Edition features.

Chapter 5. Installing WebSphere Information Integrator Content Edition on a single server

A single server installation requires the fewest steps and provides access to all of the key WebSphere Information Integrator Content Edition features.

Before you begin

Ensure that your operating system is at the correct, supported level.

You must install the J2EE application server on which you intend to deploy the content integration server components.

If you want to deploy content integration server to WebSphere Application Server, Version 6.0.1, you must install WebSphere Application Server, Fix Pack 6.0.0.2, before you can install WebSphere Application Server, Version 6.0.1.

You must have an existing application server that is available to deploy the content integration server EAR file.

About this task

For a single server installation, install all prerequisite software and content integration server on one server.

If WebSphere Application Server, Version 6.0.1 is installed on the same server, the installer program provides the option to automatically deploy content integration server to the application server.

For any application server other than WebSphere Application Server, Version 6.0.1, you must manually deploy content integration server according to the application server documentation.

Procedure

To install content integration server on a single server:

1. Start the WebSphere Information Integrator Content Edition installation wizard from a command line:

AIX Log in as the root user and enter `./setupaix`

Linux Log in as the root user and enter `./setupLinux.bin`

Solaris (SPARC)

Log in as the root user and enter `./setupSolaris.bin`

Solaris (Intel x86)

Log in as the root user and enter `./setupSolarisx86.bin`

UNIX (for UNIX operating systems that are not supported by content integration server)

Log in as the root user and enter `./setupUnix.sh`

Windows

Log in as Administrator and enter `setupwin32.exe`

You also have the option to enter one of the following commands to start the installation wizard:

Standard mode

```
java -cp setup.jar run
```

Silent mode

```
java -cp setup.jar run -silent -options response_file
```

Console mode

```
java -cp setup.jar run -console
```

Response file template

```
java -cp setup.jar run -options-template response_file
```

Record Options to Response File

```
java -cp setup.jar run -options-record response_file
```

2. Select a language for the installation wizard.
3. Select **Full** as the content integration server installation type.
4. Answer the remaining prompts.
5. In the installation summary window, review your configuration, then click **Next**.
6. Click **Finish**.
7. If you installed content integration server on a Windows operating system, you must restart your computer.
8. If you did not choose to deploy content integration server to WebSphere Application Server, manually deploy content integration server to your application server.
9. Start the administration tool. The administration tool displays the Options window.
10. Verify the default settings.
 - If you choose to have the installer program deploy content integration server on WebSphere Application Server, click **OK** to accept the default settings.
 - If you manually deployed content integration server to any other application server, you might need to change the default settings.
11. Create a connector configuration.
12. Complete additional connector-specific installation steps that are described in the connector documentation.
13. Test the connector configuration. To test the connector configuration from the administration tool, right click on the connector that you configured, and click **Test Connection** from the drop-down menu.
14. Ensure that the data store service is running. On Windows, the data store service starts automatically when you restart the server. For other operating systems, you must start the data store service.

Related concepts

Chapter 4, “Overview of single-server and distributed-server installations,” on page 9

All WebSphere Information Integrator Content Edition components can be installed on a single server or distributed across many servers to support the various system architecture requirements. Performing a distributed-server installation is more complex than performing a single server installation and requires a greater knowledge of J2EE concepts and deployment steps and of WebSphere Information Integrator Content Edition and its components.

Connectors

Related tasks

Chapter 17, “Starting the data store service,” on page 63

The data store service is a native component that runs outside of the application server.

Starting the administration tool

Configuring connectors

Chapter 9, “Deploying content integration server on a vendor-supplied application server,” on page 45

You can deploy content integration server on WebSphere Application Server, Version 6.0.1, WebSphere Application Server, Version 5.1.1, and WebLogic Application Server, Version 8.1 (SP4).

Chapter 21, “Uninstalling WebSphere Information Integrator Content Edition,” on page 73

The WebSphere Information Integrator Content Edition uninstallation program will remove WebSphere Information Integrator Content Edition including subscription event services, Web client, and connectors.

Chapter 6. Installing WebSphere Information Integrator Content Edition in a distributed environment

You can install WebSphere Information Integrator Content Edition in a distributed server environment.

About this task

Installing content integration server in a distributed architecture is an advanced task that only individuals who are trained in content integration server administration or individuals who are experienced in J2EE application deployment should perform.

The specific steps for installing WebSphere Information Integrator Content Edition in a distributed environment will vary, depending on the system architecture.

Procedure

To install WebSphere Information Integrator Content Edition in a distributed environment:

1. Start the WebSphere Information Integrator Content Edition install wizard from a command line:

AIX Log in as the root user and enter `./setupaix`

Linux Log in as the root user and enter `./setupLinux.bin`

Solaris (SPARC)

Log in as the root user and enter `./setupSolaris.bin`

Solaris (Intel x86)

Log in as the root user and enter `./setupSolarisx86.bin`

UNIX (for UNIX operating systems that are not supported by content integration server)

Log in as the root user and type `./setupUnix.sh` from a command line.

Windows

Log in as the root user and type `setupwin32.exe` from a command line.

You also have the option to enter one of the following commands to start the installation wizard:

Standard mode

```
java -cp setup.jar run
```

Silent mode

```
java -cp setup.jar run -silent -options response_file
```

Console mode

```
java -cp setup.jar run -console
```

Response file template

```
java -cp setup.jar run -options-template response_file
```

Record Options to Response File

```
java -cp setup.jar run -options-record response_file
```

2. Select a language for the installation wizard.
3. Select **Full** as the content integration server installation type.
4. Answer the remaining prompts.
5. In the installation summary window, review your configuration, then click **Next**.
6. Click **Finish**.
7. If you have installed content integration server on a Windows operating system, you must restart your computer after the installation is completed.
8. If you did not choose to deploy content integration server to WebSphere Application Server, manually deploy content integration server to your application server.
9. If access services for content integration server will run on more than one server, repeat the installation on each server that you plan to run access services.
10. Copy the components (JAR, WAR and native libraries) to the servers that require them and then deploy and start components. To determine the components that are required to support the role of each server in your distributed system architecture, see the distribution contents for content integration server.
11. Ensure that the data store service is running. On Windows, the data store service starts automatically when you restart the server. For other operating systems, you must start the data store service.
12. Start the application server on each computer that will run access services.
13. Start the administration tool. The administration tool displays the Options window.
14. Verify the default settings.
 - If you choose to have the installer program deploy content integration server on WebSphere Application Server, click **OK** to accept the default settings.
 - If you manually deployed content integration server to any other application server, you might need to change the default settings.
15. Configure the connectors.
16. Complete additional connector-specific installation steps that are described in the connector documentation.
17. For each component that is not deployed on your main access services server, select that component and update any required settings to specify the location where the component is deployed.
18. Test the connector configurations. To test the connector configuration from the administration tool, right click on the connector that you configured, and click **Test Connection** from the drop-down menu.

Related concepts

Connectors

Related tasks

Chapter 17, "Starting the data store service," on page 63

The data store service is a native component that runs outside of the application server.

Starting the administration tool

Configuring connectors

Chapter 21, "Uninstalling WebSphere Information Integrator Content Edition," on page 73

The WebSphere Information Integrator Content Edition uninstallation program will remove WebSphere Information Integrator Content Edition including subscription event services, Web client, and connectors.

Related reference

Overview of installation directory structure

Chapter 7. Configuring the content integration server to run in direct mode

If you require only a very specific subset of content integration server functionality, and it is not feasible to install an application server in order to use content integration server, you can run content integration server in direct mode.

About this task

To run content integration server in direct mode you do not need to deploy content integration server to an application server. However, when running in direct mode, many content integration server features are not available. Applications that use direct mode will not benefit from important application server features such as scalability, load balancing, and high reliability. For these reasons, direct mode is not recommended for most uses of content integration server.

You can run direct mode applications immediately after you install content integration server.

When content integration server runs in direct mode, integration API functionality is embedded completely within the client. Connections are made directly from the client to the native repositories, or when the RMI proxy connector is used, to the servers on which the connectors for the native repositories reside. Services for content integration server, such as the logging service, also are available when content integration server runs in direct mode, but you must manually start the log service.

The following content integration server functionality is not available when content integration server runs in direct mode:

- Federated query
- HTTP access
- Session pool
- SOAP client proxy
- Subscription event services
- URL addressability
- Viewer applet
- View services
- Web client
- Web components
- WebServices API

Procedure

To configure the content integration server to run in direct mode:

1. Verify the application class path settings. You must add the connector JAR file to the class path for each connector that you want to use in direct mode. Otherwise, you can use the default class path settings to run in direct mode.

2. Set the `vbr.as.operationMode` system property of the application Java Virtual Machine to the value `direct`. The default value for the system property is `server`.

Related tasks

Starting the administration tool

Chapter 8. Deploying the content integration server on WebSphere Application Server

Before you can deploy the content integration server in a WebSphere Application Server environment, you must install WebSphere Application Server, Version 6.0.1 or Version 5.1.1, and WebSphere Information Integrator Content Edition, Version 8.3.

The WebSphere Information Integrator Content Edition documentation uses the following conventions:

IICE_HOME

The WebSphere Information Integrator Content Edition installation directory.

PROFILE_NAME

The WebSphere Application Server, Version 6.0.1 profile name.

WAS_HOME

The WebSphere Application Server installation directory.

Related concepts

“Administering WebSphere Application Server”

When you deploy content integration server on WebSphere Application Server, you can use tools to complete basic application server administrative tasks.

Related tasks

“Creating a new profile for WebSphere Application Server, Version 6.0.1” on page 27

You can create a new profile on which to deploy content integration server. You use the profile name to start and stop the WebSphere Application Server on which content integration server is deployed.

“Automatically deploying the content integration server on WebSphere Application Server, Version 6.0.1” on page 28

You can use the runDeployment script to automatically deploy the content integration server as an application on WebSphere Application Server, Version 6.0.1.

Administering WebSphere Application Server

When you deploy content integration server on WebSphere Application Server, you can use tools to complete basic application server administrative tasks.

For more information on WebSphere Application Server administration, see the WebSphere Application Server Information Center.

Related concepts

Chapter 8, “Deploying the content integration server on WebSphere Application Server”

Before you can deploy the content integration server in a WebSphere Application Server environment, you must install WebSphere Application Server, Version 6.0.1 or Version 5.1.1, and WebSphere Information Integrator Content Edition, Version 8.3.

Related tasks

“Starting and stopping a WebSphere Application Server”

A single installation of WebSphere Application Server can contain several independent application servers. To start and stop an application server instance from a command prompt, you can use commands in the *WAS_HOME* directory.

“Starting the WebSphere Application Server administrative console” on page 25
You use the administrative console to manually deploy content integration server on WebSphere Application Server.

“Navigating the WebSphere Application Server administrative console” on page 26

The WebSphere Application Server administrative console organizes information into a hierarchical format. The upper levels of this hierarchy are displayed on the leftmost panel as a set of expandable nodes, such as servers, applications, and resources.

Starting and stopping a WebSphere Application Server

A single installation of WebSphere Application Server can contain several independent application servers. To start and stop an application server instance from a command prompt, you can use commands in the *WAS_HOME* directory.

About this task

The default WebSphere Application Server, Version 6.0 installation creates a profile that is named *default* and a *server1* application server that is created for that profile. Each profile that is created is associated with an application server that is named *server1*.

On WebSphere Application Server, Version 6.0, the profile name is required to start and stop the application server. Because application servers are contained within profiles, you cannot start a server without specifying the profile that is associated with it. You can start a server from the *WAS_HOME/profiles/PROFILE_NAME/bin* directory without the profile name, or you can start a server from *WAS_HOME/bin* and include the profile name.

Procedure

- To start an application server instance for WebSphere Application Server, Version 6.0:
 - On Windows, use the following command to start the server for a profile that is named *IICEServer*: *WAS_HOME\profiles\IICEServer\bin\startServer.bat server1*
 - On UNIX, use the following command to start the server for a profile that is named *IICEServer*: *WAS_HOME/profiles/IICEServer/bin/startServer.sh server1*
- To stop an application server instance for WebSphere Application Server, Version 6.0:
 - On Windows, use the following command to stop *server1* that is associated with a profile named *IICEServer*:
WAS_HOME/profiles/IICEServer/bin/stopServer.bat server1
 - On UNIX, use the following command to stop *server1* that is associated with a profile named *IICEServer*: *WAS_HOME/profiles/IICEServer/bin/stopServer.sh server1*
- To start an application server instance for WebSphere Application Server, Version 5.1:

- On Windows, use the following command to start an application server that is named *server1*: `C:\WebSphere\AppServer\bin\startServer.bat server1`
- On UNIX, use the following command to start an application server that is named *server1*: `/usr/WebSphere/AppServer/bin/startServer.sh server1`
- To stop an application server instance for WebSphere Application Server, Version 5.1:
 - On Windows, use the following command to stop an application server named *server1*: `C:\WebSphere\AppServer\bin\stopServer.bat server1`
 - On UNIX, use the following command to stop an application server named *server1*: `/usr/WebSphere/AppServer/bin/stopServer.sh server1`

Related concepts

“Administering WebSphere Application Server” on page 23

When you deploy content integration server on WebSphere Application Server, you can use tools to complete basic application server administrative tasks.

Related tasks

“Creating a new profile for WebSphere Application Server, Version 6.0.1” on page 27

You can create a new profile on which to deploy content integration server. You use the profile name to start and stop the WebSphere Application Server on which content integration server is deployed.

Starting the WebSphere Application Server administrative console

You use the administrative console to manually deploy content integration server on WebSphere Application Server.

About this task

The standard WebSphere Application Server installation automatically deploys the administrative console on the default application server, *server1*.

Procedure

To use the administrative console:

1. Start the application server *server1*.
2. Open a browser window and enter the following URL, where *your_hostname* is replaced with the name or IP address of the computer where the application server is running.

Option	Description
If you installed WebSphere Application Server, Version 6.0:	<code>http://your_hostname:9061/ibm/console</code>
If you installed WebSphere Application Server, Version 5.1:	<code>http://your_hostname:9090/admin</code>

The URL loads a login window for the WebSphere Application Server administrative console.

3. Log in to the WebSphere Application Server administrative console.
 - If application server security is turned off (the default), you can enter any value in the user ID field.
 - If security is turned on, you must provide the appropriate credentials, depending on the application server security method.

After you authenticate, the administrative console main page opens.

Related concepts

“Administering WebSphere Application Server” on page 23

When you deploy content integration server on WebSphere Application Server, you can use tools to complete basic application server administrative tasks.

Related tasks

“Creating a new profile for WebSphere Application Server, Version 6.0.1” on page 27

You can create a new profile on which to deploy content integration server. You use the profile name to start and stop the WebSphere Application Server on which content integration server is deployed.

“Deploying the content integration server on WebSphere Application Server, Version 5.1.1” on page 37

You can deploy the content integration server as an application on WebSphere Application Server.

Navigating the WebSphere Application Server administrative console

The WebSphere Application Server administrative console organizes information into a hierarchical format. The upper levels of this hierarchy are displayed on the leftmost panel as a set of expandable nodes, such as servers, applications, and resources.

Procedure

To navigate to areas in the administrative console, use the following format to find information about the application server, *server1*:

Servers → **Application servers** → *server1* → **Server messaging** → **Messaging engines**

To navigate to this example location in the administrative console, expand the **Servers** node in the left navigation panel, and then select **Application servers**. A list of application servers displays in the right panel. From this panel, choose *server1*. Information about *server1* is displayed in the right panel of the interface. This information includes links to more detailed information, for example, **Messaging engines**, which is under the section **Server messaging**.

Related concepts

“Administering WebSphere Application Server” on page 23

When you deploy content integration server on WebSphere Application Server, you can use tools to complete basic application server administrative tasks.

Related tasks

“Creating a new profile for WebSphere Application Server, Version 6.0.1” on page 27

You can create a new profile on which to deploy content integration server. You use the profile name to start and stop the WebSphere Application Server on which content integration server is deployed.

Creating a new profile for WebSphere Application Server, Version 6.0.1

You can create a new profile on which to deploy content integration server. You use the profile name to start and stop the WebSphere Application Server on which content integration server is deployed.

About this task

The default WebSphere Application Server installation creates a single profile that is named default. Each profile you create is associated with a single application server called server1.

Procedure

To create a new profile that is named *IICEServer*:

- From a Windows command line, type:

```
WAS_HOME\bin\wasprofile.bat -create -profileName IICEServer
-profilePath "WAS_HOME\profiles\IICEServer"
-templatePath "WAS_HOME\profileTemplates\default"
-nodeName IICEServer -cellName IICEServer -hostName localhost
-portsFile "IICE_HOME\websphere_deployment\responsefile.portdef.txt"
```

- From a UNIX shell, type:

```
WAS_HOME/bin/wasprofile.sh -create -profileName IICEServer
-profilePath WAS_HOME/profiles/IICEServer
-templatePath WAS_HOME/profileTemplates/default
-nodeName IICEServer -cellName IICEServer -hostName localhost
-portsFile IICE_HOME/websphere_deployment/responsefile.portdef.txt
```

The ports defined in the responsefile.portdef.txt file are provided as default values. You might need to modify this file for your specific environment.

Related concepts

Chapter 8, “Deploying the content integration server on WebSphere Application Server,” on page 23

Before you can deploy the content integration server in a WebSphere Application Server environment, you must install WebSphere Application Server, Version 6.0.1 or Version 5.1.1, and WebSphere Information Integrator Content Edition, Version 8.3.

Related tasks

“Starting and stopping a WebSphere Application Server” on page 24

A single installation of WebSphere Application Server can contain several independent application servers. To start and stop an application server instance from a command prompt, you can use commands in the *WAS_HOME* directory.

“Deploying the content integration server on WebSphere Application Server, Version 6.0.1” on page 33

You can manually deploy the content integration server as an application on WebSphere Application Server, Version 6.0.1.

Automatically deploying the content integration server on WebSphere Application Server, Version 6.0.1

You can use the runDeployment script to automatically deploy the content integration server as an application on WebSphere Application Server, Version 6.0.1.

Before you begin

You must install WebSphere Information Integrator Content Edition and WebSphere Application Server on the same computer, before you can deploy the content integration server as an application on WebSphere Application Server.

Procedure

To use the runDeployment script to deploy the content integration server:

1. Verify the port assignments in the *IICE_HOME/websphere_deployment/responsefile.portdef.txt* file.
2. Verify values for the following deployment options for the runDeployment script:

WAS_HOME

The installation directory for WebSphere Application Server, Version 6.0.1

PROFILE_NAME

The profile name that should be used when content integration server is deployed. If this profile does not exist, the deployment script creates the profile.

ABSOLUTE_INSTALL_LOCATION

The installation location of content integration server.

ESC_IICE_HOME

The character-escaped installation location of content integration server. *ESC_IICE_HOME* is the same as the *ABSOLUTE_INSTALL_LOCATION*, except double slashes are used for directory delimiters. *ESC_IICE_HOME* is not used on UNIX systems and should be set to the same value as the *ABSOLUTE_INSTALL_LOCATION*.

3. Execute the runDeployment script:
 - For Windows, from a command line
type:*IICE_HOME/websphere_deployment/runDeployment.bat*
 - For UNIX, from a command line type:
IICE_HOME/websphere_deployment/runDeployment.sh

Related concepts

Chapter 8, “Deploying the content integration server on WebSphere Application Server,” on page 23

Before you can deploy the content integration server in a WebSphere Application Server environment, you must install WebSphere Application Server, Version 6.0.1 or Version 5.1.1, and WebSphere Information Integrator Content Edition, Version 8.3.

Related tasks

Chapter 17, “Starting the data store service,” on page 63

The data store service is a native component that runs outside of the application server.

Configuring subscription event services for WebSphere Application Server, Version 6.0.1

If you did not automatically deploy WebSphere Information Integrator Content Edition on WebSphere Application Server during installation, and you are manually deploying WebSphere Information Integrator Content Edition on WebSphere Application Server, Version 6.0.1, you must configure subscription event services if you installed it as part of the WebSphere Information Integrator Content Edition installation.

Before you begin

Ensure that subscription event services is installed with content integration server.

Procedure

To configure subscription event services:

1. Create the Service integration bus for the content integration server JMS queues:
 - a. Navigate to **Service integration** → **Buses**.
 - b. Click **New**.
 - c. Enter the following property:
 - Name: iiceSIB
 - d. Click **OK**.
 - e. Click the link for the service integration bus that was created.
 - f. Click the **Additional Properties** → **Bus members** link.
 - g. Click **Add**.
 - h. Select the **Server** radio button.
 - i. Select IICEServer: server1 for the server.
 - j. Verify that the Data store default is enabled.
 - k. Click **Next**.
 - l. Click **Finish**.
 - m. Click **Save** at the top of the page to save the changes.
 - n. Click **Save** to complete the save process.
2. Create the JMS Queue Connection Factory:
 - a. Navigate to **Resources** → **JMS Providers** → **Default messaging**.
 - b. Set the scope to Server and click **Apply**.
 - c. Click the **Connection Factories** → **JMS queue connection factory** link.
 - d. Click **New**.
 - e. Enter the following properties:
 - Name: VBRConnectionFactory
 - JNDI name: VBRConnectionFactory
 - Bus name: iiceSIB
 - f. Click **OK**.
 - g. Click the link for the JMS Queue Connection Factory.
 - h. Click the **Additional Properties** → **Connection pool properties** link.
 - i. Set the Maximum connections property to 25.
 - j. Click **OK**.

- k. Click the **Save** link at the top of the page to save the changes.
- l. Click the **Save** button to complete the save process.
3. Create the SIB JMS Destinations:
 - a. Navigate to **Service integration** → **Buses** → *iiceSIB* → **Additional Properties** → **Destinations**.
 - b. Click **New**.
 - c. Select the **Queue** radio button.
 - d. Click **Next**.
 - e. Enter the following property:
 - Identifier: sibVBRSubscriptionGroupProcessorQueue
 - f. Click **Next**.
 - g. For Step 2, assign the queue to a bus member, click **Next**.
 - h. Click **Finish**.
 - i. Repeat steps b-h to add the remaining six SIB JMS Destinations:

SIB Destination 2
Identifier: sibVBRContentMonitorQueue

SIB Destination 3
Identifier: sibVBREventFilterQueue

SIB Destination 4
Identifier: sibVBREventHandlerQueue

SIB Destination 5
Identifier: sibVBRStatisticsQueue

SIB Destination 6
Identifier: sibVBRSubscriptionServicesDLQ

SIB Destination 7
Identifier: sibVBRMainDLQ
 - j. Click the **Save** link at the top of the page to save the changes.
 - k. Click the **Save** button to complete the save process.
4. Create the JMS Queue Destinations:
 - a. Navigate to **Resources** → **JMS Providers** → **Default messaging**
 - b. Set the scope to Server and click **Apply**.
 - c. Click on the **Destinations** → **JMS queue** link.
 - d. Click **New**.
 - e. Enter the following properties:

Name VBRSubscriptionGroupProcessorQueue

JNDI name
queue/VBRSubscriptionGroupProcessorQueue

Bus name
iiceSIB

Queue name
sibVBRSubscriptionGroupProcessorQueue

Description
VBR Subscription Group Processor
 - f. Click **OK**.
 - g. Repeat Step e. and Step f. to add the remaining six JMS Queue Destinations:

JMS Queue Destination 2

Name: VBRContentMonitorQueue

JNDI name: queue/VBRContentMonitorQueue

Bus name: iiceSIB

Queue name: sibVBRContentMonitorQueue

Description: VBR Content Monitor

JMS Queue Destination 3

Name: VBREventFilterQueue

JNDI name: queue/VBREventFilterQueue

Bus name: iiceSIB

Queue name: sibVBREventFilterQueue

Description: VBR Event Filter

JMS Queue Destination 4

Name: VBREventHandlerQueue

JNDI name: queue/VBREventHandlerQueue

Bus name: iiceSIB

Queue name: sibVBREventHandlerQueue

Description: VBR Event Handler

JMS Queue Destination 5

Name: VBRStatisticsQueue

JNDI name: queue/VBRStatisticsQueue

Bus name: iiceSIB

Queue name: sibVBRStatisticsQueue

Description: VBR Statistics

JMS Queue Destination 6

Name: VBRSubscriptionServicesDLQ

JNDI name: queue/VBRSubscriptionServicesDLQ

Bus name: iiceSIB

Queue name: sibVBRSubscriptionServicesDLQ

Description: VBR Subscription Services DLQ

JMS Queue Destination 7

Name: VBRMainDLQ

JNDI name: queue/VBRMainDLQ

Bus name: iiceSIB

Queue name: sibVBRMainDLQ

Description: VBR Main DLQ

- h. Click **Save** at the top of the page to save the changes.
 - i. Click **Save** to complete the save process.
5. Create the SIB JMS Activation Specifications:
- a. Navigate to **Resources** → **JMS Providers** → **Default messaging**

- b. Set the scope to Server and click **Apply**.
- c. Click the **Activation Specification** → **JMS activation specification** link.
- d. Click **New**.
- e. Enter the following properties:
 - Name: asVBRSubscriptionGroupProcessorQueue
 - JNDI name: eis/asVBRSubscriptionGroupProcessorQueue
 - Destination JNDI name: queue/VBRSubscriptionGroupProcessorQueue
 - Bus name: iiceSIB
- f. Click **OK**.
- g. Repeat Steps d-f to add the remaining six SIB JMS Activation Specifications:

SIB JMS Activation Specification 2

JNDI name: eis/asVBRContentMonitorQueue

Name: asVBRContentMonitorQueue

Destination JNDI name: queue/VBRContentMonitorQueue

Bus name: iiceSIB

SIB JMS Activation Specification 3

Name: asVBREventFilterQueue

Bus name: iiceSIB

JNDI name: eis/asVBREventFilterQueue

Destination JNDI name: queue/VBREventFilterQueue

SIB JMS Activation Specification 4

Name: asVBREventHandlerQueue

JNDI name: eis/asVBREventHandlerQueue

Destination JNDI name: queue/VBREventHandlerQueue

Bus name: iiceSIB

SIB JMS Activation Specification 5

Name: asVBRStatisticsQueue

JNDI name: eis/asVBRStatisticsQueue

Destination JNDI name: queue/VBRStatisticsQueue

Bus name: iiceSIB

SIB JMS Activation Specification 6

Name: asVBRSubscriptionServicesDLQ

JNDI name: eis/asVBRSubscriptionServicesDLQ

Destination JNDI name: queue/VBRSubscriptionServicesDLQ

Bus name: iiceSIB

SIB JMS Activation Specification 7

Name: asVBRMainDLQ

JNDI name: eis/asVBRMainDLQ

Destination JNDI name: queue/VBRMainDLQ

Bus name: iiceSIB

- h. Click **Save** at the top of the page to save the changes.

- i. Click **Save** to complete the save process.

Related concepts

Overview of JMS queues

Related tasks

“Deploying the content integration server on WebSphere Application Server, Version 6.0.1”

You can manually deploy the content integration server as an application on WebSphere Application Server, Version 6.0.1.

Deploying the content integration server on WebSphere Application Server, Version 6.0.1

You can manually deploy the content integration server as an application on WebSphere Application Server, Version 6.0.1.

Before you begin

You must install WebSphere Information Integrator Content Edition and WebSphere Application Server on the same computer.

Procedure

To manually deploy the content integration server as an application in WebSphere Application Server:

1. Create a new profile that is named *IICEServer*.
2. Start the application server for the *IICEServer* profile.
3. Record port information for the new *IICEServer* profile:
 - a. Select **Servers** → **Application Servers** → *server1* → **Communications** → **Ports**.
 - b. Record the port numbers for *wc_adminhost*, *wc_adminhost_secure*, and *BOOTSTRAP_ADDRESS* for use in future steps.
4. Update the default virtual host aliases to include the new HTTP transports:
 - a. Select **Environment** → **Virtual Hosts** → *default_host* → **Additional Properties** → **Host Aliases**.
 - b. To define host aliases for the *wc_adminhost* and *wc_adminhost_secure* HTTP transports that you recorded in a previous step, click **New**.
 - c. Type the host name to use for each transport: *
New Alias 1
Host Name: *
Port: 9061

New Alias 2
Host Name: *
Port: 9044
 - d. Click **OK** for each alias.
 - e. After creating each of the aliases, click **Save** at the top of the page to save the changes.
 - f. Click **Save** to complete the save process.
5. Create a new shared library for content integration server dependencies:
 - a. Navigate to **Environment** → **Shared Libraries**.
 - b. Ensure that the scope is set to **Node**. If it is not, select the **Node** radio button and click **Apply**.

- c. Click **New**.
 - d. Name the new shared library *iiceDependencies*.
 - e. Set the class path to include *IICE_HOME/datastore/datastore.jar*.
 - f. Set the Native Library Path to include *IICE_HOME/datastore*.
 - g. Click **OK**.
 - h. Click **Save** at the top of the page to save the changes.
 - i. Click **Save** to complete the save process.
6. Create a new class loader:
 - a. Select **Servers** → **Application Servers** → *server1* → **Server Infrastructure** → **Java and Process Management** → **Class loader**
 - b. Click **New**.
 - c. Select Parent First for the Class loader mode.
 - d. Click **OK**.
 - e. Click the **Additional Properties** → **Libraries** link.
 - f. Click **Add**.
 - g. Choose the *iiceDependencies* library you created in the previous step and click **OK**.
 - h. Select *iiceDependencies* for the Library name.
 - i. Click **Save** at the top of the page to save the changes.
 - j. Click **Save** to complete the save process.
 7. Add the home directory for content integration server and the headless option to the property set of the application server Java virtual machine:
 - a. Select **Servers** → **Application Servers** → *server1* → **Server Infrastructure** → **Java and Process Management** → **Process Definition** → **Additional Properties** → **Java Virtual Machine** → **Additional Properties** → **Custom Properties**
 - b. Click **New**.
 - c. Enter the following properties:
 - 1) Name: *vbr.home*
 - 2) Value: *IICE_HOME*
 - 3) Description: content integration server installation root directory.
 - d. Click **OK**.
 - e. Click **New**.
 - f. Enter the following properties:
 - Name: *java.awt.headless*
 - Value: *true*
 - g. Click **OK**.
 - h. Click **Save** at the top of the page to save the changes.
 - i. Click **Save** to complete the save process.
 8. Configure subscription event services:
 - If subscription event services was installed, and you do not complete Step 9, content integration server will not deploy to the application server.
 - If subscription event services was not installed, you have the option to configure subscription event services. If you choose not to configure subscription event services, then you can skip Steps 9-11.
 9. Logout of the WebSphere Application Server Administrative Console.
 10. Stop the application server for the *IICEServer* profile.

11. Start the application server for the *IICEServer* profile.
12. Start the WebSphere Application Server Administrative Console.
13. Install the content integration server application on the *IICEServer* profile.
14. Install the content integration server enterprise application on the *IICEServer* profile:
 - a. Select **Applications** → **Install New Application**.
 - b. Specify the path (or click **Browse**) to the VeniceBridge.ear file in the *IICE_HOME* directory.
 - c. Click **Next**.
 - d. In the Preparing for the application installation step, click **Next**.
 - e. A security warning is displayed. You can ignore this warning and click the **Continue** button.
 - f. Complete the following WebSphere Application Server steps for installing a new application:
 - 1) Provide options to perform the installation: Uncheck the **Create Mbeans for Resources** and click **Next**.
 - 2) Map modules to servers: Click **Next**.
 - 3) Provide options to perform the EJB Deploy: Click **Next**.
 - 4) Provide listener bindings for message-driven beans: Select the **Activation Specification** radio button and enter the Activation Specification JNDI Name for the corresponding MDB. This step is required only if subscription event services was installed.

SubscriptionGroupProcessorMDB
eis/asVBRSubscriptionGroupProcessorQueue

ContentMonitorMDB
eis/asVBRContentMonitorQueue

EventFilterMDB
eis/asVBREventFilterQueue

EventHandlerMDB
eis/asVBREventHandlerQueue

StatisticsProcessorMDB
eis/asVBRStatisticsQueue

 - Click **Next**.
 - At the Application Resource Warnings message, click **Continue**.
 - 5) Provide JNDI Names for Beans: Click **Next**.
 - 6) Map virtual hosts for web modules: Click **Next**.
 - 7) Map security roles to users/groups: Click **Next**.
 - 8) Ensure all unprotected 1.x methods have the correct level of protection: Click **Next**.
 - 9) Summary: Click **Finish**. The application starts to deploy. This process can take a significant amount of time, depending on your hardware and the number of connectors you selected during content integration server installation.
 - g. Click the **Save to Master Configuration** link to save your changes.
15. Start the FastObjects server. If you are running the content integration server on UNIX, start the server by running *IICE_HOME/bin/rdsservice.sh*. If you are running content integration server on Windows, and the service is not

started, navigate to **Control Panel** → **Administrative Tools** and start the WebSphere Information Integrator Content Edition data store service.

16. Stop and then restart the application server *server1* on the *IICEServer* profile.

Related tasks

“Configuring subscription event services for WebSphere Application Server, Version 6.0.1” on page 29

If you did not automatically deploy WebSphere Information Integrator Content Edition on WebSphere Application Server during installation, and you are manually deploying WebSphere Information Integrator Content Edition on WebSphere Application Server, Version 6.0.1, you must configure subscription event services if you installed it as part of the WebSphere Information Integrator Content Edition installation.

“Creating a new profile for WebSphere Application Server, Version 6.0.1” on page 27

You can create a new profile on which to deploy content integration server. You use the profile name to start and stop the WebSphere Application Server on which content integration server is deployed.

Configuring subscription event services

“Configuring the content integration server application for WebSphere Application Server, Version 6.0.1”

After you install WebSphere Information Integrator Content Edition, you must configure the application to use the content integration server on WebSphere Application Server, Version 6.0.1.

Configuring the content integration server application for WebSphere Application Server, Version 6.0.1

After you install WebSphere Information Integrator Content Edition, you must configure the application to use the content integration server on WebSphere Application Server, Version 6.0.1.

Procedure

To configure WebSphere Information Integrator Content Edition applications:

1. Update the content integration server configuration script. On Windows, update the *IICE_HOME*\bin\config.bat file. On UNIX, update the *IICE_HOME*/bin/config.sh script.
 - a. Back up the configuration script.
 - b. Set the *WAS_HOME* environment variable to the WebSphere Application Server installation directory, such as *C:\Program Files\IBM\WebSphere\AppServer*.
 - c. Edit the *JNDI_CLIENT_PROVIDER* variable, so that it uses the *BOOTSTRAP_ADDRESS* server port number that you recorded during the deployment process. An example value for this property is:

```
iiop://localhost:2810
```
2. If you manually deployed content integration server, copy the deployed *vbr_access_services.jar* and *vbr_view_services.jar* files to the *IICE_HOME*/lib directory. These files are in the folder *WAS_HOME*/AppServer/profiles/*PROFILE_NAME*/installedApps/*node*/VeniceBridge.ear

where *node* is the WebSphere Application Server node where content integration server is deployed.

3. Update the client JNDI properties:
 - a. Start the WebSphere Information Integrator Content Edition administration tool. The WebSphere Information Integrator Content Edition application server must be started prior to using the administration tool.
 - b. Open the **Edit** → **Options** menu.
 - c. Ensure that the WebSphere option is selected and click **Properties**.
 - d. Check the port number that the `java.naming.provider.url` property is set to use. Ensure that the port number is the same as the *IICEServer* name server port that you recorded in the deployment process, such as 2810. An example value for this property is `iiop://localhost:2810`.
 - e. Click **OK** to confirm the properties, and then click **OK** again to close the options dialog.
 - f. Perform a JNDI lookup on the access services entry to ensure the configuration is correct.

Related tasks

“Deploying the content integration server on WebSphere Application Server, Version 6.0.1” on page 33

You can manually deploy the content integration server as an application on WebSphere Application Server, Version 6.0.1.

Deploying the content integration server on WebSphere Application Server, Version 5.1.1

You can deploy the content integration server as an application on WebSphere Application Server.

Before you begin

You must install WebSphere Information Integrator Content Edition and WebSphere Application Server on the same computer.

Procedure

To deploy the content integration server:

1. Start the WebSphere Application Server administrative console.
2. Create an application server instance where you will deploy the content integration server:
 - a. Select **Servers** → **Application Servers**.
 - b. Click the **New** button.
 - c. Enter a name for this new server. For example, type *IICEServer*.
 - d. Ensure that the **Generate Unique HTTP Ports** box is selected.
 - e. Click **Next**.
 - f. When you are prompted to confirm the new application server, click **Finish**.
 - g. Click **Save** at the top of the page to save your changes.
3. Record port information for the new server:
 - a. Select **Servers** → **Application Servers** → *IICEServer* → **Web Container** → **HTTP transports**.

- b. Record the port numbers for the HTTP transports now for use in future steps. You will see HTTP transports defined on four different ports, two standard transports and two SSL enabled transports.
 - c. Select **Servers** → **Application Servers** → *IICEServer* → **End Points** → **BOOTSTRAP_ADDRESS**.
 - d. Record the value of the Port field now for use in future steps. You will see the port that the *IICEServer* application server name service runs on, such as 2810.
4. Update the default virtual host aliases to include the new HTTP transports:
 - a. Select **Environment** → **Virtual Hosts** → *default_host* → **Host Aliases**.
 - b. For each of the four HTTP transports that you recorded in the previous step, click **New** and define a host alias for that transport.
 - c. Enter the Host Name to use for each transport: *


```

New Alias 1
  Host Name: *
  Port: 9081

New Alias 2
  Host Name: *
  Port: 9091

New Alias 3
  Host Name: *
  Port: 9044

New Alias 4
  Host Name: *
  Port: 9044
          
```
 - d. Click **OK** for each alias.
 - e. Click **Save** at the top of the page to save the changes.
5. Create a shared library for content integration server dependencies:
 - a. Select **Environment** → **Shared Libraries**.
 - b. Click **New**.
 - c. Name the new shared library *iiceDependencies*.
 - d. Set the class path to include *IICE_HOME/datastore/datastore.jar*.
 - e. Click **OK**.
 - f. Click **Save** at the top of the page to save the changes.
6. Assign the new shared library to the *IICEServer* application server:
 - a. Select **Servers** → **Application Servers** → *IICEServer* → **Classloader**
 - b. Click **New**.
 - c. The class loader mode is set to `PARENT_FIRST` and click **OK**.
 - d. Select the class loader that you created.
 - e. Click **Libraries**.
 - f. Click **Add**.
 - g. Select the *iiceDependencies* library that you created and click **OK**.
 - h. Click **Save** at the top of the page to save the changes.
7. Add the content integration server home directory to the application server Java virtual machine property set:
 - a. Select **Servers** → **Application Servers** → *IICEServer* → **Process Definition** → **Java Virtual Machine** → **Custom Properties**
 - b. Click **New**.

- c. Type the following properties:
 - Name: vbr.home
 - Value: *IICE_HOME*
 - Description: content integration server installation root directory.
- d. Click **OK**.
- e. Click **Save** at the top of the page to save your changes.
8. Install the content integration server application on the *IICEServer* server:
 - a. Select **Applications** → **Install New Application**.
 - b. If you are running the administrative console locally, select the Local Path option and go to the VeniceBridge.ear file in the *IICE_HOME* directory.
 - c. Click **Next**.
 - d. In the Preparing for the application installation step, click **Next**.
 - e. Ignore any security warnings and click **Continue**.
 - f. Installing a new application:
 - 1) Provide options to perform the installation: Clear the **Create Mbeans for Resources** check box and click **Next**.
 - 2) Provide options to perform the EJB Deploy: Click **Next**.
 - 3) Provide Listener Ports for Messaging Beans: This step is displayed if subscription event services was installed during the WebSphere Information Integrator Content Edition installation. Click **Next**.
 - 4) Provide JNDI Names for Beans: Click **Next**.
 - 5) Map virtual hosts for web modules: Click **Next**.
 - 6) Map modules to application servers: Select the option in the Clusters and Servers list, select all modules in the Module list, and click **Apply**. The page reloads with all modules assigned to the *IICEServer* application server. Click **Next**.
 - 7) Ensure all unprotected 1.x methods have the correct level of protection: Click **Next**.
 - 8) Summary: Click **Finish**. The application starts to deploy. This process can take a significant amount of time, depending on your hardware and the number of connectors that you selected during content integration server installation.
 - g. Click **Save to Master Configuration** to save your changes.
9. If you installed subscription event services, configure subscription event services for WebSphere Application Server, Version 5.1.1.
10. Start the FastObjects server. If you are running content integration server on UNIX, start the server by running the *IICE_HOME/bin/rdsservice.sh* script. If you are running content integration server on Windows, and the service is not started, select **Control Panel** → **Administrative Tools** and start the data store service.
11. Setup your environment. On Windows, open a command window and run the *IICE_HOME\bin\config.bat* file. On UNIX, open a shell and run the *IICE_HOME/bin/config.sh* script.
12. Stop and then restart the application server.
13. Complete the steps to configure WebSphere Information Integrator Content Edition applications for WebSphere Application Server, Version 5.1.1.

Related tasks

“Configuring the content integration server application for WebSphere Application Server, Version 5.1.1” on page 40

After you install WebSphere Information Integrator Content Edition, you must configure the application to deploy the content integration server on WebSphere Application Server.

“Starting the WebSphere Application Server administrative console” on page 25
You use the administrative console to manually deploy content integration server on WebSphere Application Server.

Configuring the content integration server application for WebSphere Application Server, Version 5.1.1

After you install WebSphere Information Integrator Content Edition, you must configure the application to deploy the content integration server on WebSphere Application Server.

Procedure

To configure the content integration server application:

1. Update the content integration server configuration script. On Windows, update the *IICE_HOME*\bin\config.bat file. On UNIX, update the *IICE_HOME*/bin/config.sh script.
 - a. Back up the configuration script.
 - b. Set the *WAS_HOME* environment variable to the WebSphere Application Server installation directory, such as C:\WebSphere\AppServer.
 - c. If you want to use subscription event services, set the *MQ_HOME* environment variable to the WebSphere MQ installation directory.
 - d. Set the *JNDI_CLIENT_PROVIDER* environment variable to the *IICEServer* server port number that you recorded when you deployed content integration server. An example value for this property is:
`iiop://localhost:2810`
2. Update the client JNDI properties:
 - a. Start the content integration server administration tool.
 - b. Select **Edit** → **Options**.
 - c. Select **WebSphere**, and then click **Properties**.
 - d. Check the port number that the `java.naming.provider.url` property is set to use. Set the property by using the *IICEServer* bootstrap port number. During deployment, you recorded this number from the *BOOTSTRAP_ADDRESS* in the WebSphere Application Server administrative console. Replace the port in this example with the number that you recorded. An example value for this property is
`iiop://localhost:2810`.
 - e. Click **OK** to confirm the properties, and then click **OK** again to close the Options window.
 - f. Perform a JNDI lookup on the access services entry to ensure that the configuration is correct.
3. Copy the deployed *vbr_access_services.jar* and *vbr_view_services.jar* files to the *IICE_HOME*/lib directory. These files are in the *WAS_HOME*/AppServer/installedApps/*node*/VeniceBridge.ear folder where *node* is the WebSphere node where content integration server is deployed.

Related tasks

“Deploying the content integration server on WebSphere Application Server, Version 5.1.1” on page 37

You can deploy the content integration server as an application on WebSphere Application Server.

“Configuring subscription event services for WebSphere Application Server, Version 5.1.1”

After you install subscription event services as part of the content integration server, you must configure subscription event services to deploy the content integration server on WebSphere Application Server.

Configuring subscription event services for WebSphere Application Server, Version 5.1.1

After you install subscription event services as part of the content integration server, you must configure subscription event services to deploy the content integration server on WebSphere Application Server.

Before you begin

Ensure that subscription event services is installed with content integration server. To use subscription event services, you must install embedded messaging when you install WebSphere Application Server.

If you install embedded messaging for WebSphere Application Server on UNIX, certain groups and users are required.

Procedure

To configure subscription event services:

1. Create a JMS Connection Factory:
 - a. Navigate to Resources\WebSphere JMS Provider.
 - b. Type IICEServer in the **Server** field and click **Apply**.
 - c. Click **WebSphere Queue Connection Factories**.
 - d. Click **New**.
 - e. Type the following properties:

Name	VBRConnectionFactory
JNDI Name	VBRConnectionFactory
Enable XA	unchecked
 - f. Click **Apply**.
 - g. Scroll down and click **Connection Pool**.
 - h. For **Max Connections**, specify 25. The number of maximum connections can vary depending on your needs.
 - i. Click **OK**.
 - j. Click **Save** at the top of the page to save the changes.
2. Create JMS Queues:
 - a. Navigate to Resources\WebSphere JMS Provider.
 - b. Type IICEServer in the **Server** field and click **Apply**.
 - c. Click **WebSphere Queue Destinations**.

- d. Create the following JMS queues by updating the **Name** and **JNDI Name** fields. All the other fields can use their default values.
 - **Name:** VBRSubscriptionGroupProcessorQueue
JNDI Name: queue/VBRSubscriptionGroupProcessorQueue
 - **Name:** VBRContentMonitorQueue
JNDI Name: queue/VBRContentMonitorQueue
 - **Name:** VBREventFilterQueue
JNDI Name: queue/VBREventFilterQueue
 - **Name:** VBREventHandlerQueue
JNDI Name: queue/VBREventHandlerQueue
 - **Name:** VBRStatisticsQueue
JNDI Name: queue/VBRStatisticsQueue
 - **Name:** VBRSubscriptionServicesDLQ
JNDI Name: queue/VBRSubscriptionServicesDLQ
 - **Name:** VBRMainDLQ
JNDI Name: queue/VBRMainDLQ
 - e. Navigate to Servers\Application Servers\IICEServer\Server Components\JMS Servers.
 - f. Add all of the JMS queue names (not the JNDI Names) to the queue names list, for example:
 - VBRSubscriptionGroupProcessorQueue
 - VBRContentMonitorQueue
 - VBREventFilterQueue
 - VBREventHandlerQueue
 - VBRStatisticsQueue
 - VBRSubscriptionServicesDLQ
 - VBRMainDLQ
 - g. Set the Initial State to Started.
 - h. Click **OK**.
3. Configure the JMS Message Listener Service:
 - a. Navigate to Servers\Application Servers\IICEServer\Message Listener Service.
 - b. Click **Listener Ports**.
 - c. Create the following listener ports by filling in the **Name** and **Destination JNDI Name** fields.
 - **Name:** VBRSubscriptionGroupProcessorListener
Destination JNDI Name: queue/VBRSubscriptionGroupProcessorQueue
 - **Name:** VBRContentMonitorListener
Destination JNDI Name: queue/VBRContentMonitorQueue
 - **Name:** VBREventFilterListener
Destination JNDI Name: queue/VBREventFilterQueue
 - **Name:** VBREventHandlerListener
Destination JNDI Name: queue/VBREventHandlerQueue
 - **Name:** VBRStatisticsProcessorListener
Destination JNDI Name: queue/VBRStatisticsQueue

The following properties for each listener port are the same for the default deployment. Depending on the environment and expected load, the Max Sessions and Max Messages values can change.

- Connection Factory JNDI Name: VBRConnectionFactory
- Max sessions: 5
- Max retries: 1
- Max messages: 1

d. Click **Save** at the top of the page to save the changes.

Related concepts

Overview of JMS queues

Related tasks

“Configuring the content integration server application for WebSphere Application Server, Version 5.1.1” on page 40

After you install WebSphere Information Integrator Content Edition, you must configure the application to deploy the content integration server on WebSphere Application Server.

Chapter 9. Deploying content integration server on a vendor-supplied application server

You can deploy content integration server on WebSphere Application Server, Version 6.0.1, WebSphere Application Server, Version 5.1.1, and WebLogic Application Server, Version 8.1 (SP4).

About this task

The content integration server J2EE components are packaged as a single EAR file that can be deployed on any application server that supports the J2EE 1.3 (or later) specification.

Procedure

To deploy content integration server on a vendor-supplied application server:

1. Install WebSphere Information Integrator Content Edition.
2. If you successfully deployed and configured the content integration server previously, for a different application server, back up the config.xml configuration file for the content integration server to avoid overwriting application server settings. You can alternate between configurations, if you stop and restart the application server each time that you change the config.xml configuration file.
3. Define the JVM system property `vbr.home` for the application server to specify the content integration server installation directory. For example:
`-Dvbr.home=C:/Program Files/IBM/WebSphereIICE`

You might need to modify the application server startup script or batch file to define the system property.

4. Add the `IICE_HOME/datastore` directory to the path environment variable of the shell that starts the application server JVM. Use the `PATH` environment variable for Windows, `LIBPATH` for AIX, and `LD_LIBRARY_PATH` for Solaris and Linux.
5. Deploy the EAR file `IICE_HOME/VeniceBridge.ear` according to your application server documentation.
6. Edit the content integration server startup script, `config.bat` (Windows) or `config.sh` (UNIX), to include the application server client JAR files and the correct JNDI lookup parameters. The startup script is in the `IICE_HOME/bin` directory.
7. Start the WebSphere Information Integrator Content Edition administration tool, and change the default application server to your application server.

Related concepts

Chapter 15, "Java client deployment," on page 59

Content integration server includes many example programs that demonstrate how to use the Java API to access content integration server functionality.

Related tasks

Chapter 5, "Installing WebSphere Information Integrator Content Edition on a single server," on page 13

A single server installation requires the fewest steps and provides access to all of the key WebSphere Information Integrator Content Edition features.

Chapter 10, "Deploying content integration server on WebLogic application server, Version 8.1," on page 47

BEA WebLogic application server, Version 8.1 SP4 can deploy both enterprise beans and Web applications from an EAR file. Content integration server includes default deployment descriptors for WebLogic application server in the enterprise bean JAR files.

Chapter 10. Deploying content integration server on WebLogic application server, Version 8.1

BEA WebLogic application server, Version 8.1 SP4 can deploy both enterprise beans and Web applications from an EAR file. Content integration server includes default deployment descriptors for WebLogic application server in the enterprise bean JAR files.

About this task

The following conventions are used:

IICE_HOME

The content integration server base installation directory.

WL_HOME

The base directory of the WebLogic 8.1 application server installation.

WL_DOMAIN

The name of the domain where you are deploying content integration server. During the default installation WebLogic creates a domain called *Examples*.

Procedure

To deploy content integration server to the WebLogic application server, Version 8.1:

1. Install content integration server.
2. Back up the content integration server configuration file *IICE_HOME\config.xml*.
3. Install content integration server to a clean WebLogic domain. See the BEA documentation for the configuration script (UNIX) and configuration file (Windows) that you run to create a new domain.
4. Edit the WebLogic startup script in the *WL_DOMAIN/user_projects/domains/domainname* directory:
 - a. Set the *JAVA_OPTIONS* parameter to include the directive `"-Dvbr.home=IICE_HOME".`
 - b. Add the data store to the path:
 - For Windows:
`PATH=IICE_HOME\datastore;%PATH%`
 - For AIX:
`LIBPATH=IICE_HOME/datastore:$LIBPATH`
 - For Solaris:
`LD_LIBRARY_PATH=IICE_HOME/datastore:$LD_LIBRARY_PATH`
 - For Linux:
`LD_LIBRARY_PATH=IICE_HOME/datastore:$LD_LIBRARY_PATH`
 - c. Add *IICE_HOME/datastore/datastore.jar* to the end of the *CLASSPATH* variable. An example portion of a WebLogic startup script is shown here:

```
...
@REM SET content integration server OPTIONS
set VBR_HOME=C:\IICE
```

```

set JAVA_OPTIONS=-Dvbr.home=%VBR_HOME%
set PATH=%PATH%;%VBR_HOME%\datastore
set CLASSPATH=%CLASSPATH%;%VBR_HOME%\datastore\datastore.jar
...

```

5. Verify that the data store service is running. If content integration server is installed in a Windows environment, go to **Start** → **Programs** → **Administrative Tools** → **Services** and verify that the data store service is running. In a UNIX environment, go to *IICE_HOME/bin* and start the data store service by running the *rdsservice.sh* file.
6. Run the WebLogic startup script in the new domain directory to start the WebLogic application server.
7. Open the WebLogic administration console.
8. If subscription event services are installed, configure subscription event services for WebLogic.
9. Configure WebLogic security to allow access to the services monitor and subscription event services applications.
10. In the left pane, go to **Deployments** → **Applications** and then click **Deploy a new Application**.
11. Locate the EAR file that was installed on the file system *IICE_HOME\VeniceBridge.ear* and click **Select**.
12. Type *IIContentEd* as the application name and click **Deploy**. The window will refresh several times, and all JAR and WAR files deploy successfully.
13. Edit the *config.sh* script (UNIX) or the *config.bat* file (Windows) in the *IICE_HOME/bin* directory:
 - a. Set the environment variables *JNDI_CLIENT_FACTORY* and *JNDI_CLIENT_PROVIDER* to reference the correct JNDI parameters for WebLogic enterprise bean lookup.
 - b. Set the environment variable *EJB_CLIENT_CLASSPATH* to reference the WebLogic 8.1 client JAR file and the *weblogic.jar* file, in the *WL_HOME/weblogic81/server/lib* directory.
 - c. Set the environment variable *JAVA_HOME* to reference the JVM that is included with the WebLogic, Version 8.1 SP4 application server.
14. Run the administration tool and change the default application server to WebLogic.

Related tasks

Chapter 9, “Deploying content integration server on a vendor-supplied application server,” on page 45

You can deploy content integration server on WebSphere Application Server, Version 6.0.1, WebSphere Application Server, Version 5.1.1, and WebLogic Application Server, Version 8.1 (SP4).

“Configuring subscription event services for WebLogic application server, Version 8.1” on page 49

If you installed subscription event services and are deploying content integration server on WebLogic application server, you must configure the subscription event services.

Starting the administration tool

Configuring subscription event services for WebLogic application server, Version 8.1

If you installed subscription event services and are deploying content integration server on WebLogic application server, you must configure the subscription event services.

Before you begin

To confirm whether your WebLogic instance has a JMS server, use the WebLogic administration console to navigate to Services\JMS\Servers. If you see a JMS server, ignore Step 1, and proceed to Step 2 to configure the JMS Connection Factory.

Procedure

To configure subscription event services for WebLogic:

1. Create a new JMS server. Your WebLogic installation might already have a configured JMS server.
 - a. Navigate to Services\JMS.
 - b. Select **Servers**, and then click **Configure a new JMS Server**.
 - c. Specify a JMS Server name and click **Create**.
 - d. Click the **Targets** tab and select a server from the drop-down menu.
 - e. Click **Apply**.
2. Create a new JMS connection factory:
 - a. Navigate to Services\JMS\Connection Factories.
 - b. Click **Configure a new JMS Connection Factory**.
 - c. Specify the following properties:

Name VBRConnectionFactory

JNDI Name
VBRConnectionFactory

Keep the default values for the other JMS connection factory properties.
 - d. Click **Create**.
 - e. Click the **Targets** tab, and select the appropriate server from the **Available** list and move it to the **Chosen** list.
 - f. Click **Apply**.
3. Create JMS queues:
 - a. Navigate to Services\JMS\Servers*Your JMS Server*\Destinations.
 - b. Create the following JMS queues by completing the **Name** and **JNDI name** fields. Use the default values for all other fields.

Name VBRSubscriptionGroupProcessorQueue

JNDI name
queue/VBRSubscriptionGroupProcessorQueue

Name VBRContentMonitorQueue

JNDI name
queue/VBRContentMonitorQueue

Name VBREventFilterQueue

JNDI name
queue/VBREventFilterQueue

Name VBREventHandlerQueue

JNDI name
queue/VBREventHandlerQueue

Name VBRStatisticsQueue

JNDI name
queue/VBRStatisticsQueue

Name VBRSubscriptionServicesDLQ

JNDI name
queue/VBRSubscriptionServicesDLQ

Name VBRMainDLQ

JNDI name
queue/VBRMainDLQ

- c. Open the details of each queue and click the **Redelivery** tab. Change the redelivery limit to 1 and the error destination to VBRMainDLQ. Use the default redelivery limit and error destination settings for the VBRMainDLQ.

Related tasks

Chapter 10, "Deploying content integration server on WebLogic application server, Version 8.1," on page 47

BEA WebLogic application server, Version 8.1 SP4 can deploy both enterprise beans and Web applications from an EAR file. Content integration server includes default deployment descriptors for WebLogic application server in the enterprise bean JAR files.

Chapter 11. Configuring security for WebLogic application server

Because the services monitor application and subscription event services administration application both use basic HTTP authentication, you must create a WebLogic user to access these applications.

About this task

If you want the same user name and password combination for both the services monitor application and the subscription event services administration application, then complete this procedure once.

Procedure

To create a WebLogic user:

1. Navigate to Security\Realms*realm_name*\Users.
2. Click **Configure a New User**.
3. Type Administrator as the name and password. If you want a different user name and password combination for each application, edit the principal-name property in the weblogic.xml descriptor in the WEB-INF directory of each web application.
4. Type Content integration server administrator as the description.
5. Click **Apply**.

Chapter 12. Starting the Remote Method Invocation (RMI) proxy connector server

Start the Remote Method Invocation (RMI) proxy connector server when you want to use the RMI proxy connector to send connector requests to an RMI server that is hosting the real connector in another virtual machine on the same machine or on another server.

Before you begin

Before you start the RMI proxy connector server, verify that all required repository libraries have been copied to *IICE_HOME/lib*. Required repository libraries for each connector are listed in the documentation for that connector.

Procedure

To start the RMI proxy connector server:

- On Windows, you can use the batch file *IICE_HOME\bin\RMIBridge.bat* to start the RMI proxy connector server.
- On UNIX, you can use the shell script *IICE_HOME/bin/RMIbridge.sh* to start the RMI proxy connector.

Chapter 13. Configuring a remote computer as a client to WebSphere Information Integrator Content Edition hosted on WebSphere Application Server

WebSphere Application Server provides a client installation program for remote computers that need to connect to applications that are hosted in WebSphere Application Server.

Before you begin

1. Start the content integration server on the target server.
2. Install WebSphere Application Client on the client machine. The version of WebSphere Application Client should match the version of WebSphere Application Server on which content integration server is deployed.
3. Perform a full content integration server installation on the client computer.

Procedure

To configure a remote computer as a client to content integration server hosted on WebSphere Application Server:

1. Copy the following files from the WebSphere Information Integrator Content Edition installation into the *IICE_CLIENT_HOME*\lib directory for the client computer:

For WebSphere Application Server, Version 5.1.1

```
WAS_SERVER_HOME\installedApps\<<node>\
VeniceBridge.ear\vbr_access_services.jar

WAS_SERVER_HOME\installedApps\<<node>\
VeniceBridge.ear\vbr_view_services.jar
```

For WebSphere Application Server, Version 6.0.1, after automatic deployment of content integration server

```
WAS_HOME/profiles/IICEServer/installedApps/
IICEServer/VeniceBridge.ear/vbr_access_services.jar

WAS_HOME/profiles/IICEServer/installedApps/
IICEServer/VeniceBridge.ear/vbr_view_services.jar
```

2. Update the client configuration script for content integration server. On Windows, this file is *IICE_CLIENT_HOME*\bin\config.bat. On UNIX, this file is *IICE_CLIENT_HOME*/bin/config.sh:
 - a. Back up the configuration script.
 - b. Edit the *WAS_HOME* variable by setting it to the WebSphere Application Client installation directory.
 - c. Edit the *MQ_HOME* variable by setting it to the WebSphere Application Client MQ Java directory. This directory is typically outside of the installation directory of the application client. For example, for WebSphere Application Server, Version 5.1.1 on Windows, the default directory is Program Files\IBM\WebSphere MQ\Java. For WebSphere Application Server, Version 6.0.1 on Windows, the default directory is *WAS_HOME*\lib\WMQ\java.
 - d. Edit the *JNDI_CLIENT_PROVIDER* variable, ensuring that it uses content integration server's name and server port `iioport://my_server:2810`.
3. Update the client JNDI properties:

- a. Start the administration tool.
 - b. Click **Edit** → **Options**.
 - c. Ensure that the WebSphere option is selected, and then click **Properties**.
 - d. Check the port number that the `java.naming.provider.url` property is set to use. Ensure that it is the same as the content integration server name and port that you recorded during the deployment process, such as 2810. An example value for this property is `iiop://my_server:2810`.
 - e. Click **OK** to confirm the properties, and click **OK** again to close the Options window.
4. Test the client configuration:
- a. Open a command prompt.
 - b. On Windows, run the `run_sample swing.RepoBrowser` file. On UNIX, run the `./run_sample.sh swing.RepoBrowser` script. The RepoBrowser sample displays the set of repositories that are configured on the content integration server.

Chapter 14. Deploying the Web application in exploded form

To use the search and display forms feature of content integration server, the Web client must be deployed in an exploded form. If the Web client is not deployed in an exploded form, custom forms will not be available.

About this task

The Web client is included in the VeniceBridge.ear file in the *IICE_HOME* directory. The Web client is also located at *IICE_HOME/war/webclient.war* file.

Procedure

The steps that are required to deploy the Web application in exploded form depend on the type of application server.

WebSphere Application Server

When deploying the EAR file in WebSphere Application Server, ensure that the distribute application option is selected on the AppDeployment Options page. This option will deploy the application in an exploded format that allows custom search and display forms to function.

WebSphere Application Server uses the distribute application option as the default.

WebLogic application server

1. Extract the webclient.war file into a directory. *IICE_HOME/webclientx* is an appropriate destination for the extracted archive. A few modifications are needed in the new directory.
2. Open the WEB-INF/wc-config.xml file for editing.
3. Find the vbr.relate.datastore.url property.
4. Change this property value to FastObjects://localhost/relate_store2. This modification ensures that there are no conflicts with other instances of the Web application.
5. Create a second datastore so that relate_store2 will work.

For both the WebSphere Application Server and the WebLogic application server, if the Web client is being deployed to a different application server instance than other content integration server components, you must modify the WEB-INF/web.xml file to use the appropriate JNDI properties to create an external connection to access services.

Related concepts

Working with the data store

Related tasks

Creating a data store

Chapter 15. Java client deployment

Content integration server includes many example programs that demonstrate how to use the Java API to access content integration server functionality.

When you install content integration server, a startup script `run_sample.bat` (Windows) or `run_sample.sh` (UNIX) is created in the `IICE_HOME/bin` directory that sets all of the class path and configuration parameters that are required to run sample applications. If you choose to have the install program deploy content integration server to WebSphere 6.0.1 during installation, the script creates all required libraries. For other application servers, you must add the required JAR files for the enterprise bean client library to the `IICE_HOME/lib` directory, before you run any sample applications.

You can update the `run_sample` script files to run the command-line examples in direct mode. To run the examples in direct mode, set the system property `vbr.as.operationMode` to the value `direct`. The default value for the system property is `server`.

The following example shows how you might use the Java API to log on to a repository:

```
run_sample commandline.RepoTest MyRepository MyUserid  
MyPassword
```

The `run_sample` script uses the class path that the `config.bat` file (Windows) or `config.sh` file (UNIX) sets. Java clients must set the properties that are required to connect to the application server and get a handle to the access services enterprise bean. The following table shows the properties that are required to connect to the application server.

Table 2. Properties that are required to connect to the application server

Property	Description
<code>java.naming.factory.initial</code>	Name of the application server specific class that is used to create the enterprise bean handle. Default value: <code>com.ibm.websphere.naming.WsnInitialContextFactory</code>
<code>java.naming.provider.url</code>	URL to the application server specific naming service used to request the enterprise bean handle. Default value: <code>iiop://localhost:2810</code>

To deploy the Java client on a separate computer, you must edit the Java naming provider URL and substitute the actual host name in place of `localhost`.

If you want to deploy content integration server on a vendor-supplied server, you must edit the `config.bat` file (Windows) or `config.sh` file (UNIX) to use the appropriate naming factory and provider URL for your application server. The following table summarizes the naming factory values and provider URL values for several supported application servers.

Table 3. Naming factory values and provider URL values for application servers

Application server	java.naming.factory.initial	java.naming.provider.url
WebSphere Application Server, Version 5.1.1 and 6.0.1	com.ibm.websphere.naming.WsnInitialContextFactory	iiop://localhost:2810
WebLogic application server, Version 8.1	weblogic.jndi.T3InitialContextFactory	t3://localhost:7001

Related tasks

Chapter 9, “Deploying content integration server on a vendor-supplied application server,” on page 45

You can deploy content integration server on WebSphere Application Server, Version 6.0.1, WebSphere Application Server, Version 5.1.1, and WebLogic Application Server, Version 8.1 (SP4).

Chapter 16. Content integration server EAR packager utility

You might need to repackage the content integration server enterprise archive (EAR) file for deployment to add or update another Web application or to add dependent libraries for a connector.

The EAR packager utility provides a simple and consistent way to create the EAR file with the revised contents and with an appropriate application.xml deployment descriptor. The EAR packager utility includes the following parameters.

-libraryJars

You can specify relative or fully qualified file names for any dependent JAR files that should be included. Typically, you specify `IICE_HOME/lib/vbr.jar`. You might also want to include connector-specific JAR files here. Any JAR files that you include here are added to the archive and specified in the manifest and deployment descriptor.

-appDirs

You can specify full or relative paths to directories that contain the enterprise bean and WAR files that you wish to include. You must separate the directory names with commas.

-updateEJBManifests

This parameter is an optional switch that instructs the EAR packager to update the manifest files of the enterprise bean and WAR files to reference the libraries that are supplied (-libraryJars), before packaging them in the final EAR file.

-appName

This parameter specifies the name of the EAR file that you create. The EAR file uses the .ear extension.

You can use the `run_sample` script that is included with WebSphere Information Integrator Content Edition to set the appropriate Java class path before you run the packager.

The following example command creates an EAR file named `MyApplication.ear` that includes the typical content integration server libraries: Documentum Foundation Classes (DFC) jar file, content integration server enterprise bean, content integration server WAR files, and a custom WAR file.

```
./run_sample.sh com.venetica.vbr.util.EarPackager -libraryJars
../lib/vbr.jar,/documentum/shared/dfc.jar -appDirs
../ejb,../war,/usr/home/servlets -updateEJBManifests -appName MyApplication
```

You can use the `rebuild_ear` script as a shortcut for rebuilding the VeniceBridge EAR file.

The following command shows how to rebuild the VeniceBridge EAR file on UNIX:

```
./rebuild_ear.sh
```

The following example command shows how to rebuild the VeniceBridge EAR file on Windows:

```
./rebuild_ear.bat
```

Related concepts

Connector access to repository libraries

Chapter 17. Starting the data store service

The data store service is a native component that runs outside of the application server.

Procedure

To start the data store service:

- On Windows, this service is installed as a Windows service named **IBM WebSphere II Content Edition Data Store Service**, which is started automatically when the server is started. The service can be manually started using the **Services Manager**, which is in **Control Panel** → **Administrative Tools**.
- On UNIX, use the shell script to start the data store service:

```
IICE_HOME/bin/rdsservice.sh
```

Related concepts

Working with the data store

Related tasks

Chapter 5, “Installing WebSphere Information Integrator Content Edition on a single server,” on page 13

A single server installation requires the fewest steps and provides access to all of the key WebSphere Information Integrator Content Edition features.

Chapter 6, “Installing WebSphere Information Integrator Content Edition in a distributed environment,” on page 17

You can install WebSphere Information Integrator Content Edition in a distributed server environment.

“Automatically deploying the content integration server on WebSphere Application Server, Version 6.0.1” on page 28

You can use the runDeployment script to automatically deploy the content integration server as an application on WebSphere Application Server, Version 6.0.1.

Chapter 20, “Starting the content integration server,” on page 71

After you install and deploy WebSphere Information Integrator Content Edition you can start the content integration server.

Chapter 18. Accessing product information and help

You can access product information and help on the IBM Web site or on an intranet server.

By default, the product accesses documentation on the IBM Web site. If you want to access the documentation on an intranet server, you must install the documentation from the *WebSphere Information Integrator Information Center CD* and configure the Web client and the administration tool to use an intranet information center.

Related tasks

“Installing the WebSphere Information Integrator Information Center”

You can install the WebSphere Information Integrator Information Center to be accessed from an intranet.

“Configuring the Web client and administration tool to use an intranet information center” on page 66

You can configure the Web client and the administration tool to use an intranet information center.

Installing the WebSphere Information Integrator Information Center

You can install the WebSphere Information Integrator Information Center to be accessed from an intranet.

Procedure

To install the WebSphere Information Integrator Information Center:

1. Insert the *WebSphere Information Integrator Information Center CD* into the drive. For UNIX systems you also must mount the CD.
2. Start the WebSphere Information Integrator Information Center installation wizard from a command line:

AIX Enter `./setupaix`

Linux Enter `./setupLinux.bin`

Solaris (SPARC)

Enter `./setupSolaris.bin`

Solaris (Intel x86)

Enter `./setupSolarisx86.bin`

UNIX (for UNIX operating systems that are not supported by content integration server)

Enter `./setupUnix.sh`

Windows

Enter `setupwin32.exe`

You also have the option to enter one of the following commands to start the installation wizard:

Standard mode

`java -cp setup.jar run`

Silent mode

```
java -cp setup.jar run -silent -options response_file
```

Console mode

```
java -cp setup.jar run -console
```

Response file template

```
java -cp setup.jar run -options-template response_file
```

Record Options to Response File

```
java -cp setup.jar run -options-record response_file
```

3. The installation wizard will guide you through the installation.

After you have installed the WebSphere Information Integrator Information Center, you will need to configure the Web client and administration tool to use the installed intranet information center.

Related concepts

Chapter 18, "Accessing product information and help," on page 65

You can access product information and help on the IBM Web site or on an intranet server.

Related tasks

"Configuring the Web client and administration tool to use an intranet information center"

You can configure the Web client and the administration tool to use an intranet information center.

Chapter 19, "Starting the information center," on page 69

The WebSphere Information Integrator Information Center contains documentation for the content integration server. If you have WebSphere Information Integrator OmniFind Edition, the information center also contains documentation for enterprise search.

Configuring the Web client and administration tool to use an intranet information center

You can configure the Web client and the administration tool to use an intranet information center.

Before you begin

Install the WebSphere Information Integrator Information Center.

Procedure

To configure the Web client and the administration tool to use an intranet information center:

1. Start the administration tool.
2. Click **Edit** → **Options** and modify the **Documentation URL** property to specify the URL of the installed WebSphere Information Integrator Information Center. By default, the **Documentation URL** property is set to the URL for the information center that is hosted on the IBM Web site. Change this property using the following URL format, where *hostname* is the name of the computer where the information center is installed and the default port number is 8888:
`http://hostname:portnumber/help/topic/`
3. Click **Save** to save your changes.

The Web client and administration tool will now use the installed WebSphere Information Integrator Information Center.

Related concepts

Chapter 18, “Accessing product information and help,” on page 65

You can access product information and help on the IBM Web site or on an intranet server.

Related tasks

“Installing the WebSphere Information Integrator Information Center” on page 65

You can install the WebSphere Information Integrator Information Center to be accessed from an intranet.

Chapter 19. Starting the information center

The WebSphere Information Integrator Information Center contains documentation for the content integration server. If you have WebSphere Information Integrator OmniFind Edition, the information center also contains documentation for enterprise search.

Procedure

To start the information center:

Windows

From the desktop, click **Start** → **Programs** → **WSIIC** → **Start Information Center**

From a command line, type

```
C:\Program Files\IBM\WebSphereIIInformationCenter\ibm_help\IC_start.bat
```

UNIX, AIX, Linux

From a command line, type

```
/opt/IBM/WebSphereIIInformationCenter/IC_start.sh
```

Related tasks

“Installing the WebSphere Information Integrator Information Center” on page 65

You can install the WebSphere Information Integrator Information Center to be accessed from an intranet.

Chapter 20. Starting the content integration server

After you install and deploy WebSphere Information Integrator Content Edition you can start the content integration server.

Procedure

To start the content integration server:

1. Start the *FastObjects* server:
 - To start the server on UNIX, type: `IICE_HOME/bin/rdsservice.sh`
 - To start the server on Windows, if the service is not started, navigate to **Control Panel** → **Administrative Tools** → **Services** and start **IBM WebSphere II Content Edition Data Store Service**
2. Before you restart the server, setup your environment:
 - On Windows, open a command window and type:
`IICE_HOME\bin\config.bat`
 - On UNIX, open a shell and source `IICE_HOME/bin/config.sh`. For example, to source the `config.sh` file, type `. IICE_HOME/bin/config.sh`

When content integration server is manually or automatically deployed after installation, you must run the command to set up your environment each time the server is restarted to avoid an error when the application server tries to access the datastore. If you do not run the command, the following error message is generated:

```
Problems loading native libraries: Cannot find library pt95Jrt
(libpt95Jrt.a or .so) in sun.boot.library.path or java.library.path
```

If the auto-deployment option is selected during installation of content integration server, the installer program modifies the server start script so that Step 2 is not necessary.

3. Using the same command window or shell, stop the *IICEServer* application server.
4. Once the application server has stopped, start the *IICEServer* application server.

Related tasks

Chapter 17, "Starting the data store service," on page 63

The data store service is a native component that runs outside of the application server.

Chapter 21. Uninstalling WebSphere Information Integrator Content Edition

The WebSphere Information Integrator Content Edition uninstallation program will remove WebSphere Information Integrator Content Edition including subscription event services, Web client, and connectors.

Procedure

To remove WebSphere Information Integrator Content Edition with the uninstallation program:

1. Go to the `_uninst` directory in the `IICE_HOME` installation directory.
2. Start the uninstallation program.

AIX Log in as the root user and type `uninstaller.bin`

Linux Log in as the root user and type `uninstaller.bin`

Solaris (SPARC)

Log in as the root user and type `uninstaller.bin`

Solaris (Intel x86)

Log in as the root user and type `uninstaller.bin`

UNIX (for UNIX operating systems that are not supported by content integration server)

Log in as the root user and type `uninstaller.sh`

Windows

Double-click the `uninstaller.exe` file or type `uninstaller.exe`

You also have the option to enter one of the following commands to remove WebSphere Information Integrator Content Edition:

- `java -cp uninstall.jar run`
- `java -cp uninstall.jar run -console`

Console mode is a text-only interface for the uninstaller.

3. After the uninstallation program starts, select a language for the uninstaller wizard.
4. Click **Next**.
5. Answer the remaining prompts.
6. From the uninstallation summary window, review your configuration, then click **Uninstall**.
7. From the window that says the uninstallation was successful, click **Finish**.
8. If you installed WebSphere Information Integrator Content Edition on a Windows operating system, you must restart your computer.

Related tasks

Chapter 5, "Installing WebSphere Information Integrator Content Edition on a single server," on page 13

A single server installation requires the fewest steps and provides access to all of the key WebSphere Information Integrator Content Edition features.

Chapter 6, "Installing WebSphere Information Integrator Content Edition in a distributed environment," on page 17
You can install WebSphere Information Integrator Content Edition in a distributed server environment.

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