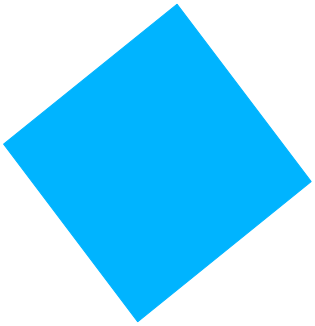
UDB Training

Getting Started and Connected



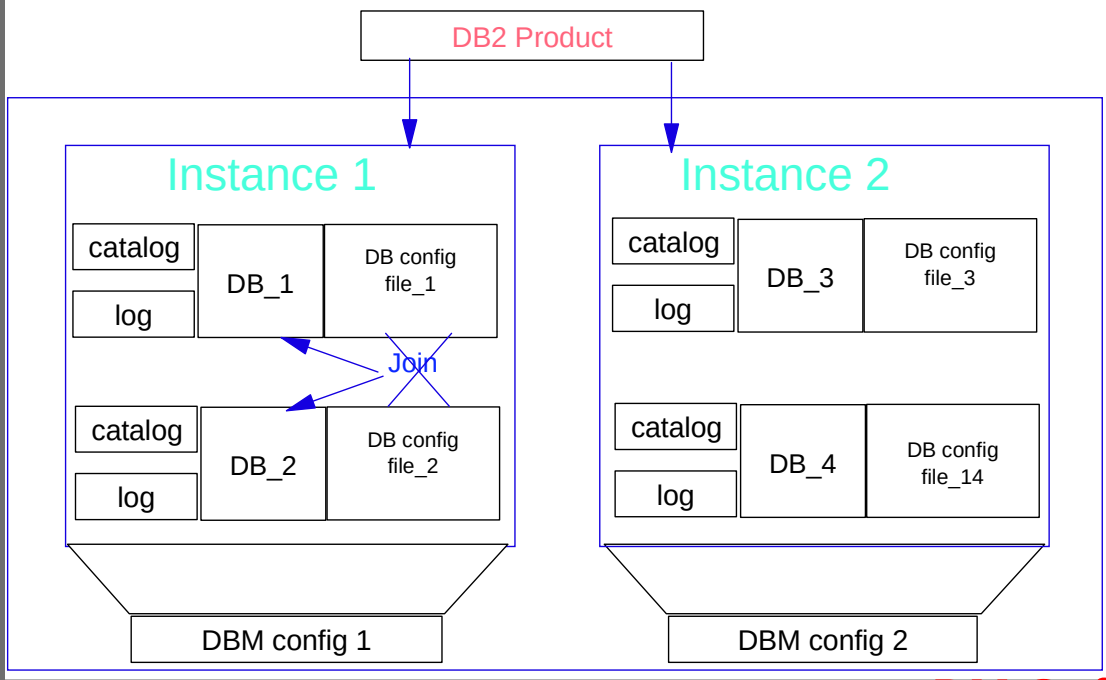
Objectives

- After completing this section you should be able to:
  - Install DB2
  - Create / configure a DB2 Instance & a DAS (Admin Server) Instance
  - Understand the configuration for the Client / Server Environment
  - Use the interfaces (Command Line Processor / Command Window, Command Center)
  - Stop and Start a DB2 & DAS Instance

DB2 Instances

- A DB2 instance is an independant db2 server "engine".
- It executes the SQL to update/insert/delete data, controls data access, etc.
- A DB2 instance is an environment where you store data and run applications.
- You may want to have more than one instance. For example,
  - Development
  - Production
- A default instance (DB2) is created when you install DB2 on an INTEL machine, ie: OS2, NT & Win95.
- Additional instances can be created using the **db2icrt** command.

DB2 Instances

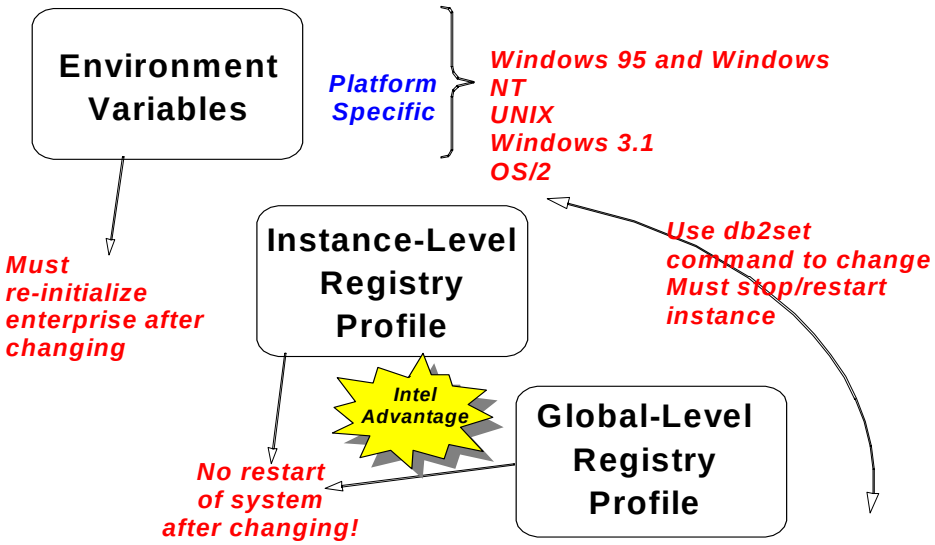


The DB2 Admin Server (DAS)

- Installed automatically with DB2 (by default)
- Automatically detects the communication protocols installed on the system
- Configures communication support for the detected protocols
- Required for remote administration
- db2admin start to start the DAS
- db2admin stop to stop the DAS

The DB2 Environment

Setting DB2 Variable Values



The DB2 Environment

DB2 Environment

- Made up of three parts:
  - *Environment variables (not included in Registries)*
  - *DB2 Instance Profile Registry*
  - *DB2 Global Profile Registry*
- Search order:
  - *Session environment*
  - *DB2 Instance Profile (values set with db2set command)*
  - *DB2 Global Profile (values set with db2set command)*
- Additionally:
  - *DB2 System Profile Registry*

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db2set

The db2set Command

- Command Line tool
- Administers the DB2 Profile Registry
- Displays, sets, resets or removes profile variables

```
db2set
variable=value
-g
-i instance [node number]
-n DAS node [[-u user id] [-p password]]
-r
-l
-lr
-v
-? (or -h)
-all
-null
```

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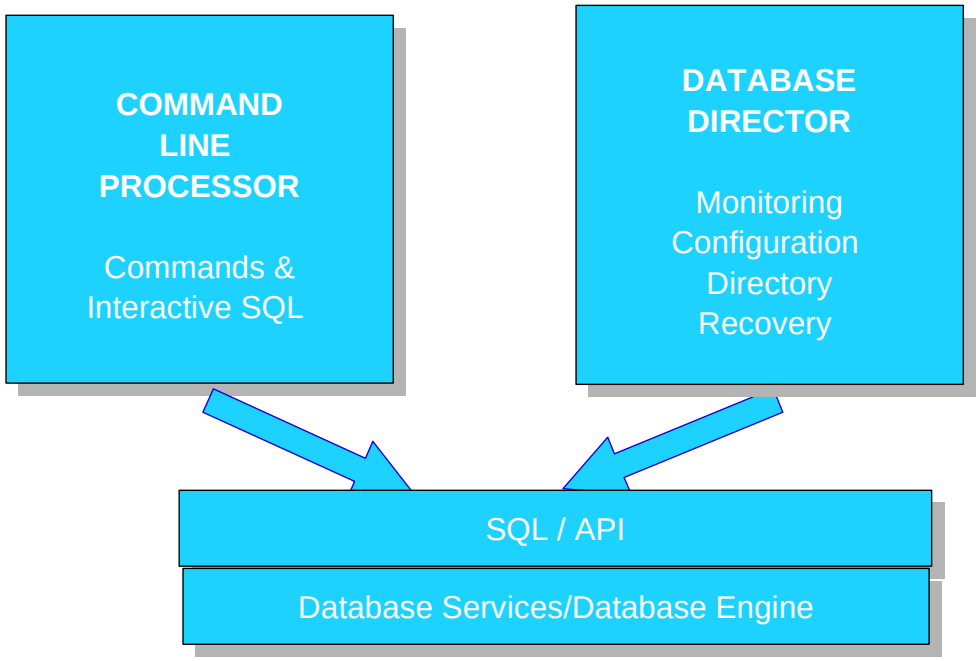
DB2 Environment Setup

Operating System	Environment Variables
OS/2	CONFIG.SYS file
Windows NT	System icon in the Control Panel
UNIX	Within a script file called :- a. db2profile (Bourne or Korn shell) b. db2cshrc (C shell)

DB2 Interfaces



SQL Statements & DB2 Commands

- You can use the command line processor or Command center to enter SQL statements and DB2 commands.
- The command line processor can operate in 3 modes:
  - Interactive input
  - Command line
  - File input
- The Command Center can execute scripts or accept input from the command line.

CLP Interactive Input mode

To invoke the command line processor interactive input mode, click on the **command line processor** icon or type **db2** at a command prompt.

When in interactive input mode the prompt looks like this:
db2 =>

When in this mode, **MUST NOT** prefix commands with **db2**
To end interactive mode, enter **terminate** to return

To execute Operating System commands type **!<OS command>**

Command Line mode

To invoke the command line processor in command line mode, click on the **DB2 Command Window** icon and a **DB2 CLP** window appears.

When in this mode, you **MUST** prefix commands with **db2**

DB2 LIST NODE DIRECTORY

To end command line mode, enter **db2 terminate** and close the window.

OS commands can be issued with out the **db2** prefix

File Input mode

To invoke the command line processor in file input(batch) mode, click on the **DB2 Command Window** icon and a **DB2 CLP** window appears.

File input mode is invoked as follows

DB2 -f myfile.clp

Commands are processed until **terminate or quit** is issued, or an end-of-file is encountered.

Comment lines can be added and must be prefixed with **--**

Command Line Options

DB2 LIST COMMANDS 0PTIONS

```
Command Line Processor Option Settings

Backend process wait time (seconds)          (DB2BQTIME) = 1
No. of retries to connect to backend         (DB2BQTRY) = 60
Request queue wait time (seconds)            (DB2RQTIME) = 5
Input queue wait time (seconds)              (DB2IQTIME) = 5
Command options                             (DB2OPTIONS) =

Option  Description                                 Current Setting

 -a      Display SQLCA                               OFF
 -c      Auto-Commit                                 ON
 -e      Display SQLCODE/SQLSTATE                    OFF
 -f      Read from Input file                        OFF
 -l      Log commands in history file                OFF
 -o      Display output                              ON
 -p      Display interactive input prompt            ON
 -r      Save output to report file                  OFF
 -s      Stop execution on command error             OFF
 -t      Set statement termination character         OFF
 -v      Echo current command                        OFF
 -w      Display FETCH/SELECT warning messages       ON
 -z      Save all output to output file              OFF
```


DB2 Commands from CLP

ACTIVATE/DEACTIVATE DATABASE
ATTACH/DETACH
BACKUP/RESTORE DATABASE
BIND/REBIND
CATALOG/UNCATALOG
CHANGE DATABASE COMMENT
CHANGE SQLISL
CONNECT/DISCONNECT
CREATE/DROP DATABASE
DB2START/DB2STOP
DEACTIVATE DATABASE
ECHO
EXPORT/IMPORT
FORCE APPLICATION
GET
HELP
INVOKE
LIST
LOAD
PREP/PRECOMPILE
PRUNE HISTORY
QUERY CLIENT
QUIESCE TABLESPACES
QUIT/TERMINATE
REGISTER/DEREGISTER
RELEASE
REORG TABLE
RESET MONITOR
RESTART DATABASE
ROLL FORWARD DATABASE
RUNSTATS
SET
UNCATALOG
UPDATE

Getting HELP!

- You can obtain syntax and information for all DB2 commands from the CLP:-

DB2 ?	**list of all DB2 commands**
DB2 ? command	**a specific command**
DB2 ? SQLnnnn	**a specific SQLCODE**
DB2 ? DB2nnnn	**a DB2 error code**

The Command Center

- Built into the Control Center
- Allows yu to enter OS and DB2/SQL commands
- After executing an SQL stmt you can select it and have its visual explain info displayed
- Works the same as the CLP

Using the Control Center

- Configuration -Display and alter the settings of your databases.
- Recovery - Back-up, restore or roll forward a database or tablespace.
- Directory - Manage directories for accessing local and remote databases. Create/Drop, list, catalog/uncatalog databases.
- Managing Media - Create, drop or change table spaces. Modify storage allocated to table spaces

Creating the Sample DB

- DB2 comes with a sample database called SAMPLE
  - The SAMPLE DB requires 8-15 mb of disk space
  - It is automatically cataloged with an alias of SAMPLE
  - To create the sample database
    - type **db2sampl** at a command prompt
  - To remove issue the DROP command
    db2 DROP DATABASE SAMPLE