Spot Problems Before Your Users Call: User Experience Monitoring for Oracle Apps

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Agenda

• IT management & User Experience Management
• User Experience Management for Oracle Applications
• Key Use Cases
• Best Practice: Oracle GIT
• Summary
• Q&A
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
What the business wants to know

• How many users accessed my application in last 30 days?
• How many orders did I accept?
• Which customers/partners did the orders come from?
• What percentage of these orders did I process correctly and if an error occurred – what error?

What IT can only respond with

• The application was up 99% of the time
• We had 200 concurrent sessions at peak load
• Every server and service in the order management application met it’s performance and availability SLA
• When faults were logged, we are able to resolve them within 2 hours
User Experience Management
User Experience Management Approaches

- Ensure the performance of a specific business process or user
- Determine location-specific performance problems by monitoring from multiple geographic locations
- Ensure the performance of applications based on many different protocols

- Catch performance problems for all users
- Catch unexpected performance issues or unique user interactions
- Diagnose problems quickly with “replay”
- Determine exact usage of applications
Real User Experience Insight
Passive / Real User Monitoring

Real User Monitoring:
- Replay of poor performance
- Executive dashboards
- Extensive KPI and SLA monitoring
- Full alerting capabilities
- User Flow performance analyses
- Customized reporting
- Trend analyses
- Full data integration OBIee
Key use Cases
The Four Primary Use Cases

- **Order slowdown alert**
  - “Why are Less Orders Reported or Handled by our Call Center Agents?”

- **Support escalation**
  - “Assisting in 2nd and 3rd Level Support Processes”

- **Adoption of application**
  - “Are my Users Following Corporate Guidelines?”

- **Performance Problem for Specific Function**
  - “It only happens when I click here…”
Order Slowdown Alert

"Why are Less Orders Reported or Handled by our Call Center Agents?"

• **Symptoms**
  – Business gets alert less orders are closed per period
  – IT gets alert that more errors occur in User Flow

• **Solution Approach**
  – Both KPI and Funnel show high drop
    • Investigate the user flow
    • See page Errors on second step
Order slow-down Alert

Oder intake is slowing down, successful completion of the order flow is very low at the moment.
Order slow-down Alert

Why is there a Slow Down in Orders?

There seem to be many “errors” on Step 2.
Order slow-down Alert
Who was impacted by the problem?

What users were impacted? Click any of the sessions to review all activity in that session.
Order slow-down Alert
Who was impacted by the problem?

Replay the user session to find out what happened.
Support Escalation

“Assisting in 2nd and 3rd Level Support Processes”

• **Symptoms**
  – First line of support is a Siebel helpdesk department with agents answering customer’s questions on the phone. If this helpdesk is not able to (fully) answer a request, they will escalate it to 2nd level support.

• **Solution Approach**
  1) Was there a known defect in Siebel at the time the issue was reported?
  2) Was the issue a one-time event, or is it a structural defect/problem?
  3) Who was the user exactly, what was he/she doing in Siebel at that time, and what led up to the problem
Support Escalation

“Assisting in 2nd and 3rd Level Support Processes”

The Login applet is actually not very slow overall so this might be a specific user issue.
Support Escalation

“Assisting in 2nd and 3rd Level Support Processes”

Only one Siebel object is slow – the loading of a CAB file takes almost 35 seconds!
Adoption of application

“Are my Users Following Corporate Guidelines?”

• Symptoms
  – New application deployed.
  – New process for Sales: To ensure maximum support in terms of lead generation, open Service Request Enterprises screen at least twice a day. This screen enables an account manager to quickly find selling opportunities in his own region.

• Solution Approach
  1) Are all users following usage guidelines?
  2) Is there any problem to particular user groups?
Adoption of application

“Are my Users Following Corporate Guidelines?”

What users are opening up the Service Request frequently according to Corporate Guidelines?
Adoption of application

“Are my Users Following Corporate Guidelines?”

Split per User Role, what function what accessed and how was the perceived performance?
Performance Problem for Specific Function

“It only happens when I click here…”

• Symptoms
  – Commonly the most difficult cases to investigate. Though everything looks fine, no alert flare up you have specific users complaining that “sometimes” they have performance problems.
  – Always vague descriptions of where in the application the problem occurs, mostly incomplete information is logged with support.

• Solution Approach
  1) Find particular user sessions of last couple of days.
  2) Quickly review performance bottle-necks in particular sessions?
  3) Dive in session details to determine possible causes.
Performance Problem for Specific Function

“It only happens when I click here…”

Use session diagnostics
Search per user ID or IP for example to select the correct session
Performance Problem for Specific Function

“It only happens when I click here…”

Review all activity of that user in a particular session. Immediately errors and slow down stand out in the reporting.
Performance Problem for Specific Function

“It only happens when I click here…”

Every 404 error you are researching ends up being a wildcard search: Hit*
This information is easily reproduced and exposes a simple coding mistake.
Oracle Global IT environment

Three main IT areas:
- On Demand (hosting)
- Corporate
- Development

Random Facts on On Demand:
- Primary DC: Austin, TX
- Network Devices ~900 (10% of total)
- Hosts > 10,000
- Storage > 3.5 TR

> 4,500 Applications

> 110,000 total EM monitored targets (all except network devices)
Web based application monitoring
via synthetic and real user monitoring (RUM)

- Real User Monitoring
  (network tap as close to the web based app)
  - Accurate and Complete
  - Sophisticated performance diagnostic tool
  - Includes replay, reports, analysis
  - Oracle Technology Stack, compatibility, integrations

- Synthetic Test Monitoring
  EM Beacons “agents” per geographic location scheduled recording replay
Traditional RUEI Model

Network Regeneration Tap connects to a RUEI collector
Complex & Diverse Environment
several SLB connect several web based applications for several customers

Prod, Stage and Dev (Web services, Application Server, DB, hosts)

One server load balancer shared by multiple customer applications.

One Customer may have apps spanning multiple load balancer
The Challenge
Meeting the requirements of a diverse environment

How do we design the RUEI implementation to meet the business requirements? (flexibility, scaleability, maneagability)

<table>
<thead>
<tr>
<th>Separate</th>
<th>customer data for dedicated RUEI single tenant?</th>
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<tbody>
<tr>
<td>Consolidate</td>
<td>reports of many customer applications into fewer RUEI or single RUEI?</td>
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<td>Selectively combine reports</td>
<td>on customer application located in multiple load balancer groups?</td>
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<td>Deliver Solution in a Timely manner</td>
<td>(especially for time sensitive requirements)?</td>
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Solution: Single Point of Entry

Bring in all relevant data from many sources into a single point of entry.

centralize via Aggregate Switch
Filter and Route

Compatible Aggregate Switches: (a) Anue Net Tool Optimizer (b) NetOptics Director
Traditional RUEI Model

Network Tap connects to a RUEI collector

Second RUEI environment
New Option: Consolidate into Single RUEI

Central multi-tenant RUEI providing RUM reports on several customer applications.
New Option: Expand into Multiple RUEI Servers
Benefits with aggregating data
For environment with diverse, and large number of applications

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<tr>
<th>Flexibility</th>
<th>Efficiency &amp; Manageability</th>
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<tr>
<td>Centralize (multi-tenant)</td>
<td>Additional setup at SW level</td>
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<tr>
<td>Decentralize (single-tenant)</td>
<td>Less RUEI servers unless dedicated</td>
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<td>Combination of decentralized, &amp; centralized</td>
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<th>Scaleable Design</th>
<th>Better Service</th>
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<td>Scale as the need grows</td>
<td>Real user, accurate, &amp; complete performance data</td>
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<td>Less traffic to process with filtering</td>
<td>Accelerate troubleshooting on more applications</td>
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<tr>
<td>Routing to desired destination</td>
<td>Significant setup time reduction</td>
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Sample RUEI Report
Multi-tenant: Many Applications in a Single RUEI

Multiple E-Business Applications
Sample RUEI Report

One Applications in a Single RUEI or Single App Access in a Multi-tenant RUEI

Single E-Business Application RUEI report
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