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InfoSphere Information Server

Configuring Information Server 9.1 for Informix

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This presentation will discuss how to configure Information Server version 9.1 running on UNIX or Linux platforms, to connect to Informix® databases.

Objectives

- Prerequisites
- How to configure
- How to test
- Resources

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The objectives of this presentation are to explain the required prerequisites before you can connect to Informix, how to configure DataStage® to connect to Informix databases using the Informix CLI Stage and the Informix Enterprise Stage, and how to test this configuration to ensure it is working properly.

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Pre-requirements

- 64-bit Informix Client must be installed on Engine Tier
- Obtain values for environment variables

Name	Description	Example
INFORMIXDIR	The location of the Informix Client installation.	/opt/informix
INFORMIXSERVER	The name of the Informix database server. It can be different to that of the host name.	MYSERVER
INFORMIXSQLHOSTS	The name of the machines where the Informix server instances are running	mymachine
ONCONFIG	The name of the active file that holds configuration parameters for the database serve	/opt/informix/etc/sqlhosts.ol_informix1210

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Before you can connect to Informix, you need to install the 64 bit version of the Informix Client on the Engine Tier. After installation, ensure that the Informix Client is working before you try to configure DataStage.

Next, obtain the values for the environment variables INFORMIXDIR, INFORMIXSERVER, INFORMIXSQLHOSTS and ONCONFIG. The variable INFORMIXDIR contains the location of Informix. The variable INFORMIXSERVER contains the name of the Informix database server, which can be different than the host name. The variable INFORMIXSQLHOSTS, contains the name of the machines where the Informix Server instances are running. The variable ONCONFIG contains the name of the active file that holds the configuration parameter for the database server. If you do not know how to obtain these values then contact your Informix database administrator.

How to configure (1 of 4)

- Backup dsenv

- Edit dsenv

- Add Informix environment variables to the end of file
    - Informix CLI, Informix Load and Informix XPS Stages
        - INFORMIXDIR
        - INFORMIXSQLHOSTS
        - ONCONFIG
        - Add $INFORMIXDIR/bin to PATH variable
        - Add folders lib, lib/cli and lib/esql located under INFORMIXDIR to library path To use
    - Informix Enterprise, also add
        - INFORMIXSERVER

Before you configure DataStage, create a backup of the dsenv file so you can rollback any changes if necessary.

Next, edit the dsenv file and add the INFORMIXDIR environment variable to the end of the dsenv file. To prevent some known errors during running time, set the values for the variables INFORMIXSQLHOSTS and ONCONFIG.

Add $INFORMIXDIR/bin to the PATH variable.

Add the folders lib, lib/cli and lib/esql located under $INFORMIXDIR to the library path. Be aware that this environment variable can have different names, such as LD_LIBRARY_PATH, SHLIB_PATH, or LIBPATH depending on the operating system you are working with.

If you intend to use the Informix Enterprise Stage, also set the variable INFORMIXSERVER.

How to configure (2 of 4)

- Add changes to end of file
- Export all variables
  - Example:

```
INFORMIXDIR=/opt/informix; export INFORMIXDIR
PATH=$PATH:$INFORMIXDIR/bin; export PATH
export INFORMIXSQLHOSTS
LIBPATH=$LIBPATH:$INFORMIXDIR/lib:$INFORMIXDIR/lib/cli:$INFORMIXDIR/lib/esql
export LIBPATH
INFORMIXSQLHOSTS=/opt/informix/etc/sqlhosts.ol_informix1210
ONCONFIG=onconfig.ol_informix1210; export ONCONFIG
# Required for Informix Enterprise Stage
INFORMIXSERVER=MYSERVER; export INFORMIXSERVER
```

- Save dsenv
- Restart DataStage engine

This slide displays an example of the environment variables added at the end of the dsenv file. Be sure to export each environment variable as seen in this example.

Once the variables have all been added, save the file and restart the DataStage engine for the changes to take effect.

How to configure (3 of 4)

- Informix CLI requires 64-bit non-wired ODBC connectivity

- Not included with DataStage

- Back up $DSHOME/.odbc.ini

- Edit $DSHOME/.odbc.ini

- Add data source name
  Example:
  ```
  [infxcli]
  Driver=/home/informix/ids12/lib/cli/iclit09b.so
  Description=IBM INFORMIX ODBC DRIVER
  Database=mydatabase
  LogonID=informix
  pwd=informix
  HostName=machine_name
  PortNumber=31555
  Servername=server_name
  CursorBehavior=0
  TRANSLATIONDLL=/home/informix/ids12/lib/esql/igo4a304.so
  ```

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If you are going to use the Informix CLI stage, you need to create an ODBC Data Source name. This stage only works with non-wired ODBC drivers. Information Server 9.1 does not include any 64-bit non-wired ODBC drivers so you will have to obtain and install 64-bit ODBC drivers from Informix.

Create a backup of the file $DSHOME/.odbc.ini and then edit it.

Add a Data Source Name with the information of the database you want to connect to.

How to configure (4 of 4)

- Add UNICODE=UTF-8 to section [ODBC]
  - Example
  ```
  [ODBC]
  IANAAppCodePage=4
  InstallDir=/opt/IBM/InformationServer/Server/branded_odbc
  TraceDll=/opt/IBM/InformationServer/Server/branded_odbc/lib/VMtrc25.so
  UseCursorLib=0
  UNICODE=UTF-8
  TraceOptions=0
  ```

- Edit file <Project_Directory>/uvodbc.config

- Add new DSN
  - Example
  ```
  [ODBC DATA SOURCES]
  <localuv>
  DBMSTYPE = UNIVERSE
  network = TCP/IP
  service = uvserver
  host = localhost

  <infxcli>
  DBMSTYPE = ODBC
  ```

- DSN name must match DSN name in .odbc.ini exactly

- Must have a space on both side of "="

You also need to include the line UNICODE=UTF-8 in the [ODBC] section of this file.

Finally, add a DSN entry to the file <Project_Directory>/uvodbc.config using the exact same DSN name you used in .odbc.ini. This name is case sensitive so be sure it matches exactly. Also, be sure there is a space on both sides of the =.

Validating the configuration

- Open DataStage Designer
- Import a Table Definition
    - Import -> Table Definitions -> ODBC Table Definitions
- If import fails
    - Open a new terminal session
    - Source dsenv
    - Test connectivity using example utility
        ```
        $ cd $DSHOME
        $ . ./dsenv
        $ cd ../branded_odbc/samples/example
        $ ./example
        ```
- Informix Enterprise
    - Import a table using Import Orchestrate Schema

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The next step is to validate the configuration. Open the DataStage Designer. To validate the Informix CLI Stage, try to import a table definition using ODBC Table Definitions from the Import Table Definitions menu. If this works, the configuration is valid and jobs that connect to Informix should function properly. If this fails, test the changes to the dsenv using the example utility to test ODBC connections. To do this, open a new terminal session, source the dsenv file, and run the example as displayed on this slide. If this test fails, double check that the values entered in the dsenv and the .odbc.ini file are valid. If the example connects successfully, the changes in the dsenv and in the .odbc.ini file are correct and most likely the cause of the issue is that the DataStage engine was not restarted after the changes were made.

To validate the Informix Enterprise Stage, try to import a table using the option Import Orchestrate Schema from the Import Table Definitions menu. Select DBMS Type = Informix, and then provide the name of the server, database, table and user and password. If this works then the configuration is valid. If this fails, you might need to restart the Engine. Also, you can use the error message to identify what part of the configuration is incorrect.

Resources

- More details on how to use Informix Stages
  - Information Center for InfoSphere® Information Server

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For more details on how to use Informix Stages, go to the Information Center for InfoSphere Information Server.

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