IBM Cúram Social Program Management
Version 7.0.2

Runtime Environment Installation Guide

IBM

Note

Before using this information and the product it supports, read the information in "Notices" on page 8

Contents

Chapter 1. Installing a Runtime Environment

Describes how to install a Runtime Environment, which deploys the application suite without having to perform the build process. The Runtime Environment is a build for WebSphere Application Server or Oracle WebLogic Server that is only on the Microsoft Windows operating system. The Runtime Environment is useful for evaluating the default Cúram functionality and for demonstration purposes and is not for use in a production environment.

Depending on your license agreement, the IBM Cúram Social Program Management Runtime is available in a number of different configurations.

Installing prerequisite products

You must install certain prerequisite products before you install the Cúram software.

For the exact versions of these products, see the *IBM Cúram Social Program Management Supported Prerequisites* technote. For more information, see the related link.

Related information

IBM Cúram Social Program Management Supported Prerequisites

Installing Apache Ant

Apache Ant from the Apache Jakarta project is a build tool that is based on Java.

Before you begin

You do not need to extract the Apache Ant compressed file into a directory called `ant`. The file extracts to the `apache-ant-version` directory.

Procedure

1. Download the Ant compressed file from the Apache website.
2. Extract the file to a directory of your choice on your computer
   For example, extract `apache-ant-version-bin.zip` to `C:\apache-ant-version`.
   The installation is now complete.

Configuring Apache Ant

You must create Microsoft Windows environment variables and update your Microsoft Windows path for Apache Ant.

Procedure

1. Create an ANT_HOME system environment variable with the value set to the Apache Ant installation directory.
2. Add `%ANT_HOME%\bin` to the PATH environment variable.
3. Create an ANT_OPTS system environment variable with the value -Xmx756m.

Installing IBM DB2 for Linux, UNIX, and Windows

Ensure that your account has administrative privileges and then follow the DB2 installer instructions to complete a default installation. You do not need to manually create a DB2 database. The platform software provides Ant scripts that you can run as a postinstallation step to create a basic test database.

Note the following options that are presented during a default installation:

- The *Name* and *Password* of the administrator account. Use an account and password as per the standards and requirements of your site and DB2. If it is an existing user, that user must be a member of

the Administrator group. The informational message about `OLE DB support` component can be safely ignored.

- Certain editions of the DB2 installer support federated databases. If the installer presents an option that is defaulted to **This machine will be the instance-owning database partition server**, then change this option to **This machine will be a single-partition database server**.
- You must choose MBCS or SBCS, depending on your requirements. If you are unsure of what database encoding option to select, see the related information about data encoding.

Configuring for circular transaction logging

When you use a database with circular transaction logging enabled, certain transactions can exceed the available log file space and fail. To avoid this issue, either use archive logging or set the available log size and quantity appropriately until it meets the needs of the transaction.

About this task

A common point for this failure is when the `prepare.application.data` Ant target is running, as this target publishes all the CER rule sets on the system. This Ant target is typically run after a clean database build. If the log is too small, it can result in an `SQLCODE -964` error.

You can use the following example to help you to increase the DB2 log file size and quantity. The exact amount of log file storage that is required varies from system to system. For more information about increasing the number and size of the log files available, see the specific documentation for your database.

Procedure

1. Open a command prompt and enter db2cmd.
2. Enter the following command:

   ```
   db2 connect to db_name user db_user_name using db_password
   ```

   Where *db_name*, *db_user_name*, *db_password* are the credentials of the database.
3. Enter the following commands:

   ```
   db2 update db cfg for db_name using logfilsiz log_file_size
   ```

   ```
   db2 update db cfg for db_name using logprimary primary_log_files
   ```

   ```
   db2 update db cfg for db_name using logsecond secondary_log_files
   ```

   Where the temporary values are as follows:

   - The log file size. Set *log_file_size* to 1024.
   - The number of primary log files. Set *primary_log_files* to 50.
   - The number of secondary log files. Set *secondary_log_files* to 100.
4. Restart the database by entering the following commands:

   ```
   db2stop
   db2start
   ```

Installing the Oracle database

Assuming that no previous versions of Oracle are installed, you can complete a typical Oracle database server installation.

Postinstallation configuration for the Oracle database
Complete the following postinstallation task on the Oracle database.

Note: The postinstallation tasks require connecting to Oracle as the privileged 'sys' user. Immediately after you install Oracle, the password for this user is *change_on_install*. Oracle requires that you change this password.

Creating an Oracle role for application servers
The application needs certain privileges to use the Oracle XA interface. Later, when you configure the application, the user name under which the server connects to Oracle is specified. The appropriate privileges must be assigned to this user name for the server to work successfully.

About this task

An easy way to bundle together the various privileges that are required is to create an Oracle role. Privileges can be granted to this role. Later this role can be granted to your users, granting all the privileges that are associated with that role.

The following commands create a role that is called CURAM_SERVER and give it the necessary privileges. A user named CURAM_USER is then assigned that role and given the password PASSWORD. You run these commands inside an Oracle SQLPlus window.

Procedure

1. To run the commands from SQLPlus, type the following at a command prompt:

   ```
   sqlplus ?/? as SYSDBA
   ```

2. Enter the following commands:

   ```
   CREATE ROLE "CURAM_SERVER";
   GRANT RESOURCE TO "CURAM_SERVER";
   @%ORACLE_HOME%\RDBMS\ADMIN\xaview.sql
   GRANT SELECT ON V$XATRANS$ TO PUBLIC;
   GRANT SELECT ON PENDING_TRANS$ TO PUBLIC;
   GRANT SELECT ON DBA_2PC_PENDING TO PUBLIC;
   GRANT SELECT ON DBA_PENDING_TRANSACTIONS TO PUBLIC;
   GRANT EXECUTE ON DBMS_SYSTEM TO CURAM_SERVER;
   CREATE USER CURAM_USER IDENTIFIED BY
   PASSWORD DEFAULT TABLESPACE "USERS" TEMPORARY TABLESPACE "TEMP";
   GRANT "CONNECT", "CURAM_SERVER", UNLIMITED TABLESPACE TO <CURAM_USER>;
   ```

   Where CURAM_USER and PASSWORD are the database user credentials.

Configuring for circular transaction logging
When you use a database with circular transaction logging enabled, certain transactions can exceed the available log file space and fail. To avoid this issue, either use archive logging or set the available log size and quantity appropriately until it meets the needs of the transaction.

A common point for this failure is when the `prepare.application.data` Ant target is running, as this target publishes all the CER rule sets on the system. This Ant target is typically run after a clean database build.

For information about increasing the number and size of the log files available, see the specific documentation for your database. The exact amount of log file storage that is required varies from system to system.

WebSphere Application Server

WebSphere Application Server is supported as an enterprise application server.

Installing WebSphere Application Server
Install WebSphere Application Server from the installation media.

If you are optionally installing WebSphere Application Server as a service, you must create a user account in advance. This user is then used as the credentials for the service. This user account must have administrator privileges.

Important:

- Do not install WebSphere Application Server in a directory that contains spaces in the name, such as the default `Program Files` directory.
- Do not install the WebSphere Application Server sample applications. The sample application Apache Derby data source results in a class path conflict with the application web client use of Derby.

Postinstallation configuration for WebSphere Application Server
Complete the following tasks to configure WebSphere Application Server.

Setting the WebSphere Application Server environment variable
Set the required Microsoft Windows environment variable for WebSphere Application Server.

Procedure

Set the WAS_HOME environment variable to the server directory of the WebSphere Application Server installation.
For example, `C:\WebSphere\AppServer`

Oracle WebLogic Server

Oracle WebLogic Server is supported as an enterprise application server.

Installing Oracle WebLogic Server
Complete the following steps to install Oracle WebLogic Server.

Procedure

Run the Oracle installer. When prompted in the installation wizard, choose the following options:

- For the installation type, choose a custom installation.
- For products and components, clear all options except the **WebLogic Server** branch.
- Accept the default not to install as a Windows service.
- Do not run the Quickstart on exit.

Postinstallation steps for Oracle WebLogic server
After you install Oracle WebLogic server, you must set up the WLS_HOME environment variable.

Procedure

Set the WLS_HOME environment variable to the `server` directory of the Oracle WebLogic Server installation.
For example, *home_directory*`\wlserver_`*version*`\server` or *home_directory*`\wlserver_10.3\server`.
Where *home_directory* is the home directory that is specified during the WebLogic Server installation.

Installing Java SE and Java EE

You can install a stand-alone Java SE and Java EE, or use the Java SE and Java EE that are included with each supported application server. Follow the Oracle documentation to install the Oracle Java SE and

Java EE. No further installation steps are required if you intend to use the versions that are included with the application server.

Configuring Java SE and Java EE
Regardless of which Java SE and Java EE you use, you must complete the following configuration steps.

About this task
You might need multiple versions of Java SE and Java EE installed on a single computer. For this reason, you can choose the scope for these Microsoft Windows environment variables. For example, system wide, or through a script file or symbolic links.

Procedure

1. Create a JAVA_HOME environment variable that points to the installed Java SE.
2. Place `%JAVA_HOME%\bin` at the beginning of the PATH environment variable.
3. Create a J2EE_JAR environment variable that points to the installed Java EE JAR file.
   - For WebSphere Application Server, point to `%WAS_HOME%\lib\j2ee.jar`.
   - For Oracle WebLogic Server, point to `%WLS_HOME%\lib\weblogic.jar`.
   - For Oracle Java Platform EE SDK 5, point to *installation_directory*`\lib\j2ee.jar`. Where *installation_directory* is the directory where you installed the software. By default `C:\Sun\SDK`.

Installing the Runtime software

A runtime installer is provided to install the runtime system. Run the installer and provide the required information.

About this task

A Java and license folder are distributed as part of the media pack. These contain required resources that are used during the installation process.

For installation on Microsoft Windows operating systems, each installer is provided as a `.exe` file.

During the installation, all installation process and the installation history are saved to the following log files:

- `/Installer/CuramInstaller.log`
- `/Installer/Installhistory.txt`
- During the installation, a database user name and password might be required. You can specify any account name and password. However the account must have rights to create tables and run SQL statements. For example, the database administrator's account.
- During the installation, you must select the application server on which you want to install the Cúram Application.

Procedure

Double-click the provided installer .exe file and complete the installation wizard.

Postinstallation steps

After you successfully complete the installation, you must complete the following steps before running a Cúram application.

- Configure the application server.

- Create the Cúram database.
- Import Searchable Data from Cúram Database.

Configuring the Application Server

IBM Cúram provides a number of scripts that should be run to automatically configure your application server.

Note: The server named during installation is created when the configure target is run. Any existing server configurations are overwritten.

Application Server configuration
To configure the application server, click **Start** > **Programs** > **IBM Cúram** > **Runtime** > **Configure Application Server**.

Create the Cúram Database

You must set up your database to work with the Cúram software.

Database Set-up Utility
A database setup utility is provided to help you prepare your database for use with Cúram.

The database setup performs the following steps:

- Creates the IBM Cúram Social Program Management database tables.

  Note: If there are any existing Cúram tables in your database, this step will destroy and recreate them.
- Populates the database with initial data required to start the Cúram Server Application.
- Populates the database with demonstration data.
- Populate the Cúram code tables with their default values.
- Creates database constraints, such as primary and foreign keys.
- Creates database indexes to support Cúram database queries.

Note: It may take several minutes to complete the database set-up utility.

To run the database set-up utility:

- Click Start -> Programs -> IBM Cúram -> Runtime -> Reset Database

Import Searchable Data from the IBM Cúram Database
After the database utility has run, the search database extractor can be ran. This utility converts searchable data from the IBM Cúram database into a format suitable for use by the Cúram Generic Search Server.

Note: ⬜⊘Generic Search Server is deprecated. For more information, see Deprecated features

The extractor should complete quickly.

To run the search database extractor utility:

- Click Start -> Programs -> IBM Cúram -> Runtime -> Import Searchable Data from Cúram Database

Installing a Cúram Application

IBM Cúram provides scripts for installing a Cúram Application onto your application server.

To run this script:

- Click Start -> Programs -> IBM Cúram -> Runtime -> Install Server

Initialize the Global Search Server

The IBM Cúram Search Server must be initialized after installation, and whenever the Cúram Application is restarted.

To run this script:

• Click Start -> Programs -> IBM Cúram -> Runtime -> Initialize Lucene Search Server

If this step is omitted, the Cúram Search Server initializes automatically on the first search request from the application.

Using the Cúram Application

Cúram Runtime provides scripts for starting, stopping and restarting the Cúram Application and a shortcut to the login page.

These shortcuts can found at the following locations:

• Start -> Programs -> IBM Cúram -> Runtime -> Start Server
• Start -> Programs -> IBM Cúram -> Runtime -> Stop Server
• Start -> Programs -> IBM Cúram -> Runtime -> Restart Server
• Start -> Programs -> IBM Cúram -> Runtime -> Cúram Home Page

Uninstalling the application

During installation of the Cúram software, an uninstallation file is created in the `<install>\Uninstaller\uninstaller.jar` directory. You can use this file to uninstall the application.

About this task

JAR files might be recognized as executable by being associated with a suitable launcher, such as `javaw`. If this is the case for your operating system, start the Cúram Uninstaller with the standard method that is supported by your operating system. For example, double-clicking the Cúram Uninstaller file.

Note: The uninstaller does not reset any system variables that are set by a previous installation.

Procedure

1. Navigate to the `<install>\Uninstaller\` directory.
2. Double-click the `uninstaller.jar` file to uninstall the Cúram software.

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