Pre-requisites

- Install.DB2 8.2 and WebSphere MQ v5.3 on your machine

For information on how to set up WebSphere MQ for WebSphere Data Interchange see the wdi_mq_setup.txt file in the samples directory.

On Windows platforms the WebSphere MQ Services Trigger Monitor does not fully support PROCESS definitions that contain file paths having embedded blank characters e.g. "C:\Program files\". Instead run the WebSphere MQ trigger monitor program runmqtrm as described in wdi_mq_setup.txt.

Lab Instructions

Using the WebSphere Data Interchange Server install file, perform the installation as outlined in the WDI Administration and Security Guide, chapter 1 and duplicated in the readme.txt file (see below)

WDI Administration and Security Guide
Chapter 1

Windows
To use the InstallShield Wizard, you must be logged in as an administrator. By default, the WebSphere Data Interchange server is installed to the C:\Program Files\IBM\WDIServer\V3.3 directory. You must have at least 150 MB of free space on this drive. Remember, user data will require additional space.

- 1. Insert the WebSphere Data Interchange server CD into the CD-ROM drive. a. On the menu bar, click **Start —> Run**. b. Find the directory containing the WDIServerV33.exe executable. c. Run the executable to start the InstallShield Wizard.The Welcome screen opens as the InstallShield Wizard prepares to install the WebSphere Data Interchange Server.
- 2. Click Next. The license agreement opens.
- 3. Read the information and license terms on the panel. Click the appropriate button to accept the terms of the license agreement and to indicate you have read the notice and agree to its terms. If you want to print the license agreement, click Print. If you do not agree to the license agreement, the installer will exit.
- 4. To continue with the install, Click Next. The Installer dialog box displays the installation directory.

- 5. If you want to install the Server into another directory than the default, C:\Program Files\IBM\WDIServer\V3.3, change the location by typing a different location or use the Browse button to navigate to the location you prefer.
- 6. Click Next. The installer dialog then displays a listing of the installation directory and the total size of the install required.
- 7. Click Next. The InstallShield wizard displays the choices for the install.

- 8. Click Next.
- 9. The InstallShield Wizard begins copying program files. To stop this process at any point, click Cancel. When the installation is complete, the screen displays the successful installation message.
- 10. Click Finish. The installation of the files is complete.

The following directories are created within the installation directory:bin bind ddl eif include license mig32 runtime samples Additional directories might be created for use by InstallShield, for example for storing uninstall information, and Java™ Virtual Machine binaries.**Note:** For Windows installations, the bin directory for WebSphere Data Interchange V3.3 is added to the end of your current path. This directory must be completely within the first 255 characters of the PATH to allow DB2 to execute any of the Client's new Submission features. If you have another version of WebSphere Data Interchange installed on your system, you need to change your path to make sure that the WebSphere Data Interchange V3.3 bin directory comes before any other versions of WebSphere Data Interchange in your PATH. If other versions of WebSphere Data Interchange executables are found in your path, you may receive database errors such as a -818, since the executables from other versions are not bound to the EDIEC33E database.

Setting up the WebSphere Data Interchange database

There are new features in WebSphere Data Interchange V3.3 that require changes to the DB2 instance used for the WebSphere Data Interchange database. The user environment from which the DB2 database starts must contain information that enables the database to access WebSphere Data Interchange. Perform the following steps as a user with DB2 administrator authority.

- 1. If you are installing on Windows, using your DB2 administrator user ID, select **Start —> Programs —> IBM DB2 —>Command Line Tools —> Command Window** to open the DB2 Command window. If you are installing on AIX, log in as a DB2 user with administrator authority. The remaining database setup steps use this command window or login session.**Note:** DB2 and WebSphere Data Interchange work best when installed on the same drive.
- 2. Change to the ddl directory under the installation directory. a. Issue the following command:

db2 –tf createdb.ddl > createdb.out

When this process has successfully completed, the database has been built. Review the log file named createdb.out. It should look like:

DB20000I The CREATE DATABASE command completed successfully.
DB20000I The UPDATE DATABASE CONFIGURATION command completed successfully.
DB20000I The UPDATE DATABASE CONFIGURATION command completed successfully.
DB20000I The UPDATE DATABASE CONFIGURATION command completed successfully.

- 3. Change to the DB2 directory that contains the bind files for the DB2 utilities: v If you are installing on Windows, this is typically C:\Program Files\IBM\SQLLIB\bnd. For more information, see the section Binding Database Utilities in the appropriate DB2 Quick Beginnings book. v If you are installing on AIX , this is typically /u/<db2_instance>/sqllib/bnd, where *<db2_instance>* is the userID of the instance owner. Issue the following commands:

db2 connect to ediec33e
db2 bind @db2ubind.lst messages bind.msg grant public
db2 bind @db2cli.lst messages clibind.msg grant public
db2 connect reset

Or: From the DB2 installation directory, enter the following command where WDIServerInstalldir is the directory where you installed WebSphere Data Interchange Server V3.3. : \WDIServerInstalldir\ddl\binddbut.bat This batch file will run the aforementioned commands. If you are working on AIX, you might not have write authority in the current directory. If you do not, you must specify a different file for the messages, for example */tmp/bind.msg*.

- 4. Change back to the ddl directory under the installation directory. a. Issue the following command:

  db2 –tf ediec33.ddl –l ec33.log
  This creates the tables, indexes, views, stored procedures, and other files necessary to run WebSphere Data Interchange. The resulting log file, named *ec33.log*, is about 264 Kb. b. Invoke the command to issue the GRANT statements that are required to grant access to the newly created tables for the WebSphere Data Interchange Client. By default this GRANTs access to public. You might want to change public to specific user IDs or a group of authorized users.
  db2 –tf grntec33.ddl –l grntec33.log
  The resulting log file, named *grntec33.log*, is about 35 Kb.Change to the bind directory under the installation directory.
- 5. Invoke the command to bind the DB2 packages and issue the GRANT statements that are required to grant access to the newly created tables for the Server. The default in bindgrnt.fi1 GRANTs access to public. You might want to change public to specific user IDs or a group of authorized users.
  db2 -tf bindgrnt.fil -l bind.log

The resulting log file, named *bind.log*, is about 11 Kb.

- 6. Change to the eif directory under the installation directory and issue the following command:
  loadeif.bat
  This process will use WDI PERFORM IMPORT to load additional data into the DB2 tables. This includes data such as functional acknowledgment maps, validation maps, a sample data transformation map, and various profiles and tables.
- 7. To use the remote execution function of the client connecting to a Windows database, the database will need to be stopped and restarted once all the previous setup is complete. This will enable the stored procedures to work correctly. For use of the remote execution function of the Client connecting to an AIX database, you will need to add the *setdienv.sh* to the DB2 profile of the user starting DB2 and then restart DB2.
- 8. You have now completed the set up of the database.
  Note: If you are currently using WebSphere Data Interchange V3.2, and would like to migrate your transaction store, management reporting, and SAP status data from your WebSphere Data Interchange V3.2 database, see the Appendix of this guide. Other data such as maps, profiles, etc. can be migrated from previous versions of WebSphere Data Interchange using normal export and import procedures.

Verifying your installation

To verify your installation of WebSphere Data Interchange server, complete the following steps:

- 1. Change directory to the **samples** directory

- 2. Enter the command:
  wditest
  This command runs a batch file on Windows, and a shell script on AIX to set up environment variables and run a translation using the sample map and data provided. The environment is restored at the end of the test. If the installation is successful, the following output is returned:

DI Translator Started, build date: (WDI build date)
DI Translator processed your request.
DI Translator shutdown

If an error or errors are written to the console or to the *prtfile* in the samples directory check the messages and take the appropriate corrective action.

WDI Readme.txt

****

***** Welcome to WebSphere Data Interchange for Multiplatforms V3.3**

****

****

****

For information on how to set up WebSphere MQ for WebSphere Data Interchange see the wdi_mq_setup.txt file in the samples directory.

On Windows platforms the WebSphere MQ Services Trigger Monitor does not fully support PROCESS definitions that contain file paths having embedded blank characters e.g. "C:\Program files\". Instead run the WebSphere MQ trigger monitor program runmqtrm as described in wdi_mq_setup.txt.

***** Install instructions for WebSphere Data Interchange V3.3**

Complete server installation and setup instructions can be found in the WebSphere Data Interchange Administration and Security Guide.

1) Perform subsequent steps as a user with DB2 administrator authority.

2) After the InstallShield installation, the directory structure within the installation directory is as follows:

bin
bind
ddl
eif
include
license
mig32
runtime
samples

* Additional directories may be created for use by InstallShield. These are used for things like keeping uninstall information, and the Java Virtual Machine binaries.

3) If you are installing on Windows, using your DB2 administrator user ID, select:
Start -> Programs -> IBM DB2 -> Command Line Tools -> Command Window
to open the DB2 Command window.

If you are installing on AIX, log in as a DB2 user with administrator authority.

The remaining database setup steps use this command window or login session.

Note: DB2 and WebSphere Data Interchange work best when installed on the same drive.

4) Change directory to the ddl directory

5) Issue the command:

db2 -tf createdb.ddl > createdb.out

This process will create the database. When this process has completed successfully the database has been built.

Review the log file named createdb.out. It should not contain any errors.

6) Change to the DB2 directory which contains the bind files for the DB2 utilities.
- If installing on Windows, this typically has a name like C:\Program Files\SQLLIB\bnd.
- If installing on AIX, this typically has a name like /u/<db2 instance>/sqllib/bnd, where <db2 instance> is the id of the instance owner.

(See DB/2 Quick Beginnings "Binding Database Utilities")

7) Issue the following commands:

```
db2 connect to ediec33e
db2 bind @db2ubind.lst messages bind.msg grant public
db2 bind @db2cli.lst messages clibind.msg grant public
db2 connect reset
```

8) Change the current directory back to the ddl directory.

9) Issue the command:

```
db2 -tf ediec33.ddl -l ec33.log
```

This process creates the WebSphere Data Interchange V3.3 tables, indices, views, etc.

10) The next step will issue GRANT statements necessary for WDI Client access to the newly created tables. The default is to issue GRANTs to public. You may wish to change public to specific userids or a group of authorized users.

11) Issue the commands:

```
db2 -tf grntec33.ddl -l grntec33.log
```

12) Change directory to the bind directory

13) The next step will issue GRANT statements necessary for WebSphere Data

Interchange Server access to the newly created tables. The default within bindgrnt.fil is to issue GRANTs to public. You may wish to change public to specific userids or a group of authorized users.

14) Issue the command:

db2 -tf bindgrnt.fil -l bind.log

This process will BIND the WebSphere Data Interchange V3.3 DB2 packages and GRANT execute authority to public.

15) Change to the eif directory under the installation directory and issue the following command:

loadeif.bat

This process will use WDI PERFORM IMPORT to load additional data into the DB2 tables. This includes data such as functional acknowledgment maps, validation maps, a sample data transformation map, and various profiles and tables.

16) To use the remote execution function of the client connecting to a Windows database, the database will need to be stopped and restarted once all the previous setup is complete. This will enable the stored procedures to work correctly.

For use of the remote execution function of the Client connecting to an AIX database, you will need to add the setdienv.sh to the DB2 profile of the user starting DB2 and then restart DB2.

17) The installation for the WebSphere Data Interchange V3.3 is complete.

Notes on setting the PATH:

For Windows installations, the bin directory for WDI 3.3 is added to the end of your current path. If you have another version of WDI installed on your system, you need to change your path to make sure that the WDI 3.3 bin directory comes before any other versions of WDI in your PATH. If other versions of WDI executables are found in your path, you may receive database errors such as a -818, since the executables from other versions are not bound to the EDIEC33E database.

For AIX installations, there is a script in the samples directory that can be used to set up the WDI environment variables. To use this script, enter the command:

```
. setdienv.sh
```

This command can also be run from within your .profile when you login. By using the "." followed by a blank, this will set the variables in the current environment. Otherwise, the environment variables are only set for the duration of the script.

***** Install verification steps**

1) Change directory to the samples directory

2) Enter the command:

wditest

This will start a batch file (Windows) or shell script (AIX) to set up environment variables and run a translation using the sample map and data provided. The environment is restored at the end of the test.

If the installation is successful, you should see the following output:

DI Translator Started, build date: (WDI build date)
DI Translator processed your request.
DI Translator shutdown

If error(s) are written to the console or to the prtfile (in the samples directory), check the messages and take appropriate corrective action.

***** Setting up a TCP/IP alias for remote access to AIX databases**

For improved performance when accessing an AIX database from the WDI Client, use of a TCP/IP alias is suggested. This also prevents certain performance related database errors. To set up a TCP/IP alias for a database do the following steps using an id with db2 sysadm authority:

You will need to substitute your local values for the following:

<service> is the service name in /etc/services for the DB2 port
<hostname> is the host name for the machine
<hostnode> is the tcpip node name you want to define
<dbname> is the database name
<dbalias> is the database alias

Issue these commands one time for the machine to create the TCP/IP node:

```
db2set DB2COMM=tcpip
db2 update dbm cfg using svcename <service>
db2 catalog tcpip node <hostnode> remote <hostname> server <service>
```

Then for each database, you will define an alias by issuing the following command:

```
db2 catalog database <dbname> as <dbalias> at node <hostnode>
```

For example, if your system had the following local values:

db2tcp01 is the service name in /etc/services for the DB2 port
wdihost is the host name for the machine
wditcp is the tcpip node name you want to define
EDIEC33E is the database name
WDITCP33 is the database alias you want to use

You would issue the following commands:

```
db2set DB2COMM=tcpip
db2 update dbm cfg using svcename db2tcp01
db2 catalog tcpip node wditcp remote wdihost server db2tcp01
db2 catalog database EDIEC33E as WDITCP33 at node wditcp
```

When remote DB2 clients connect to the EDIEC33E database, they can use the WDITCP33 alias for the database name.

If you want to define additional TCP/IP aliases for that system, you only need to issue the "db2 catalog database" command for the other databases. You do not need to define the node again.

For more information, refer to your DB2 documentation.

***** Migrating data from previous releases**

If you are currently using an earlier version/release of WebSphere Data Interchange, you can migrate maps, trading partners, profiles, and most other database objects by exporting the objects from your existing WDI database, then importing them into your WDI 3.3 database. You can export and import individual objects using the WDI Client, use the release migration feature of the WDI Client, or use PERFORM EXPORT and PERFORM IMPORT commands on WDI Server.

Note: If you are migrating from WDI 3.2 MP to 3.3 using WDI Client Release Migration, and created your WDI 3.2 server database after CSD16 was installed, you may see the following error during the Release Migration processing:

11041 - A database error occurred while attempting to open table "EDIENU32.EDIPSCR". ODBC return code is: -1. Description: SQL0206N "TRACKNM" is not valid in the context where it is used. SQLSTATE=42703. Internal Codes: State:S0022,Native:-206, Origin:[IBM][CLI Driver][DB2/NT]

The error is due to the EDIPSCR table missing several new columns, e.g. "TRACKNM". The fix is to run the CSD16.ddl from the WDI 3.2 ddl directory and re-run the export. Note: "TRACKNM" is only the first of several columns that are missing.

Certain operational data including Transaction Store, Management Reporting, and SAP Status data cannot be imported or exported. Special programs are included with WDI 3.3 to migrate this data from a WDI 3.2 database to WDI 3.3.

Some restrictions on the use of these programs:

- These programs only support the migration from WDI 3.2 databases to WDI 3.3 databases. Migration of Transaction Store, Management Reporting, and SAP status data from WDI 3.1 is not supported.
- These programs only support migration to the same type of operating system. For example, you can use them to migrate from a WDI 3.2 database on Windows to a WDI 3.3 database on Windows, but not from 3.2 on Windows to 3.3 on AIX.
- The WDI 3.2 system that you are migrating from must have CSD7 or later installed.
- These programs are intended to REPLACE ALL existing Transaction (Document) Store, Management Reporting, and SAP status information

in the new database. Although it is possible modify the scripts to insert records into the WDI 3.3 database without deleting the existing records first, this should only be used in special situations, and is generally not recommended. If the migrated records conflict with records that were generated by WDI 3.3 processing, it can put the database into an invalid state, and later cause problems during translation and/or reporting functions. To avoid this situation, the script to load the data will use the "clean" option to delete all existing records from the WDI 3.3 table before it loads the migrated data.

- There are a number of interdependencies between Transaction Store tables, and also between Management Reporting tables. You should migrate these as a set, and not try to migrate individual tables. Migrating individual tables can put the database into an invalid state, and later cause problems during translation and/or reporting functions.

These migration steps can be done either immediately after you create your WDI 3.3 database and load the default data, or they can be done later after you have done additional setup and testing with WDI 3.3. If you do the migration after you have done additional testing with WDI 3.3, remember that any existing WDI 3.3 Transaction Store, Management Reporting, and SAP status data will be deleted during the migration of the WDI 3.2 data. Other data such as maps, profiles, etc. will not be affected by these migration steps.

Unloading WDI 3.2 tables
(If WDI 3.2 database is on the SAME machine where WDI 3.3 is installed)

To unload the Transaction Store, Management Reporting, and SAP status tables from a WDI 3.2 database that is on the same machine where WDI 3.3 is installed, follow the steps below:

1) On the machine where WDI 3.3 is installed (and contains the WDI 3.2 database), open a command window which will allow you to enter DB2 commands.

If you are installing on Windows, using your DB2 administrator user ID, select Start -> Programs -> IBM DB2 -> Command Window to open the DB2 Command window.

If you are installing on AIX, log in as a DB2 user with administrator authority.

The remaining database setup steps use this command window or login session.

2) Change to the mig32 directory under the WDI 3.3 install directory.
Invoke the command to bind the DB2 package and issue the GRANT statement that is required to run the edimunl migration program. The default in bindmunl.ddl GRANTs access to PUBLIC. You might want to change PUBLIC to specific user IDs or a group of authorized users.

```
db2 -tf bindmunl.ddl
```

3) Run the unload32 script to read the WDI 3.2 database tables, and write the data to files. For each table that is unloaded, the number of records is displayed and a separate file with a .mig extension is created.

```
unload32
```

Unloading WDI 3.2 tables
(If WDI 3.2 database is on a DIFFERENT machine than WDI 3.3 is installed)

To unload the Transaction Store, Management Reporting, and SAP status tables from a WDI 3.2 database that is NOT on the machine where WDI 3.3 is installed, follow the steps below:

1) Copy the contents of the mig32 directory from the WDI 3.3 machine to the machine that has the WDI 3.2 database.

2) On the machine that contains the WDI 3.2 database, open a command window which will allow you to enter DB2 commands.

If you are installing on Windows, using your DB2 administrator user ID, select Start -> Programs -> IBM DB2 -> Command Window to open the DB2 Command window.

If you are installing on AIX, log in as a DB2 user with administrator authority.

The remaining database setup steps use this command window or login session.

3) Change to the directory where you copied the mig32 files. Invoke the command to bind the DB2 package and issue the GRANT statement that is required to run the edimunl migration program. The default in bindmunl.ddl GRANTs access to PUBLIC. You might want to change PUBLIC to specific user IDs or a group

of authorized users.

db2 -tf bindmunl.ddl

4) Run the unload32 script to read the WDI 3.2 database tables, and save them to files. For each table that is unloaded, the number of records is displayed and a separate file with a .mig extension is created.

unload32

5) Copy the .mig files to the mig32 directory where WDI 3.3 is installed. These files contain binary data, so you should make sure the files are copied as binary, to make sure they do not get corrupted during the copy.

Loading migrated data into WDI 3.3 tables

Once you have successfully unloaded the data from the WDI 3.2 database, you can load them into the WDI 3.3 tables. Remember, that this will replace all Transaction Store, Management Reporting, and SAP status information that currently exists in the WDI 3.3 database. To load the WDI 3.2 data into the WDI 3.3 database, follow the steps below:

1) On the machine where WDI 3.3 is installed, open a command window which will allow you to enter DB2 commands.

If you are installing on Windows, using your DB2 administrator user ID, select Start -> Programs -> IBM DB2 -> Command Window to open the DB2 Command window.

If you are installing on AIX, log in as a DB2 user with administrator authority.

The remaining database setup steps use this command window or login session.

2) Change to the mig32 directory under the WDI 3.3 install directory. Invoke the command to bind the DB2 package and issue the GRANT statement that is required to run the edimlod migration program. The default in bindmlod.ddl GRANTs access to PUBLIC. You might want to change PUBLIC to specific user IDs or a group of authorized users.

db2 -tf bindmlod.ddl

3) Run the load33 script to run the migration program edimlod for each table. This will delete existing entries from the WDI 3.3 database tables (Transaction Store, Management Reporting, and SAP status), and insert the records from the files created during the unload process. For each table that is loaded, the number of records inserted is displayed.

load33

The edimlod program will do any necessary conversions on the WDI 3.2 records so it can insert the data into the WDI 3.3 database. Some notes on these conversions:

- Since the WDI 3.2 database did not support Unicode, data is assumed to be in the system default codepage. Values are converted to Unicode during the load process as required.
- The sender and receiver qualifier values are included in the Transaction Store tables for WDI 3.3, but were not saved in WDI 3.2. For records that are migrated from WDI 3.2, these will be set to a value of "*". If you use the qualifiers as part of your filter criteria for queries and extracts, you will need to specify an "*" to see the migrated data. Or, you can omit the qualifier from your filter criteria.

When WDI server updates the Transaction Store status to reflect received functional acknowledgements or network communications, it has special logic to check for entries with the "*" qualifiers if it is unable to find the Transaction Store entries that match the specific qualifiers in the data.

***** Uninstall instructions for WebSphere Data Interchange V3.3**

To uninstall on AIX:

1) Change directory to the _uninst directory

2) Issue the command:

uninstall.bin

To uninstall on Windows:

1) Use the Windows "Add/Remove Programs" dialog on the control panel
to uninstall the program.

***** Acknowledgements *****

***** END OF DOCUMENT WebSphere Data Interchange for Multiplatforms V3.3**