DB2 Data Management Software

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DB2 Version 8 Client Configuration

DB2 Quickstart Education
Maintained by Paul Yip (ypaul@ca.ibm.com)

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BEFORE YOU BEGIN

- Ensure SERVER is ready to accept remote connections
- THREE things to ensure per instance:
  - ►update SVCENAME (service name) parameter in DBM CFG

    example: update dbm cfg using svcename db2cdb2inst1

  - ►update services with the service name
    - UNIX: /etc/services
    - Windows: c:\winnt\system32\drivers\etc\services

      example: db2cdb2inst1   50000/tcp
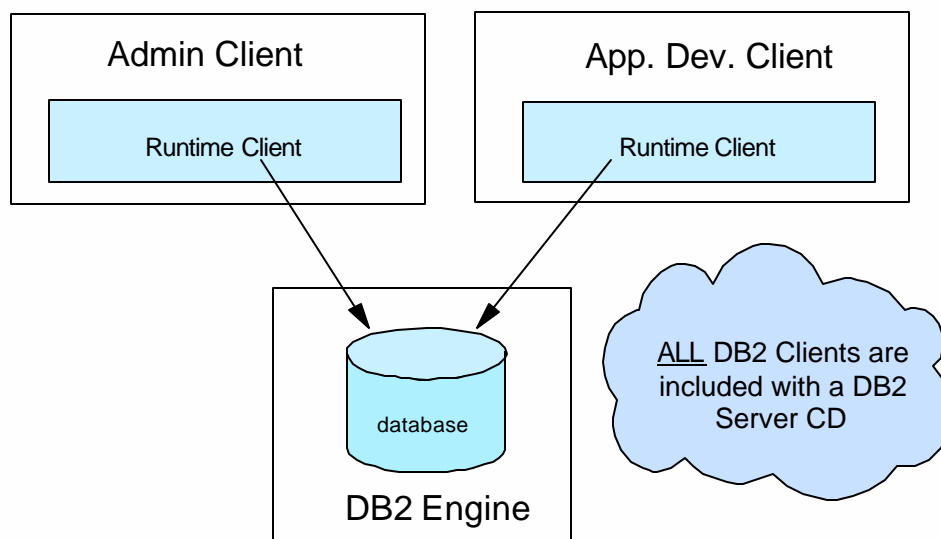
  - ►enable protocol in DB2 registry

      example: db2set DB2COMM=TCPIP

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BEFORE YOU BEGIN *(continued)*

- restart instance after changing parameters
  - ▶ force application all
  - ▶ db2stop
  - ▶ db2start

- ensure DAS is running
  - ▶ db2admin start

DB2 Clients

Admin Client	App. Dev. Client
Runtime Client	Runtime Client

database

DB2 Engine

ALL DB2 Clients are included with a DB2 Server CD

Database Catalogs
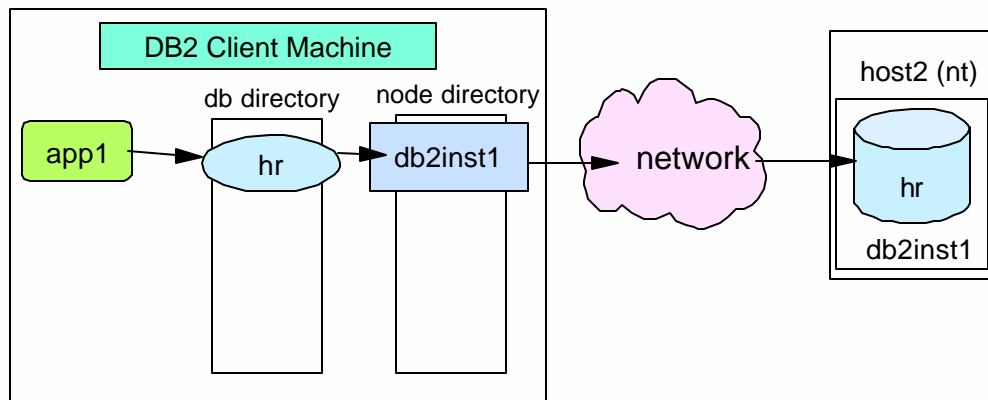
- Each client maintains three directories

- **NODE** directory
  - a list of remote DB2 instances

- **ADMIN NODE** directory
  - list of remote DB2 Admin servers

- **DATABASE** directory
  - a list of databases

> ALL NODE entries must be unique

> All DATABASE entries must be unique
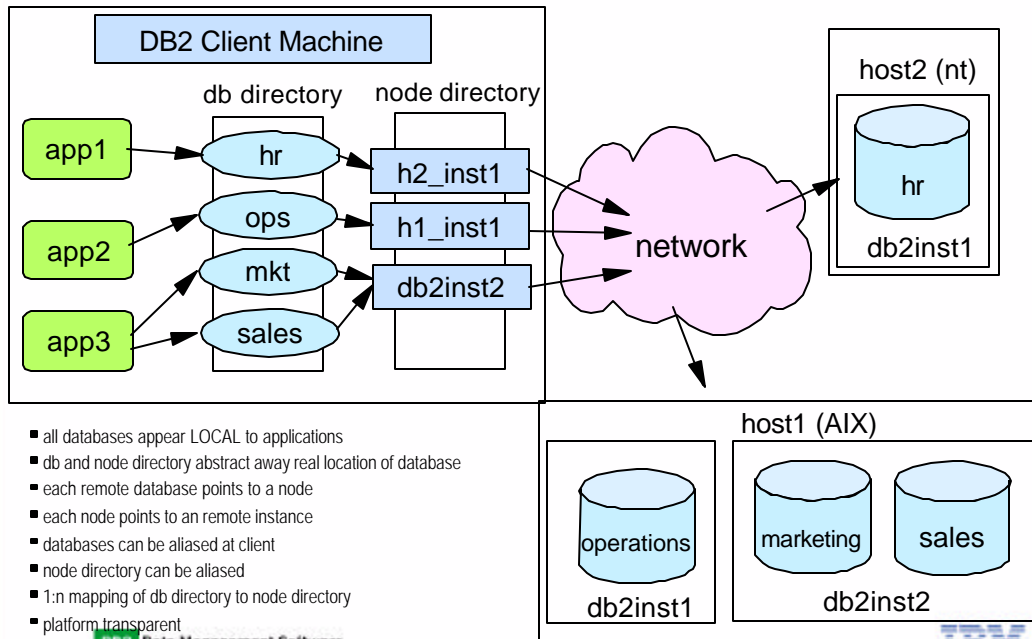
> All entries limited to 8 characters

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Basic Client Connectivity

DB2 Client Machine

app1 → db directory: hr → node directory: db2inst1 → network → host2 (nt): hr, db2inst1

Commands:

catalog tcpip node db2inst1 remote host2 server 50000

catalog database hr at node db2inst1

catalog admin tcpip node host2 remote host2 (not illustrated)

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Advanced Client Connectivity Example

| DB2 Client Machine |

db directory   node directory   host2 (nt)

- app1
- hr → h2_inst1 → network → hr db2inst1
- ops → h1_inst1
- app2
- mkt → db2inst2
- app3
- sales

host1 (AIX)

operations db2inst1   marketing   sales db2inst2

- all databases appear LOCAL to applications
- db and node directory abstract away real location of database
- each remote database points to a node
- each node points to an remote instance
- databases can be aliased at client
- node directory can be aliased
- 1:n mapping of db directory to node directory
- platform transparent

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Catalog Commands

- Catalog the remote system's ADMIN NODE (DAS)

  catalog admin tcpip node zeus remote zeus.mycompany.com

- Catalog the remote DB2 instance in NODE directory

  catalog tcpip node nodeX *remote 192.168.0.2 server 50000*

- Catalog the SAMPLE database on DB2 in the db directory

  catalog database SAMPLE as MYSAMP at node nodeX

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ATTACH

```
attach to <nodename> user <uid> using <pwd>
detach
```

- Once you've cataloged a remote node, you can work with the remote instance as if it were local by using ATTACH on the node entry
  - ►Example:
    - −LIST APPLICATIONS for remote node
    - −GET DBM CFG for remote node
    - −etc..

- Often confused with CONNECT
  - ►CONNECT - connect to and work with databases. Databases always appear local to client.
  - ►ATTACH - attach to remote instance processes and work with them as if local

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Easier Ways to Catalog

- **The Configuration Assistant**
  - ►a graphical user interface to "discover" DB2 databases on the network
  - ►Node and Admin node aliases generated randomly for simplicity

- **Control Center**
  - ►The main administration tool. Not as simple as Configuration Assistant, but easier than command line

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Final Test

- If all works well, the following will succed:

  db2 "connect to <dbname> user <usr> using <pwd>"

- DBA Courtesy: check that Control Center node/db discovery works.

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Client Setup

- Minimum Requirement
  - ▶ DB2 Runtime Client is installed
    - ▬ packaged with DB2 Server, Admin, or AD Client install option

- Windows
  - ▶ Whole machine is client, regardless of user

- UNIX
  - ▶ If client does not run its own instance, a 'client' instance must be set up
  - ▶ or, a regular unix user can "source" the instance owner's profile in sqllib/db2profile

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Sample Configuration Scenarios

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Scenario 1 (UNIX):

- Application server installed on middle tier UNIX machine with only DB2 client installed. DB2 Server resides on a physically separate machine. How can I connect to the application to the database?

  A special CLIENT instance is required on the middle tier. As root, create a new userid and run the following command:

  db2icrt -s client -u <fenced-id> <instance name>
  catalog admin node...
  catalog tcpip node ...
  catalog database ... at node ...

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Scenario 2 (UNIX):

- Application Server and DB2 Server reside on same UNIX machine. However, the instance is db2inst1, but the user runs as a different userid, appuser1

- appuser1 can simply "source" the environment of db2inst1. As appuser1, issue:

  $. /home/db2inst1/sqllib/db2profile

  Then, connect to databases as if they were local

- Recommendation: place the above command in appuser1's .profile file.

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