Business-Driven Application Management and End-to-End Performance Diagnostics

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Agenda

- Enterprise Manager Overview
- Application Management Strategy & Roadmap
  - Strategy summary
  - What’s new in EM 11gR1
  - What’s planned for upcoming releases
- End-to-End Demo
- Symantec End-to-End Management case study
- Q&A
Enterprise Manager Overview
Business-Driven IT Management

User Experience

Business Transactions
- WEB PORTAL
- PRODUCT CATALOG
- ORDER ENTRY
- OTHER SERVICES

Business Services

Business-Driven Application Management
- Understand business needs
- Manage from business perspective

Integrated Application-to-Disk & Cloud Management
- Eliminate management silos
- Create agile IT for dynamic business

Integrated Systems Management & Support
- Proactively identify and fix problems
- Maximize business productivity

Oracle Support

Integrated Application-to-Disk and Cloud Management

APPLICATIONS
- MIDDLEWARE
- DATABASES
- SERVERS
- STORAGE

Services Cloud
Application Management Strategy & What’s New
Business - IT Disconnect

**Business Demand**

- How satisfied are my users?
- How many orders did we complete?
- My order is stuck, what’s going on?

**Traditional IT Response**

- The application was up 90% of time.
- We had 200 database transactions.
- Our servers are up. We will look into it.
Oracle Solution

Business Demand

- How satisfied are my users?
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Oracle Business-Driven Application Management

- User Experience Management
  - 99% of users were satisfied.
- Business Transaction Management
  - We completed 250 orders.
- Business Service Management
  - There is an issue with a supplier’s app. It has been escalated.
Oracle Solution

**Business Demand**

- How satisfied are my users?
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**Oracle Business-Driven Application Management**

- User Experience Management
- Business Transaction Management
- Business Service Management

**New IT Response**

- 99% of users were satisfied.
- We completed 250 orders.
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User Experience Management

Key Challenges

1. Can I monitor all user sessions?
   Can I replay a particular session, and see what actions the user did / did not take?

2. Can I develop business actionable information from my user monitoring?

3. Does the solution
   • Require custom instrumentation?
   • Support web and packaged applications?
   • Secure business data?
User Experience Management Approaches

- Ensure the performance of a specific business process or user
- Proactive monitoring – be alerted to issues from locations with no users or traffic
- Ensure the performance of applications based on many different protocols

- Monitor experience for all users
- Monitor performance, errors, and business KPI’s
- Diagnose problems quickly with “replay” of user session
- Determine exact usage of applications
Built-in Analytics with Business Data

- Analysis of user experience information based on “cube based data sets”
- Successive drill down to identify trends
- Customizable dimensions that can be based on business data – order value, product id, etc.
User Experience Management
New in Oracle Enterprise Manager 11g

User Session Analysis
- Diagnostics drill-downs to Java/SOA applications, EBS, and Siebel
- Export RUEI session for realistic test scripts

Business – IT Correlation
- Integrated Synthetic & Real User Monitoring
- Application-based role access to all business and IT data

Enterprise Ready
- Integration with Oracle Identity & Access Management
- Scalability improvements
- Chinese version available
Oracle Solution

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Business Transaction Management

End-to-End, Application Level View

- Real-time tracking of each transaction
- Follows transactions across all infrastructure and applications
  - App Servers, Applications, ESB's, BPM's, Etc.
- Leverages message content – the business value flowing through the application
- Exception Management – Business and Technical exceptions
Oracle BTM/Amberpoint Implementation

Sep 2010
Symantec at a Glance

- Founded in 1982, IPO in 1989
- $6.2 billion revenue in FY 2009
- More than 17,500 employees
- More than 600 global patents
- Operations in more than 40 countries
- More than 120 million active consumer users
- #419 on the 2009 Fortune 500
- More than 120 million enterprise customers
- 99 percent of Fortune 1000 companies are customers
- Invests 13% of annual revenue in R&D
Business Context

- Siloed process
- Legacy Application
- User Experience Issues

- SOA based Implementation
- Service Orchestration
- Enhanced User Experience
SOA Implementation

- Enterprise registrations/renewals SOA application comprises 7 component services ported on different platforms like TIBCO, Weblogic, IBM Datapower etc
SOA Implementation

*Focus on Operational Visibility…*

- How many registrations have come through
- How successful is this business model
- New functionality- so no idea for the expected load
- No visibility about the transaction patterns

- System Scalability/Performance
- Transactions conforming to overall SLA
- Transactions conforming to component SLA
- Exceptions and their patterns
- Customer usage of the system during peak loads like month-end, qtr-end, year-end etc
Monitoring/Management Drill-Down

- BTM observers observe, collect and send transaction/SLA data to server
- Send alerts @ real-time for SLA violations
- Reports for service/application availability
- Adds up to 3% overhead for weblogic and 2% for TIBCO
Benefits Of BTM

• Measure the success of the Business Model
• Measure the stability and SLA of the system
• Run-time transactions monitoring
• Get the end to end visibility of the transactions
• Send alerts for non-conforming SLA
• Service availability reports
• Calculates response times of services during load/performance test helping in fixing SLAs of component services
Monitoring/ Management Infrastructure

**PROD**
- Dell E5200 2CPU 4-core, 16GB RAM
  - Sphere
  - Monitoring Agent
  - SLM
  - Monitoring Agent

**QA/UAT**
- Dell E5200 2CPU 4-core, 16GB RAM
  - Sphere
  - EXM
  - Monitoring Agent-1
  - EXM
  - Monitoring Agent-2

- Horizontally Scalable through adding more hardware
Best Practices

• Planning
  – Robust planning of service monitoring in design/architecture phase

• Implementation
  – Perform a comprehensive POC/Pilot for compatibility with target systems
  – Separate server and agent components on different machines/VMs
  – Create the operational action plan for the alerts

• Optimization
  – Tuning of the Observer, agent and server configurations for lower overhead & higher performance
Next steps

- Use Amberpoint/Oracle BTM for monitoring for all SOA projects

Areas of Interest

- Observers for TIBCO Active Matrix Business Works, TIBCO Service Bus, etc
- Observer for Oracle Fusion Middleware (BPEL, ESB, OWSM etc)
- Continued support for IBM Websphere Datapower agent
- High Availability feature for BTM server components
- Enhanced Out-of-box Reporting Capabilities
Oracle Solution

Oracle Business-Driven Application Management

Business Demand

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New IT Response

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Business Service Management

Key Challenges

1. What application and system components is my service dependent on?

   How will changes to any affect the other services?

2. Can the service implementers understand why performance & availability is not meeting expectations?

   Can I compare my settings between two environments?

3. How do I track changes made?

   Can I automate repetitive tasks, like cloning & patching?

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Service Dependency & Models

Service Performance Management

Service Lifecycle Management
# Integrated Management of Middleware & Database


### Common Capabilities
- Guided Discovery
- Real-time/historical monitoring
- Service level management
- Multi-domain management
- Alerts & notifications
- Group management
- Predefined performance metrics
- Configuration management
- Out-of-box/user-defined reports

### Middleware-Specific Capabilities

#### WL Server
- Java diagnostics
- Support Workbench
- Process control
- Drilldowns to WL Admin Console, FMW Control

#### SOA Suite
- Support for SOA composites, BPEL, OSB, ESB
- Web service policy mgmt
- SOA provisioning, cloning, composite deployment

#### WebCenter
- Support for WebCenter Services, User-defined ADF Task Flows, JSF Pages, Portlets

#### Identity Mgmt
- Support for OID, OVD, OIF, DIP, OIM, OAAM
- LDAP-based service test

#### Web Tier
- Monitor virtual hosts and module request statistics
- Monitor availability, requests & capacity of origin servers
- Process control

#### Database
- Diagnostics & Tuning
- Automatic Workload Repository
- SQL Tuning Advisor
- Configuration policies
- Patching, 1-click provisioning

#### Coherence
- Complete cluster visibility and cache monitoring
- Start/stop nodes or entire cluster
- Automated starting of new nodes to replace departed nodes

#### BI EE
- Support for BI DAC Server
- Out-of-box ETL performance
Service Performance Management

- View Service topology
- Drill into functional implementation
- View performance for each step (BPEL activity, service bus pipeline, portal page, region, etc.)
- Drill into Java EE implementation of functional step
- Even drill to SQL performance for any service (including dehydration SQL)
Service Lifecycle Management
Application Configuration and Provisioning

- Automated, daily collection of configuration data
- Manage configuration drift via configuration comparisons
- Build new application environments efficiently
- Provision changes completely
- Validate changes made correctly
Business Service Management
New in Oracle Enterprise Manager 11g

Service Dependency & Models
- Support for SOA 11g, WebCenter 11g, & WebLogic 10.3.x
- Integrated Application Dependency & Performance
- Policy Monitoring
  - Enforcement monitoring, alerting, reporting
  - Integrated policy authoring, editing, attachment

Service Performance Management
- Automated discovery
- New Performance Dashboards
- Application Targets and application to system dependency
- Integrated JVM Diagnostics

Service Lifecycle Management
- Configurations for WLS patches, resource adapters, web services, SOA 11g, IDM 11g
- WebLogic Server domain cloning and scale out
- SOA Composite Provisioning
Application Management Roadmap
Roadmap

• Key Focus Areas
  – End-to-End Integrated Management
  – Integrated with Enterprise Manager cloud solutions
  – Fusion Applications support

• Best-of-breed, modular components
  – User Experience, Business Transactions, Business Services
  – Continue to invest in differentiators
  – Easy to deploy and setup
  – Based on Oracle Enterprise Manager add-on model
Demo
Demonstration Introduction

- **Problem Scenarios:**
  - Orders with large numbers of line items experience slow processing due to validation logic in the OSB proxy service
  - Certain select orders are experience a hang resulting in a processing error due to a bad Java callout
Roadmap
Application Performance Management

**End User Monitoring**
- Fusion Applications, iFLEX, Retek Accelerator
- Improved User Transaction reports based on page flow
- Horizontal & Vertical scalability improvements
- RUEI/BTM integration

**End-to-End Performance**
- Extension for Fusion Applications
- New Composite Application Management Targets
- Enhanced SLA management – Contractual SLAs, multiple SLO’s, alerts
- SOA 11g, servlet observers available for Oracle BTM
- Observer SDK for Oracle BTM
Roadmap

Fusion Applications Management

• Application Discovery, Modeling, and Monitoring
• Business Metrics and IT Metric Correlation
• Business Service Monitoring & Application Topology
• Fusion Application Configuration Management
• Transaction Tracing & Drill-Downs

Middleware Management

• Middleware Diagnostic Advisor
• Enhanced SOA Management – BPM 11g support, SOA Domain Groups
• Fusion Middleware patching. Enhanced provisioning with support for application provisioning, and gold image provisioning
• Integrated Application Configuration Management
Oracle Enterprise Manager 11g
Resource Center
Access Videos, Webcasts, White Papers, and More
Oracle.com/enterprisemanager11g
Not to be Missed Enterprise Manager Sessions!

- **Business-Driven IT Management with Oracle Enterprise Manager 11g**
  - Leng Tan, VP, Tuesday, Sept 21st, 11 am, Moscone South 102
  - EM Overview, Product Roadmap, Cool Demos!

- **Enterprise IT and Cloud Computing**
  - Richard Sarwal, SVP, Monday, Sept. 20th, 3:30 pm, Moscone South 102

- **Business-Driven Application and End-to-End Performance Diagnostic**
  - Ali Siddiqui, VP, Monday, Sept 20th, 3:30pm in Moscone West Room 3024
  - MW Management Overview, Product Roadmap, Cool Demos

- **What Lies Beneath: Oracle Ops Center for OS and Hardware Management**
  - Steve Wilson, VP, Tuesday, Sept 21st, 5:00pm in Moscone South Room 270
## Additional Oracle Enterprise Manager Sessions

### Monday, Sept. 20

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Location</th>
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<tbody>
<tr>
<td>Mon 5:00 p.m.</td>
<td>Managing Oracle WebLogic Server: New Features and Best Practices</td>
<td>Moscone W L3, Rm 3024</td>
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<tr>
<td>Tu 11:00 a.m.</td>
<td>General Session: Business-Driven IT with Oracle Enterprise Manager 11g</td>
<td>Moscone S Rm102</td>
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<tr>
<td>Tu 11:00 a.m.</td>
<td>Managing the Oracle Ecosystem on a Cloud Platform: Oracle Enterprise Manager</td>
<td>Moscone S Rm 309</td>
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<tr>
<td>Tu 3:30 p.m.</td>
<td>Oracle Identity Management Administration Best Practices</td>
<td>Moscone S Rm 309</td>
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<tr>
<td>Wed 4:45 p.m.</td>
<td>Oracle SOA Management Best Practices, Tips, and Techniques</td>
<td>Moscone W L3, Rm 3018</td>
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<tr>
<td>Thu 9:00 a.m.</td>
<td>Oracle WebLogic Server Management for Oracle DBAs</td>
<td>Marriott Marquis, Salon 9</td>
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<tr>
<td>12:00 p.m.</td>
<td>Spot Problems Before Your Users Call: User Experience Monitoring for Oracle Apps</td>
<td>Marriott Hotel, Golden Gate A</td>
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<tr>
<td>1:30 p.m.</td>
<td>Deep Java Diagnostics and Performance Tuning: Expert Tips and Techniques</td>
<td>Marriott Marquis, Salon 9</td>
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### Tuesday September 21, 2010

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<tr>
<td>2:00 p.m.</td>
<td>Oracle Fusion Middleware Management Hands-On Lab</td>
<td>Marriott Hotel, Salon 12/13, YB Level</td>
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### Thursday September 23, 2010

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<tr>
<td>10:30 a.m.</td>
<td>Oracle Fusion Middleware Management Hands-On Lab</td>
<td>Marriott Hotel, Salon 12/13, YB Level</td>
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