DB2 for Linux, UNIX, and Windows Performance Tuning and Monitoring Workshop

(Course Code CF41)

Lab Set Up Guide

ERC 9.0

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Purpose

This Lab Set Up Guide provides directions for installing, preparing, and verifying the lab hardware and software in preparation for conducting a class of course CF41 (CF412 in US). The Requirements sections of this document may also be used to determine the specific hardware and software needed to conduct a class.
Requirements

Software Overview

- IBM DB2 9 for Linux UNIX and Windows (GA Level)

Hardware Configuration

- Authorized Classroom Locations: ALL
- Network Requirements: VPN Access
- TCP/IP: DHCP
- Bandwidth: 384K
- Server Machines: None

Student Machines:

1. Intel

   Student machine is required for CF41.
   Network connectivity is required. Either Token Ring or Ethernet can be used.
   These are the minimum physical requirements for this machine:
   - Processor: PIII
   - Processor Speed: 1Ghz
   - Memory: 1GB
   - Storage: 20G
   - Network Adapter: Ethernet
   - Video: 1024 x 768
   - Peripherals:

Software

- IBM DB2 9 for Linux UNIX and Windows
- RedHat Enterprise Linux ES 4
Installation Procedures:

Student machine is required for CF41.

Overview of setup:

__ 1. Install Red Hat Enterprise Linux ES 4 (standard server installation). (See LINUX installation below.)
__ 2. Perform Linux customizations.
__ 3. Users and Groups will be established during DB2 UDB Installation.
__ 4. Install Adobe Acrobat Reader
__ 5. Install IBM DB2 9 for Linux UNIX and Windows. See Install DB2 for LINUX below.
__ 6. Install CF41 Files (see Install CF41 Files below).
__ 7. Perform machine customizations prior to copying the machine (see Customization before Copying below).
__ 8. Copy first machine out to other machines (if packcopy or ghosting procedures are being used). This is where the ghost image should be made if ghosting is going to be used.
__ 9. Perform post-installation customizations (see Post-installation Customizations below).

LINUX Customizations

__ 1. Start the installation from your installation medium, for example, CD.
__ 2. You will get the Welcome screen, click NEXT.
__ 3. Select the correct Mouse Type and click NEXT.
__ 4. Select Automatically Partition and click NEXT.
__ 5. Confirm the Automatic Partitioning screen by clicking NEXT.
__ 6. Answer the Warning with YES.
__ 7. On the next screen, accept the proposed partitioning by clicking NEXT.
__ 8. Use the default Boot Loader Configuration, simply click NEXT.
__ 9. Set your Network configuration depending on your actual network settings and/or location settings (automatically done via DHCP if possible). Click NEXT.
__ 10. On the Firewall screen, select No firewall and click NEXT.
__ 11. On the next screen, select your Language Support (for example, English USA) and click NEXT.
__ 12. Select the appropriate Time Zone/Location and click NEXT.
__13. On the next screen, **set the root password: dalvm3** and click **NEXT** (it could take some time till the next screen appears).

__14. Accept** the current package list by clicking **NEXT**.

__15. On the next screen, **confirm** by clicking **NEXT** that the installation can be done.

__16. After the installation is done, you must select your **graphical interface** (normally autodetect works fine, a setting will be proposed). Click **NEXT**.

__17. On the next screen, select your **Monitor Configuration** (here it might be, that the LCD is not detected correctly). In this case, select Generic LCD Display and the select the appropriate resolution. Click **NEXT**.

__18. On the **Graphic configuration** screen, you can **accept the default** by clicking **NEXT**.

__19. On the next screen (congratulations), the installation procedure would be finished as soon as you click **EXIT**.

__20. Remove the installation CD if not automatically done.

__21. After an automatic reboot, your LINUX system will be ready.

**Install DB2 9 for LINUX**

__1. Log on as **root**.

__2. The CD-ROM drive should be mounted automatically on /mnt/cdrom. If not, mount the CD-ROM drive using the command: `mount /dev/cdrom /mnt/cdrom`

__3. Change to the DB2 9 for Linux directory: `cd /mnt/cdrom`

__4. Decompress the product file: `gzip -d product.tar.gz` where product is the name of the product that you downloaded.

__5. Untar the product file: `tar -xvf product.tar`

__6. Change directory: `cd ./product/disk1`

__7. Issue the command: `./db2setup`

__8. Select **Install a Product** and then select **DB2 Enterprise Server Edition**.

__9. Click **Install New**.

__10. The Setup-Wizard appears, click **NEXT**.

__11. **Accept the Licence Agreement** and click **NEXT**.

__12. Choose **TYPICAL** as the **Installation Type** and click **NEXT**.

__13. Install **DB2 Enterprise Server Edition on this Computer** should be selected, click **NEXT**.

__14. Select Do Not create a DB2 instance and click **NEXT**.

__15. Select **Finish** to complete installation.
Install CF41 Files

1. Login as root.
2. Create DAS user and DB2 Instance Owner for CF41.
   - Create a new group: groupadd adm01
   - Create new users: useradd -g adm01 dasusr1
     - passwd dasusr1
     - ibm2blue
   - useradd -g adm01 inst411
     - passwd inst411
     - ibm2blue
3. Create new instance: /opt/ibm/db2/V9.1/instance/db2icrt -u inst411 inst411
4. Create DB2 DAS: /opt/ibm/db2/V9.1/instance/dascrt -u dasusr1
5. Make a database subdirectory in the home directory: mkdir /database
6. Make a subdirectory for automatic storage: mkdir /dbauto
7. Set the correct ownership: chown inst411.adm01 /database
8. Set the correct ownership for auto storage path: chown inst411.adm01 /dbauto
9. Set the correct permissions: chmod 2775 /database
    - chmod 2775 /dbauto
10. Login as db2inst1 user: su - inst411
11. Obtain the tar file for the CF41 class called cf419labfiles.tar.
12. Copy this file to the bin subdirectory of the home directory of the db2inst1 user:
    - cd $HOME/bin
    - cp <path to file>/cf419labfiles.tar ~inst411
13. Extract the tar file: tar -xzvf cf419labfiles.tar
    - a. The following will be extracted to the home directory of the inst411 user:
       - The application multi
       - The SQL applications sqlt1*
       - The bind files for all applications, *.bnd
       - The command file to create the TP1 database tp1class
       - The multi configuration files tp1*.cfg
       - Other files needed to support the lab exercises
14. Change user back to root: exit
15. Install the additional libraries:
    - rpm -ivh ~inst411/*.rpm
16. Login as inst411 user: su - db2inst1
Customization before Copying

__1. You still need to be logged in as inst411.
__2. Verify that DB2 is running: `db2start` (if not running already, it will be started)
__3. Change to the bin subdirectory: `cd bin`
__4. Create Automatic storage paths: `mkdir /dbauto/path1`
   `mkdir /dbauto/path2`
__5. Run the command script to create the TP1 database (tp1class) this will run for 5-10 minutes. Enter `tp1class.cmd`.
__6. When prompted, answer **yes** to recreate the TP1 database.
__7. When the script is complete, make sure you can connect to the new database, enter `db2 connect to tp1`.
__8. Exit the terminal session by typing, `db2 terminate`, and then type `exit`.

Contact Information

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