

# Database Administration Tools

## – Tools & Description

- Universal Installer(OUI) - Used to install, upgrade, or remove software components
- Database Configuration Assistant - A graphical user interface tool that interacts with the OUI, or can be used independently, to create, delete or modify a database
- Password File Utility - Utility for creating a database password file
- SQL\* Plus - A utility to access data in a database
- Enterprise Manager - A graphical interface used to administer, monitor, and tune one or more databases

# Universal Installer

- Used to install, upgrade, or remove software components, and create a database
- Based on a Java engine
- Features include:
  - Automatic dependency resolution
  - Allows for Web-based installations
  - Tracking inventory of component and suite installations
  - De-installation of installed components
  - Support for multiple DBMS homes
  - Support for globalization technology

# Interactive Installation

- To start Universal Installer on Unix:
  - `$ ./runInstaller`

# Non-Interactive Installation Using Response Files

- To start Universal Installer in non-interactive mode:
  - `./runInstaller -responsefile myrespfile -silent`

# Database Configuration Assistant

- The Database Configuration Assistant allows you to:
  - Create a database
  - Configure database options
  - Delete a database
  - Manage templates

# Optimal Flexible Architecture(OFA)

- DBMS vendor recommended standard database architecture layout
- OFA involves three major rules:
  1. Establish a directory structure where any database file can be stored on any disk resource.
  2. Separate objects with different behavior into different tablespaces.
  3. Maximize database reliability and performance by separating database components across different disk resources.



# DBMS Software and File Locations

- Software

oracle\_base

/product

/release\_number

/bin

/dbs

/rdbms

/sqlplus

/admin

/inst\_name

/pfile

- Files

oradata/

db01/

system01.dbf

control01.ct1

redo0101.log

...

db02/

system01.dbf

control01.ct1

redo0101.log

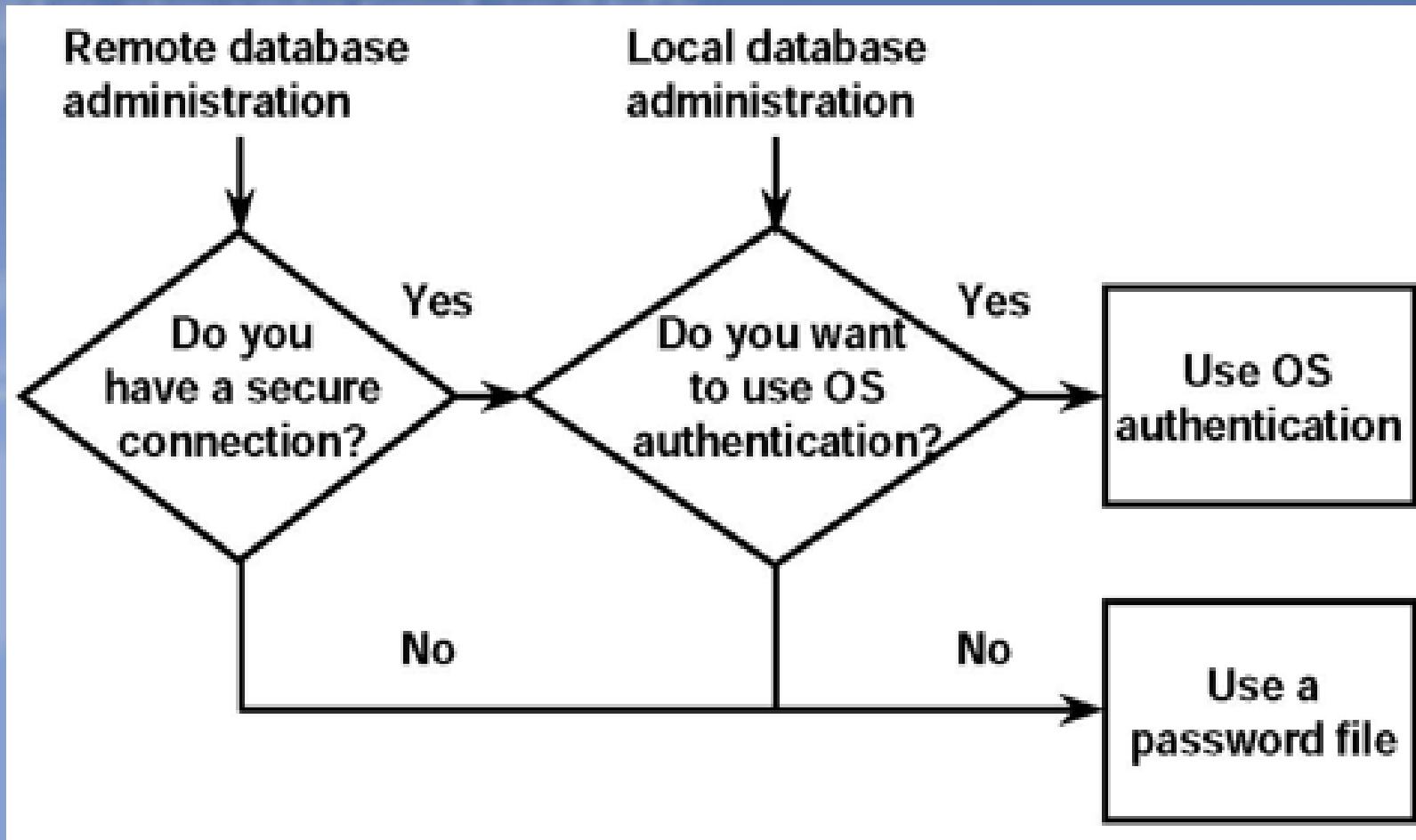
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# Database Administrator Users

- When a database is created the users SYS and SYSTEM are created automatically and granted the DBA role.
  - SYS
    - Password: change\_on\_install
    - Owner of the database data dictionary
  - SYSTEM
    - Password: manager
    - Owner of additional internal tables and views used by DBMS tools



# Authentication Methods for Database Administrators



# Using Password File Authentication

- Create the password file using the password utility:  
`$orapwd file=$ORACLE_HOME/dbs/orapwU15  
password=admin entries=5`
- Set REMOTE\_LOGIN\_PASSWORDFILE to EXCLUSIVE in the initialization parameter file
- Add user to the password file and assign appropriate privileges to each user  
`GRANT SYSDBA TO HR ;`

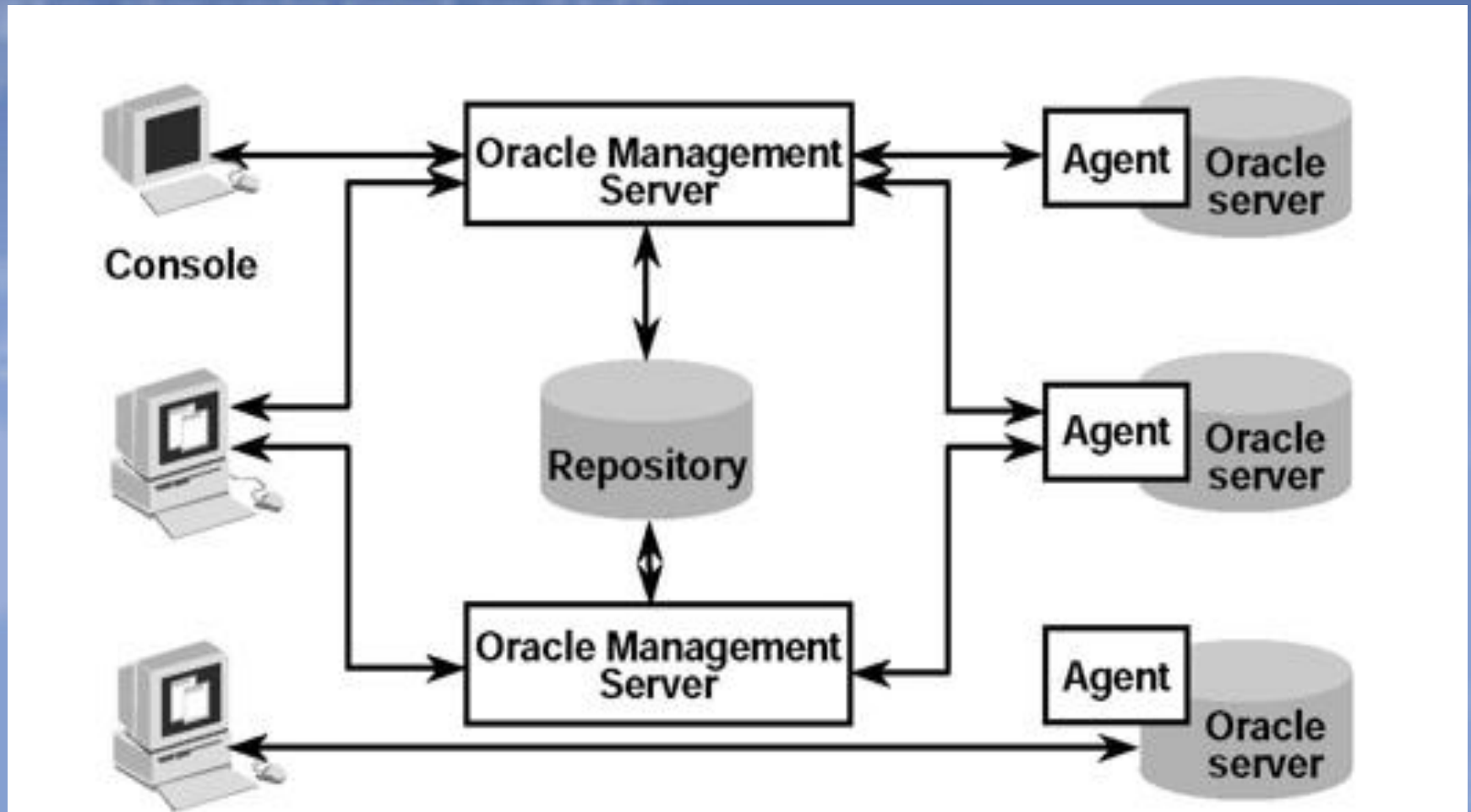
# SQL\*Plus

- SQL \*Plus is an DBMS tool that provides the capability to interact with and manipulate the database.
- Provides the ability to start up and shutdown the database ,create and run queries, add rows, modify data , and write customized reports.
- Subset of the standard SQL language with specific add-on.

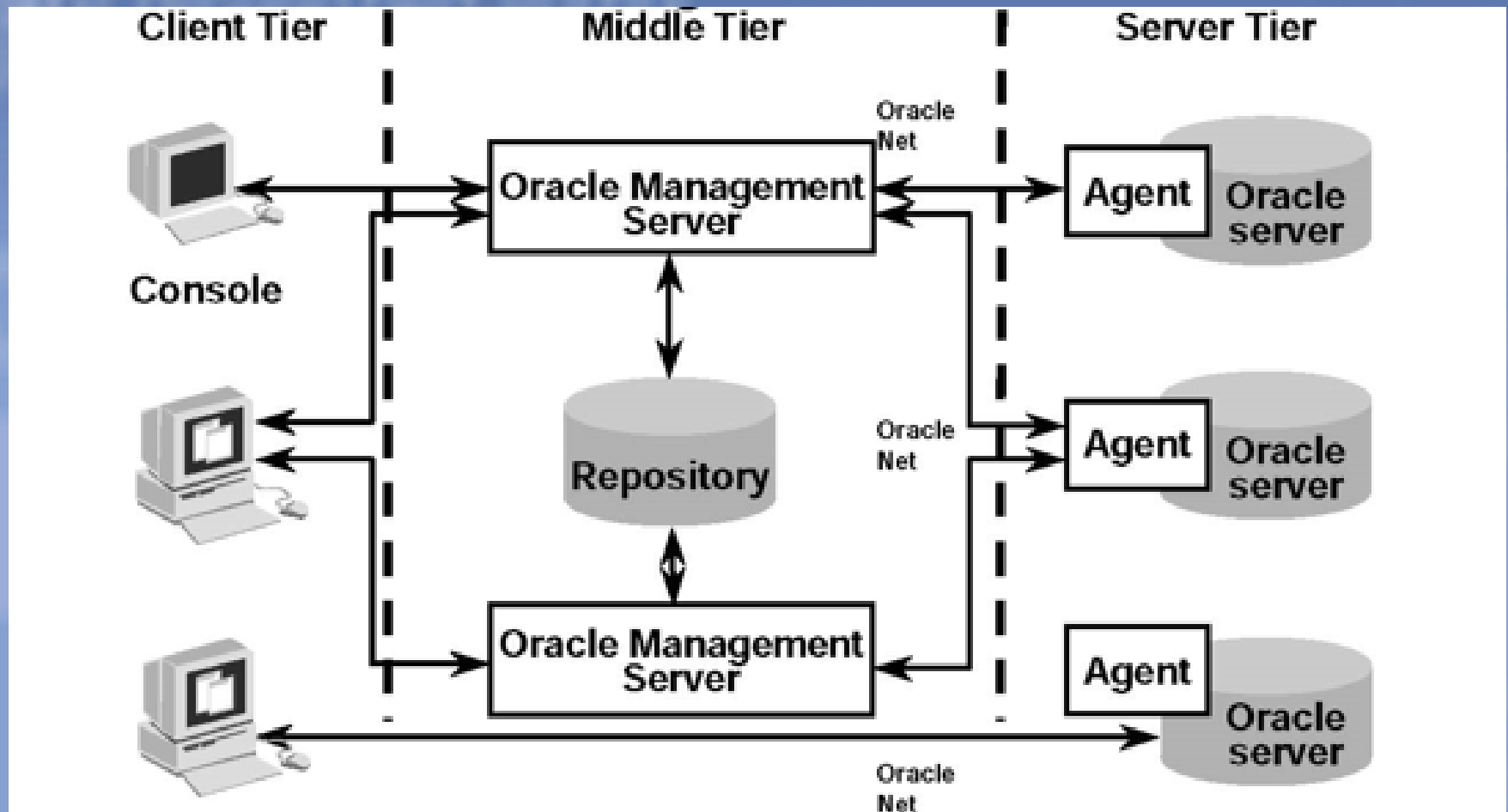
# DBMS Enterprise Manager

- Serves as a centralized systems management console for DBAs.
- Provides a set of common services that help manage the DBMS environment.
- Includes integrated applications.
- Manages the environment such as database, web servers and listeners.
- A tool to administer , diagnose and tune multiple databases.
- Provides tools for administering parallel servers and replicated databases.

# DBMS Enterprise Manager Architecture: (Java-Based Console and Applications)



# DBMS Enterprise Manager Architecture: (Managed Nodes)





# DBMS Enterprise Manager Console

## – Console

- Central launching point for all applications.
- Can be run in thin mode or as a fat client.
- Can be launched either standalone or through DBMS Management Server.

# DBA Tools

– Standard applications that can be launched from the Console:

- Instance Manager
- Security Manager
- Storage Manager
- Schema Manager
- SQL\*Plus Worksheet