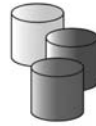
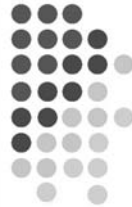


# 1

## ***DB2 Server Management***



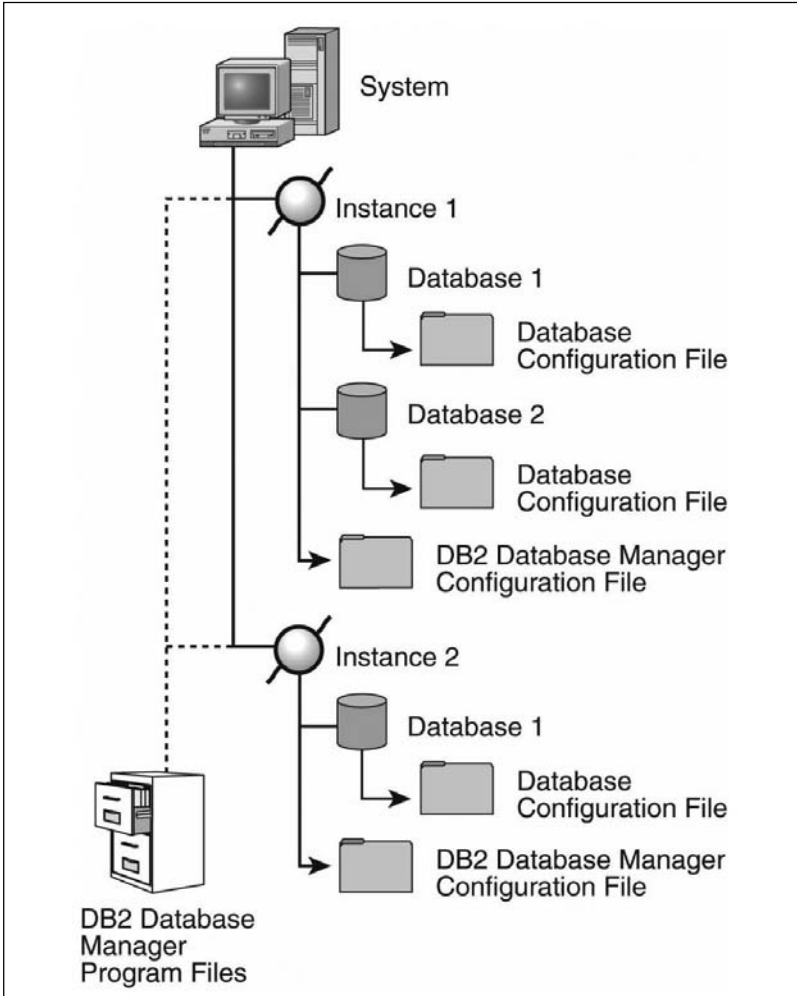
Ten percent (10%) of the DB2 9.7 for LUW Database Administration Exam is designed to test your knowledge of basic DB2 server management.



## Servers, Instances, and Databases



DB2 9.7 sees the world as a hierarchy of objects. Workstations (or servers) occupy the highest level, instances occupy the second level, and databases make up the third level.



## Configuring the DB2 System Environment



During normal operation, the behavior of a DB2 server is controlled, in part, by a collection of special DB2-specific system-level values. These values are stored in one of three different *environment* or *registry* profiles:

- The DB2 Global Level Profile Registry
- The DB2 Instance Level Profile Registry
- The DB2 Instance Node Level Profile Registry

Values assigned to these registry profiles can be seen or set with the `db2set` command.

## The `db2set` Command



```
db2set <[ Variable ] = [ Value ]>
<-g>
<-i [ InstanceName ] <PartitionNumber >>
<-all>
<-null>
<-r [ InstanceName ] <NodeNumber >>
<-n [ DASNode ] < u [ UserID ] <-p [ Password ]>>>
<-l | -lr>
<-v>
<-ul | -ur>
<-h | -?>
```

## *Examples of the db2set Command*



**db2set**

Lists all registry variables that have been set for the current instance

**db2set -lr**

Displays a list of all registry variables that are supported by DB2

**db2set DB2\_ATS\_ENABLE=YES**

Enables the administrative task scheduler for the current instance

## *Configuring Instances*



The behavior of a DB2 instance is controlled, in part, by a Database Manager configuration file. This file is composed of many different parameters; the values assigned to those parameters can be seen or modified using the following commands:

- GET DATABASE MANAGER CONFIGURATION
- UPDATE DATABASE MANAGER CONFIGURATION
- RESET DATABASE MANAGER CONFIGURATION

## **GET DATABASE MANAGER CONFIGURATION**



GET

[DATABASE MANAGER | DB MANAGER | DBM]

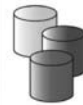
[CONFIGURATION | CONFIG | CFG]

<SHOW DETAIL>

**GET DBM CFG SHOW DETAIL**

Displays detailed information about an instance's configuration

## **UPDATE DATABASE MANAGER CONFIGURATION**



UPDATE

[DATABASE MANAGER | DB MANAGER | DBM]

[CONFIGURATION | CONFIG | CFG]

USING [ [*Keyword*] [*Value*] , ...]

<IMMEDIATE | DEFERRED>

**UPDATE DBM CFG USING NOTIFYLEVEL 4**

Indicates that DB2 is to collect the maximum amount of diagnostic information available and write it to the db2diag.log file and the administration notification log when warnings or errors occur

## **RESET DATABASE MANAGER CONFIGURATION**



**RESET**

[DATABASE MANAGER | DB MANAGER | DBM]  
[CONFIGURATION | CONFIG | CFG]

**RESET DBM CFG**

Resets an instance's configuration; all configuration parameters are assigned their original default values

## **DB2 Administration Server (DAS)**



The DAS is a separate server process that operates independently of, yet concurrently with, all other instances. The DAS ...

- Provides remote clients with the information needed to establish communications with other instances
  - Allows remote administration of an instance
  - Assists in task (job) management
  - Provides a way to "discover" information about other DAS processes, DB2 instances, and DB2 databases
- ✓ *In DB2 9.7, the Control Center tools and the DAS have been deprecated and may be removed at a later date.*

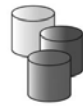
## Configuring the DAS



The DAS is configured via the DB2 Administration Server configuration file. This file also consists of several different parameters; the values assigned to those parameters can be seen or modified using the following commands:

- GET ADMIN CONFIGURATION
- UPDATE ADMIN CONFIGURATION
- RESET ADMIN CONFIGURATION

## GET ADMIN CONFIGURATION



GET ADMIN  
[CONFIGURATION | CONFIG | CFG]

GET ADMIN CFG

Displays information about the DAS's configuration

## UPDATE ADMIN CONFIGURATION



UPDATE ADMIN  
[CONFIGURATION | CONFIG | CFG]  
USING [ [*Keyword*] [*Value*] ,...]

UPDATE ADMIN CFG USING SCHED\_ENABLE OFF  
Turns the DB2 Task Scheduler OFF

## **RESET ADMIN CONFIGURATION**



RESET ADMIN  
[CONFIGURATION | CONFIG | CFG]

RESET ADMIN CFG  
Resets the DAS configuration; all configuration parameters are assigned their original default values

## **Configuring Databases**



The behavior of a DB2 database is controlled, in part, by a database configuration file. This file also consists of several different parameters; the values assigned to those parameters can be seen or modified using the following commands:

- GET DATABASE CONFIGURATION
- UPDATE DATABASE CONFIGURATION
- RESET DATABASE CONFIGURATION

## **GET DATABASE CONFIGURATION**



GET [DATABASE | DB]  
[CONFIGURATION | CONFIG | CFG]  
FOR [*DBAlias*]  
<SHOW DETAIL>

GET DB CFG FOR *sample* SHOW DETAIL  
Displays configuration information for a database named SAMPLE



## **UPDATE DATABASE CONFIGURATION**



```
UPDATE [DATABASE | DB]
[CONFIGURATION | CONFIG | CFG]
FOR [DBAlias]
USING [[Keyword][Value],...]
<IMMEDIATE | DEFERRED>
```

```
UPDATE DB CFG FOR sample
USING LOCKTIMEOUT 1000
```

Sets the amount of time an application will wait to obtain a lock to 1,000 seconds

## **RESET DATABASE CONFIGURATION**



```
RESET
[DATABASE | DB]
[CONFIGURATION | CONFIG | CFG]
FOR [DBAlias]
```

```
RESET DB CFG FOR sample
```

Resets the configuration for a database named SAMPLE; all configuration parameters are assigned their original default values

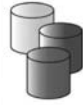
## The AUTOCONFIGURE Utility



Using information you provide *about a single database*, the AUTOCONFIGURE utility will recommend optimal Database Manager configuration parameter values, database configuration parameter values, and initial buffer pool sizes to use.

Recommendations made can be displayed, or they can be automatically applied to an instance and a database.

## The AUTOCONFIGURE Command



```
AUTOCONFIGURE
USING [ [Keyword] [Value] ,...]
APPLY [DB ONLY | DB AND DBM | NONE]
```

```
AUTOCONFIGURE USING MEM_PERCENT 60
APPLY DB ONLY
```

Determines the best configuration to use when 60% of the available memory will be available for the instance; makes changes to the database configuration only