IBM Rational TestManager

Step-by-step guide to create a new DB2 TestManager project

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This module provides you with a step-by-step guide on how to create a new DB2® project for IBM Rational® TestManager versions 7.0 and higher.

Module objectives

- The following topics are covered in this module:
    - ▸ Prerequisites
    - ▸ Creating an empty DB2 database for each TestManager project
    - ▸ Configuring the database using the Configuration Advisor Wizard
    - ▸ Installing the Configuration Assistant and setting up an alias
    - ▸ Creating the TestManager data store with Rational Administrator

This slide lists the five topics covered in this presentation. When you complete this module, you will be able to perform these tasks: Create an empty DB2 database for each TestManager project; Configure the database using the Configuration Advisor Wizard; Install the Configuration Assistant and set up an alias; Create the TestManager data store with Rational Administrator

Prerequisites

- **It is assumed that you have installed these products on your testing environment**
  - ▸ TestManager V7.0 or above
  - ▸ TestManager license is available
- **One of the DB2 database servers listed below is available**
  - ▸ DB2 Universal Database Express Edition for Windows® V8.2
  - ▸ DB2 Universal Database Personal Edition for Windows V8.2
  - ▸ DB2 Enterprise Server Edition for Windows V8.2
  - ▸ IBM DB2 V9.1 (32 bit editions) FP 3 on Vista and Windows

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There are two requirements before you create a new DB2 project in TestManager. The first requirement is to verify if you have TestManager installed and that there is a TestManager license available in your testing environment. The second requirement is to make sure one of these five DB2 database servers is available. DB2 UDB Components for Rational Products V8.2 (this is shipped with TestManager), DB2 Universal Database Express Edition for Windows V8.2, DB2 Universal Database Personal Edition for Windows V8.2, DB2 Enterprise Server Edition for Windows V8.2, or IBM DB2 V9.1 (32 bit editions) FP 3 on Vista and Windows. Note, you must have local administrator rights on the TestManager and DB2 server machines to complete the next steps.

Creating an empty DB2 database for each TestManager project

- Create an empty database

- Configure the database using the Configuration Advisor wizard

- Create the table spaces

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You need to complete three main steps to create an empty DB2 database for each TestManager project. An empty DB2 database must exist for each TestManager project so that you can later populate it with a TestManager data store. You can create the empty database on the same machine on which the DB2 server is installed. You need to configure the database using the Configuration Advisor wizard. Finally, you need to create the table spaces. Each of these steps is described in greater detail in the procedures that follow.

Creating an empty DB2 database (continued)

To create an empty database:

1. Click **Start > Programs > IBM DB2 > General Administration Tools > Control Center**. The Control Center dialog box opens.

2. In the DB2 Control Center dialog box, expand **All Systems**, and expand the host name that corresponds to the database server name. Then expand **Instances** and expand **DB2**.

3. Ensure that all DB2 services are running on the DB2 server host.

4. Right-click the **Databases** folder and select **Create Database > Standard**. **Note**: If the database creation is not successful, run these commands from the DB2 command line editor:
   db2
   db2> **connect to** *database-name*
   db2> **bind db2schema.bnd blocking all grant public**
   db2> **disconnect all**

5. In the **Database name** field, type the name of the database. **Note**: DB2 supports database names of up to eight characters.

As shown on this slide, the steps to create an empty database include starting the control center, then locating the host name for that machine under "All Systems". If all the DB2 services are running, you can create the database from the GUI; if not, the commands for creating a database from the command line are shown here. When you name the database, remember that DB2 allows only 8 characters. This database is used in Rational Administrator when you create the TestManager data store.

Creating an empty DB2 database (continued)

6. Select a default drive and type an alias name in the **Alias** field (up to eight characters). Optionally, provide comment in the **Comment** box. Click **Next**

7. On the **Specify How and where to store the user tables** page, select **High Performance** and then click **Add**.
   a. Select a location on the DB2 server to store the user tables and give it a file name.
   b. Type a size for the table.
      A good starting point is 200 MB. Use a larger size if you think your tables will grow.
   c. Click **OK**.

8. Click **Finish**.
   A progress dialog box opens.

9. Once you see the "successfully created" message, click **Yes** to launch the Configuration Advisor.

10. Continue with the next procedure, Configuring the Database Using the Configuration Advisor Wizard.

As shown on this slide, there are additional steps to create an empty database on your DB2 server. Type the alias name which allows up to eight characters. Then you need to specify how and where to store the user tables and select Finish. Once the database is successfully created you will launch the Configuration Advisor and configure the database.

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Creating an empty DB2 database (continued)

1. The Configuration Advisor wizard launches when you click **Yes** in step 9 of the previous procedure. Complete the actions as you progress through the Configuration Advisor wizard – see table on the right.
   Click Next after you complete each page.

2. Click Finish.

3. When you see the Command completed successfully message, click Close and continue with the next procedure, Creating the Table Spaces.

Page	Action
Confirm the name	Do not make any changes.
Specify how much of this server's memory you want the database manager to use.	Drag the **Target Memory** slider to specify the maximum memory the database can use.
Select the type of workload that best reflects your database.	Select **Transactions (order entry)**.
Specify a typical database transaction.	Select **Fewer than 10 (short transaction)**.
Specify a database administration priority.	Select **Faster transaction performance (slower recovery)**.
Specify whether the database is populated with data.	Select **No**.
Estimate the number of applications connected to this database.	**Average number of connected local applications**: Leave the choice as 0. **Average number of connected remote applications**: Select the number of TestManager clients you expect to connect.
Select an isolation level that best reflects your application.	Select **Cursor stability (many locks of short duration)**.
Enabling the DB2 scheduling function.	Do not make any changes.

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As shown on this slide, there are multiple steps to configure the database. Once you complete the steps in the table, you will click Finish. Once you see the message that it was completed successfully you will continue to the next set of guidelines for creating the table spaces.

Creating an empty DB2 database (continued)

4. Under the database-name folder for the database you created, right-click the **Table Spaces** folder and click **Create.**

5. Complete the actions as you progress through the **Create Table Space** wizard. Click **Next** after you complete each page.

Page	Action
Specify a name for your new table space.	Type a name in the **Table space name** field. Optionally type a comment.
Specify the type of table space you want to create.	Select **Regular.**
Specify the buffer pool for your new table space.	1. Click **Create**. 2. Complete the Create Buffer Pool dialog box: a. **Buffer pool name**: Type a name. b. **Page size**: 32 c. Select **Use Extended Storage**. d. Do not make any other changes. e. Click **OK** 3. Select the buffer pool you just created.
Select the space management system that you want to use.	Select **System-managed space (low maintenance).**
Define containers for this table space.	1. Click Add. 2. Complete the Define Container dialog box: **Look in**: Select a drive and location for the container. **File name**: Type a name for the container. 3. Click **OK**.
(continued on next page)	4. Select the container you just created.

As shown on this slide, you will right click the table spaces folder to create it. Then the "create table space wizard" opens and you will select the appropriate configuration choices from the table on this slide . You will need to specify a name, a type, the buffer pool, the space management system and the containers.

Creating an empty DB2 database (continued)

Page	Action
Specify the extent and prefetch sizes for this table space.	Select the average size of a table in this table space **Note**: You should typically select **Less than 200MB**. If you expect to have a very large data store, select **Between 200 MB and 2 GB.**
Describe hard drive specifications.	Define the specifications for the hard drive where the DB2 database resides.
Specify the dropped table recovery option for your new table space.	Select **Enable dropped table recovery**

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As shown on this slide you will continue to choose the appropriate configurations in the Create Table Space Wizard. You need to specify the extent and prefetch sizes, define the hard drive specifications and select "Enable dropped table recovery".

Creating an empty DB2 database (continued)

6. Click **Finish**.

7. In the left pane of the Control Center, select **Table Spaces**.

8. In the right pane of the Control Center, right-click the new table space name you created and select **Privileges**.

9. On the Group page, click **Add Group**, select the **Public** group, and click **OK**.

10. Select **Public** (the group you just added).

11. In the **Privileges: USE** box, select **Yes** and click **OK**.

12. Continue with the next procedure, Installing and Configuring the DB2 Administrative Client.

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Once you click Finish you will select Table Spaces and select Privileges. You are then going to add the public group, select Yes in the "Privileges: Use box" and continue with the Install and Configuration of the DB2 Administrative client.

Installing the configuration assistant

- To install the configuration assistant:
  - On each client PC, install the Configuration Assistant from either the server installation (located on the CD) or the Administrative Client (located on the Web site). Then follow the remaining steps in this procedure to configure the client on each machine.

    Note: The minimum components you need to select for the Configuration Assistant (either from CD setup or from the Administrative Client) are:

    Choose from the Client Support menu:
    - Interfaces
    - Base Client Support
    - System Bind Files
    - Communication Protocols

      (Select "**This feature and all sub-features**" for each component.)

    Choose from the Administration Tools menu:
    - Configuration Assistant

The steps to install the DB2 Configuration Assistant on each client PC are outlined on this slide. The DB2 Configuration Assistant must be installed and configured on each client PC. The Configuration Assistant is available along with the DB2 server installation CD. The minimum components you need to select for the Configuration Assistant from the client support menu are interfaces, base client support, system bind files and communication protocols. From the administration tools menu select Configuration Assistant.

Setting up an alias

1. Click **Start** > **Programs** > **IBM DB2** > **Set-up Tools** > **Configuration Assistant**.

2. If the DB2 Message dialog box opens, click **Yes**.

3. Select **Search the network** and click **Next**.

This slide outlines the major steps you need to follow when setting up a DB2 alias. You will start the configuration assistant and then select Yes when the DB2 message dialog box opens. Then you will select "search the network and choose "Next" to continue.

Setting up an alias (continued)

4. Expand the **Known Systems** folder. If you see the DB2 database server host on which the database resides, expand it and select the database name for which you want to create an alias. Click Next.

If you do not see the DB2 server host you need or if you cannot expand the **Known Systems** folder, expand the **Other Systems** folder

If you cannot expand either the **Known Systems** or the **Other Systems** folders:
   a. Click **Add System**. The Add Systems dialog box opens.
   b. Complete the Add Systems dialog box:
     System Name: Type the name of the computer on which you created the empty database.
     Host Name: This field is filled in automatically. It is the same as the System Name.
     Node Name: Type the name of the database you created.
     Operating System: Filled in automatically as Windows.
   c. Click **OK**.
    d. Expand the **Database** folder and click **Next**.

Note: If you still do not see the server host that you need, talk to your database administrator. There might be a network problem.

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Here is a continuation of the steps you need follow when setting up a DB2 alias. When you expand the known systems folder and see the DB2 database server host, select the database name. If you do not see the host under the known systems folder or the other systems folder you need to add the system. If you still do not see the server host you need to talk to your database administrator.

Setting up an alias (continued)

5. Type an alias name in the **Database alias** field. (Use the same alias for the database on each client PC.) Optionally, type a comment in the Comment box. Then click **Next**.
(Use the same alias for the database on each client PC.)

6. Select the **Register this database for ODBC**. Click **Finish**.

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As shown on this slide, you continue to set up your alias by typing in the alias name in the database alias files, select the option to "register this database for ODBC" and click Finish.

Setting up an alias (continued)

7. A confirmation dialog box opens. To test access to the DB2 database,
   a. Click **Test Connection**.
   b. In the Test Connection dialog box:
      - Select **ODBC** and leave the other fields as they are.
      - Type the user ID and password that has access to the database.
      - Click **Test Connection**.
      - Close the dialog box by clicking **Cancel**.
      - Click **Close**.

   Note: If the connection fails, try to connect by using these commands from the DB2 command line editor:
   db2
   db2> **catalog TCPIP node node-name remote host-name server port-number**
   db2> **catalog database database-alias at node node-name** db2> **terminate**.

8. Repeat steps one through seven for each client PC as needed.

Finally, you will finish going through the remaining two steps to set up a DB2 alias. You need to test the access to the DB2 database by clicking "Test Connection" and filling in the appropriate user ID and password information. You need to repeat steps one through seven for each client PC.

Creating the TestManager data store with Rational administrator

- Be sure that there is an alias associated with the database for all data stores with which you will run TestManager.

- Use the same alias name for each client connecting to the data store.

- Make sure that the user name and password of the alias have the authority to modify the database.

- Be sure that there is only one project for each database (no more than one project in a database).

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You need to follow certain rules when creating a database. You can create the data store from either a client or the server. Before you begin, follow the rules above when creating a data store.

Creating the TestManager data store (continued)

- To create the data store for DB2 databases:

  1. In Rational Administrator, follow one of these steps:

     a) Create a project and select "Configure Project Now" when you reach the New Project Summary Box or

     b) Right-click an existing project and **click Configure**.

     The Configure Project dialog box opens.

  2. Click **Create** next to **Test Assets**.
     The Create Test data store dialog box opens.

  3. Select **IBM DB2 UDB** and click **Next**.
     The IBM DB2 UDB Components for Rational Products Settings dialog box opens.

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As shown on this slide, you will create the data store in Rational Administrator. You need to create a project, configure the project by clicking create next to Test Assets and selecting IBM DB2 UDB.

Creating the TestManager data store (continued)

4. Complete the dialog box:

   New test data store path: Leave this field as is. It reflects the path of the selected project.
   Database alias: Type the alias you created when you configured the DB2 Administrative Client. (See Installing and Configuring the DB2 Administrative Client.)
   User Name: Type the user name that has access to connect to the database. If you are using Windows authentication, include the domain name followed by a backslash (for example: Rational\Myname).
   Password: Type the password that has access to connect to the database.

5. Click **Next**. The Initialize new Test data store from existing assets dialog box opens.

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Here you will continue to enter the appropriate information by specifying the test data store path, database alias name, user name and password.

Then you will click next to initialize the new test data store.

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Creating the TestManager data store (continued)

6. Select any items you want to initialize. Then click **Next**.
   The create Test data store summary dialog box opens. This dialog box summarizes the information you entered. To change any information, click **Back** and return to the appropriate dialog box.

7. Click **Finish**.

8. Watch for the Successfully Created message.

Here are the final steps you need to follow to finish creating the TestManager data store. Select any items you want to initialize, click next and then click finish. You will receive a "successfully created" message.

Summary

- Creating an empty DB2 database for each TestManager project

- Configuring the database using the Configuration Advisor wizard

- Installing the Configuration Assistant and setting up an alias

- Creating the TestManager data store with Rational Administrator

In summary, this module covered four topics. First you created an empty DB2 database and configured the database using the Configuration Advisor wizard. Next you installed the Configuration Assistant and set up an alias. Finally, you created the TestManager data store with Rational Administrator. You should now be comfortable with creating a new DB2 project.

Additional resources

- U2 product family support

  http://www.ibm.com/software/awdtools/test/manager/support/index.html

- DB2 Version 9 for Linux®, UNIX®, and Windows

  http://publib.boulder.ibm.com/infocenter/db2luw/v9/index.jsp?topic=/com.ibm.db2.udb.doc/doc/c0024220.htm

- U2 product family support

  http://www.ibm.com/software/data/u2/support/

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You can find additional resources on the TestManager support page, the DB2 Information Center and the U2 support page.

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