Oracle Enterprise Manager 11g:
Gain Control of Your Database. Eliminate Unauthorized Changes.

Andy Oppenheim
Product Manager
Oracle Corporation
Configuration Management Challenges

Pain Points

- Configuration Drift?
- Service Quality?
- Planned & Unplanned Changes?
- Security & Compliance Audit?
- Time-to-Value for New App?
Patch Management Challenges

Pain Points

• Are all the systems patched and up-to-date?
• Are manual processes a costly time-sink?
• Does it take days/weeks to deploy DB, RAC, or Middleware?
• Do we have standard builds for our systems?
• Can we scale out and back quickly as business fluctuates?
Oracle Enterprise Manager 11g
Comprehensive Configuration and Patch Management

- **Integrated Configuration and Patch Management**
  - Configure, Patch and Deploy systems in a repeatable and automated way
  - Fully integrated with My Oracle Support

- **Enforce Compliance**
  - Enforce standards across deployment lifecycles
  - Deliver 24/7 uptime with real-time change tracking

- **Boost Administrator Productivity**
  - Eliminate labor intensive error-prone processes through automation

- **Scale Up and Scale Out**
  - Response to business needs by automatically provisioning systems 80% faster
  - Manage many systems as one through “Golden” standards

- **Lower Ongoing Cost**
  - Faster problem resolution with My Oracle Support integration
  - Reduce capital spending by 20%**

**Over three years**
Integrated Configuration and Patch Management

**Configuration Management**
- Integration with My Oracle Support for service requests, knowledge, and communities
- New Application Configuration Console Blueprints
  - E-Business
  - Siebel
  - JD Edwards
  - Oracle Application Server
  - Oracle Database
  - Oracle Enterprise Linux
- Configuration management ‘best practices’
- Configuration management for PCI Compliance
- User-Defined Policies and Groups

**Provisioning & Patch Automation**
- Integration with My Oracle Support for complete patching lifecycle automation
- Support for Oracle Database 11gR2
- Conflict checking and merge request filing
- Pre-flight checks for patch automation
- DB cloning from reference installation
- Profile driven RAC provisioning
- Cluster scale-out and scale-back
- Support Oracle Exadata provisioning
- Support for Oracle WebLogic Server provisioning

**Oracle Enterprise Manager 11g**
- Complete coverage for entire application stack
- Comprehensive end-to-end monitoring
- Centralized management console
Configuration Management and Provisioning

Salient 11.1 Capability Recap

- Complete Lifecycle Management of Physical & Virtual Systems (Ops Center)
- Hardware, Firmware, OS, VM, Storage
- Industry’s Leading Database Self-Management Solution
- Database Software and Data cloning
- Scale out and Scale back of clusters
- Single Instance to RAC Conversion
- Patching of Application Servers
- SOA provisioning
- E-Business Suite Cloning
- E-Business Change and Patch Management
- Blueprint driven discovery of hardware and software
- Full stack comparisons
- Configuration Auditing and History tracking
- Configuration Policies
Typical Database Patch Management Process

Complex, Manual, Error-Prone...

1. Identify patches
   - Quarterly Security Patch from Oracle
   - Service Requests
   - Patch from other sources

2. Download patches to local system
   - Oracle Support Services
   - Oracle Technology Network
   - My Oracle Support

3. Identify targets

4. Apply on test system

5. Create/update (optional) scripts

6. Conflicts detected?
   - Yes
   - No

7. File SR, monitor, replace with MLR

8. Apply across test systems

9. Test patch in QA environment

10. Apply patch in production

11. Verify patch application

Help Desk

Create an incident

Request for downtime / retrieve approval

Request for downtime / retrieve approval

FTP patches

Manual processes by one or many DBAs

Update / close RFC

Based on heterogeneous environments (RAC, single instance, DR)
Typical Database Patch Management Process

...and time-consuming too (based on a large customer's experience with 1000+ databases)

1. Identify patches
   - Quarterly Security Patch from Oracle
   - Service Requests
   - Patch from other sources
   - Oracle Support Services
   - Oracle Technology Network
   - My Oracle Support

2. Download patches to local system
   - 3 hrs.

3. Identify targets
   - 8 hrs.

4. Apply on Test system
   - 3 hrs.

5. Create/update (optional) scripts
   - 2 days to 1 week

6. Conflicts detected?
   - Yes: 1 day to 2 weeks
   - No:

7. File SR, monitor, replace with MLR

8. Apply across Test systems
   - 1 week

9. Test patch in QA environment
   - 2 weeks

10. Apply patch in Production
    - 10 weeks

11. Verify patch application
    - 5 hrs.
Patch Automation
Fully Integrated with My Oracle Support

• Proactive advisories, recommendations, and analysis
  • One-off patches, patch set updates, and critical patch updates
• Zero downtime patching for RAC
• Integrated patch management & deployment automation
• Patch intelligence and community
• Streamlined conflicts and merge patch process
Enterprise Manager Patch Management Process

Reliable, Scalable, Automated

1. Identify patches
   • Patch advisory
   • Quarterly Security Patch from Oracle
   • Service Requests
   • Patch search

2. Consolidate list of patches

3. Create patch Plan

4. Validate Patch Plan
   Yes
   Place merge patch request; monitor SR for a merge patch
   No
   Conflicts detected?

5. Conflicts detected?
   Yes
   No

6. Place merge patch request; monitor SR for a merge patch

7. Create Policies to test patch application

8. Test patch in QA environment

9. Apply patch in production

10. Verify patch application (re-run UDP)

Key gains from automation
Oracle Enterprise Manager 11g
My Oracle Support integrated within EM
Siebel Help Desk
BMC Remedy
HP Service Center

Compare Oracle Homes for compliance validation
Best Practice Recommendation

Check for Patch Ability Using Pre-Flight Checks

Here's How

Run the Deployment Procedure in Analyze Mode at the end of the procedure interview.
Best Practice Recommendation

Check for Patch Ability Using Reports

EM Target Patchability Report

This report depicts the breakup of the patchability of the targets, the issues and problems found with the targets are detailed in the table.

All Targets

Unpatchable Targets

Analysis report of unpatchable targets

<table>
<thead>
<tr>
<th>Target Name</th>
<th>Target Type</th>
<th>Version</th>
<th>Problem</th>
<th>Details</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>prod$gb211g</td>
<td>Oracle Database</td>
<td></td>
<td>Missing Properties</td>
<td>Version is empty</td>
<td>Configuration Error. Reconfigure or check for metric collection errors</td>
</tr>
<tr>
<td>procQAT1DG_2</td>
<td>Oracle Database</td>
<td></td>
<td>Missing Properties</td>
<td>RAC Instance does not have an associated RAC Database</td>
<td>Configuration Error. Rediscover the RAC target and add the instances to RAC databases</td>
</tr>
<tr>
<td>HRdb_1</td>
<td>Oracle Database</td>
<td></td>
<td>Missing Properties</td>
<td>Database not mediated by OMS</td>
<td>Discovery error. Remove and rediscover the target on all the agents of the cluster</td>
</tr>
<tr>
<td>Findbo111G</td>
<td>Oracle Database</td>
<td></td>
<td>Unsupported Configuration</td>
<td>Databases with DataVault configured cannot be patched</td>
<td></td>
</tr>
</tbody>
</table>

Here’s How

Run Patch ability Report from Deployments >> Reports >> ‘EM Target Patch ability Report’
### Patch Management Case Study: Bayer

- **2,000 databases, 5 full time DBAs, 1 hour per patch, 4 times a year**

<table>
<thead>
<tr>
<th>Before Enterprise Manager</th>
<th>After Enterprise Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td>8,000 person hours</td>
<td>133 person hours</td>
</tr>
<tr>
<td>$160,000</td>
<td>$2,666</td>
</tr>
</tbody>
</table>

### Patch Management Case Study: Johns Hopkins

- **150 databases**

<table>
<thead>
<tr>
<th>Before Enterprise Manager</th>
<th>After Enterprise Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td>System time ~300 hours</td>
<td>15 min. per mass deployment; 37 hours total</td>
</tr>
<tr>
<td>Administrator time ~300 hours</td>
<td>A few clicks</td>
</tr>
</tbody>
</table>
Oracle Enterprise Manager & My Oracle Support
Industry’s First Integrated Management and Support Solution
Oracle Enterprise Manager & My Oracle Support
Challenge: Work is Split Between Two Different Worlds

IT Operation

- Performance Management
- Configuration Management
- Provisioning, Patching
- Service Level Management
- ...

Vendor Support

Duplication
Different views
Different languages
Different tools
Islands of automation
Lack of coordination

- Service Requests
- Knowledge Management
- Patch Downloads
- View Community Posts
- ...

ORACLE
Oracle Enterprise Manager & My Oracle Support
Integrated Support and Systems Management

Industry’s first combined solution that helps to:
• Avoid problems with real-time Oracle proactive alerts
• Rollout planned changes in a single downtime
• Solve problems faster with Configuration Management
• Stay current with Oracle best practices with configuration driven recommendations and community forums

✓ SR Management
✓ Proactive Recommendations
✓ Best Practices & Health Checks
✓ In-context Knowledge
✓ Community Feedback
✓ Configuration Drift Management
✓ Pre-flight Dependency Analysis
✓ Patch Automation
✓ Configuration Compliance
Oracle Enterprise Manager 11g & My Oracle Support
One Unified Integrated Platform
Oracle Enterprise Manager & My Oracle Support
Support Portal Used by 300,000+ Customers

Customer Benefit
- 25% of problems avoided
- 30% faster Service Request creation
- 40% faster problem resolution

Feature
- Personalized Knowledge Management
- Simplified Incident (SR) Management
- Proactive Problem Management

- Service Request (SR) processing
- Search for tips and techniques
- Download software patches and updates
- Use general system health checks and diagnostic tools
- Check certified platforms and software obsolescence
- Get answers through customer support forums
- Integrated with Enterprise Manager
Oracle Enterprise Manager & My Oracle Support
Proactive Support Using Aggregated Configuration Data

1. Millions of Configurations uploaded to My Oracle Support

2. Support Configuration Database mined to generate proactive best-practice recommendations

3. Customers acquire configuration knowledge as product of aggregate information

My Oracle Support
- Personalized Knowledge Management
- Simplified SR Management
- Proactive Config Management
Automated Configuration Upload to My Oracle Support
Reduce Problem Resolution Cycle

- Unified Support and Management View
  - Service Requests
  - Patches and Updates
  - Knowledge
Patch Plan Integration
Research in My Oracle Support Community

Patch 9119284: DATABASE PSU 10.2.0.4.3 (INCLUDES CPUJAN2010)

Last Updated: Jan 13, 2010 (38 weeks ago)
Size: 14.5 MB

Product: Oracle Database Family
Release: 10.2.0.4
Patch Target: etc

Support Level: General
Classification: Other Recommendations
Patch Tag: All Database

Bugs Resolved by This Patch
- 3934180 ORA-4000 [KSPGFNM] INTERMITTENTLY WHEN SEVERAL KSMAN JOBS ARE FORCED
- 4580889 DBMS_STATS.DELETE_SCHEMA_STATS DOES NOT DELETE INDEX STATS AFTER INDEX REBUILD
- 4670202 RAC: [KICLUSION_1]
- 4692865 ASM DOES NOT CLOSE OPEN DESCRIBORS EVEN AFTER DROP DISKGROUP
- 4696511 ORA-4000 [KXQPUP: BAD COL] WHEN CREATING BITMAP INDEX ON HUGE TABLE
- 4725199 MORE INNOCENT/INNOCENT LOCK CLEAN UP
- 4666912 STREAMS: ORA4000 [KXQPCR1:127] AND INSTANCE TERMINATION
- 5126719 TRACK LAG 2123180: LSNMR TERMINATE INSTANCE DUE TO ORA-16184 ERROR
- 5149306 ORA-27152: ATTEMPT TO POST PROCESS FAILED
- 5221182 ORA-00600 [KICLUSION_4] ERROR DURING INSERT WHILE USING ERROR LOGGING TABLE

Open Read Me to view all Bugs

Related Knowledge to this Patch
- 3924821 10.2.0.x Oracle Database and Networking -b>enterprise</b> for Microsoft P... Modified 03/04/2010

Get advanced patch guidance and impact analysis. Learn More...

Community Reviews
User 160751
Installed Successfully
5 days ago
PSU Installed successfully, it cleared other problems I had experienced with the DB. PSU definitely adds to the stability.

Read all reviews >>
Patch Plan Integration
Create Plan, Validate Plan, Revalidate Plan
Patch Plan Integration
Conflict Free Deployment

Review & Deploy

Name: DSS PATCH PLAN
Planned Deployment Date: Not Set

Validation is completed. All patches listed below can be applied without conflict.

<table>
<thead>
<tr>
<th>Status</th>
<th>Patch ID</th>
<th>Description</th>
<th>Target</th>
<th>Type</th>
<th>Oracle Home</th>
<th>Host</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>09199984</td>
<td>APPSST GSI 11G: GAPS IN AWR EN...</td>
<td>db11gr2.oracleads.com</td>
<td>Database</td>
<td>/app/oracle...</td>
<td>db11gr2.oracleads...</td>
</tr>
<tr>
<td></td>
<td>0952237</td>
<td>DATABASE PSU 11.2.0.11</td>
<td>db11gr2.oracleads.com</td>
<td>Database</td>
<td>/app/oracle...</td>
<td>db11gr2.oracleads...</td>
</tr>
</tbody>
</table>
One Integrated System @ Work
Oracle Enterprise Manager and My Oracle Support

<table>
<thead>
<tr>
<th>Personalized</th>
<th>We have saved 25% of internal support time across our DBA team.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proactive</td>
<td>It took the initial 36 hours of trying to understand what the configuration out of the equation completely.</td>
</tr>
<tr>
<td>Collaborative</td>
<td>My Oracle Support Community now goes beyond ‘customer satisfaction’ and even beyond ‘customer delight’. The new paradigm is... ‘customer ecstasy’.</td>
</tr>
<tr>
<td>Integrated</td>
<td>We've been able to reduce the amount of time to apply critical patch updates by up to 80%.</td>
</tr>
</tbody>
</table>
Single Instance Database Provisioning

- Supports gold images, reference systems, or bandwidth optimized local stage location
- Supports both cloning and fresh installation methods for software provisioning
- Mass deployment—multiple database deployments across multiple servers
- Template based database creation
- Several applications: test to production; production to test; EBS environment cloning
**RAC Provisioning**

1. Create Reference RAC System
2. Stage Gold Image
3. Create Production RAC System
4. Scale-Out RAC

- Gold image based provisioning
- Simplified RAC provisioning with automation
- Single click RAC scale-out and scale-back
- Automated migration to Oracle Grid
- Provision full RAC and Clusterware systems
- ASM Support
## Configuration Management Case Study: Dräxlmaier

- 300+ databases,
- 50 locations,
- 20 countries,
- 35 production sites,
- 16 development sites

<table>
<thead>
<tr>
<th>Standardized Database Deployment (Test Systems)</th>
<th>Before Enterprise Manager</th>
<th>After Enterprise Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dedicated DBA</td>
<td>4-5 days</td>
<td>‘Self-serve’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&lt;2 hours</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100% Standards Compliance</td>
</tr>
</tbody>
</table>

Enterprise Manager saves 100% of our DBAs’ time for regular application release testing.

Users can clone test systems themselves by using an in-house portal GUI to drive OEM deployments.
Automated Configuration Drift Checking
Challenges Span the App Stack and Lifecycle

- Administrative silos – Test DBA & production DBA, SYSADMIN & DBA
  - Limited visibility, finger-pointing

- Difficult to detect changes across application deployment life cycle
  - Time spent in detection and debugging

- Manual processes for rolling out application changes
  - Higher cost and time to delivery

- Fragmented reporting
  - Inaccurate compliance audits
Automated Configuration Drift Checking
Quickly Identify Differences Impacting Operations

Features
- Complex configuration comparison
- Compare one-to-one, one-to-many
- Save comparisons and versions

Benefits
- Compare entire application stacks or technology layers
- Compare all components of your operation
- Understand what has changed over time
Automated Configuration Drift Checking

Compare Complex Application Stacks or Technology Layers

• Only differences are shown, and highlighted in blue
• Ignores specified properties in subsequent compares
• Easily find the “needle in the hay stack”
Configuration Management Case Study: Ingersoll Rand

40 EBS instances, 800 Oracle databases

Focus on Enterprise Manager and Application Configuration Console

<table>
<thead>
<tr>
<th>After Enterprise Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduced IT Operations overhead by 10%</td>
</tr>
<tr>
<td>Eliminated manual scripts and reports for monitoring</td>
</tr>
<tr>
<td>One view to manage total environment</td>
</tr>
<tr>
<td>Reduce migration time of new features by 30%</td>
</tr>
<tr>
<td>Reduced unplanned outages by 10%</td>
</tr>
</tbody>
</table>

Next steps – focus on:

- Deploy Application Configuration Console across all datacenters
  - E-Business Suite
  - Siebel
  - JDE
  - Custom Apps
  - WLS, SOA
- Service Level Management
- Availability Management
# Configuration Management—Compliance

## Complying With IT Policies

<table>
<thead>
<tr>
<th>Features</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Automated detection of application schema changes</td>
<td>• Eliminate the effects of unplanned changes</td>
</tr>
<tr>
<td>• Real-time configuration change detection</td>
<td>• Detect who, when and what was changed at the point of occurrence</td>
</tr>
<tr>
<td>• Out-of-the-box frameworks mapping to SOX, PCI, …</td>
<td>• Faster rollout of compliance polices</td>
</tr>
<tr>
<td>• Automated compliance reporting across your applications</td>
<td>• Reduce time and effort in meeting your audit needs</td>
</tr>
</tbody>
</table>
Configuration Management—Compliance
Out-of-Box Frameworks Mapping to SOX, PCI…

- **Configuration Change Console** – Real-time change detection
  - Out-of-box compliance frameworks and customer extensible
- **Enterprise Manager** – Security, Configuration, Storage Policies
  - Out-of-the-box mapping and customer extensible
Configuration Management—Compliance

Automated Compliance Reporting Across Applications

Out-of-box Compliance Reports

Policy and Best Practice Reporting

- Configuration Change Console
  - Out-of-box reports focused on meeting your audit requirements
- Enterprise Manager
  - Reporting of policies and best practices across your datacenter
Configuration Compliance Case Study: Dell

Focus on Configuration Compliance

Challenges, Steps Taken

Identify patches installed in all systems
  • Oracle recommendations, CPU, PSU
  • Service Requests, recommendations
  • Critical one-off

Configurations standardized across all systems

Results

Enforced configuration control
  • Patching
  • Security, Best Practices

30% decrease in incidents month over month

Eliminated .5 FTE through reporting automation

Next steps – focus on:

• Continue to improve current processes
• Expand use of Configuration Management
• Integration with Change Management
Solution 2: Database as a Service (DBaaS)

“The cloud-based approach promotes reuse of shared resources, making it very cost effective and demand driven, while billing is based on consumption, such as hours of access or gigabyte of storage used.”

Business Needs Met by DBaaS

<table>
<thead>
<tr>
<th>Business Need</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agile Provisioning</td>
<td>Self-Service Provisioning</td>
</tr>
<tr>
<td>Accountability</td>
<td>Metering</td>
</tr>
<tr>
<td>Optimized Resource Consumption</td>
<td>Monitoring and Trending</td>
</tr>
</tbody>
</table>
Understanding Database as a Service
Setting Up and Running Database Servers on Demand

Traditional Database Deployment (Admin driven)
- Specify and procure hardware
- Configure hardware
- Deploy hardware
- Configure and deploy supporting software
- Configure and deploy Database
- Add hardware and reconfigure stack as demand grows

As-a-Service Deployment (End-user driven)
- Set up software through Web interface
- Capacity adjusts as demand changes
- Retire software when not needed

Self-Service Provisioning
Exadata and Exalogic Management

Complete Oracle Exadata Lifecycle Management
- Integrated monitoring of all Exadata components
  - Database, storage cells, network, ILOM, PDU
  - Push-button deployment
  - Risk free migration with Real Application Testing
  - Comprehensive configuration and change management
  - Fault diagnostics with call home capability
  - Fully integrated with My Oracle Support

Integrated Oracle Exalogic Elastic Cloud Management
- Integrated hardware and software monitoring
  - Exalogic compute nodes, switches and storage
  - Operational dashboards with summary of status
  - Integrated end-to-end monitoring and diagnostics
  - Remote management, phone home, My Oracle Support integration
  - Energy utilization and impact analysis
Oracle Exadata Database Machine
Provisioning and Configuration Management

- Enforce Standards
- Eliminate Drift

Automated Configuration Management
- Enforcement of Exadata configurations using Policies
- Detection of configuration drifts and changes
  - From defined golden standards
  - Between storage servers and between database machines
- Detects targets that do not have required patches
Self-Service Application
Basic Design

The next major release will include a self-service application out of box.
**Use Case Breakdown: Self-Service Portal**

Console to browse all production databases and submit a clone process.

<table>
<thead>
<tr>
<th>Database Name</th>
<th>Hostname</th>
<th>Listener</th>
<th>Service</th>
<th>Type</th>
<th>Last Action</th>
<th>Status</th>
<th>Primary/Standby</th>
<th>Oracle Version</th>
<th>Port</th>
<th>DB User</th>
</tr>
</thead>
<tbody>
<tr>
<td>EAL_SAT_PGM</td>
<td>EAL_SAT_PGM</td>
<td>EAL_SAT_PGM</td>
<td>EAL_SAT_PGM</td>
<td>Primary</td>
<td>107.12.3.9</td>
<td>Monitor</td>
<td></td>
<td>10gR2</td>
<td>1521</td>
<td>DBUser1</td>
</tr>
<tr>
<td>EAL_SAT_PGM</td>
<td>EAL_SAT_PGM</td>
<td>EAL_SAT_PGM</td>
<td>EAL_SAT_PGM</td>
<td>Standby</td>
<td>107.12.3.9</td>
<td>Monitor</td>
<td></td>
<td>10gR2</td>
<td>1521</td>
<td>DBUser2</td>
</tr>
<tr>
<td>EAL_SAT_PGM</td>
<td>EAL_SAT_PGM</td>
<td>EAL_SAT_PGM</td>
<td>EAL_SAT_PGM</td>
<td>Primary</td>
<td>107.12.3.9</td>
<td>Monitor</td>
<td></td>
<td>10gR2</td>
<td>1521</td>
<td>DBUser3</td>
</tr>
<tr>
<td>EAL_SAT_PGM</td>
<td>EAL_SAT_PGM</td>
<td>EAL_SAT_PGM</td>
<td>EAL_SAT_PGM</td>
<td>Standby</td>
<td>107.12.3.9</td>
<td>Monitor</td>
<td></td>
<td>10gR2</td>
<td>1521</td>
<td>DBUser4</td>
</tr>
<tr>
<td>EAL_SAT_PGM</td>
<td>EAL_SAT_PGM</td>
<td>EAL_SAT_PGM</td>
<td>EAL_SAT_PGM</td>
<td>Primary</td>
<td>107.12.3.9</td>
<td>Monitor</td>
<td></td>
<td>10gR2</td>
<td>1521</td>
<td>DBUser5</td>
</tr>
<tr>
<td>EAL_SAT_PGM</td>
<td>EAL_SAT_PGM</td>
<td>EAL_SAT_PGM</td>
<td>EAL_SAT_PGM</td>
<td>Standby</td>
<td>107.12.3.9</td>
<td>Monitor</td>
<td></td>
<td>10gR2</td>
<td>1521</td>
<td>DBUser6</td>
</tr>
</tbody>
</table>

- Allows the user to select a particular users of the database for the clone process.
- Allows the user to select if the new DB should be a Test or Quality System.
- Shows all available databases with additional information's.
- The source is the Enterprise Manager Repository DB.
- Allows the user to migrate the database to a other version then the production one.
Reduce Operations Cost with Automation
Forrester Total Economic Impact of Configuration and Provisioning Packs

- Reduction in costs of managing IT
- Increase staff productivity
- Increased agility to business needs
- Reduction on capital spending

- 130% ROI over 3 years
- 14 months payback period
Why Oracle Enterprise Manage 11g?
For Manageability and Change

From:
- Repetitive manual tasks
- Reactive fire fighting
- Unpredictable service levels
- Point operations

To:
- Automated self management
- Proactive forward planning
- Service level management
- Centralized control
Oracle Enterprise Manager  
Proven Solution. Trusted by Customers.

<table>
<thead>
<tr>
<th>Company</th>
<th>Benefit Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meridian</td>
<td>Saves weeks on application testing time</td>
</tr>
<tr>
<td>NOKIA</td>
<td>Saves 80% time and effort for managing Databases</td>
</tr>
<tr>
<td>China Mobile</td>
<td>Ensures seamless user experience for 50,000,000 users</td>
</tr>
<tr>
<td>Colorcon</td>
<td>90% of IT issues addressed before they impact users</td>
</tr>
<tr>
<td>Commonwealth</td>
<td>Drives asset utilization up by 70%</td>
</tr>
<tr>
<td>Cummins</td>
<td>Cuts configuration management effort by 90%</td>
</tr>
<tr>
<td>Telstra</td>
<td>Saves $1.9 million with Oracle Enterprise Manager</td>
</tr>
<tr>
<td>SSM</td>
<td>Saves $170,000 per year with Oracle Enterprise Manager</td>
</tr>
<tr>
<td>City University London</td>
<td>Replaces manual tools with automation; saves time by 50%</td>
</tr>
<tr>
<td>Starwood</td>
<td>Reduces Database testing time by 90%</td>
</tr>
<tr>
<td>Bayer</td>
<td>Reduces provisioning effort by 75%</td>
</tr>
<tr>
<td>NetApp</td>
<td>Deploys SOA infrastructure 92% faster</td>
</tr>
<tr>
<td>Cumis</td>
<td>Cuts application testing from weeks to hours</td>
</tr>
<tr>
<td>APL</td>
<td>Reduces critical patching time by 80%</td>
</tr>
<tr>
<td>City of Evanston</td>
<td>Delivers 24/7 uptime with Oracle Enterprise Manager</td>
</tr>
</tbody>
</table>

Cuts configuration management effort by 90%

Saves weeks on application testing time

Ensures seamless user experience for 50,000,000 users

Saves 80% time and effort for managing Databases

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Questions/Discussion