



ORACLE®

Oracle Enterprise Manager 10g

**Sandra Cheevers
Server Technologies
Oracle Corporation**

Agenda

- **Enterprise Manager Overview**
- **Lifecycle Automation**
- **Configuration Management**
- **Application Performance Management (+ AD4J)**
- **Service Level Management**
- **Plug-ins and Connectors**
- **Packaged Applications Management**



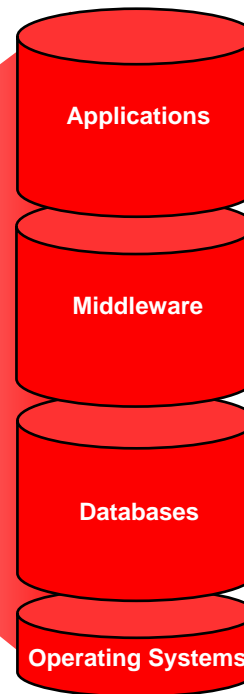
Management Capabilities



Oracle Enterprise Manager 10g

Manage For Today's Data Center

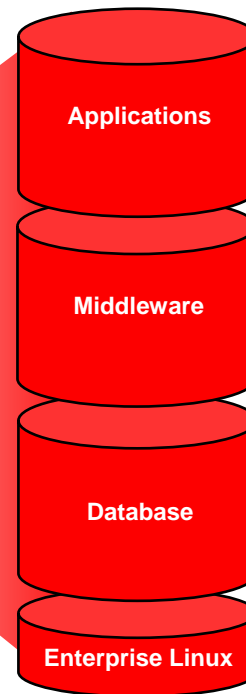
- Configuration Management
- Service Level Management
- Application Performance Mgmt
- Lifecycle Management



Oracle Enterprise Manager 10g

Support For Heterogeneous Systems

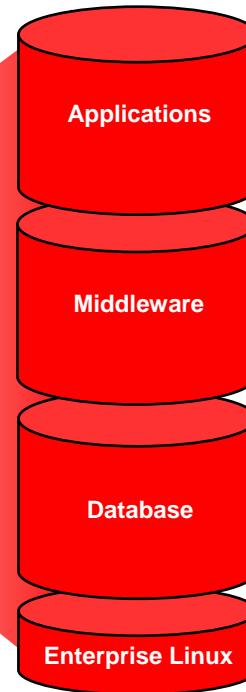
- Configuration Management
- Service Level Management
- Application Performance Mgmt
- Lifecycle Management



- BEA
- BEZ
- Blue Lane
- Check Point
- Citrix
- Dell
- Egenera
- EMC
- F5
- IBM
- Juniper
- Microsoft
- NetApp
- Nortel
- Onaro
- Pillar Data
- Radware

Oracle Enterprise Manager 10g Release R3

- Configuration Management
- Service Level Management
- Application Performance Mgmt
- Lifecycle Management



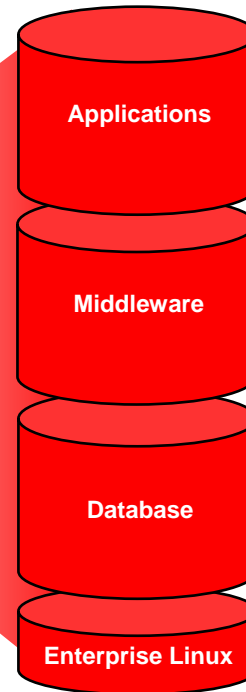
- BEA
- BEZ
- Blue Lane
- Check Point
- Citrix
- Dell
- Egenera
- EMC
- F5
- IBM
- Juniper
- Microsoft
- NetApp
- Nortel
- Onaro
- Pillar Data
- Radware

New

- E-Business Suite
- PeopleSoft
- Siebel
- Oracle SOA Management
- Oracle Identity Management
- Remedy
- Microsoft MOM
- JBoss
- IBM WebSphere MQ

Oracle Enterprise Manager 10g Release R4

- Configuration Management
- Service Level Management
- Application Performance Mgmt
- Lifecycle Management



- BEA
- BEZ
- Blue Lane
- Check Point
- Citrix
- Dell
- Egenera
- EMC
- F5
- IBM
- Juniper
- Microsoft
- NetApp
- Nortel
- Onaro
- Pillar Data
- Radware
- Jboss
- Websphere - MQ Series

New

- Data Masking
- Non-Oracle Middleware + JADE
- Business Intelligence + JADE
- Application Server Diagnostics + JADE
- Tomcat
- Vmware
- EMC Clariion
- Microsoft Exchange

Enterprise Manager 10g Product Family

→ Enterprise Manager 10g Grid Control

- Oracle's grid-ready framework, allowing IT professionals to manage the entire Oracle eco-system through one integrated management console.

→ Enterprise Manager 10g Database Control

- Database Control is the front-end tool for managing a single instance of the 10g database or single cluster instance.

→ Enterprise Manager 10g Application Server Control

- Oracle's application server management interface built directly into the Oracle 10g application server infrastructure

- Enterprise Manager 10g Management Packs
- Enterprise Manager 10g Management Plug-ins
- Enterprise Manager 10g Management Connectors

Oracle Grid Control

20 Management Packs

- Database Management Packs
 - Tuning Pack
 - Diagnostics Pack
 - Configuration Pack for DB
 - Provisioning Pack for DB
 - Change Management Pack
 - Data Masking Pack
- Middleware Management Packs
 - Diagnostics Pack + JADE
 - Configuration Pack for AS
 - Provisioning Pack for AS
 - SOA Suite Management Pack
 - IAM Management Pack
 - Business Intelligence Management Pack
- Stand Alone Management Packs
 - Diagnostics Pack for Non-Oracle Middleware
 - Service Level Management Pack
 - Configuration Management Pack for Non-Oracle Systems
 - Provisioning Pack
 - Linux Management Pack
- Application Management Packs
 - Application Management Pack for PeopleSoft Enterprise
 - Application Management Pack for Siebel
 - Application Management Pack for Oracle E-Business Suite*

Oracle Grid Control

20+ Management Plug-Ins

- Non-Oracle DBs
 - Microsoft SQL Server
 - IBM DB2 Database
- Network Devices
 - Check Point Firewall
 - Juniper Netscreen Firewall
 - F5 BigIP Local Traffic Manager & Load Balancers
- Storage Devices
 - EMC Symmetrix
 - EMC Celerra Server
 - EMC Clariion
 - NetApp Storage Filers
- Host systems
 - (Linux, Windows, Unix)
 - VMware
- Non-Oracle Middleware
 - BEA WebLogic,
 - IBM WebSphere
 - Microsoft .Net Framework
 - Microsoft Active Directory
 - Microsoft BizTalk Server
 - Microsoft Commerce Server
 - Microsoft Internet Information Server (IIS)
 - Microsoft Internet Security and Acceleration (ISA) Server
 - Microsoft Exchange Server
 - JBOSS Application Server
 - IBM WebSphere MQ
 - Tomcat

Oracle Grid Control

2 Management Connectors

- Connector for BMC Remedy Help Desk
- Connector for Microsoft Operations Manager
- Connector for *PeopleSoft Enterprise HelpDesk*
- Connector for *Siebel HelpDesk*

Oracle's Management Solutions

Answers to Today's Top Challenges

IT Operations Challenges

Improve **alignment** between business customers & IT on service levels

Transition from **reacting** to end-user complaints to proactively **resolving** issues

Assess correct status of system and application configurations

Reduce cost of managing IT infrastructure

Oracle Enterprise Manager

Service Level Management

Application Performance Management

Configuration Management

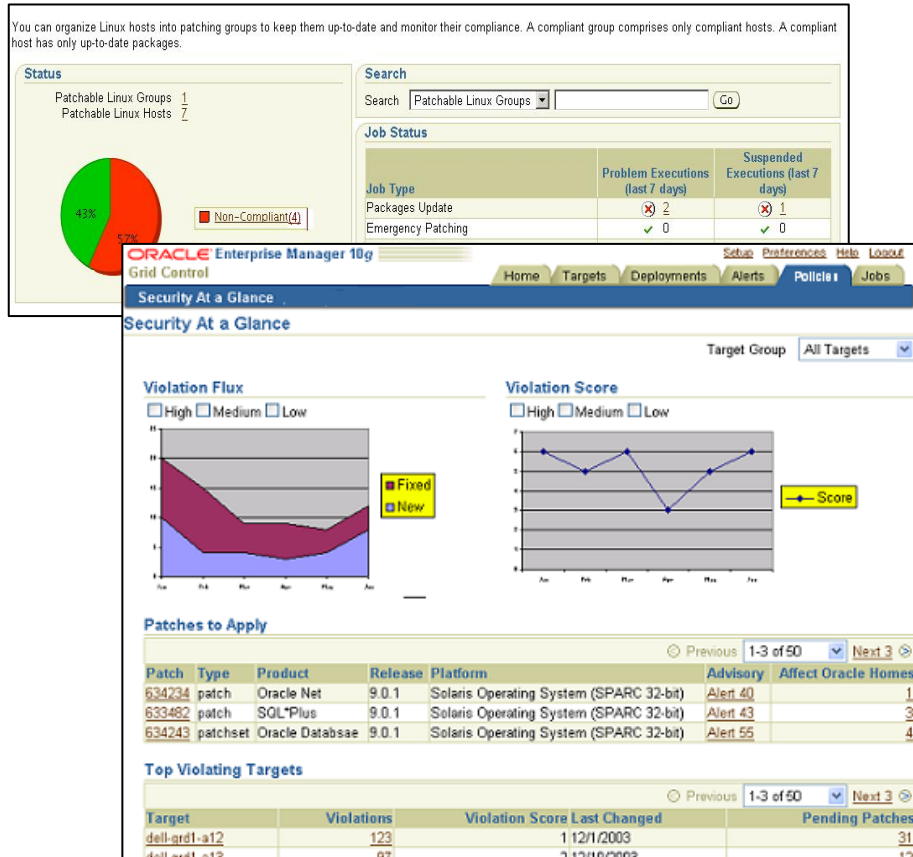
Lifecycle Automation

Lifecycle Automation



Lifecycle Automation

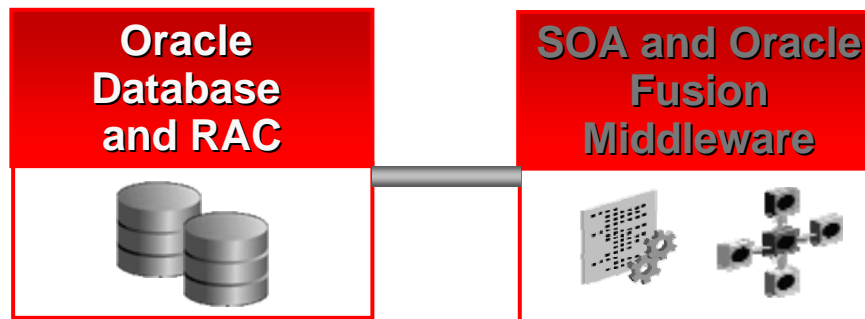
Cost effectively manage “many as one”



- **Manage many as one**
 - Dashboard views
 - Management Templates
- **Automated Software Imaging and Provisioning**
 - Clone Oracle Homes and Instances
 - Provisioning of RAC/CRS and AS clusters
 - Bare Metal OS Provisioning
- **Automation of Oracle patch processes**
 - Direct connection to MetaLink (Oracle Support)
 - Critical Patch Facility (security)

- Config Mgt Pack for DB; Config Mgt Pack for AS; Config Mgt Pack for Non-Oracle; Provisioning Pack

Lifecycle Automation: Provisioning



Simple, Accurate, Reliable Capacity on Demand

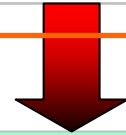
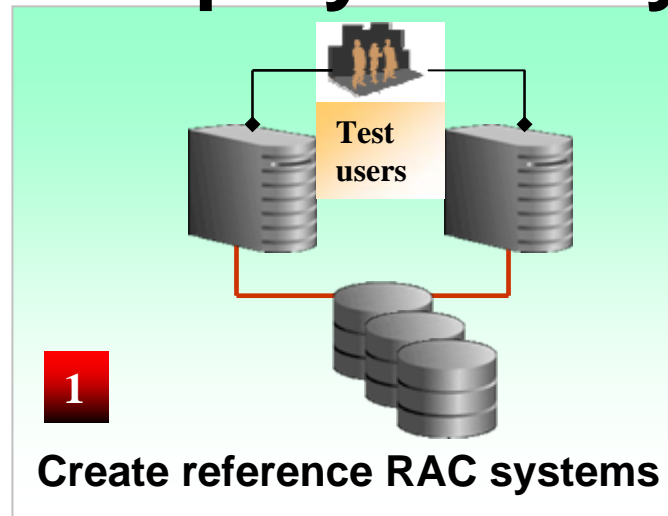
- Automate RAC provisioning while providing service
 - Convert DB to RAC
 - One-click-extend RAC to meet increased demand
 - De-provision RAC nodes
- Simplified way to scale up or down RAC
 - Integrated provisioning of RAC, ASM, and Clusterware
 - Bare metal provisioning integrated with RAC provisioning
- Flexible and Adaptable to your IT environment
 - Extend or customize Out-of-Box provisioning process
 - Integration of provisioning procedures into your IT environment



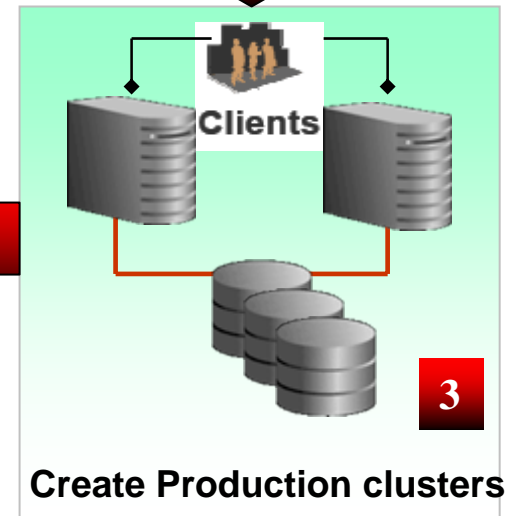
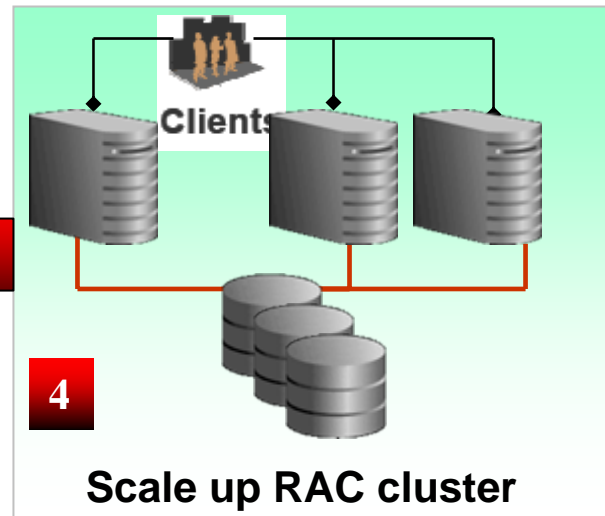
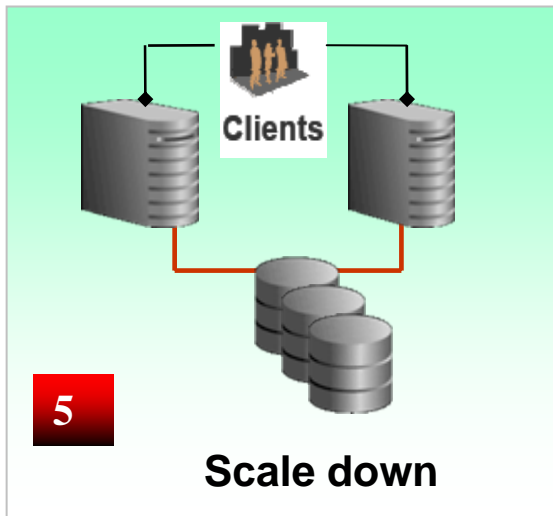
**Best on
Oracle**

Overall RAC Deployment cycle

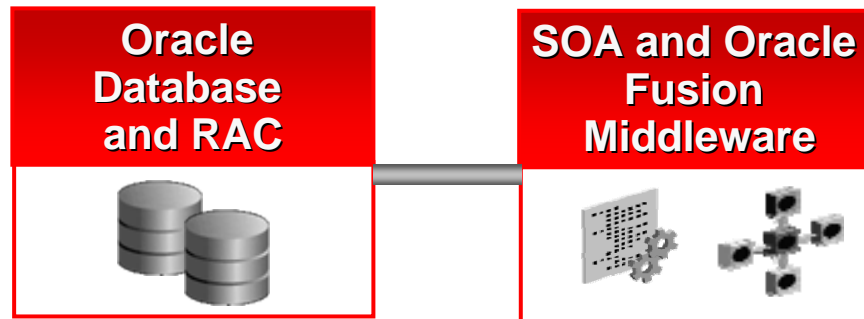
Testing and Staging



Production



Oracle Automation:Patching



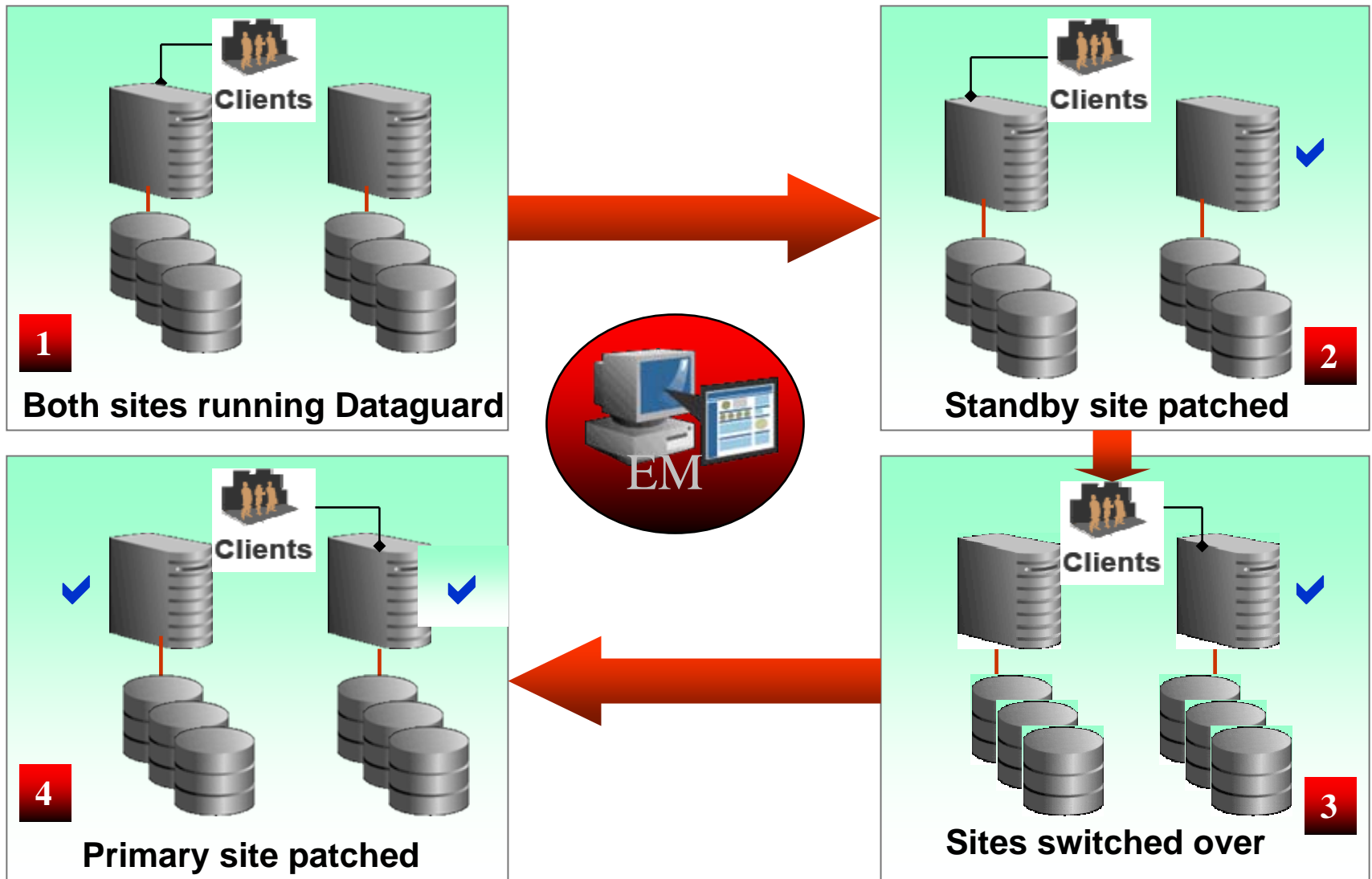
Simple, Accurate, Reliable Maintenance of Distributed Systems

- Automate patching while continuing to provide service
 - Customizable Orchestration of Multi-tier Patching of Oracle Systems Environment (COMPOSE)
 - Rolling and non-rolling patching automation
 - Out-of-Box best practices for DB, RAC, ASM, CRS, Dataguard and middle-tier
 - Automatic orchestration of system shutdown, switchover, patching, and restart
- Adaptable to your IT environment
 - Extend or customize the out-of-box provisioning process
- Enriched OS Patching (Linux, Solaris, Windows)
 - Vendor site integration e.g RHAT Network
- Reduce possibility of errors and improve reliability



**Best on
Oracle**

EM driven HA (Dataguard) Patching

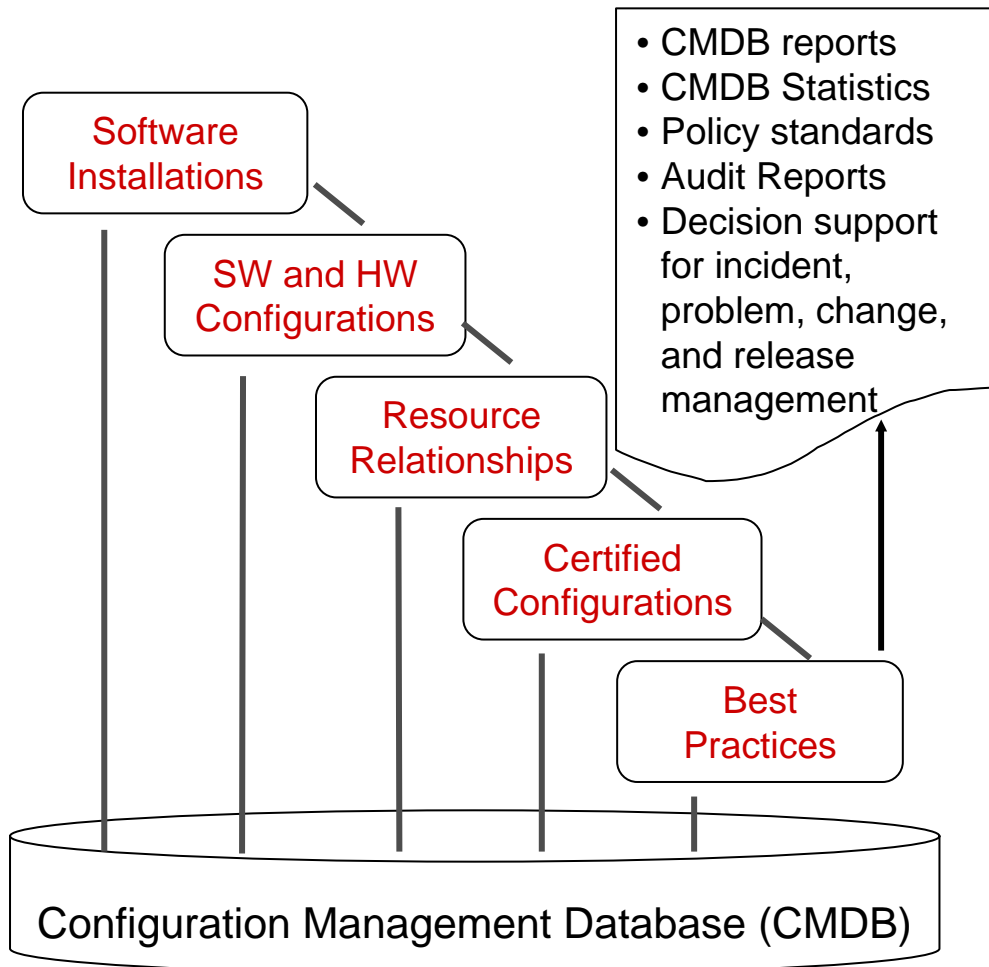


Configuration Management



Configuration Management

Know what you have and know what you're running



- **Discover**

- All hardware & software configurations
- Oracle inventory, including patch history and updates

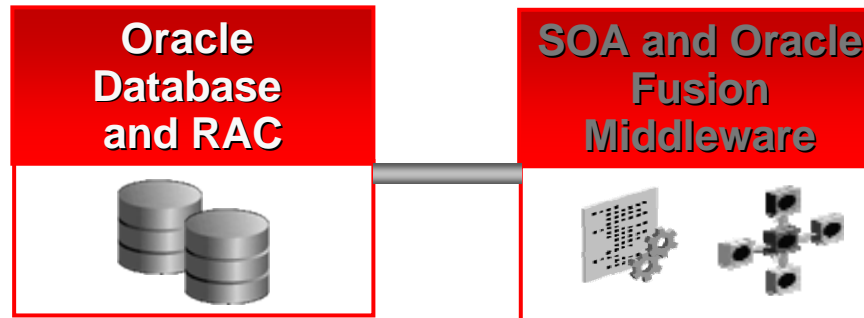
- **Analyze**

- Monitor and audit change
- Configuration comparisons against reference, saved or live configurations
- Comprehensive reporting

- **Foundation for compliance and change control**

- Policy Management
- Standardize IT operations management
- Security configuration policies

Configuration Mgmt. & Compliance



Evaluate, Report & Remediate Systems Against Best Practices

- At a glance compliance scores for your IT environment.
- C-level reporting of target compliance scores in dashboard.
- Evaluate targets and groups against collection(s) of configurations
- Out-of-Box best practices captured as collection(s) of configuration policies. Secure DB, Secure Listener, Secure RAC
- Report compliance score trends over time
- Ability to drill down from compliance dashboards into violations and take corrective actions



**Best on
Oracle**

Compliance Dashboards

- **Compliance Scoring**
 - Security settings and configurations
 - System and application configurations
 - Corporate best practices

ORACLE Enterprise Manager 10g Setup Preferences Help Logout
Grid Control Home Targets Deployments Alerts Compliance Jobs Reports
[Policy Groups](#) | [Policies](#) | [Security At a Glance](#)

Policy Group Evaluation Results

[Evaluation Results](#) [Library](#) [Errors](#)

This table summarizes the policy group evaluations. Click the name of the policy group for detailed information. Page Refreshed Oct 17, 2006 5:39:23 PM PDT

Policy Group ▲	Version	Keywords	Average Compliance Score (%)	Targets	Target Type	Description	Delete
Secure Configuration for Oracle Database	1	Security	<div><div></div></div> 75	2	Database Instance	Ensures adherence with best-practice security configuration settings that help protect against database-related threats and attacks, providing a more secure operating environment for the Oracle database. ⓘ	
Secure Configuration for Oracle Listener	1	Security	<div><div></div></div> 100	1	Listener	Ensures adherence with best-practice security configuration settings that help protect against database-related threats and attacks, providing a more secure operating environment for the Oracle database. ⓘ	

[Evaluation Results](#) [Library](#) [Errors](#)

[Home](#) | [Targets](#) | [Deployments](#) | [Alerts](#) | [Compliance](#) | [Jobs](#) | [Reports](#)

Copyright © 1996, 2006, Oracle. All rights reserved.
Oracle, JD Edwards, PeopleSoft, and Retek are registered trademarks of Oracle Corporation and/or its affiliates. Other names and brands may be trademarks of their respective owners.
[About Oracle Enterprise Manager](#)

- **Drilldowns**
 - Policy and rule descriptions
 - Violation details
 - Impacts

ORACLE Enterprise Manager 10g Setup Preferences Help Logout
Grid Control Home Targets Deployments Alerts Compliance Jobs Reports
[Policy Groups](#) | [Policies](#) | [Security At a Glance](#)

Evaluation Results: Secure Configuration for Oracle Database

[View](#) [All Results](#) [Filter By Target](#) [All](#) [Choose Target](#) [Clear](#) [Return](#)

Secure Configuration for Oracle Database

- Post Installation
- Oracle Directory and File Permissions
- Oracle Parameter Settings
- Database Password Profile Settings
 - Secure Failed Login Attempts Setting
 - Secure Password Life Time Setting
 - Secure Password Lock Time Setting
 - Secure Password Grace Time Setting
 - Password Complexity Checking Enabled
- Database Access Settings

Policy Group: Secure Configuration for Oracle Database

[Summary](#) [Trend Overview](#)

Average Compliance Score (%) 75 ⓘ

Summary For this policy group, 2 Database Instance targets were evaluated resulting in 57 violations. There were 26 rules violated.

Description Ensures adherence with best-practice security configuration settings that help protect against database-related threats and attacks, providing a more secure operating environment for the Oracle database. ⓘ

Results

Target	Compliance Score (%) ▲	Violations	Rules		Not Evaluated	Last Evaluation
			Violated	Compliant		
Oemrep Database	<div><div></div></div> 50	57	26	25	0	Oct 17, 2006 7:22:21 AM PDT
database	<div><div></div></div> 100	0	0	23	28	Oct 17, 2006 10:51:58 AM PDT

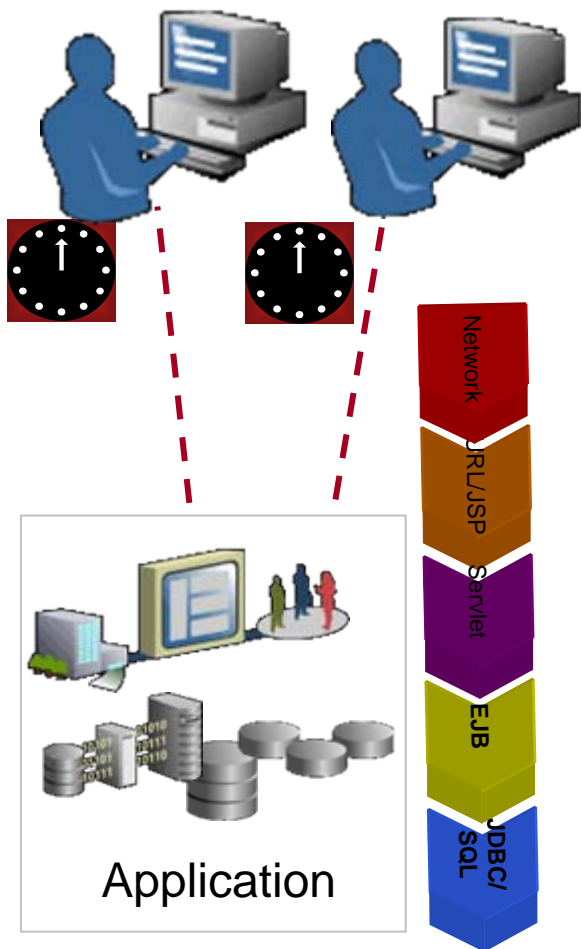
ⓘ **TIP** A rule will not be evaluated when one of the following conditions occurs: the target is managed by an older Management Agent, the rule is not applicable to the target, or the evaluation of the rule resulted in an error. To determine the version of the Management Agent monitoring the target, see [Management Agent](#). For a list of evaluation errors, see [Evaluation Errors](#).

Application Performance Management



Application Performance Management

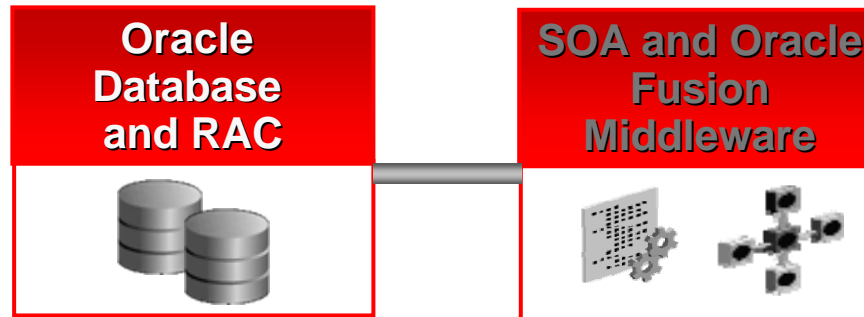
Identify and resolve end-user problems quickly



- **Complete system monitoring for entire application infrastructure**
- **Monitor from end-user perspective**
 - Test application services from representative geographies
 - Capture real end-user performance
- **Diagnostics and Tuning**
 - Rapid problem identification
 - Root Cause Analysis (RCA)
 - Problem remediation/tuning

• Service Level Mgt Pack; Application Server Diagnostics Pack; Database Diagnostics Pack; Database Tuning; Plug-ins

Oracle Database Management



Oracle DB & RAC Pre-Instrumented Capabilities

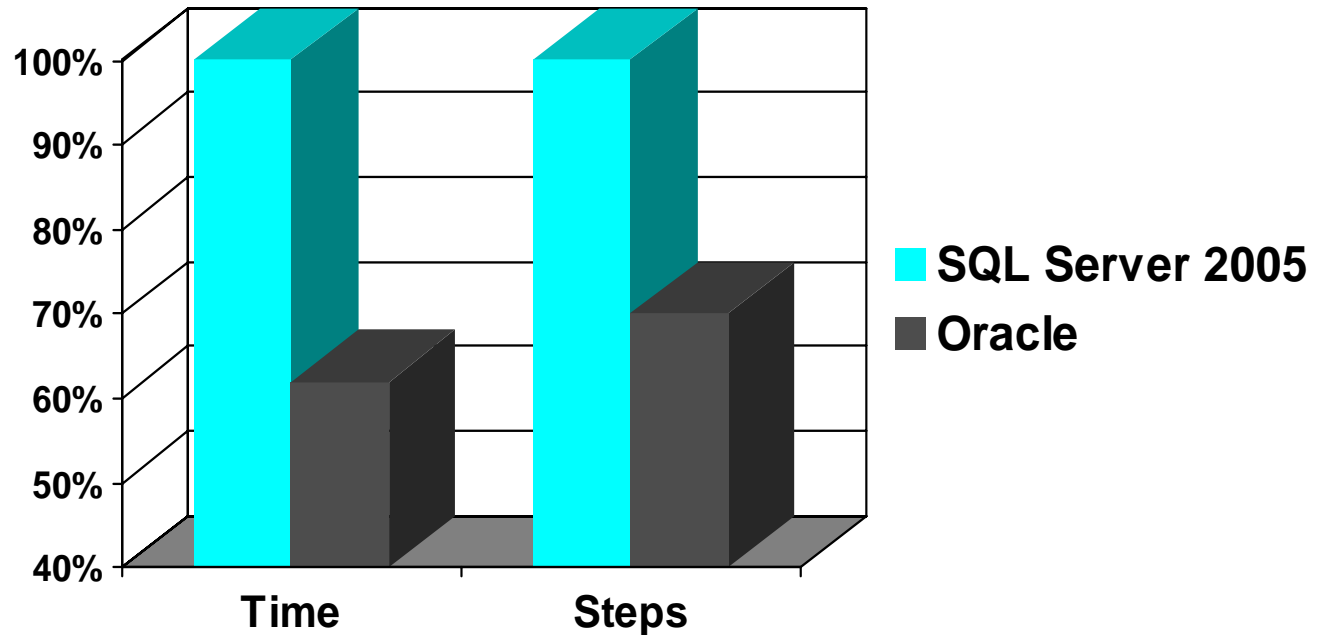
- Complete Automation to “Get on the Grid”
 - Convert single instance to Real Application Clusters
 - Deploy maximum availability using architecture of DataGuard
 - Out-of-box instrumentation for monitoring and diagnostics
 - One-click-extend Real Application Clusters to meet increased demand
 - On-going upgrades and patching (including rolling patches)
- Self-managing Database
 - Automatic Database Diagnostic Monitor
 - Automatic Workload Repository
 - Automated SQL Tuning
- Compliance Dashboard



**Best on
Oracle**

Database Management

Oracle Database 10g R2 vs. SQL Server 2005



Oracle Database 10g Release 2 outperformed SQL Server 2005.

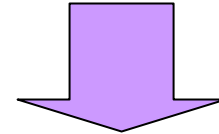
- **38%** less time and **30%** fewer steps than SQL Server 2005

Data Masking – New in 10gR4!

What

- The act of anonymizing customer, financial, or company confidential data to create new, legible data which retains the data's properties, such as its width, type, and format.

LAST_NAME	SSN	SALARY
AGUILAR	203-33-3234	40,000
BENSON	323-22-2943	60,000
D'SOUZA	989-22-2403	80,000
FIORANO	093-44-3823	45,000



Why

- To protect confidential data in test environments when the data is used by developers or offshore vendors
- When customer data is shared with 3rd parties without revealing personally identifiable information

LAST_NAME	SSN	SALARY
ANSKEKSL	111-23-1111	40,000
BKJHHEIEDK	111-34-1345	60,000
KDDEHLHESA	111-97-2749	80,000
FPENZXIEK	111-49-3849	45,000

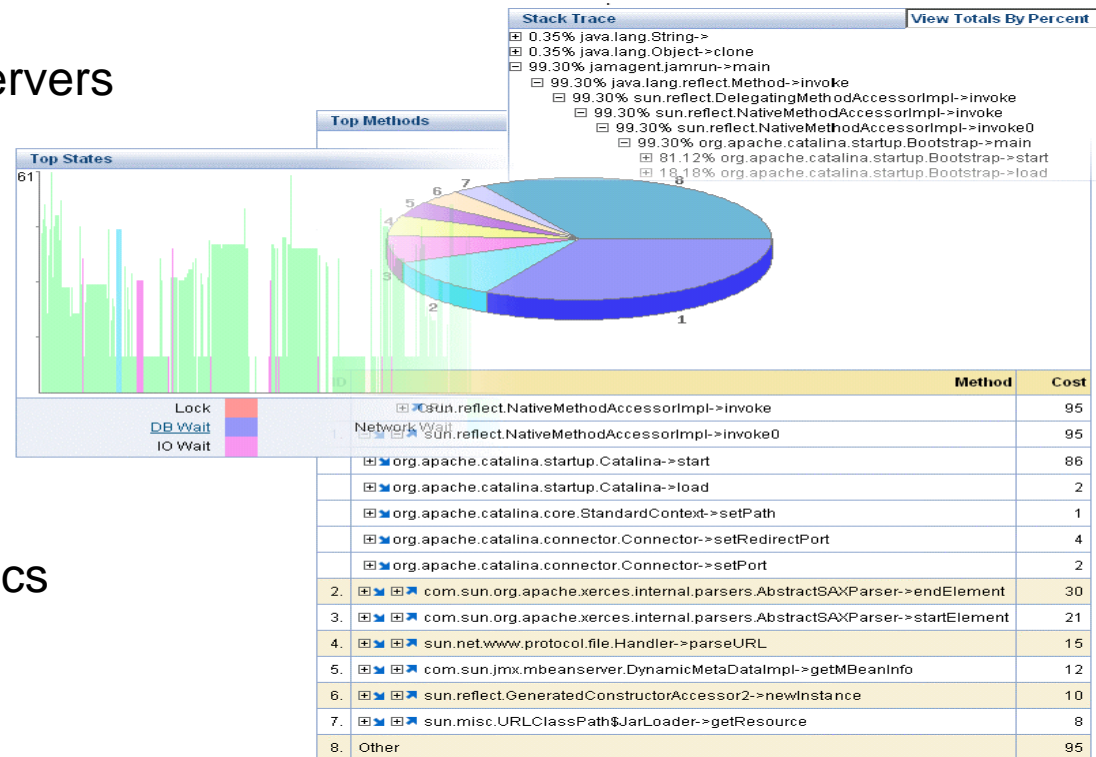
Application Performance Management

Oracle Application Diagnostics for Java (AD4J)



Oracle Application Diagnostic for Java (AD4J)

- Diagnose application performance issues (JVM, Java)
- Easy to use
 - Immediate visibility with no Application expertise required
- No performance overhead
 - Runs on production servers
- Transaction tracing capability
 - Java transactions to DB sessions
 - DB sessions to Java transactions
- Included with AS Diagnostics pack

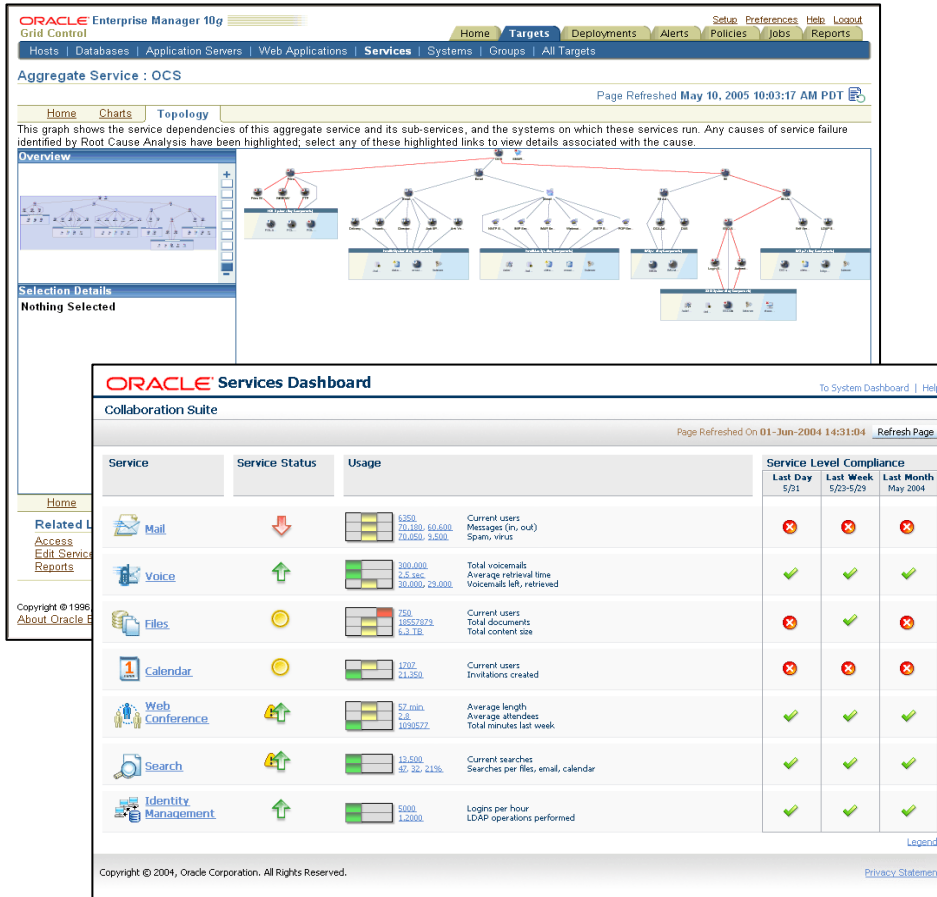


Service Level Management



Service Level Management

Align IT and business customers on service levels



- Align IT Objectives with Business Objectives
- Real-time Service Level Measurement
 - Services Dashboard
- Track actual performance to SLAs
 - Forms support (10.1.2, 9.0.4, 6i)
- Automated creation of System and Service for deployed applications
 - Change history tracking of system membership
 - Configuration change history tracking of entire system
 - Customization of system model allowed – by adding/removing individual components

Service Dashboard

ORACLE Enterprise Manager 10g
Grid Control

[Help](#)

Services Dashboard

Page Refreshed On Nov 30, 2005 5:42:27 PM MST

[Refresh](#)

Service	Status	Performance	Usage	Components	Service Level		
					Last 24 Hours	Last 7 Days	Last 31 Days
ST Identity Management Service		 58.95 Average Base S	 350520.00 Directory Oper 9148.00 Number of Succ 1602.00 Total LDAP Log	 1 up	100.00%	100.00%	99.71%
STOCS Calendar Service		 5664.25 Txn Tm	 No Data Number of User	 1 up	100.00%	100.00%	100.00%
STOCS Content Services Service		 8180.12 Txn Tm	 335.71 Average Docume 1527753.00 Total Number o 489.13 Total Size of	 1 up	100.00%	99.33%	99.33%
STOCS Discussions Service		 13896.62 Txn Tm	No Metrics Available	 1 up	100.00%	100.00%	100.00%
STOCS Mail Service		 200.74 Connect Tm 317.24 Login Tm 117.89 Read Email Tm	 0.00 List QLen 3.00 Local QLen 5.00 Msgs In Process	 2 up	100.00%	100.00%	100.00%
STOCS Mobile Collaboration Service		 4259.52 Txn Tm	 17.00 Total number o 240.00 Total number o No Data Total number o	 3 up	100.00%	99.75%	99.75%
STOCS Real-Time Collaboration Service		 11238.12 Txn Tm	 No Data Conference Min 24.00 Users (Current 10.00 Web Conference	 1 up	100.00%	99.80%	99.80%
STOCS Voicemail and Fax Service		No Metrics Available	 No Data Total Recordin No Data Total Retrieva	 3 up	100.00%	100.00%	100.00%
STOCS Web Access Client Service		 9558.31 Txn Tm	 20.50 Search Corpora 283.25 Send Message - 1192.75 Total User Log	 4 up	100.00%	100.00%	100.00%
STOCS Workspaces Service 1		 9032.75 Txn Tm	No Metrics Available	 1 up	100.00%	100.00%	100.00%

[Legend](#)

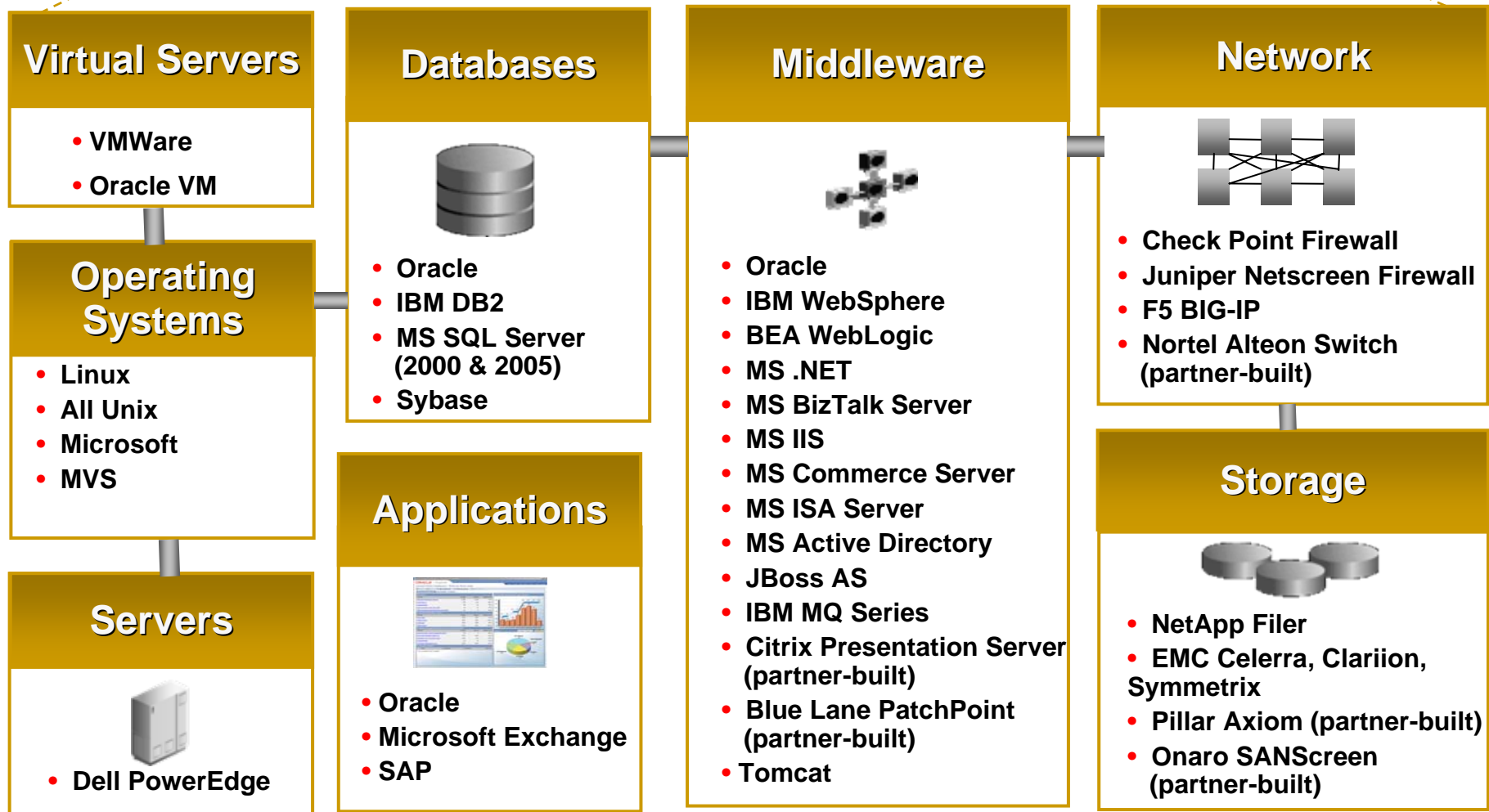
Management Plug-ins and Connectors



Application Infrastructure Management

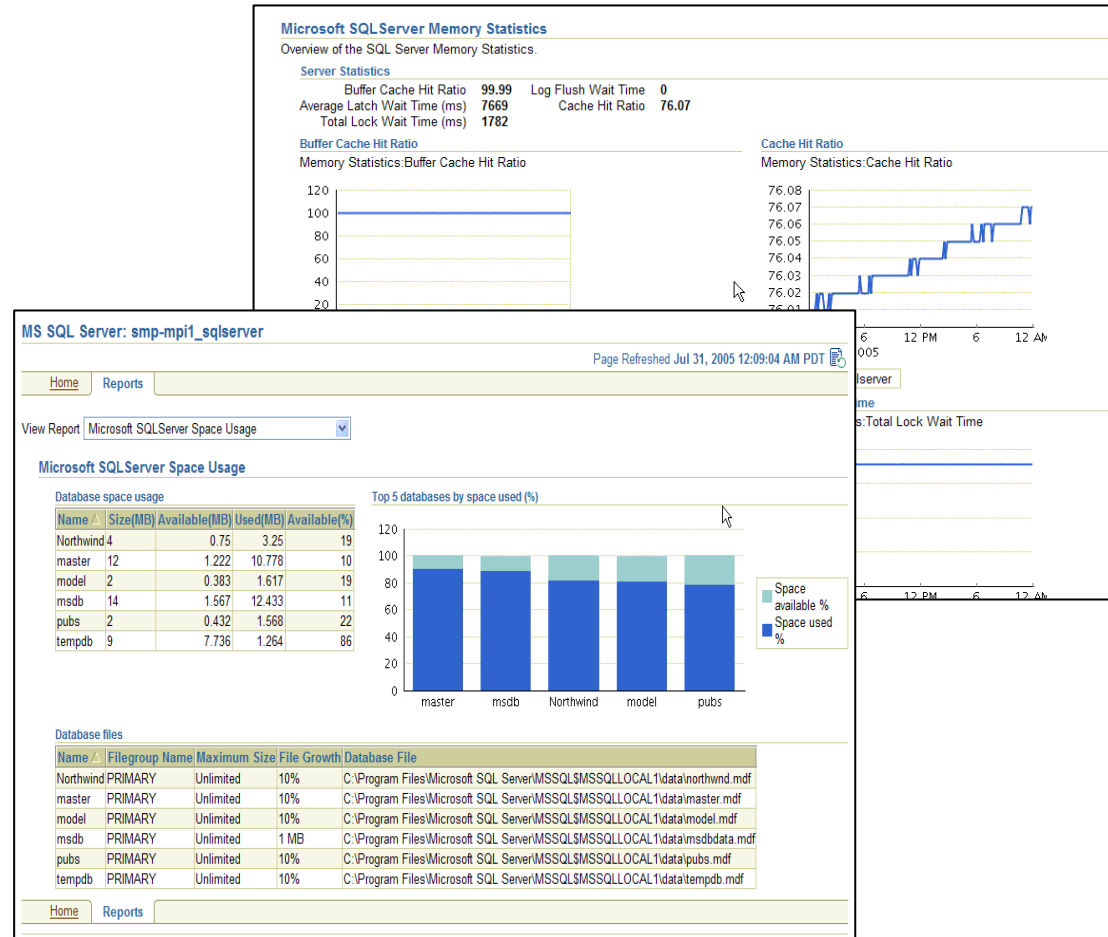
Broad management for all application-dependent components

Extended Infrastructure Management



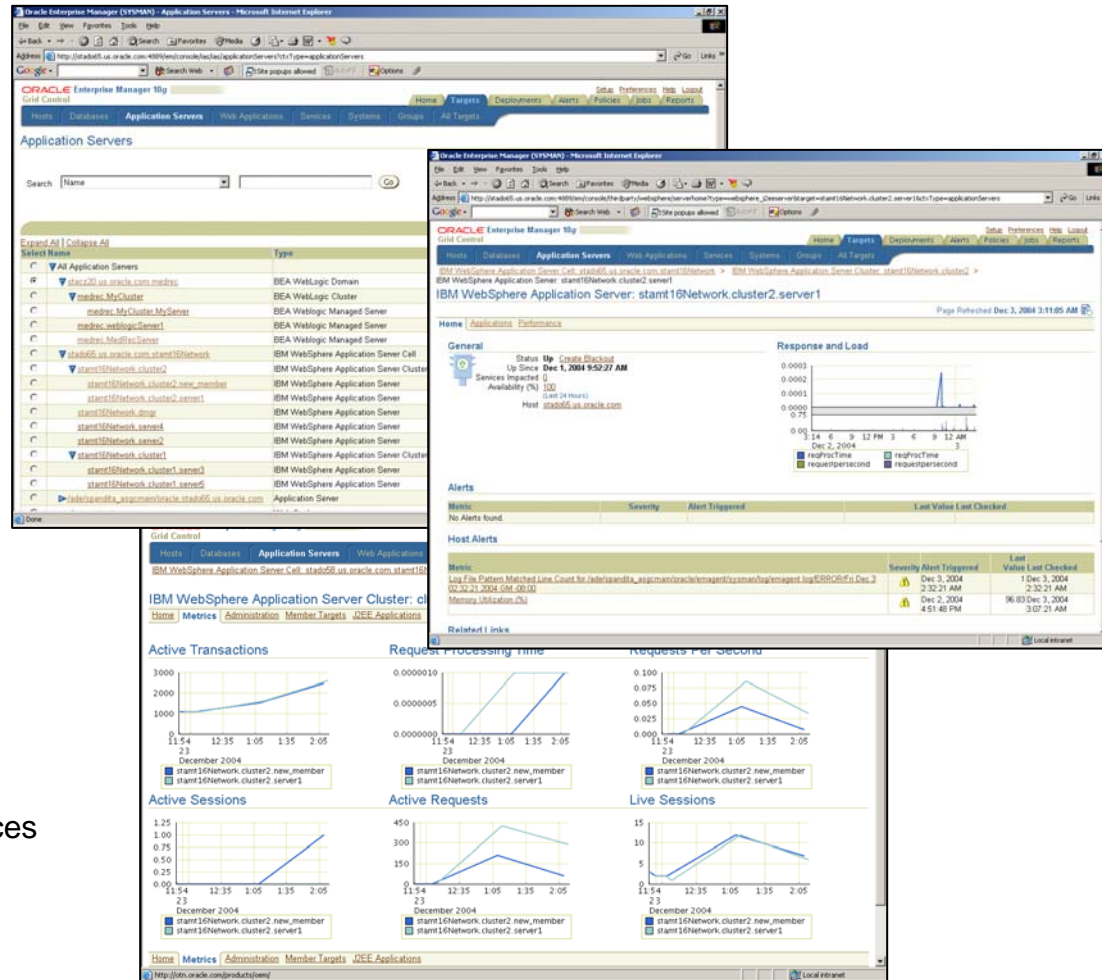
Support for Microsoft SQL Server

- Discovery
- Monitoring
 - Availability
 - Performance
 - Space Usage
 - Users and Roles
- Configuration
 - Server Configuration
 - Database Settings
 - Registry Settings
 - Security Settings
- Reports



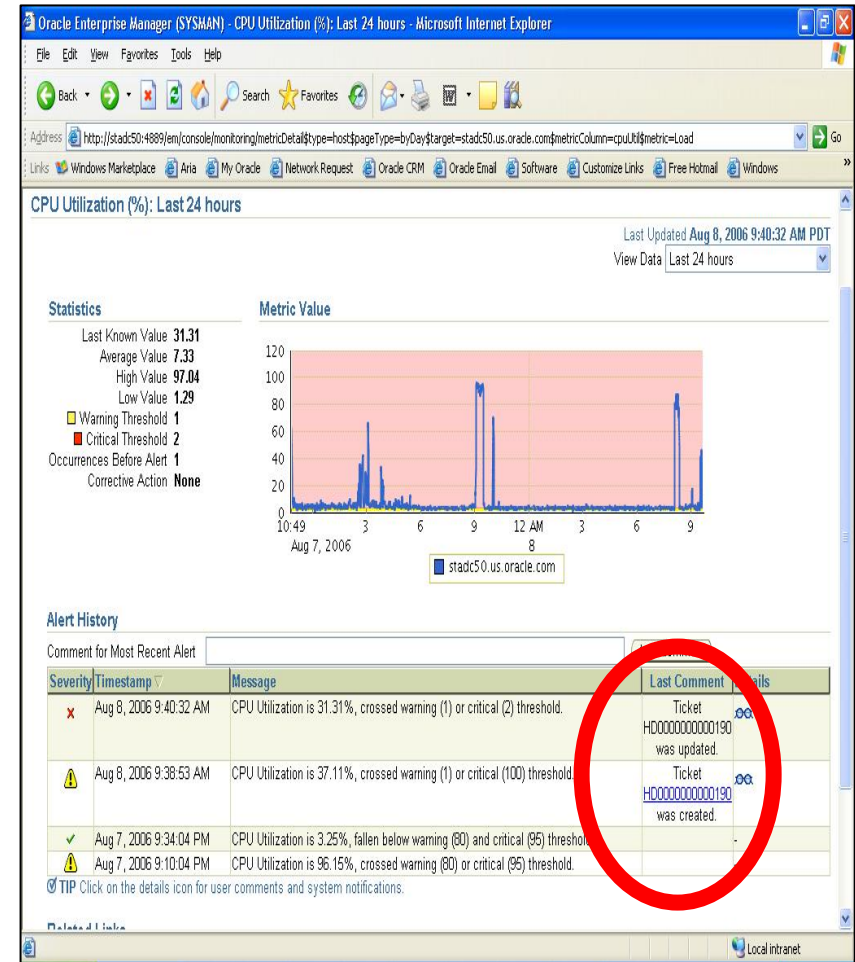
Support for WebSphere and WebLogic

- Discovery
- Monitoring
 - Activity
 - Performance
 - Response
 - Top 'n'
- Reporting, events, process control
- Synthetic transactions
- App Servers and clusters
- Configuration management
 - View collected configuration
 - Ports and protocols
 - Resource usage settings
 - Deployed applications and associated modules
 - JDBC providers and data sources
 - Compare configurations
 - Track configuration changes



Oracle Management Connector for Remedy Service Desk

- Automatically open Remedy trouble-tickets in response to EM Alerts
- Keep systems synchronized to streamline support processes and improve operational efficiencies
- In-context launch of EM from Remedy and vice versa
- Fully customizable ticket creation via ticket templates
 - Out-of-box, best practice Oracle templates
 - Flexible mapping of EM fields to Remedy trouble ticket fields
 - Ability to pre-seed values for Remedy fields

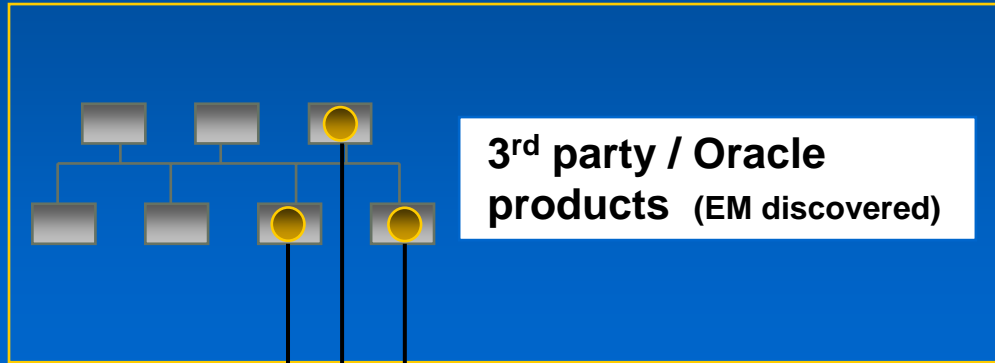


Software Configuration Manager

Extended to Oracle Support

Customer Site

Customer Data Center



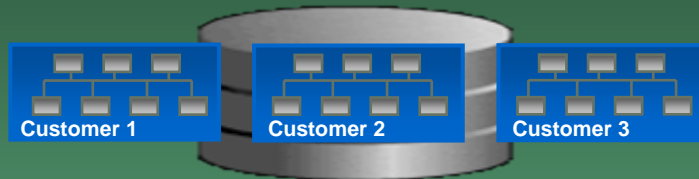
Enterprise Manager



- Discovery
- Service mappings
- Configurations

Oracle

Customer Configuration Repository



- Customer configurations

Configuration Support Manager



- Health checks
- Patches

Managing Packaged Applications



Managing Packaged Applications

Enterprise Manager



Oracle E-Business Suite – PeopleSoft – Siebel

Common Capabilities

- 1-step Discovery
- Topologies
- Service Level Management
- Out-of-box service models
- Out-of-box transactions
- System monitoring
- Application monitoring
- Dashboards
- Reports
- Configuration Management
- Transaction Tracing
- Root-cause/Impact Analysis

Embedded Application-Specific Capabilities

E-Business Suite

- Topological root-cause views
- 100+ configuration metrics
- Clone automation for test → production environments
- Cross-instance patch comparisons

PeopleSoft

- 500+ config metrics & PSAdmin admin tasks
- 25+ “tribal” knowledge-based policies
- Centralized Log Mgt
- Key bus flow monitoring

Siebel

- 50+ business metrics
- Out-of-box processes
- HI Component support
- SARM integration – real end user metrics, transaction diagnostics

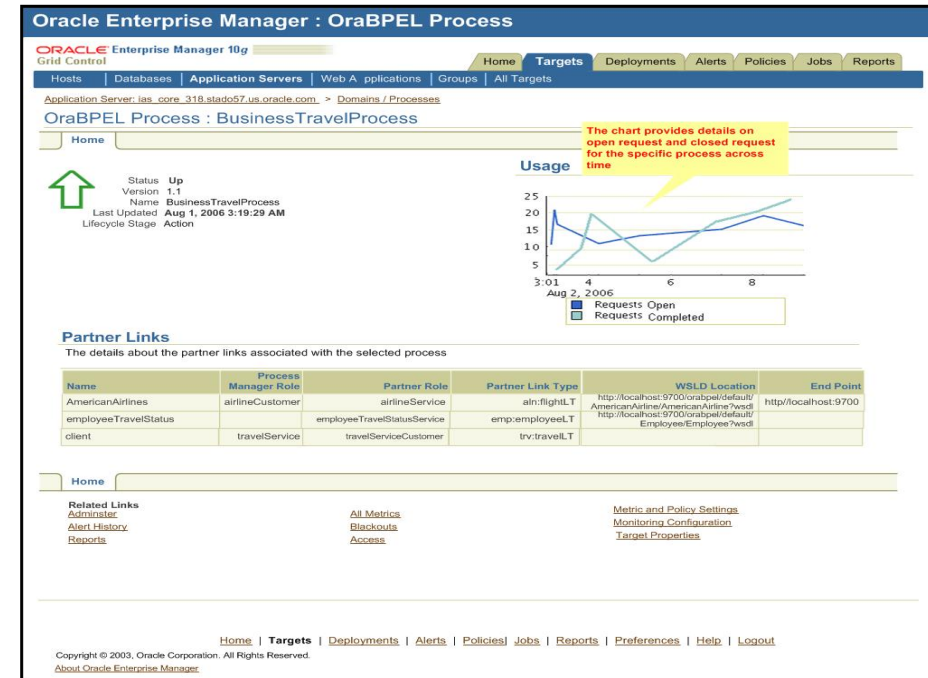
SOA Management Pack

SOA Runtime Governance

- BPEL Process Monitoring
 - Auto-discover design time dependencies into production
 - Accelerate problem resolution in process
- Web Service Monitoring
- Web Service Policy Management

Business – IT Alignment

- BAM – EM Integration
- Service Level Management



SOA Infrastructure Management

- BPEL PM Management
- ESB Management

Proven Solution

Over 22,000 Customers Globally



ORACLE