



TEMENOS™

# TAFJ-DB2 Install

R14/R15

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Temenos



## Amendment History:

Revision	Date Amended	Name	Description
11	1 <sup>st</sup> April 2011	TAFJ team	Initial version
12	7 <sup>st</sup> February 2012	H. Aubert	R12GA review
13	16 <sup>th</sup> January 2013	R. Vincent	R13GA review
14	18 <sup>th</sup> Feb. 2014	R. Vincent	R14GA review
15	3 <sup>rd</sup> Mar 2015	G.Gowrimani	R15GA review

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## Introduction

This document will show all the steps configure a DB2 database ready to be used by T24 with TAFJ. At this time TAFJ only supports DB2 Version 10 and up.

This procedure is for Windows® platform. For all other OS please refer to the official product documentation.

## Install DB2

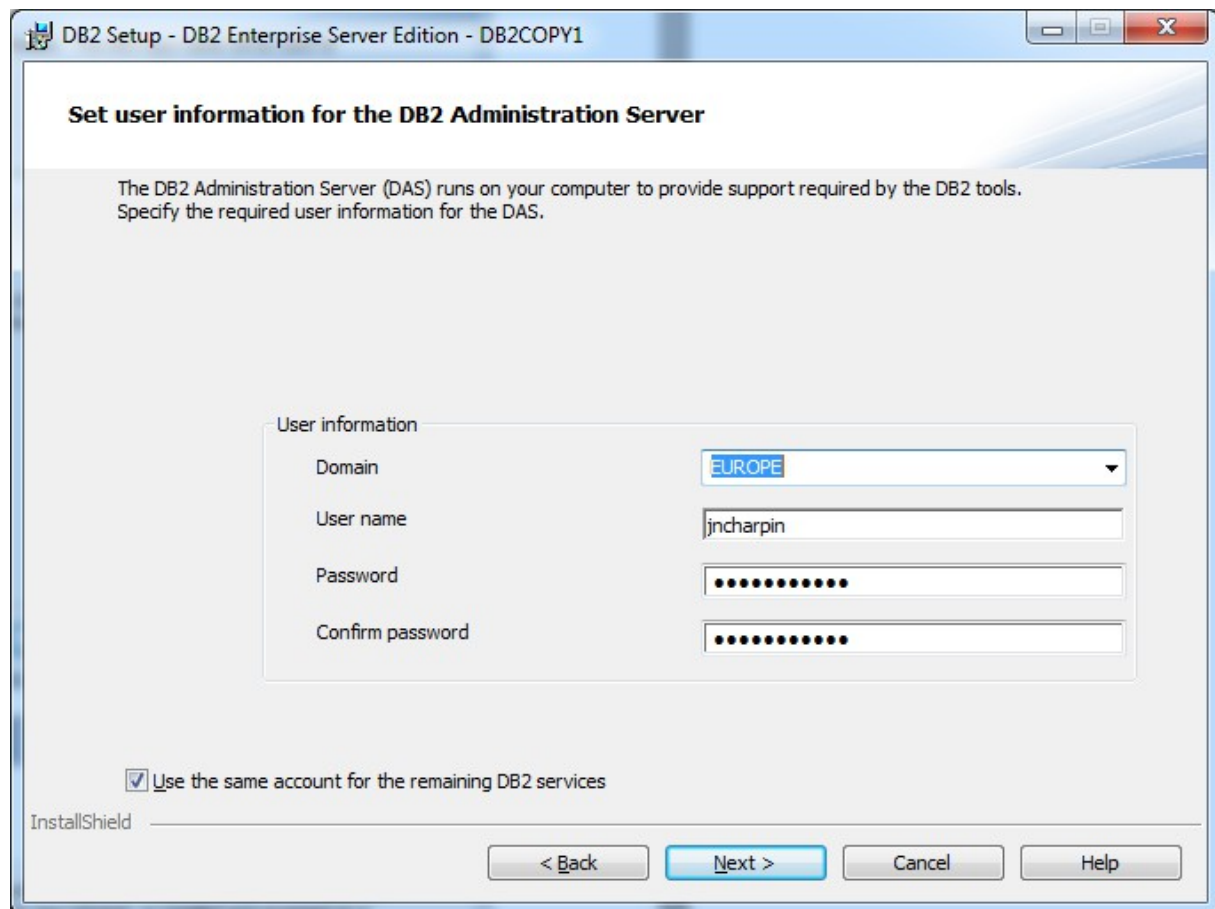
Most steps aren't shown. Please follow the official DB2 document setup.

<http://pic.dhe.ibm.com/infocenter/db2luw/v10r5/index.jsp?topic=%2Fcom.ibm.db2.luw.qb.server.doc%2Fdoc%2Ft0008099.html>

Here is an instruction video which is helpful for DB2 Express-C (keep in mind TAFJ only supports versions later than 10)

<http://www.youtube.com/watch?v=m71-BFzzkE>

A note for the installation. Choose the Domain and Username. Keep in mind that DB2 uses the OS user for authentication so on windows this is the account you most frequently log in with. You will be able to skip a step later if this user is a member of the DB2 admin group.



DB2 Setup - DB2 Enterprise Server Edition - DB2COPY1

### Set user information for the DB2 Administration Server

The DB2 Administration Server (DAS) runs on your computer to provide support required by the DB2 tools. Specify the required user information for the DAS.

User information

Domain	EUROPE
User name	jncharpin
Password	.....
Confirm password	.....

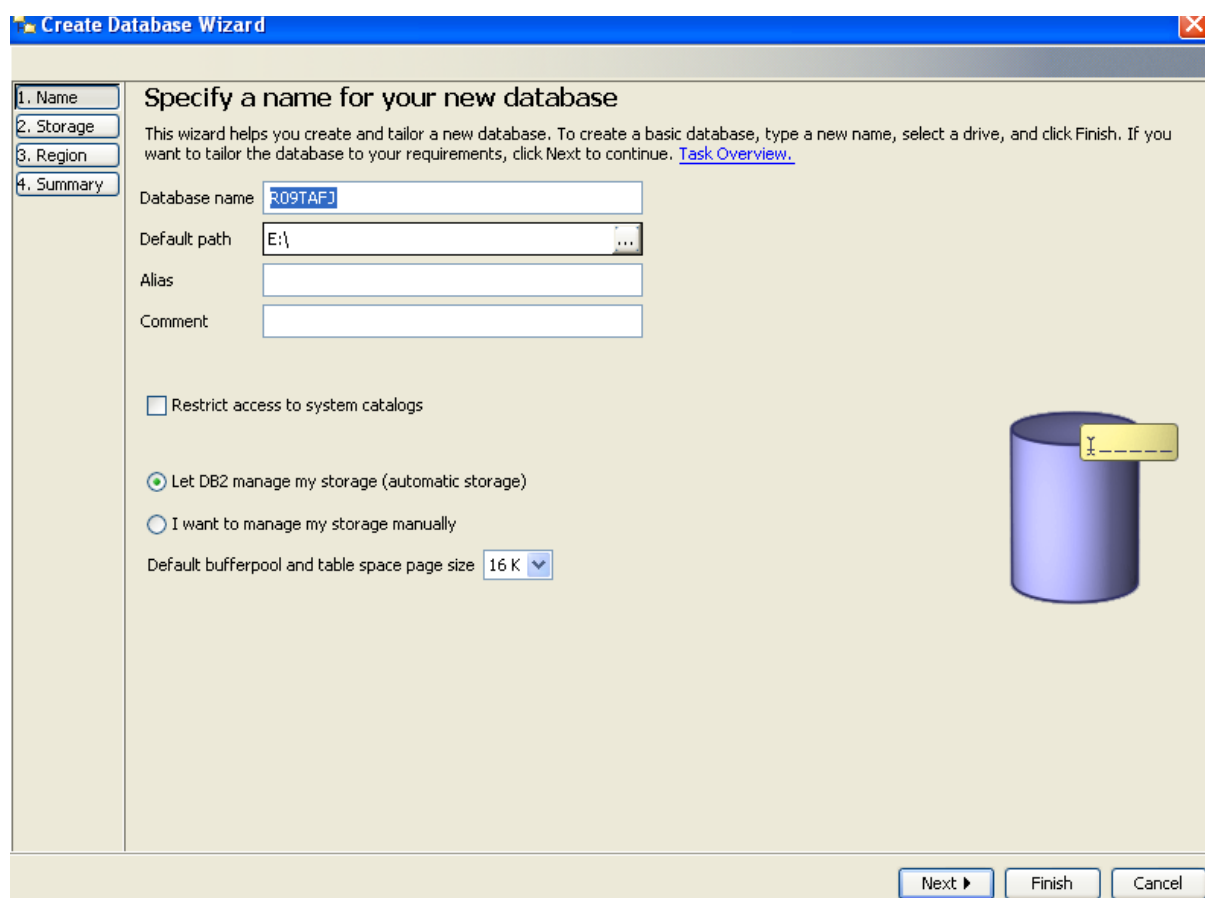
☒ Use the same account for the remaining DB2 services

InstallShield

< Back Next > Cancel Help

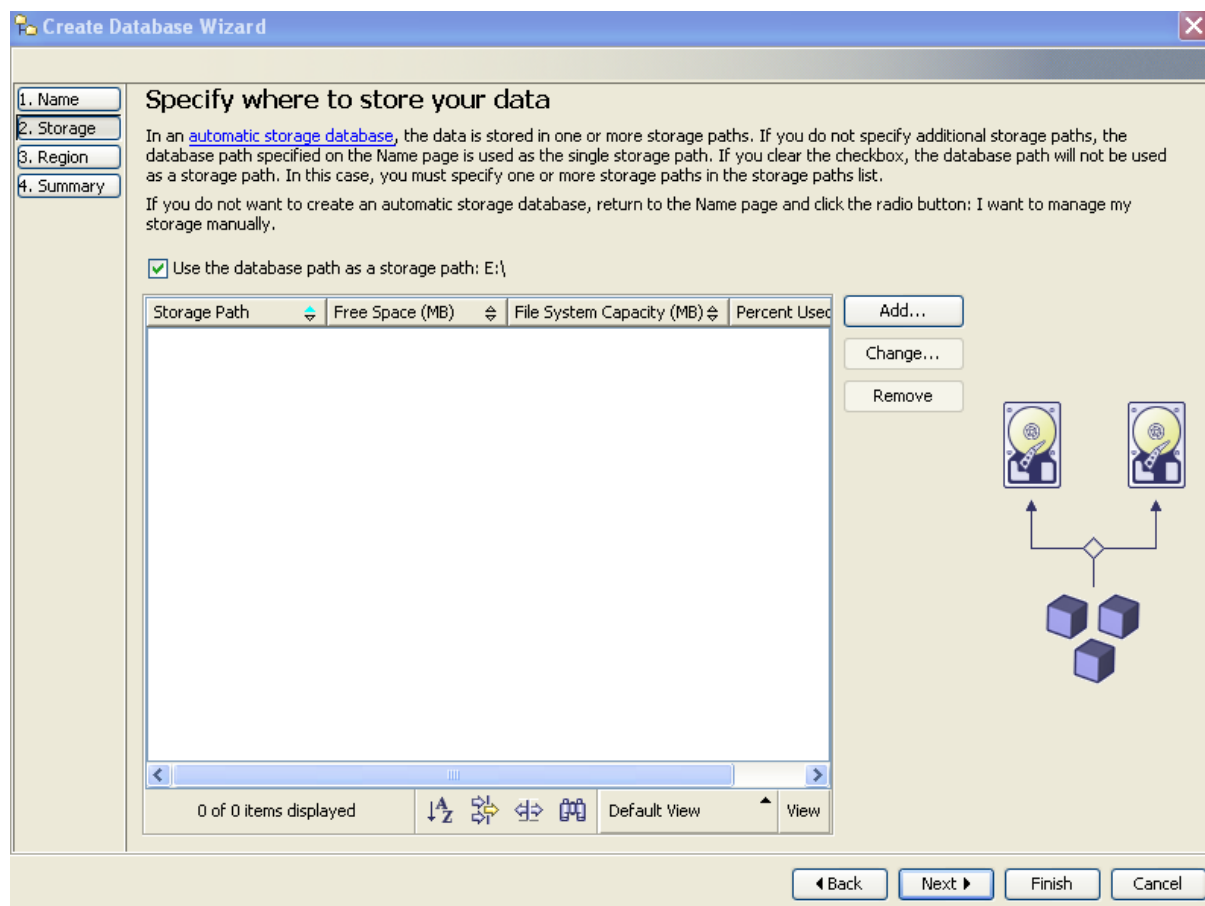
## Launch the Control Center to Create Your Database

After DB2 is finished installing, launch the control center and Select Tools Menu → Wizards and then select "Create Database Wizard"

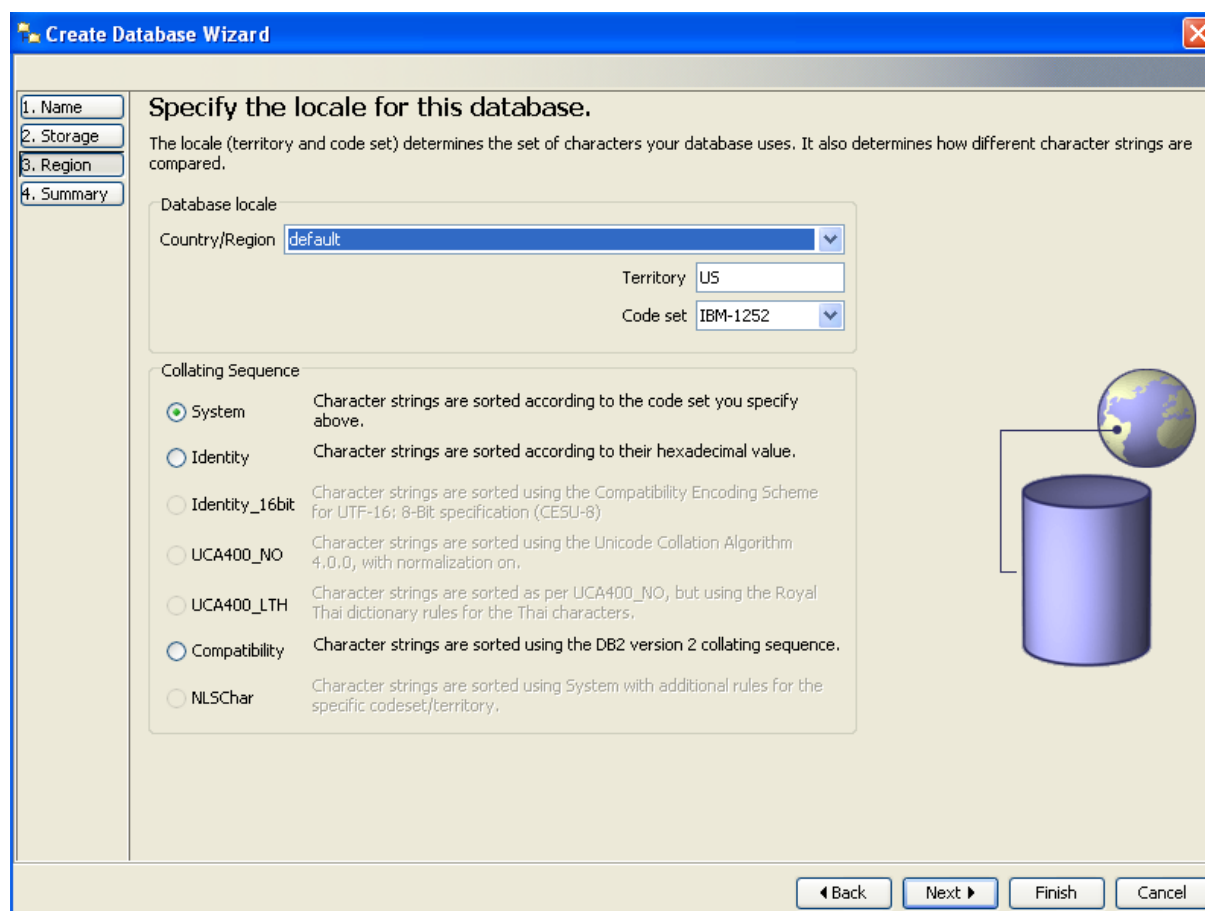


From here on we will assume your database name is R09TAFJ. You cannot change the default path as shown above. Choose "Let DB2 manage my storage" and 32k for the page size then "Next".

Click « Next »



Select « UTF-8 » for the Code Set and click « Finish ».



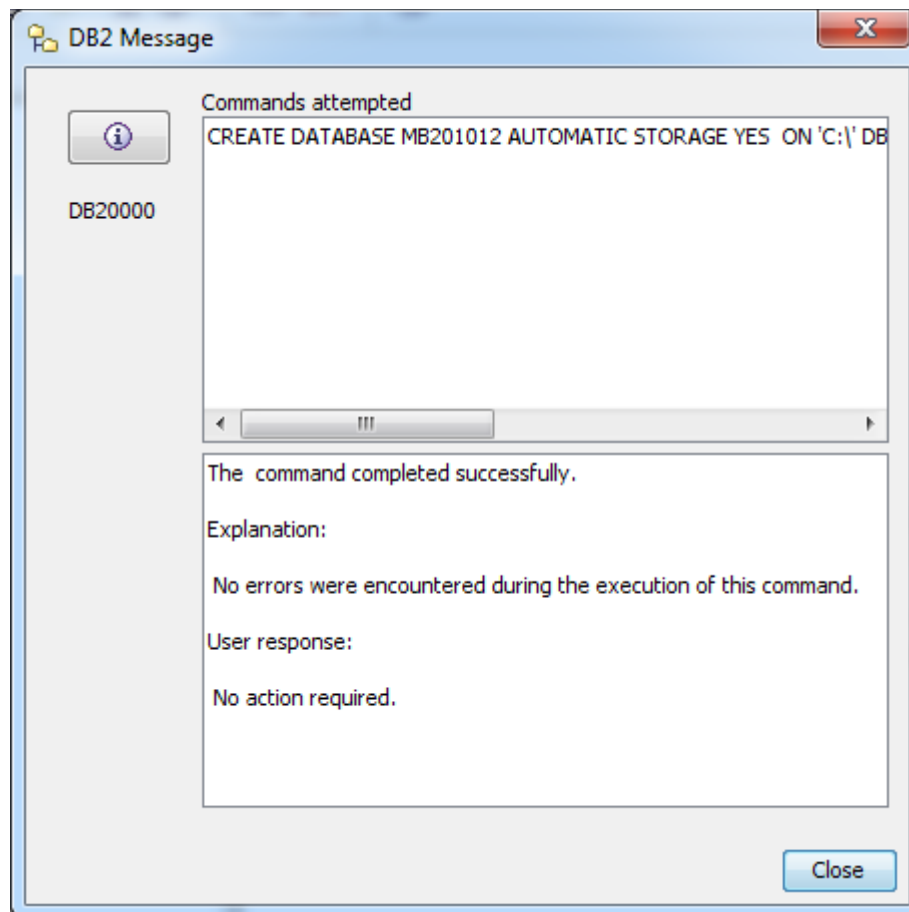
The screenshot shows the 'Create Database Wizard' window, specifically the 'Specify the locale for this database' step. The window has a blue title bar and a sidebar on the left with buttons for '1. Name', '2. Storage', '3. Region', and '4. Summary'. The main area contains the following elements:

- Title:** Specify the locale for this database.
- Description:** The locale (territory and code set) determines the set of characters your database uses. It also determines how different character strings are compared.
- Database locale section:**
  - Country/Region:** A dropdown menu currently showing 'default'.
  - Territory:** A text input field containing 'US'.
  - Code set:** A dropdown menu currently showing 'IBM-1252'.
- Collating Sequence section:** A list of radio buttons with descriptions:
  - ☒ **System**: Character strings are sorted according to the code set you specify above.
  - ☐ **Identity**: Character strings are sorted according to their hexadecimal value.
  - ☐ **Identity\_16bit**: Character strings are sorted using the Compatibility Encoding Scheme for UTF-16; 8-Bit specification (CESU-8).
  - ☐ **UCA400\_NO**: Character strings are sorted using the Unicode Collation Algorithm 4.0.0, with normalization on.
  - ☐ **UCA400\_LTH**: Character strings are sorted as per UCA400\_NO, but using the Royal Thai dictionary rules for the Thai characters.
  - ☐ **Compatibility**: Character strings are sorted using the DB2 version 2 collating sequence.
  - ☐ **NLSChar**: Character strings are sorted using System with additional rules for the specific codeset/territory.

On the right side of the window, there is a graphic of a globe connected by a line to a blue database cylinder. At the bottom right, there are four buttons: 'Back', 'Next', 'Finish', and 'Cancel'.

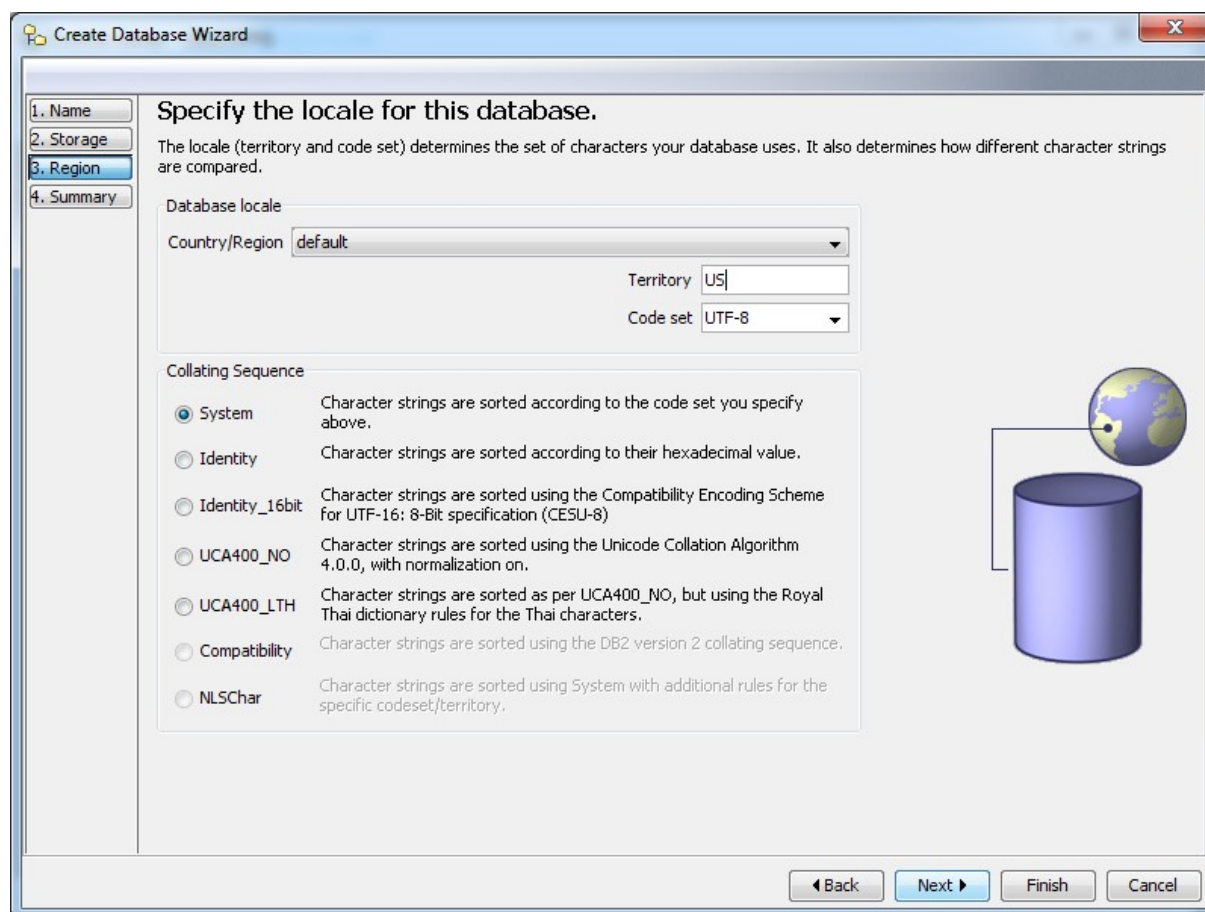


You will create your database.



Or by the command line :

```
CREATE DATABASE MYDB AUTOMATIC STORAGE YES ON '<mypath>' DBPATH ON  
'<mypath>' USING CODESET UTF-8 TERRITORY US COLLATE USING SYSTEM  
PAGESIZE 16384@
```



**Create Database Wizard**

1. Name  
2. Storage  
3. Region  
4. Summary

### Specify the locale for this database.

The locale (territory and code set) determines the set of characters your database uses. It also determines how different character strings are compared.

Database locale

Country/Region: default

Territory: US

Code set: UTF-8

**Collating Sequence**

- ☒ **System** Character strings are sorted according to the code set you specify above.
- ☐ **Identity** Character strings are sorted according to their hexadecimal value.
- ☐ **Identity\_16bit** Character strings are sorted using the Compatibility Encoding Scheme for UTF-16: 8-Bit specification (CESU-8)
- ☐ **UCA400\_NO** Character strings are sorted using the Unicode Collation Algorithm 4.0.0, with normalization on.
- ☐ **UCA400\_LTH** Character strings are sorted as per UCA400\_NO, but using the Royal Thai dictionary rules for the Thai characters.
- ☐ **Compatibility** Character strings are sorted using the DB2 version 2 collating sequence.
- ☐ **NLSChar** Character strings are sorted using System with additional rules for the specific codeset/territory.

Back Next Finish Cancel

## Create Tablespace and Grant Privileges

In the tafj installation **<tafj\_home>/db2**, you will following SQL scripts:

- ***Createtablespace\_db2.db2***
- ***grantPrivileges\_db2.db2***

You will need to edit this script to reflect the correct data. In the ***createtablespace\_db2.db2***, you will need to change 2 values (in blue):

1. The database name
2. The tablespace name

*CONNECT TO **R09TAFJ** user **MYUSER** using <password>@ (change this to the name of the database created above)*

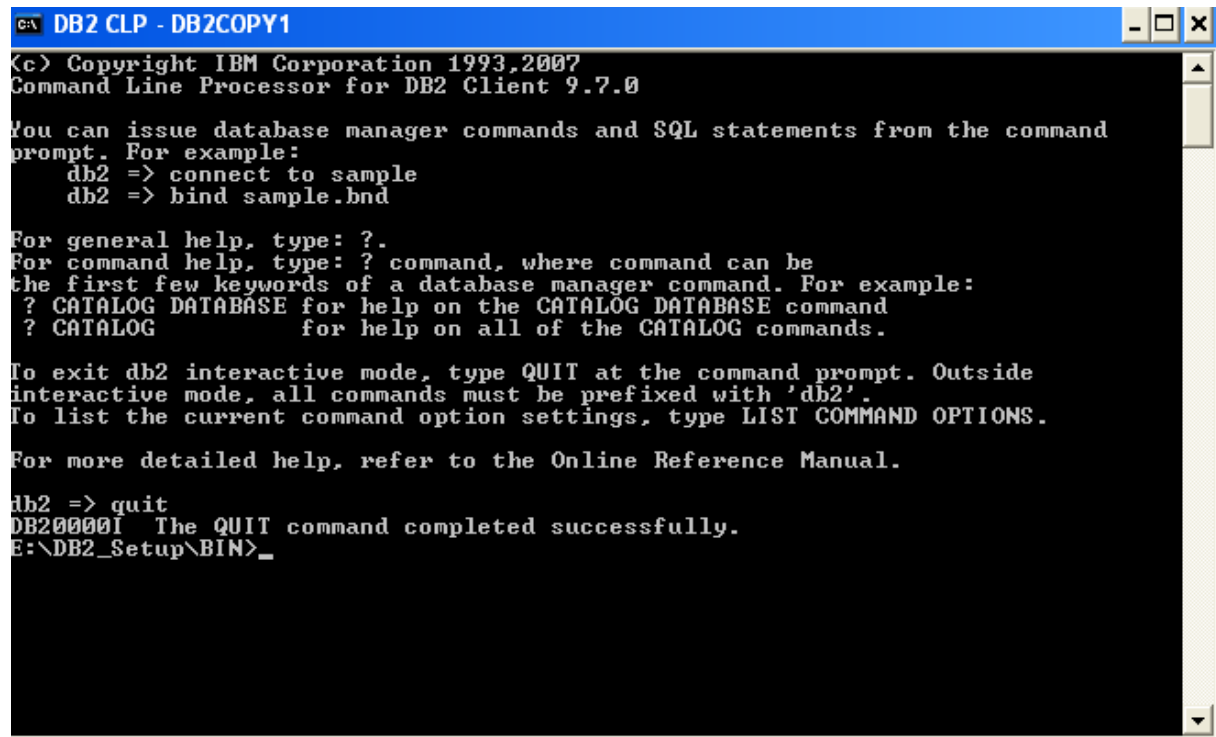
*CREATE LARGE TABLESPACE **TESTBASE** PAGESIZE 32 K MANAGED BY  
AUTOMATIC STORAGE EXTENTSIZE 8 OVERHEAD 10.5 PREFETCHSIZE 8  
TRANSFERRATE 0.14 BUFFERPOOL IBMDEFAULTBP @*

To run the script **Createtablespace\_db2.db2**, do the following .

Launch the Command Line Processor

The Command Line Processor Window appears.

Type Quit as shown below in the command line processor.



```
C:\ DB2 CLP - DB2COPY1
<C> Copyright IBM Corporation 1993,2007
Command Line Processor for DB2 Client 9.7.0

You can issue database manager commands and SQL statements from the command
prompt. For example:
    db2 => connect to sample
    db2 => bind sample.bnd

For general help, type: ?.
For command help, type: ? command, where command can be
the first few keywords of a database manager command. For example:
    ? CATALOG DATABASE for help on the CATALOG DATABASE command
    ? CATALOG           for help on all of the CATALOG commands.

To exit db2 interactive mode, type QUIT at the command prompt. Outside
interactive mode, all commands must be prefixed with 'db2'.
To list the current command option settings, type LIST COMMAND OPTIONS.

For more detailed help, refer to the Online Reference Manual.

db2 => quit
DB20000I The QUIT command completed successfully.
E:\DB2_Setup\BIN>
```

Now type the following command:

**db2 -td@ -vf %TAFJ\_HOME%\dbscripts\db2\createtablespace\_db2.db2** (specify the full path of this db2 script)

```
C:\ DB2 CLP - DB2COPY1
E:\DB2_Setup\BIN>db2 -td@ -vf E:\RTCSandbox\TAFJ\TAFJHome\oracle\createtablespace_db2.db2
update dbm cfg using mon_heap_sz 80
DB20000I The UPDATE DATABASE MANAGER CONFIGURATION command completed successfully.

update dbm cfg using java_heap_sz 2048
DB20000I The UPDATE DATABASE MANAGER CONFIGURATION command completed successfully.

update dbm cfg using sheapthres 30000
DB20000I The UPDATE DATABASE MANAGER CONFIGURATION command completed successfully.

CONNECT TO R09TAFJ

Database Connection Information
Database server      = DB2/NT 9.7.0
SQL authorization ID = R09TAFJ
Local database alias = R09TAFJ

DROP TABLESPACE USERSPACE1
DB20000I The SQL command completed successfully.

CREATE LARGE TABLESPACE TESTBASE PAGESIZE 16 K MANAGED BY AUTOMATIC STORAGE EXTENTSIZE 8 OVERHEAD 10.5 PREFETCHSIZE 8 TRANSFERRATE 0.14 BUFFERPOOL IBMDEFAULTBP
DB20000I The SQL command completed successfully.

ALTER BUFFERPOOL IBMDEFAULTBP SIZE 20000
DB20000I The SQL command completed successfully.

CREATE BUFFERPOOL BUFFER1 IMMEDIATE SIZE 250 PAGESIZE 32 K
DB20000I The SQL command completed successfully.

CREATE SYSTEM TEMPORARY TABLESPACE TEMPSAPCE2 PAGESIZE 32 K MANAGED BY AUTOMATIC STORAGE EXTENTSIZE 8 OVERHEAD 10.5 PREFETCHSIZE 8 TRANSFERRATE 0.14 BUFFERPOOL BUFFER1
```

DB2 uses the underlying operating system security (or optionally a framework such as Kerberos) to manage user IDs and passwords.

So if you want to create a new user on (for example) Linux you'd add a new user using the standard OS tools (either command line or GUI).

Access to DB2 objects, and other database privileges, can then be granted to either individual user IDs or groups (again OS groups).

The below grant privilege script can be skipped if in the Install you set your user to be the db2admin.

In the *grantPrivilege\_db2.db2*, you will need to change 3 values (in blue):

1. The database name

2. The username created when installing DB2
3. The username created when installing DB2

Note that if the password contains bizarre characters to put the password in quotes.

```
CONNECT TO R09TAFJ user MYUSER using <password>@
```

```
GRANT
```

```
DBADM,CREATETAB,BINDADD,CONNECT,IMPLICIT_SCHEMA,LOAD,CREATE_EXTERNAL_ROUTINE,QUIESCE_CONNECT,SECADM ON DATABASE TO USER MYUSER@
```

```
GRANT USE OF TABLESPACE TESTBASE TO USER MYUSER@
```

```
CONNECT RESET@
```

Now type the following command in DB2 Command Line Processor:

```
db2 -td@ -vf %TAFJ_HOME%\dbscripts\db2\grantPrivileges_db2.db2 (specify the full path of this db2 script)
```

```
DB2 CLP - DB2COPY1
CONNECT RESET
DB20000I The SQL command completed successfully.

E:\DB2_Setup\BIN>db2 -td@ -vf E:\RTCSandbox\TAFJ\TAFJHome\oracle\grantPrivileges
_db2.db2
CONNECT TO R09TAFJ

Database Connection Information

Database server      = DB2/NT 9.7.0
SQL authorization ID = RNAUEEN
Local database alias = R09TAFJ

GRANT DBADM,CREATETAB,BINDADD,CONNECT,IMPLICIT_SCHEMA,LOAD,CREATE_EXTERNAL_ROUT
INE,QUIESCE_CONNECT,SECADM ON DATABASE TO USER TAFJ3
DB20000I The SQL command completed successfully.

GRANT USE OF TABLESPACE TESTBASE TO USER TAFJ3
DB20000I The SQL command completed successfully.

CONNECT RESET
DB20000I The SQL command completed successfully.

E:\DB2_Setup\BIN>_
```

## Create Java Functions

1 Compile BasicFunctions.java in %TAFJ\_HOME%\dbscripts and place the BasicFunctions.class under the directory %DB2PATH%\FUNCTION\com\temenos\db\storedfunctions.

2. In the *javafunctions\_db2.db2*, you will need to change 3 values (in blue):

1. The database name
- 2 The username created when installing DB2
- 3 The corresponding password for the above mentioned username

connect to R09TAFJ user *MYUSER* using *password@*

4. Now type the following command in DB2 Command Line Processor:
5. **db2 -td@ -vf %TAFJ\_HOME%\dbscripts\db2\javafunctions\_db2.db2** (specify the full path of this db2 script)

Once this is finished you should be able to run a DBImport for DB2. Don't forget to copy the DB2 drivers from \$TAFJ\_HOME/dbdrivers to \$TAFJ\_HOME/ext. The properties that go in the TAFJ properties file look like this:

temn.tafj.jdbc.url	= jdbc:db2://localhost:50001/R09TAFJ
temn.tafj.jdbc.driver	= com.ibm.db2.jcc.DB2Driver
temn.tafj.jdbc.username	= MYUSER
temn.tafj.jdbc.password	= mypassword