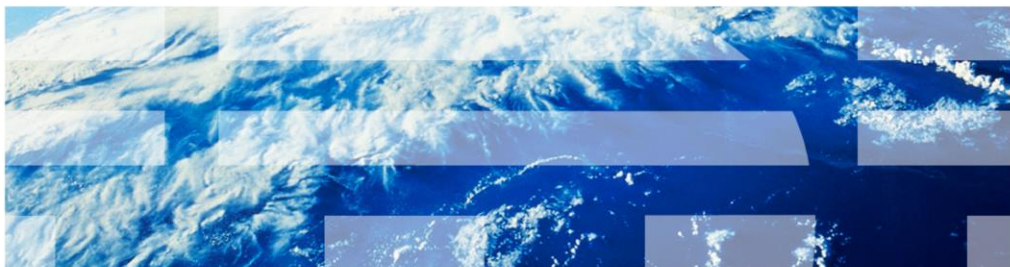


InfoSphere Master Data Management Collaboration Server

Introduction to important scripts and tools



© 2012 IBM Corporation

This presentation discusses some of the most important scripts and tools bundled with IBM InfoSphere® Master Data Management Collaboration Server. This topic is important because these tools can make maintenance and usage of the product, much more efficient and effective.

Terminology

- Aim
 - Better understanding of tools
- Terminology
 - TOP



The goal of this presentation is to provide an overview of the scripts and tools available with Master Data Management Collaboration Server to automate various tasks and improve performance of the product.

The TOP variable is meant as an environment variable that points to the installation directory.

Objectives

- Scope
 - Overview of available scripts and tools
- What is covered
 - Available scripts and tools
- What is not covered
 - Comprehensive guide
 - Troubleshooting issues



After viewing this presentation, you will develop a better understanding of the scripts at your disposal to help you administer the product.

This presentation is not a comprehensive guide covering all available scripts, see the Information Center for such details. Instead, this presentation focuses on the most frequently used scripts. This presentation is not meant to aid you with troubleshooting issues.

Background

- Prerequisites
 - Knowledge of operating system
 - Understanding product architecture



This presentation was prepared assuming that you have a good understanding of the operating system where the product is installed, for example, AIX® or Linux. It also assumes you have a general understanding of the application architecture and supporting products like database and application server.

Tools (1 of 4)

- Product Specific
 - \$TOP/bin/configureEnv.sh
 - \$TOP/bin/test_db.sh
 - \$TOP/src/db/scripts/backup/db2_export.sh
 - \$TOP/src/db/scripts/backup/db2_fast_import.sh
 - \$TOP/bin/go/rmi_status.sh
 - \$TOP/bin/db/rename_cmp.sh
 - \$TOP/bin/checkForCompileError.sh
 - \$TOP/bin/updateRtClasspath.sh

One of the most powerful tools is the `configureEnv.sh` script. Running this script validates the `$TOP/bin/conf/env_settings.ini` file and notifies you of any errors. It also generates `build.properties` and `common.properties` files, and configures the InfoSphere MDM Collaboration Server services.

The `test_db.sh` script verifies the connectivity between the application and databases, checks for JDBC and native client connections. Use this to verify the connection between the application and database server.

Running the `db2_export.sh` exports the application schema if you are using DB2. This creates a back-up of tables, indexes and sequences with their current values, and stores them in a tar file in the backup directory. Subsequently, you can use the `db2_fast_import.sh` script to import the contents of the tar file into the environment that you want. These two scripts are used for backing up and recovering the database and are only applicable for DB2.

`rmi_status.sh` is run to verify whether all the services of the application are running. In a traditional non clustered environment, there should be six services.

`rename_cmp.sh` is used to change the company code and company name of a company.

Use the `checkForCompileError.sh` script for automated checking of your scripts for compilation errors. This is useful if you deploy a lot of custom code.

The `updateRtClasspath.sh` script can be used to update the `env_settings.ini` file without re-generating the `common.properties` and other product configuration files.

Tools (2 of 4)

- Database
 - \$TOP/bin/db/create_schema.sh
 - \$TOP/bin/db/drop_schema.sh
 - \$TOP/bin/indexRegenerator.sh
 - \$TOP/bin/db_creation/create_pimdb.sh
 - \$TOP/bin/db_creation/create_pimdevdb.sh
- Application Server
 - \$TOP/bin/Websphere/create_appsvr.sh
 - \$TOP/bin/Websphere/create_vhost.sh
 - \$TOP/bin/Websphere/install_war.sh

Since the database server and application server are integral to the product, the product includes scripts to make their integration seamless.

`create_schema.sh` is used to create a schema for your database with all the pre-defined tables and indexes. It will wipe out your existing schema and replace it.

As the name suggests, `drop_schema.sh` script deletes the present schema. Hence, you need to be very careful while using it.

Use the `indexRegenerator.sh` script to regenerate indexes for entities such as items and categories. You should only run it if you change the index option for an attribute of the spec associated with the item or category after creating some other items or categories.

Both `create_pimdb.sh` and `pimdevdb.sh` are used with DB2 to create the database for the application. `create_pimdb.sh` is generally used in production while `pimdevdb.sh` is used for a test or development environment.

`create_appsvr.sh` script is run to deploy an appserver service. After the initial install, it should only be used if you are setting up clustering or adding application servers. For example, to use other features like Global Data Synchronization which is another IBM offering.

`create_vhost.sh` is used to create a virtual host for the appserver created by `create_appsvr.sh` while the `install_war.sh` script can be used to replace the existing Application Server components after deploying additional appserver service or modify current ones. These scripts will overwrite all customization of the deployed application server. Consult your product administrator before running this.

Tools (3 of 4)

- Maintenance
 - \$TOP/bin/db/analyze_schema.sh
 - \$TOP/src/maintenance/delete_old_versions.sh
 - \$TOP/src/maintenance/estimate_old_versions.sh
 - \$TOP/bin/pimprof.sh
 - \$TOP/bin/go/svc_control.sh
- Support
 - \$TOP/bin/get_ccd_version.sh
 - \$TOP/bin/pimSupport.sh

IBM also bundles some scripts to make maintenance of the application easier. Amongst these is `analyze_schema.sh` script, which is used to generate statistics of your Oracle and DB2 databases; an essential task to ensure performance. Note that you can enable automatic statistics gathering and choose not to run this script.

Old versions are created for objects such as catalogs, items, and categories whenever the objects are exported, imported, or modified. Use `delete_old_versions.sh` shell script to delete old versions of objects that are no longer needed. Deleting old object versions restores the database storage space and therefore, improves database performance. Use the `estimate_old_versions.sh` shell script to get a size estimate for the number of old object versions in various tables.

`pimprof.sh` script is used to start and stop services, and to capture memory snapshots while `svc_control.sh` script controls individual services. This is useful when you want to change an individual service.

While engaging IBM support, it is always good practice to provide detailed and precise information. A couple of the scripts that make this task easier are `get_ccd_version.sh` and `pimSupport.sh`. The former outputs the exact version of the product being used and the latter is a very powerful tool for generating and collecting diagnostic information like log files, health checks and so on. Visit the Information Center for more information on the various options available with `pimSupport.sh`.

Tools (4 of 4)

- Checking for reorganization need
 - db2 reorgchk on schema pimdb
- Defragmenting tables
 - db2 reorg table tdoc_dbl_doc_blob
- Dropping temporary tables
 - \$TOP/src/db/schema/util/drop_temp_agg_tables.pl
 - \$TOP/src/db/schema/util/drop_log_tables_seq.pl

The database optimizer requires statistical metadata information, including number of rows and cardinality about its user tables, to choose the best way to access data.

Periodically, there is a need to defragment or reorganize the database to improve performance. To check whether any of your tables require defragmentation, use the REORGCHK command. An example of the command usage is displayed on this slide. Reorganization is recommended for the tables and indexes that contain the asterisk character in the REORG column in the output of the REORGCHK command. Consult your Database Administrator for de-fragmentation and reorganization commands if you are using Oracle.

Once, you determine the need for reorganization, use the REORG command to perform it. The example displayed on this slide will defragment the documentation store, also referred to as DocStore.

You will regularly use temporary tables and indexes, for example, during import and update jobs. Use the drop_temp_agg_tables.pl perl script to remove these tables.

Similarly, drop all temporary tables starting with TCTG_ULE_USER_LOG_ENTRY and associated temporary sequences using the drop_log_tables_seq.pl perl script.

Additional resources

- <http://publib.boulder.ibm.com/infocenter/mdm/v10r0m0/topic/com.ibm.help.ic.doc/out/ic-homepage.html>

For more information on any of the tools mentioned in this presentation, visit the Information Center at the web link displayed on this slide.

Trademarks, disclaimer, and copyright information

IBM, the IBM logo, ibm.com, AIX, DB2, and InfoSphere are trademarks or registered trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of other IBM trademarks is available on the web at "[Copyright and trademark information](http://www.ibm.com/legal/copytrade.shtml)" at <http://www.ibm.com/legal/copytrade.shtml>

THE INFORMATION CONTAINED IN THIS PRESENTATION IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY. WHILE EFFORTS WERE MADE TO VERIFY THE COMPLETENESS AND ACCURACY OF THE INFORMATION CONTAINED IN THIS PRESENTATION, IT IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. IN ADDITION, THIS INFORMATION IS BASED ON IBM'S CURRENT PRODUCT PLANS AND STRATEGY, WHICH ARE SUBJECT TO CHANGE BY IBM WITHOUT NOTICE. IBM SHALL NOT BE RESPONSIBLE FOR ANY DAMAGES ARISING OUT OF THE USE OF, OR OTHERWISE RELATED TO, THIS PRESENTATION OR ANY OTHER DOCUMENTATION. NOTHING CONTAINED IN THIS PRESENTATION IS INTENDED TO, NOR SHALL HAVE THE EFFECT OF, CREATING ANY WARRANTIES OR REPRESENTATIONS FROM IBM (OR ITS SUPPLIERS OR LICENSORS), OR ALTERING THE TERMS AND CONDITIONS OF ANY AGREEMENT OR LICENSE GOVERNING THE USE OF IBM PRODUCTS OR SOFTWARE.

© Copyright International Business Machines Corporation 2012. All rights reserved.