

State of Wisconsin
Division of Enterprise Technology (DET)
Distributed Database Hosting
Service Offering Definition (SOD)



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Introduction

The DET Database Hosting Service provides customers with the framework for running Microsoft SQL Server and Oracle databases at the DET Data Center in a secure environment. DET manages all server environments and is responsible for the acquisition, installation, configuration, administration, and maintenance of the server platforms and operating system software installed on these servers.

This service is available on both physical and virtual server platforms. Microsoft SQL Server databases can be deployed on both physical and virtual servers. Oracle databases must run on physical servers.

All the technologies and software versions used to provide this service can be found within the [Technical Reference Model](#) (TRM). Please refer to the TRM to determine which technologies are strategic, emerging, transitional, or sunset for this service offering.

What Is Included

- DET managed server(s) environment.
 - Server purchasing
 - Operating System (OS) installation
 - Firewall services
 - Networking services
 - Backup and recovery of server files [Backup and Restore Service Offering](#)
 - Standard monitoring is provided for all servers
- Database software licensing within the DET managed Oracle instance environment. Database software licensing for the virtual SQL server environment when hosted on dedicated SQL server VM hosts
- DET management of databases including backup and recovery services and monitoring with various alerts including fault alerts, storage alerts, and systems level job alerts
- Database software installation, testing, maintenance, support and upgrades
- Distribution of client software to an agency for internal distribution
- Patching of operating system (OS) and database software (within standard DET change windows policy) [Patching Policy](#)
- Basic intrusion detection and reporting

What Is Not Included

The following items are not available as part of the service offering:

- Support for agency application code or 3rd party vendor application code
- Database software licensing for agency dedicated physical servers. In a dedicated physical environment licensing is the responsibility of the customer
- Licensing for additional software (including extra-cost options within the database software) not listed in this SOD under "What Is Included." All licensing costs for applications that are installed for agencies are the responsibility of the requesting agency.

- Application load testing
- Quality and Assurance (QA) testing
- Support for desktop clients
- Support for file shares on database servers
 - Administrative access to a DET managed database server which is not outlined in the Database Services Roles & Responsibilities [here](#).

Configuration and support of the items below are also not available as part of the database service offering. These configuration items may be provided through another existing offering, or made available at the consulting rate. If a customer's recovery objectives, monitoring requirements, or high availability requirements are not met by the database service offering as stated it is the customer's responsibility to establish and provide for these requirements.

- Application job monitoring
- Ad-hoc database backups and restores
- Site redundancy for database servers. Continuity of Operations Planning (COOP) or Disaster Recovery for agency applications.
- Support for bundled products, or installation options not directly related to providing the database service. Examples include but are not limited to Oracle Application Server (OAS) Oracle Application Express (APEX), SQL Express, SQL Server Analysis Services, SQL Server Reporting Services, SQL Server Integration Services, SQL Server Replication, Microsoft Office and Visual Studio.
- Support for Agency Managed Physical Servers (AMPS), and Agency Managed Virtual Servers (AMVS)
- Application recovery

Benefits

- DET provides the infrastructure so that agency staff can focus on business needs and application code.
- The database environment shares the cost of the environment across all users minimizing licensing costs, physical infrastructure costs, and support personnel costs.
- DET ensures that the database servers are supported by several different individuals, insuring coverage and continuity.
- DET analyzes and coordinates all infrastructure environment changes for their impact on agency applications.
- DET provides a secure physical environment to ensure restricted access to agency servers.

Service Description

The DET Database Hosting Service includes the hardware, software and running databases in a secure environment at the DET Data Center. Configuration of new, or access to existing services includes the following by product which can be made by request.

Oracle

- Dedicated stand alone database server
- Dedicated instances, which would be provided in a clustering software installation for Oracle with active-active clustering, allowing for cold failover to other servers in the cluster.
- Access to Oracle Enterprise Manager-Grid Control
- Recovery from Oracle Recovery Manager (RMAN) managed backups and recovery of Oracle data.
- Access to required Oracle database alert logs and traces, and agency reserved storage on the Oracle database servers through standalone gateway servers with Network File System (NFS) mounts.

SQL Server

- Dedicated stand alone database server
- Dedicated VMware database server, which would be provided on a virtual cluster, allowing for failover to other servers in the cluster.
- Recovery from SQL Server Management Studio (SSMS) managed database backups in simple recover mode by default, or point in time recovery options by request.

DET retains full control and responsibility for the acquisition, installation, configuration, administration, maintenance, and management of the server platform and operating system software.

DET follows established Service Request and Change Management procedures for the resources that DET controls (e.g. Servers, Operating Systems, Security patches, Monitoring, etc). Agency DET Database Hosting Service implementations must follow the established Service Request and Change Management procedures.

The Service Tier defines the DET level of service for availability, support, maintenance and recovery of the server.

Service Offering Review Policy

This agreement will automatically renew each fiscal year until either party provides notice of termination. Service Offering Definitions are reviewed annually.

Roles and Responsibilities

Roles and Responsibilities (of DBAs) for the database services can be found [here](#).

Business Continuity

Business Continuity for the database hosting service is the responsibility of the requesting agency.

Monitoring

Standard monitoring includes alerting and reporting to DET support staff of CPU, memory, file system utilization, network I/O and up/down status of the servers.

In addition, monitoring and alerting are provided in the Oracle environment through Oracle's Enterprise Manager-Grid Control to which agency Application DBAS have full access to the databases that belong to their agency.

Configuration Diagram

A Visio diagram of the Oracle shared database cluster is available [here](#).

How Services Are Charged

In addition to Database Hosting Service, the agency may also be required to subscribe to LAN, Storage, Backup & Restore, Directory and Enterprise Service Desk service offerings.

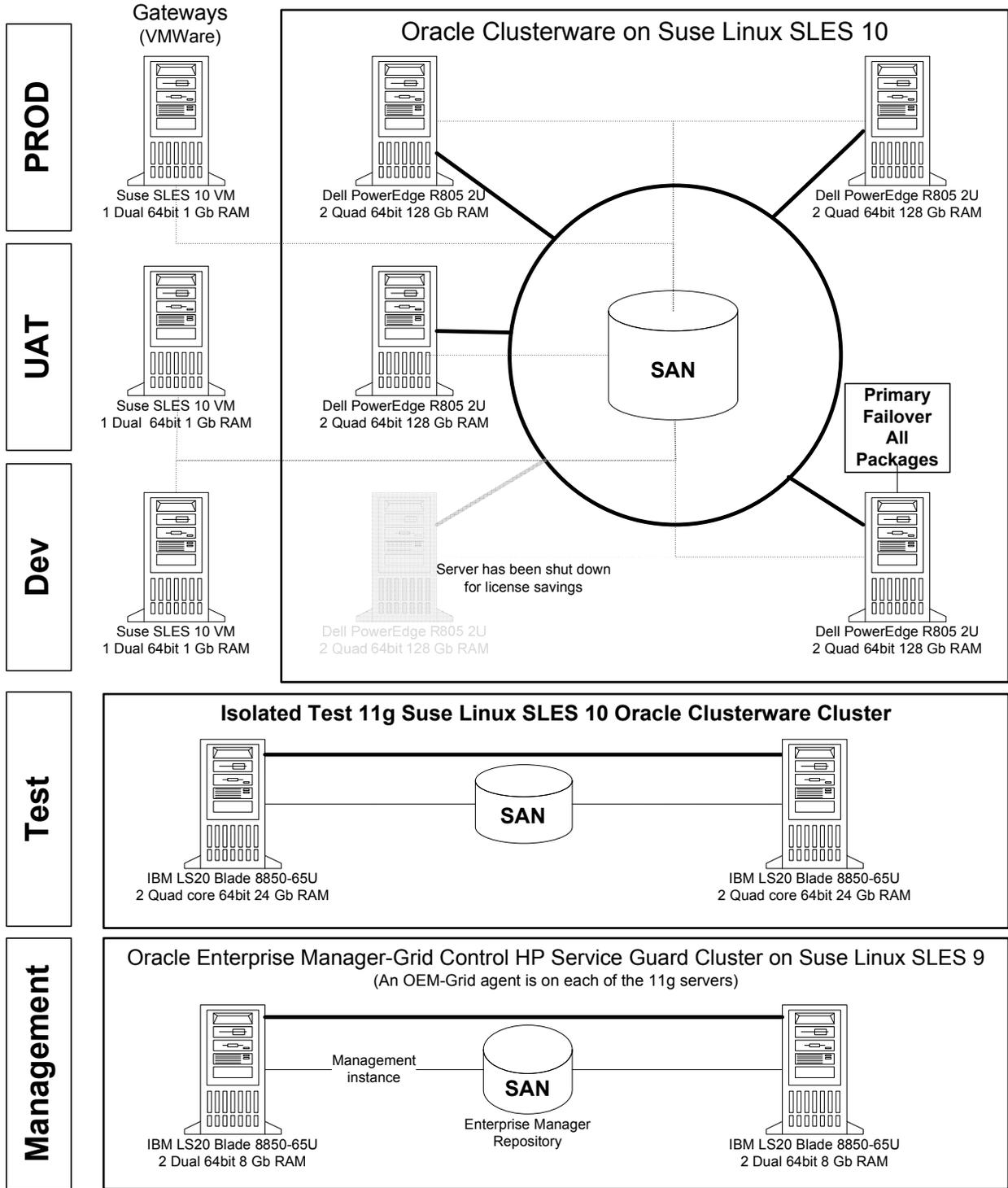
Oracle is charged based on either a dedicated server or on a dedicated instance. SQL is charged on a dedicated server, either physical or virtual. Services are billed on a monthly basis through the Enterprise Billing System (EBS). Please see the [IT Services Rate Sheet](#) for rate information.

Cost-Saving Tips

Oracle: Vendor applications tend to have or "require" their own databases. On the surface this would result in charges for each database if housed in their own instance. However many small applications can be combined in one database instance saving additional instance charges (An application database would be owned by a particular user/schema in an instance which would share memory.) This consolidation effort would be balanced by performance requirements.

Notes:

DET Oracle 11G Database Environments



Notes: All database servers are Suse Linux SLES 10 (2.6.16.60-0.34-smp #1 SMP) except for the OEM-Grid which is Suse Linux SLES 9 (2.6.5-7.315-smp #1 SMP). Database software is Oracle 11g Release 1. Monitoring software is HP Openview and Oracle Enterprise Manager-Grid Control (10.2.0.5). G:\Infrastructure Support\DBDC\Database\Oracle\Documentation\oracle_11g.vsd - 7/23/09 13:01 - 1 of 1