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Best Practices for Monitoring & Managing Your Siebel CRM Deployment

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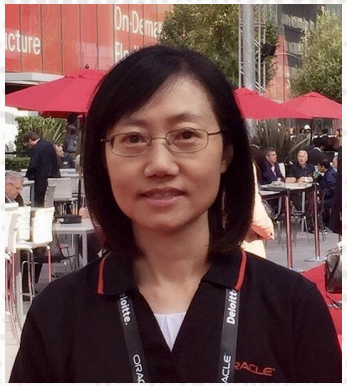
Presenters



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Agenda

1. Overview: Oracle Enterprise Manager for Siebel CRM
2. Case Study - Best Practices & Useful Tips
3. Monitoring Siebel CRM in the Cloud

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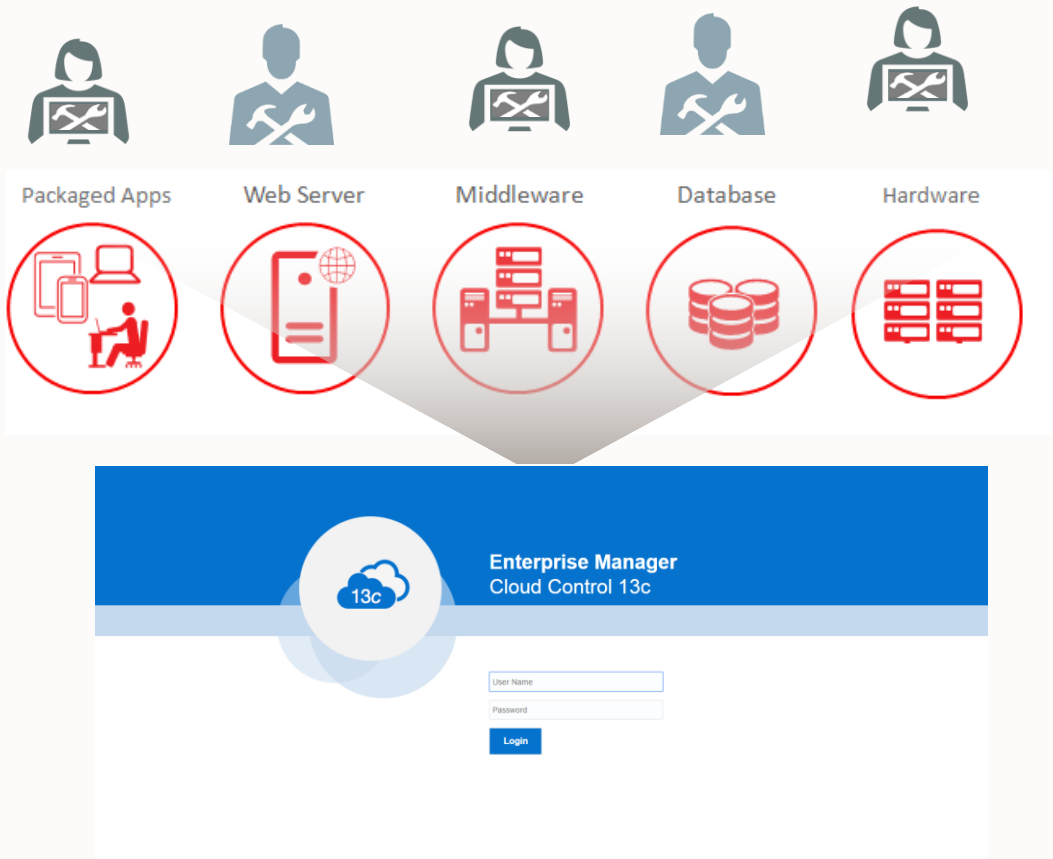
Oracle Enterprise Manager for Siebel CRM

- Manage your Siebel CRM environments easily
- Oracle Enterprise Manager (OEM) provides a centralized console that helps IT administrators manage Siebel CRM multi-target environments
- An integrated solution that leverages Oracle Enterprise Manager Cloud Control in configuration, management, application performance management, automation, & service-level management
- Comprehensive coverage of application management
  - Target Discovery
  - Siebel CRM Environment Monitoring
  - Performance Analysis
  - Compliance and Configuration Management



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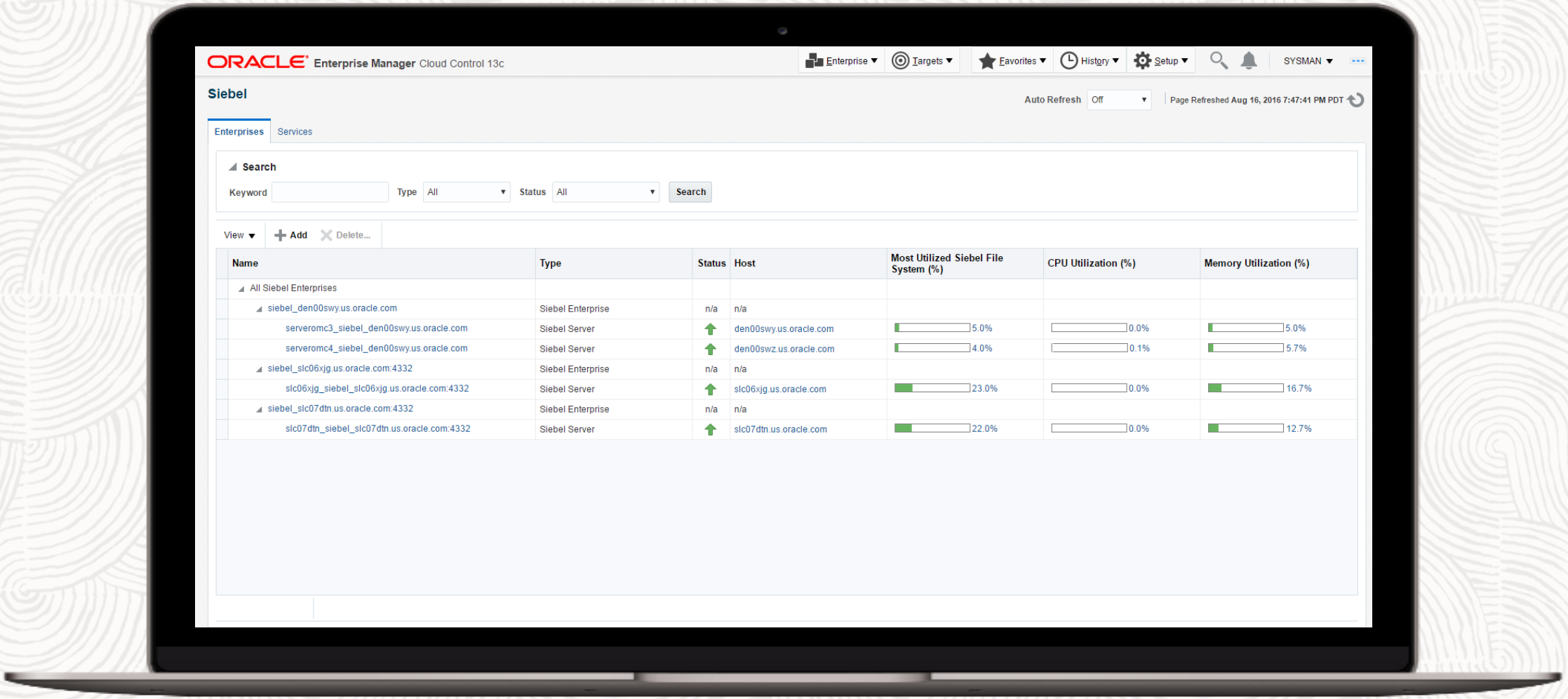
Oracle Enterprise Manager for Siebel CRM



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Case Study

Siebel CRM Monitoring with OEM
Best Practices & Useful Tips

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Oracle EM Siebel Monitoring Best Practices and Useful Tips

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Agenda

- Introduction
- Architecture Overview
- Siebel Monitoring Challenges & Solutions with OEM
- Questions

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IRCC - GCMS Overview

- Immigration, Refugee and Citizenship Canada (IRCC) is a federal government department responsible to develop, implement policies, programs and services to migrants, refugees and Citizens of Canada.
- Global Case Management System (GCMS) is IRCC's integrated and worldwide web-based system used to fulfill IRCC mandates by processing applications for immigration, refugee, citizenship and passport services for Canada.
  - GCMS was first introduced in 2004 to process applications for citizenship services.
  - In 2007, GCMS implemented Immigration processing services
  - Between 2010 and 2014, GCMS extended its immigration-related functions to other government agencies such as Custom Border Service Agency, and other federal government groups, such as Department of Justice and Immigration Refugee Board.
  - In May 2015, GCMS became the Passport Program
  - Now, over 14,000+ end users at IRCC offices in Canada and overseas work with one integrated system to process immigration, citizenship and passport applications from end to end, along one client continuum.

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Architecture Overview

- Siebel 16.19/Oracle Enterprise Manager 13.3
- Production Environment Consists of
  - 28 Siebel Servers, 3 web for users, 3 web for integration
  - 600+ Components, including 250+ of Both JMS Receivers & WPM Components
  - 2 Prod Environments, Active and Next Release. Connected with Oracle Golden Gate in order to reduce the outage window
  - ~20+ Monitored Siebel Enterprises
  - 2 Separate Siebel Projects
- Additional Monitored OEM Targets include OBIEE, BI Publisher, Tomcat, Active Directory, Custom Applications & Middleware and other Third Party Products
- Primarily on Microsoft Stack, including servers and DB
- Critical system is to be available 7/24 with minimal downtime

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Challenge:

How do I keep OEM monitoring separate from other environment activities?

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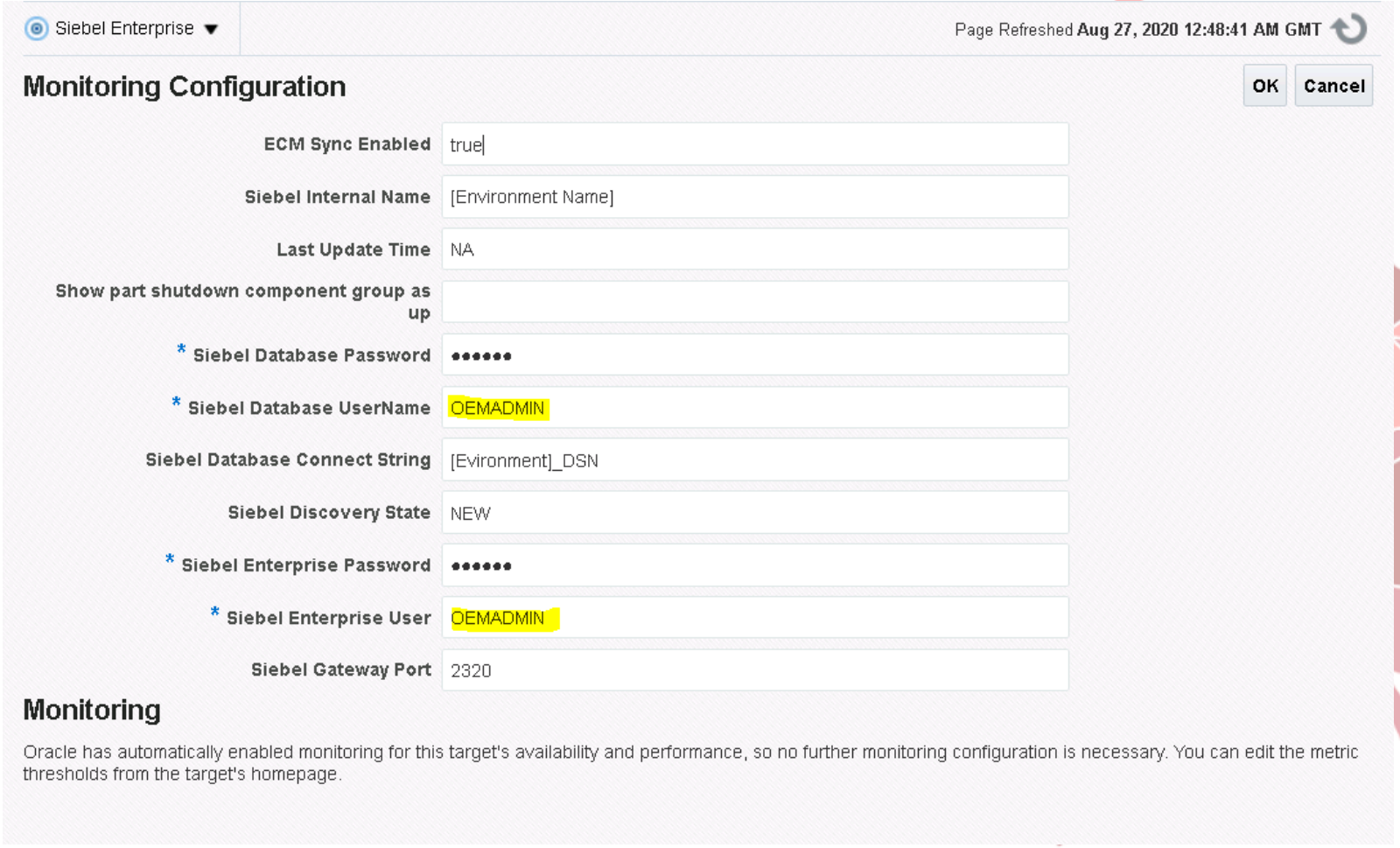
Solution: Do NOT use SADMIN

- Create a clone of the SADMIN Account such as OEMADMIN
- If you have multiple authentication methods, such as Active Directory, OID, create OEM specific accounts for each!
- Keeps the auditors happy!



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Challenge:

What is really the health of my environment?

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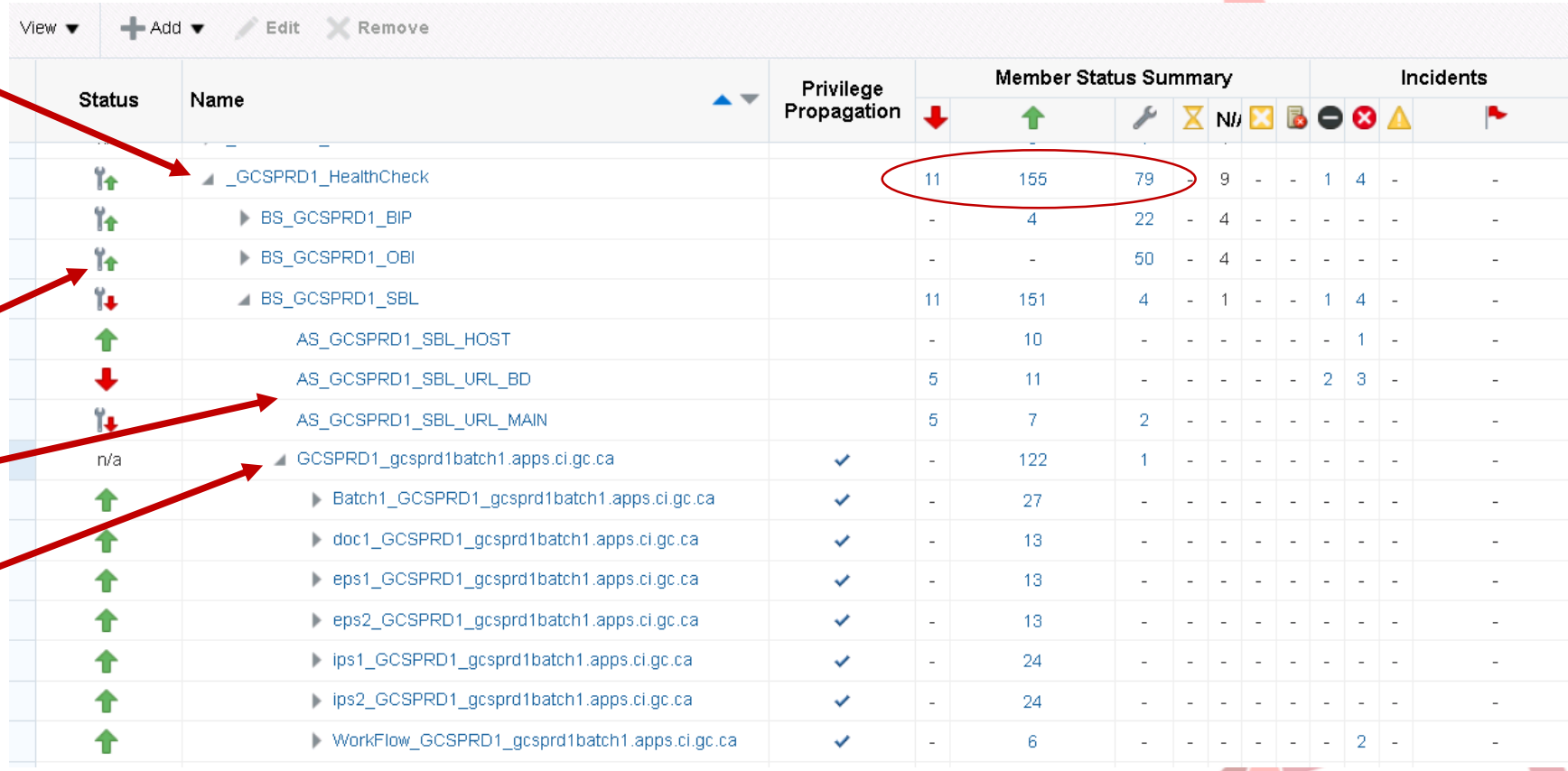
Solution: Leverage OEM's System & Services

- Systems and Services can provide a central hierarchical dashboard of your Enterprise
- Drill down on the Red Targets to see what is down.
- During Maintenance Windows, create Notification Blackouts at the top to prevent alerts, but still check the status.
- Create sub-systems of key components
- Easily expand your Siebel Enterprise to see servers, component status.
- Automate system creation with `emcli` scripts (we start with a spreadsheet)



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System/Services - Naming Convention

Notation	Definition	Description	Example
GS	Generic System|Service	A single instance that is monitored	GS_GCMSPRD0_OBI_VIP_analytics, monitors https://[Env_Name]/analytics
AS	Aggregate Service|System	A container of similar type objects such as hosts, URL's, Siebel Components. All targets must be online for the system to be online	AS_GCMSPRD1_SBL_HOST, contains gcmsprd1batch1
RS	Redundancy System	A container of similar type objects such as hosts, URL's, Siebel Components. A certain number can be offline before the system is considered down	RS_GCMSPRD1_SBL_COMP_PS_ENU (2 can be offline before alert is generated)
BS	Base System	A container of business related objects, typical Aggregate Services|Systems	BS_GCMSPRD1_SBL, contains GS_GCMSPRD1_SBL_Hosts
HealthCheck	HealthCheck	Environment Container	_GCMSPRD1_HealthCheck, contains BS_GCMSPRD1_SBL
URL_MAIN	Main URL	Aggregate of URL 's used by end users	AS_GCMSPRD1_SBL_URL_MAIN, contains GS_GCMSPRD1_SBL_VIP_english
URL_INT	Integration URL	Monitored Integration Point used by systems	AS_GCMSPRD0_MW_URL_INT, contains GS_GCMSPRD0_MW_passport
URL_BD	Back Door URL	Monitor Backdor URL's	AS_GCMSPRD1_SBL_URL_BD, contains GS_GCMSPRD1_SBL_Admin

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System/Services - Environment Prefixes

Healthcheck Order	Environment	Example
_ (underscore)	Production	_GCMSPRD1_HealthCheck
10	Training	10_GCMSTRN1_HealthCheck
20	Staging	20_GCMSSTG1_HealthCheck
30	System Test	30_GCMSSTEB_HealthCheck
40	Development	40_GCMSPEF1_HealthCheck
50	Sandbox	50_GCMSSA1_HealthCheck

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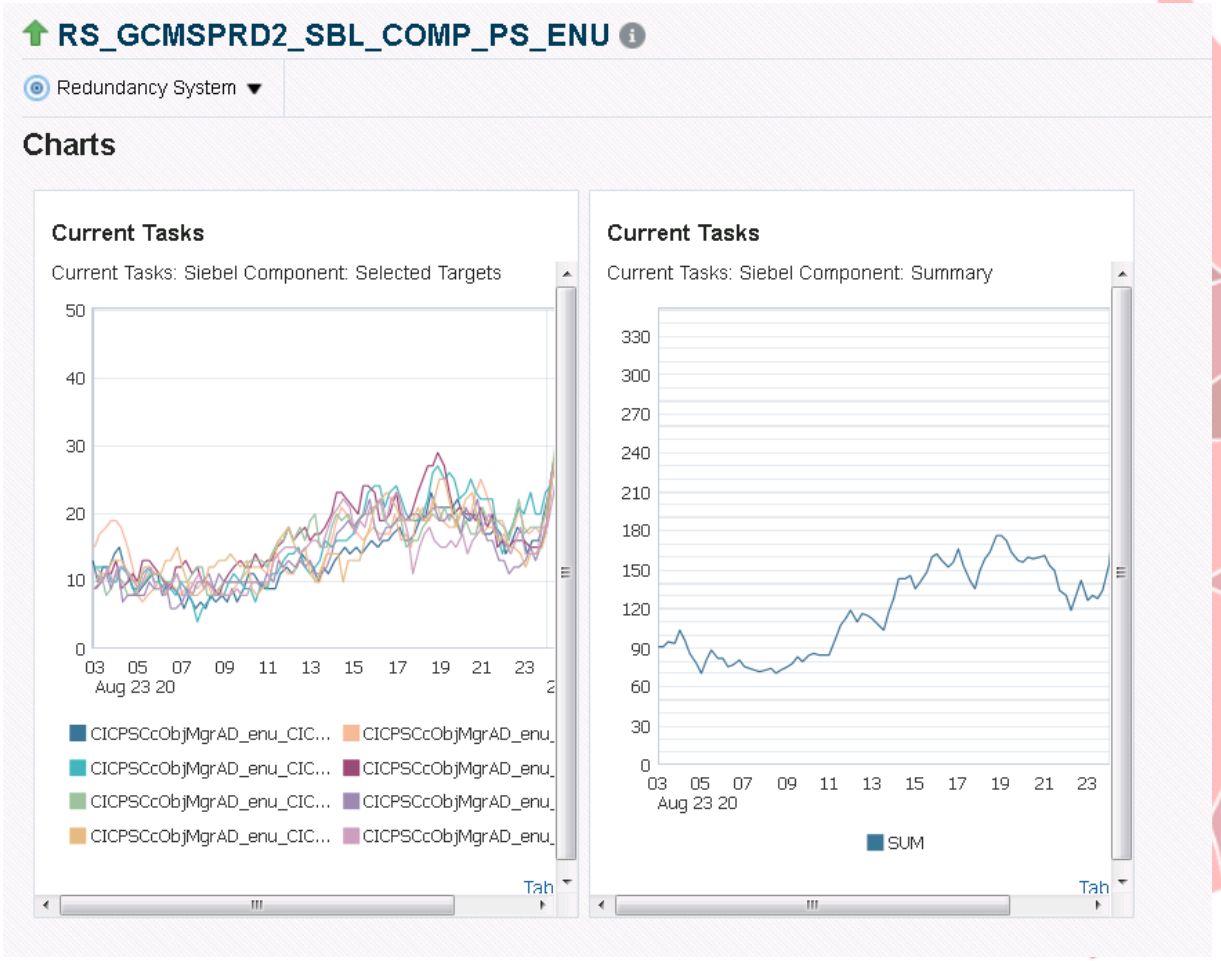
System/Services - Charting

- Create charts of individual components or summary of all components – such as how many users or on the system.
- Great for visualizing component outliers
- Track historical trends – adjust the time window - how does this week compare to last week?



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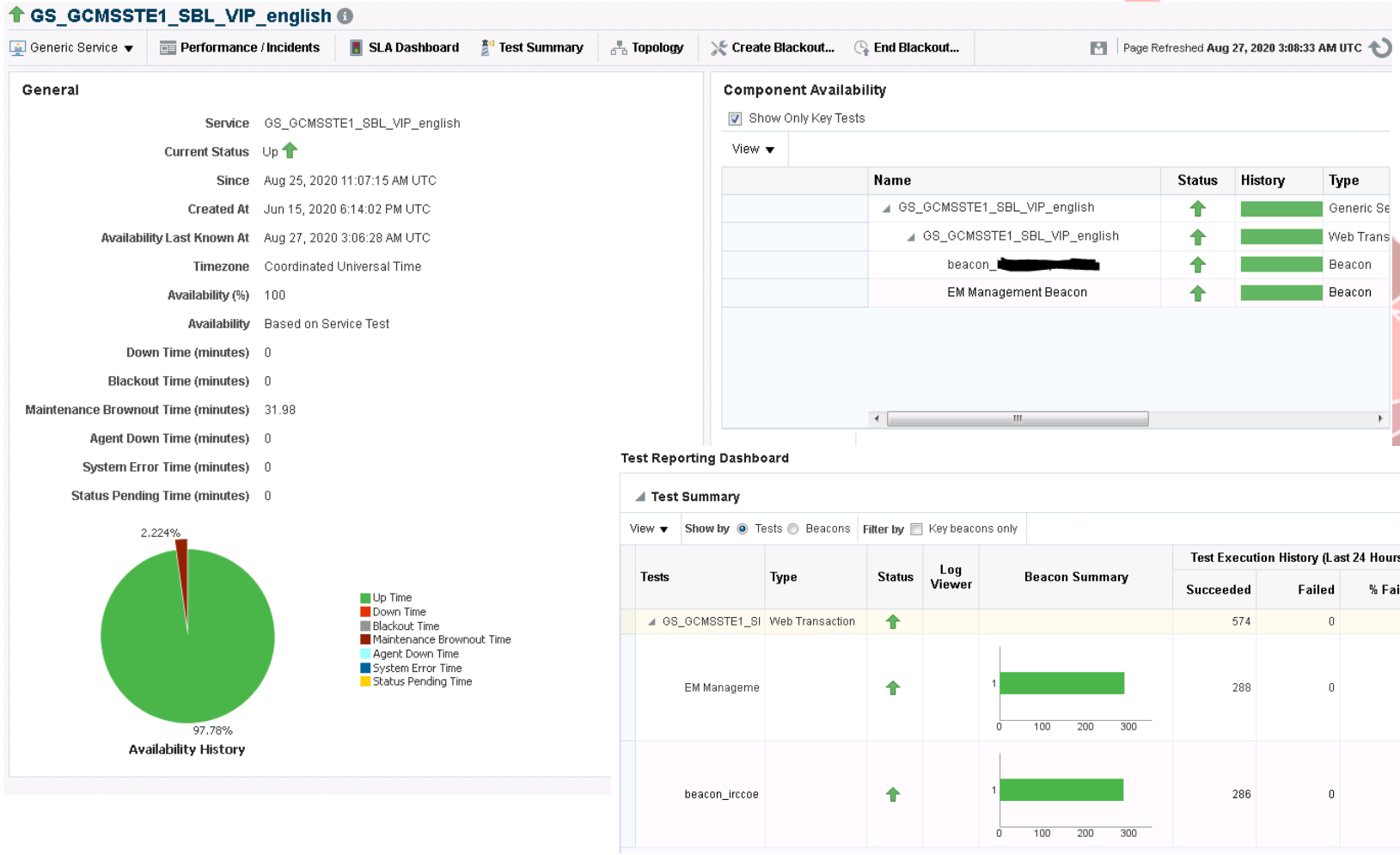
System/Services – Monitor Endpoints

- OEM Supports over 20 different types of endpoints, including:
  - Website Availability
  - LDAP
  - Port Verification,
  - Web Service (SOAP/REST)
  - Ping/TNS Ping
  - Custom Script
- Utilizes the Beacon Plugin, which can be pushed to any agent.
- Mimic Load Balancer Health Checks – with alerts
- Create synthetic transactions – such as actually logging into Siebel every X minutes



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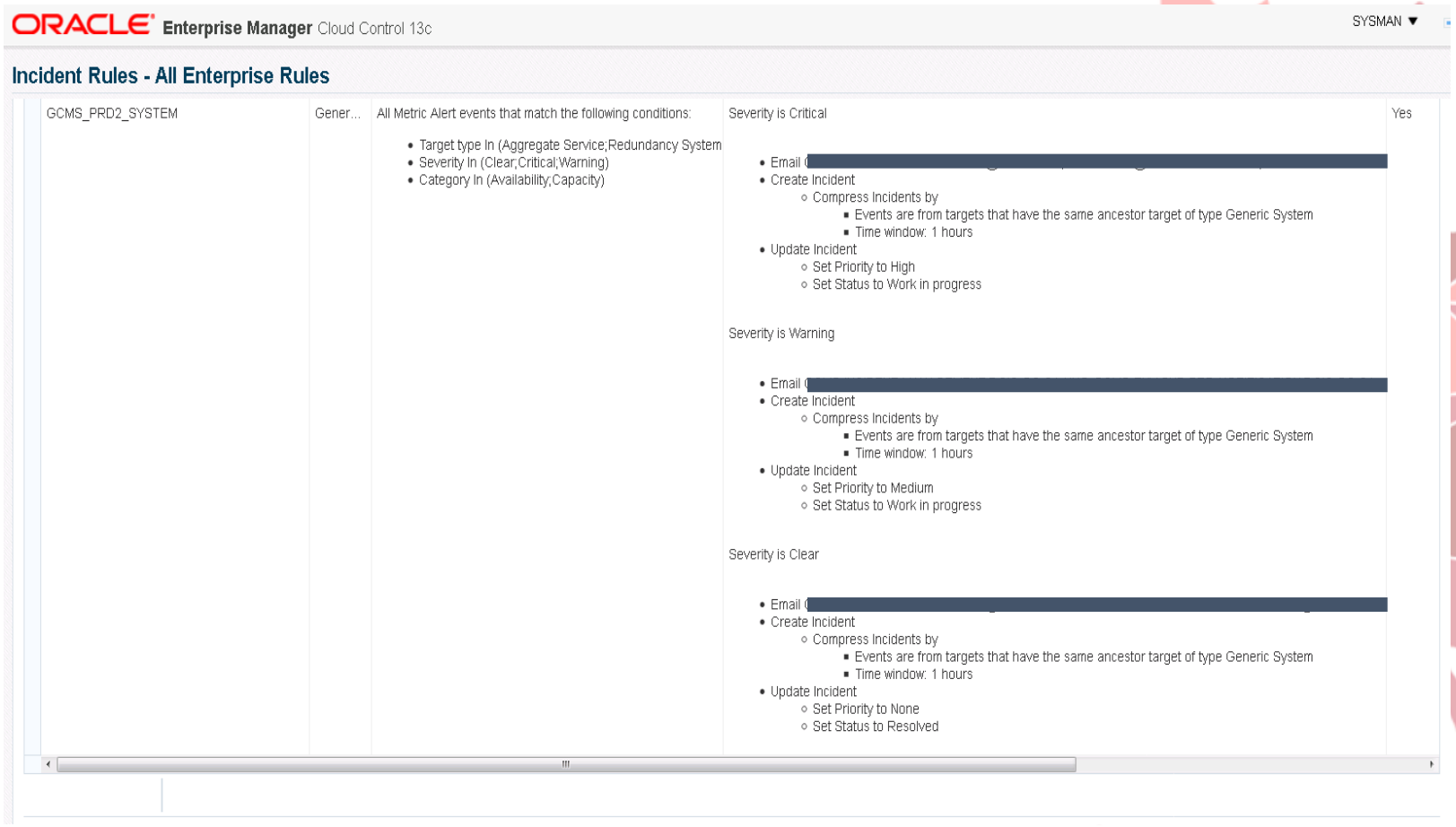
System/Services – Alerting & Incident Rules

- Create Incident Rules Base on the System, instead of the Siebel Enterprise
- Utilize Administration Groups for effective alerting
- Make sure all the properties fields are populated!

```
emcli
set_target_property_value
-property_records=
"Enteprise_Name:
siebel_enterprise:
Lifecycle Status:
Development"
-propagate_to_members
```



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Challenge:

How do I improve Siebel Component Monitoring?

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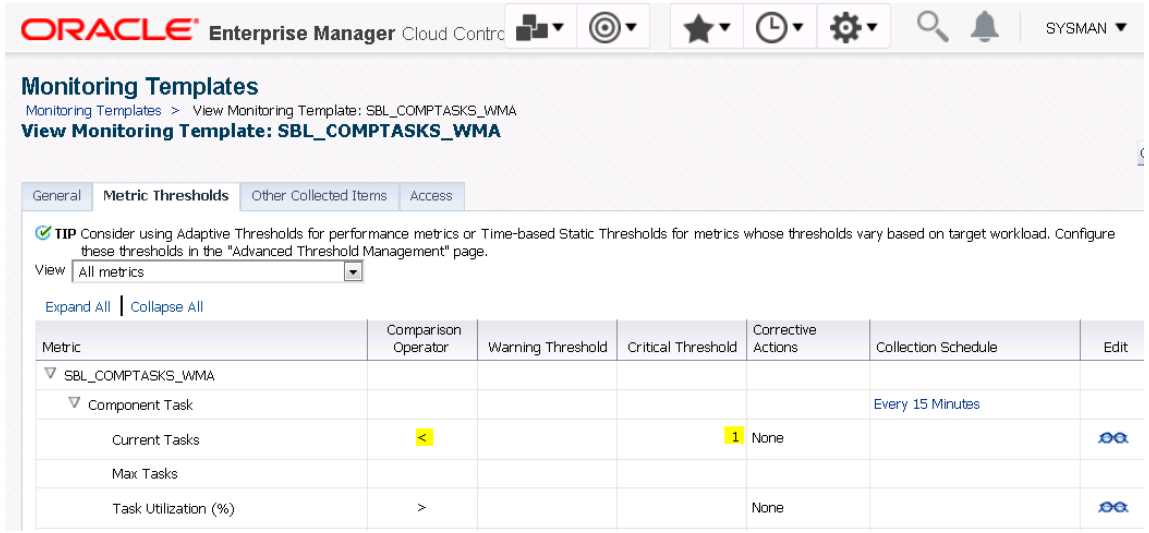
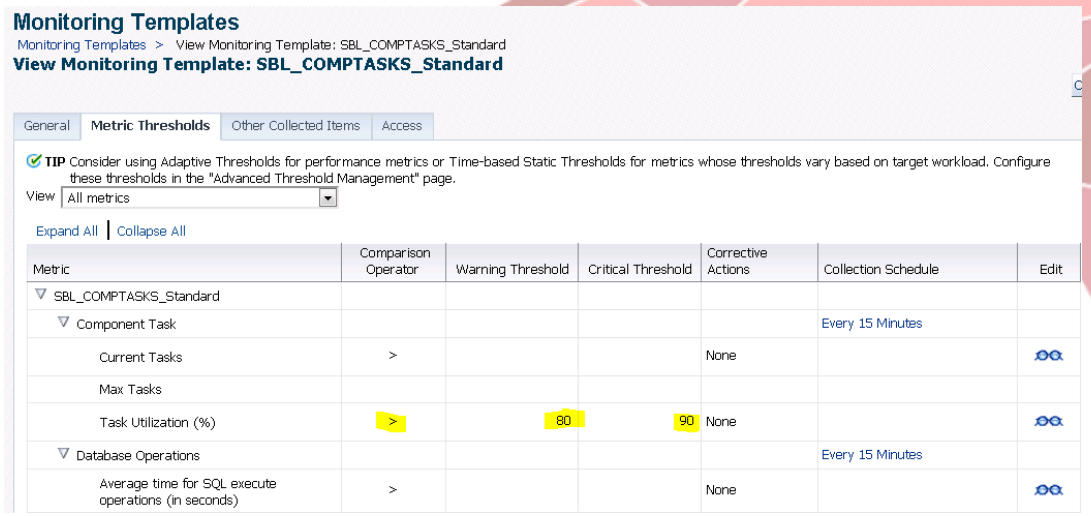
Solution – Monitoring Templates

- Different Parts of Siebel need to be monitored differently
- Create Monitoring Templates for different component types
  - Some components such as EAI,AOM's – alert on component utilization
  - Others such as WMA, JMS receivers need to alert when less than 1 task
- Apply after the Siebel Enterprise is discovered or refreshed.
- Use wild cards such as %JMS%
- Easier if you have a component type naming convention.





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Challenge:

What's happening with the Siebel Web Tier?

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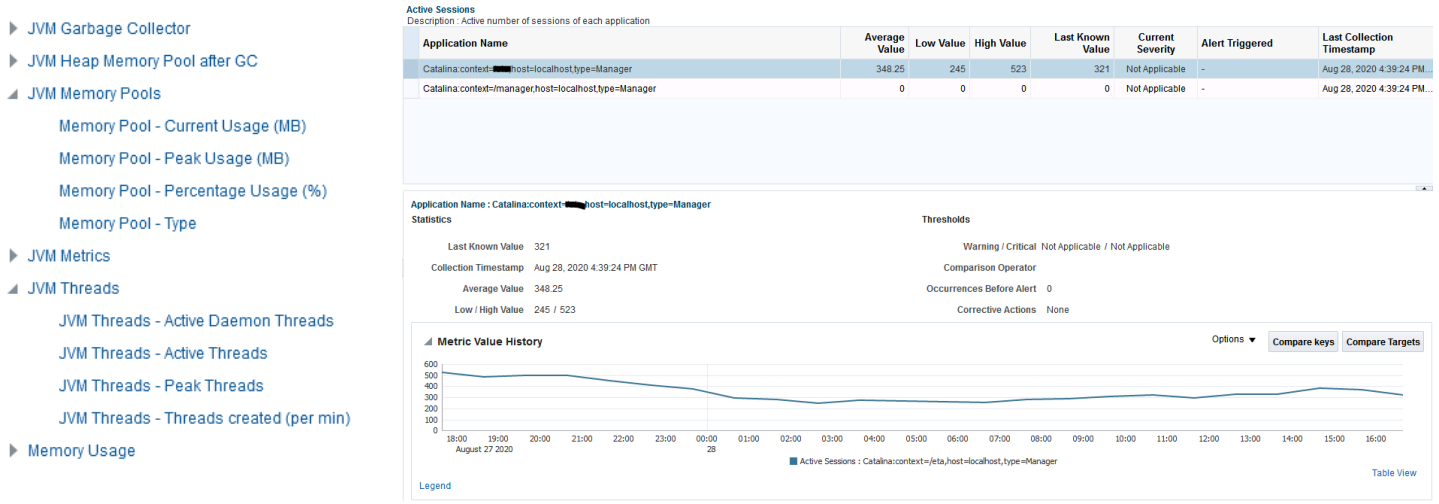
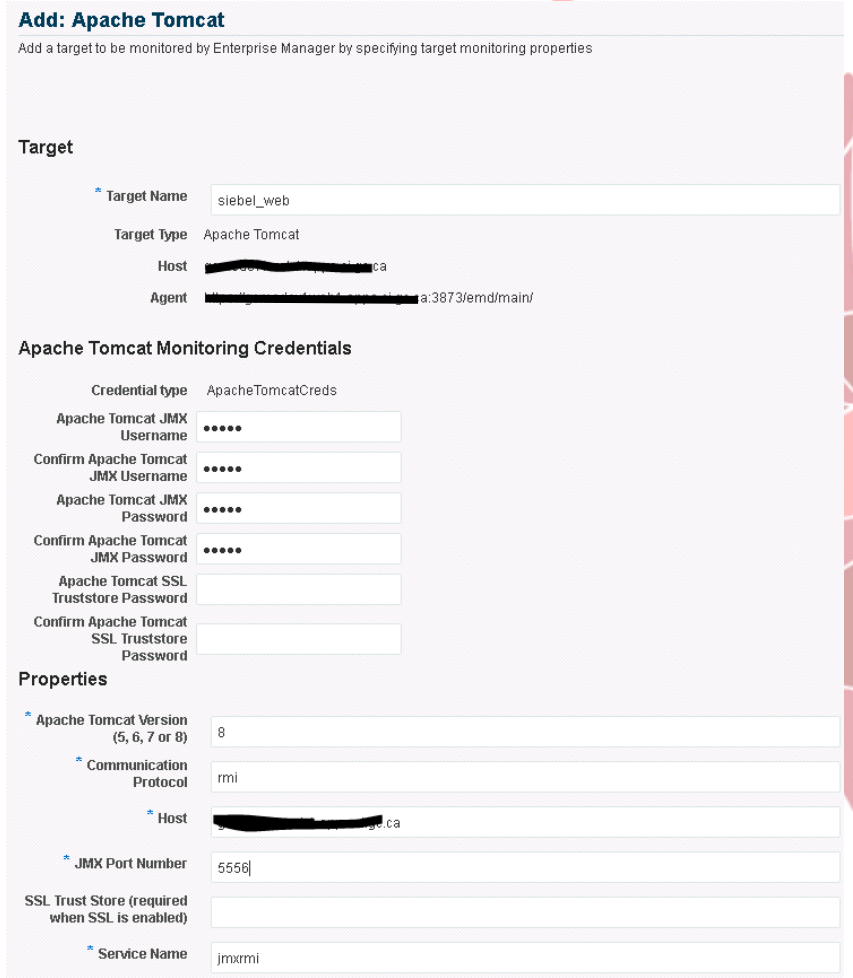
Solution – Monitor with Tomcat & JVMD Plugins

- Tomcat shows the basic status of the web server
- Monitored through JMX – need to enable in config files.

  Example:

```
CATALINA_OPTS="
-Dcom.sun.management.jmxremote.port=[jmx_port];
-Dcom.sun.management.jmxremote.authenticate=false;
-Dcom.sun.management.jmxremote.ssl=false"
```





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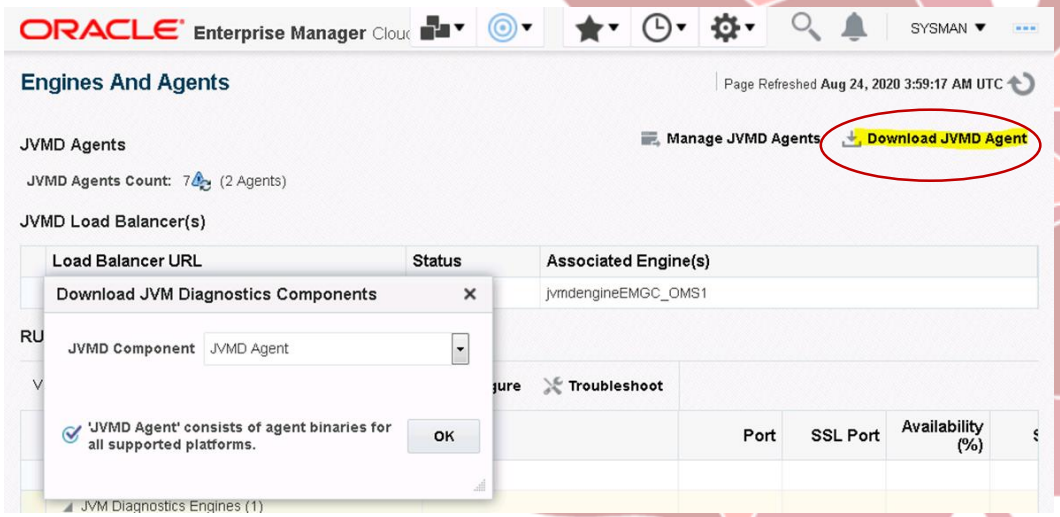
Solution – Monitor with Tomcat & JVMD Plugins

- JVMD Provides Advanced JAVA Monitoring
- WAR file downloaded from OEM and deployed in the webapps directory of Tomcat. For Example:
  - `$SIEBEL_HOME\ai\applicationcontainer\webapps\jamagent.war`
  - `$SIEBEL_HOME\ses\applicationcontainer\webapps\jamagent.war`
- In-depth Visibility of JVM Activity
  - Monitor thread states and Java method/line numbers in real time
  - Identify issues rather than diagnosing issues like application crashes, memory leaks, & application hangs
- Real Time Transaction Tracing
  - Monitor your Java application at a very high frequency (default frequency is once every 200ms)
  - Allows for interdependency of threads, bottleneck resources (DB, I/O, CPU, Locks, Network, RMI) and top methods
- Memory Leak Detection and Analysis
  - Analyze the differences between the heap dumps and identify the object causing the memory leak
  - Take heap dumps in production applications without stopping the application.
  - Heap analysis is provided with the Memory Leak Report, and the Anti-Pattern Report.



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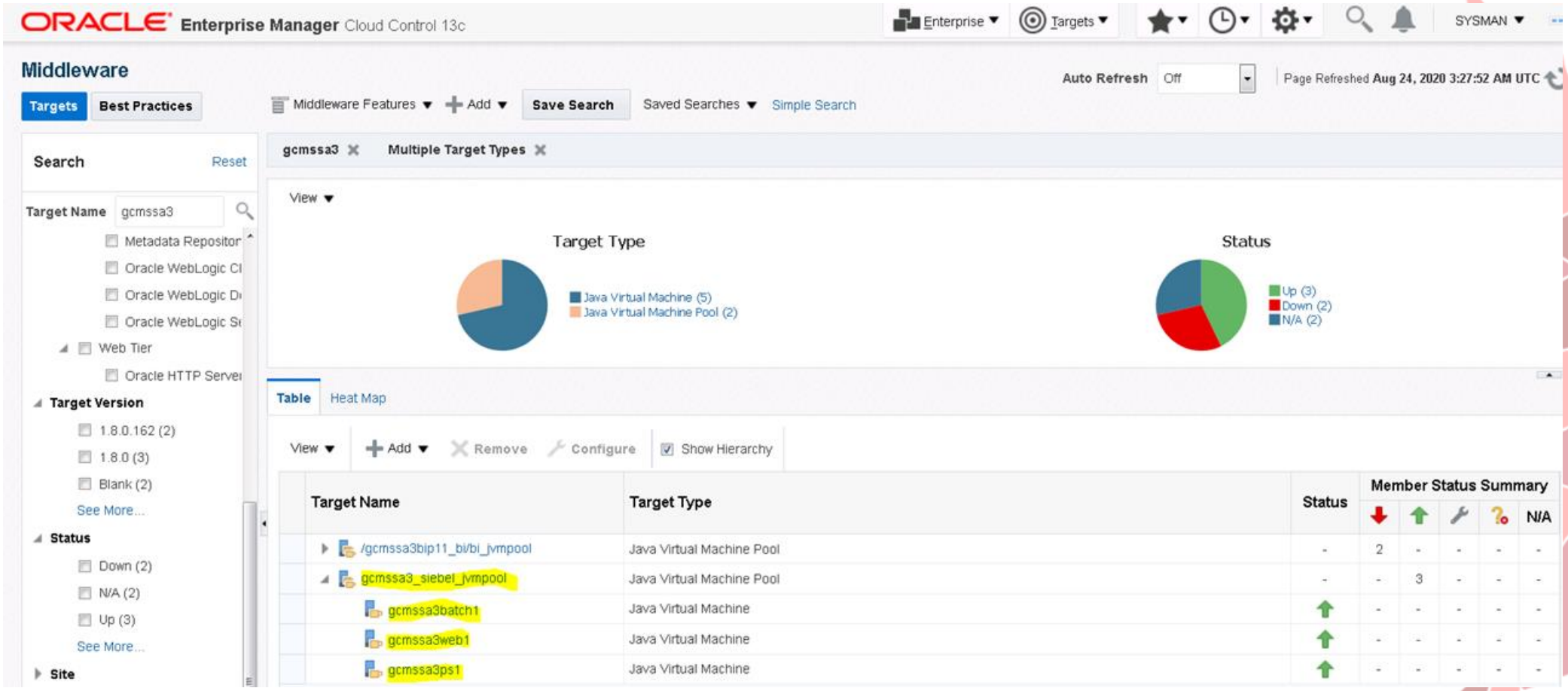
JVMD – Targets found under Middleware



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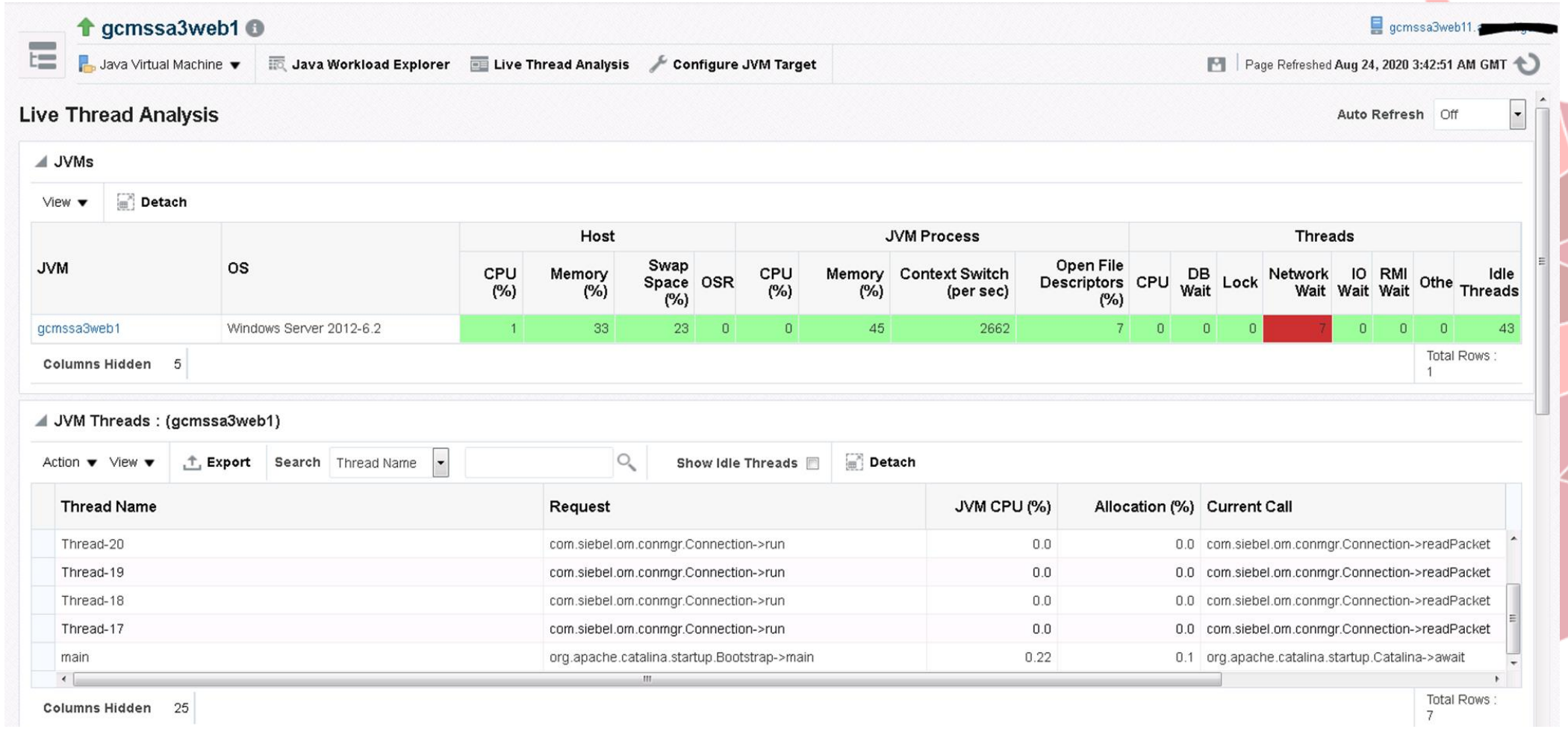
JVMD – Live Thread Analysis



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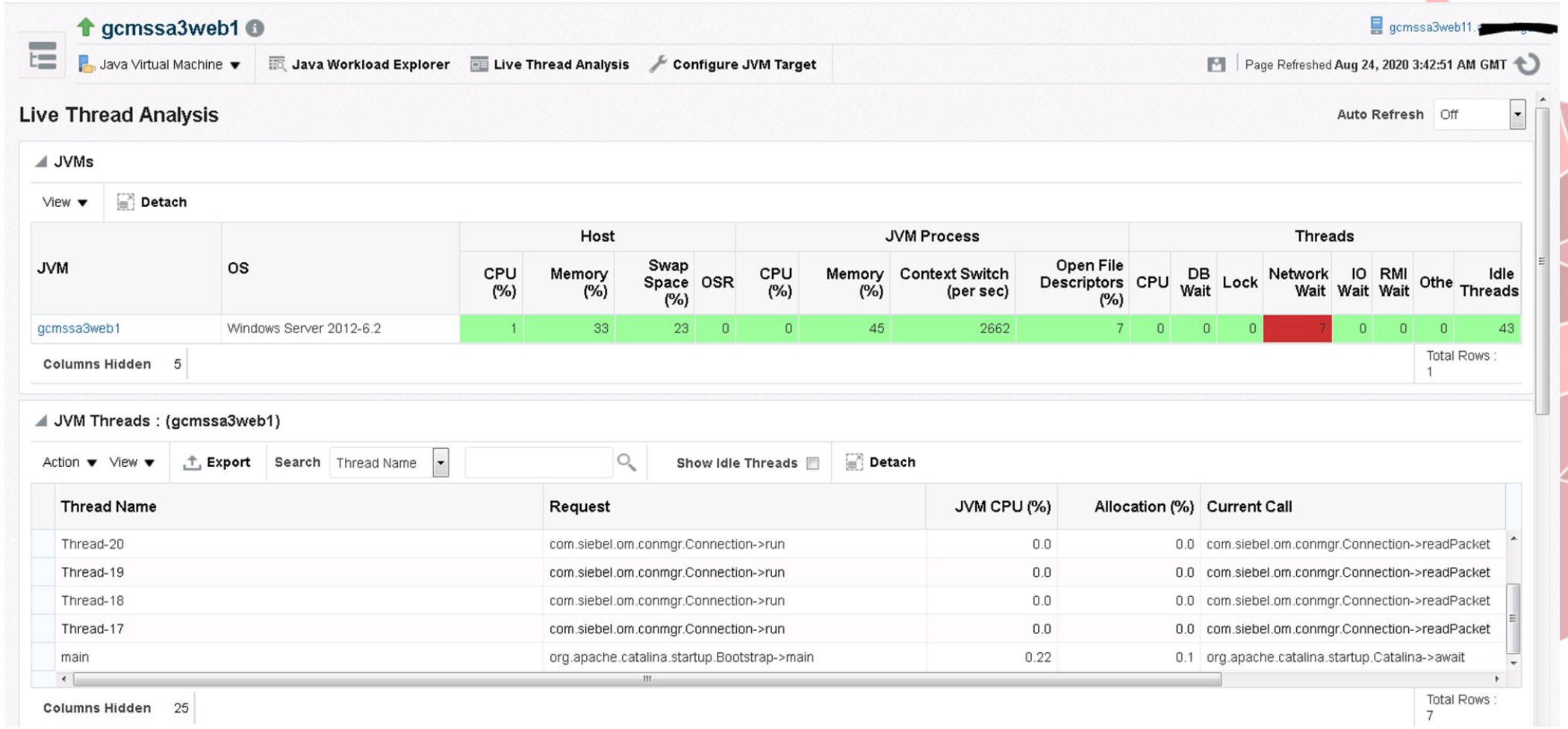
JVMD – Live Thread Analysis



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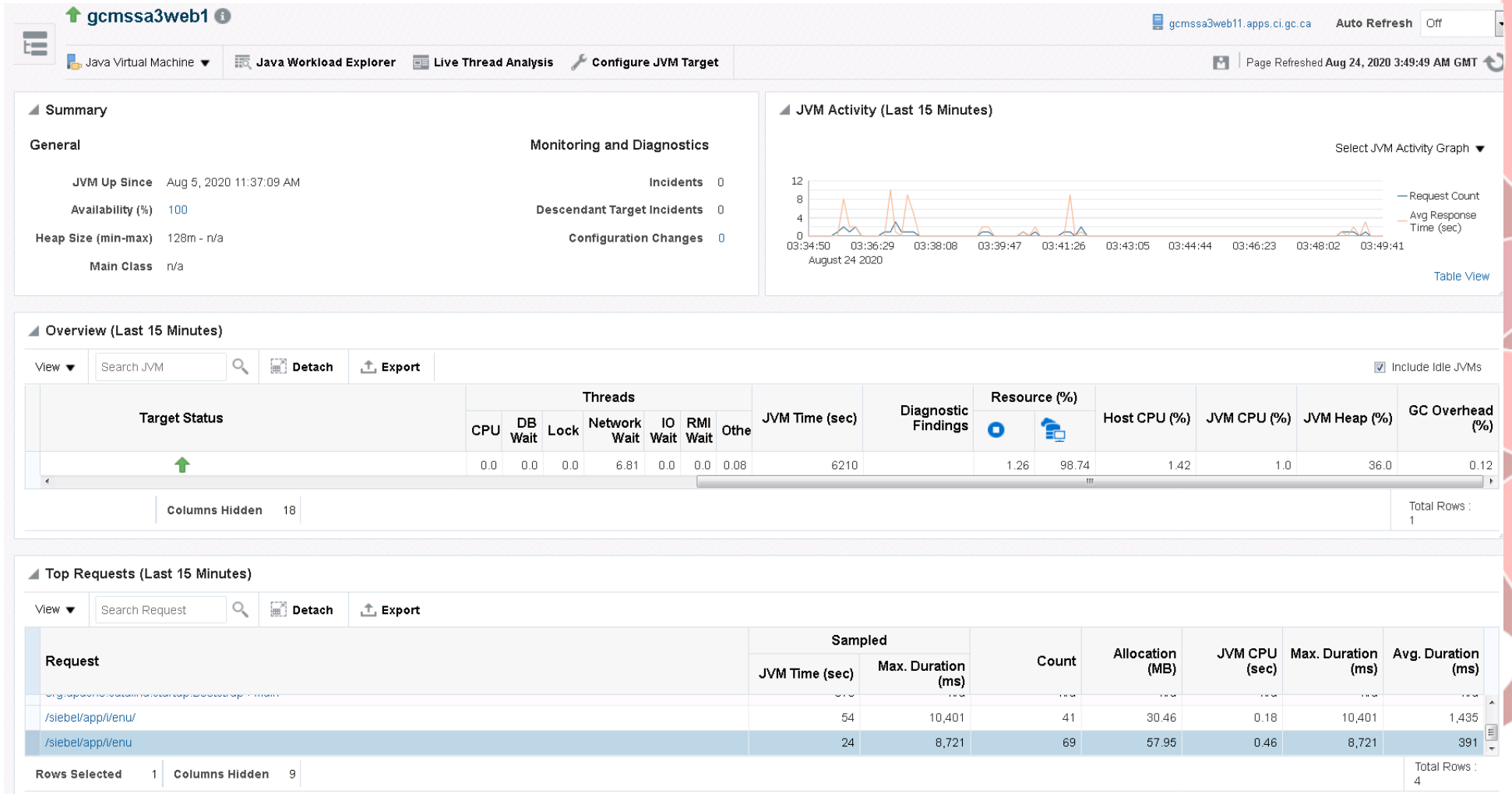
JVMD – Display Top Request



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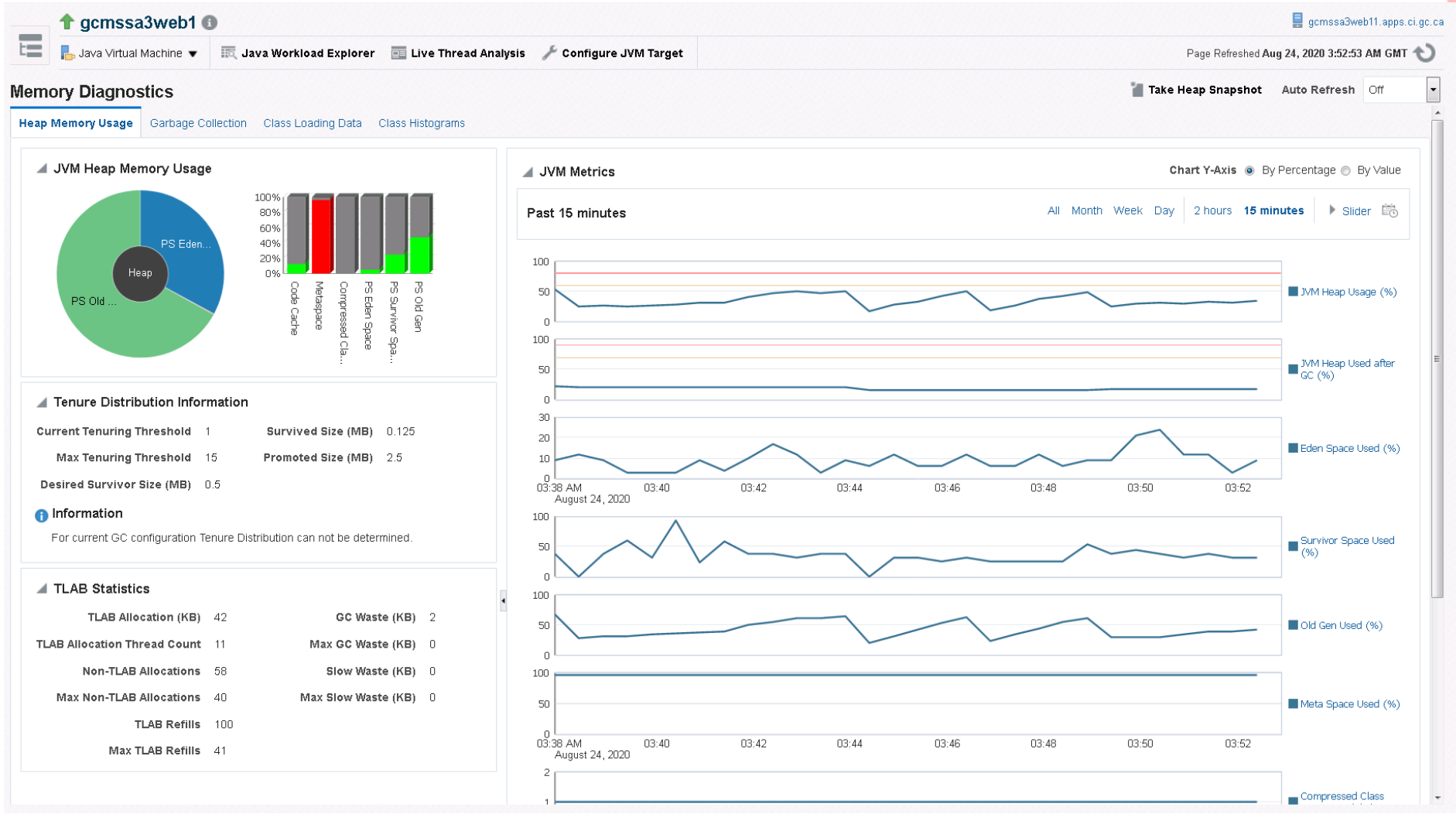
JVMD – What's going on with Memory?



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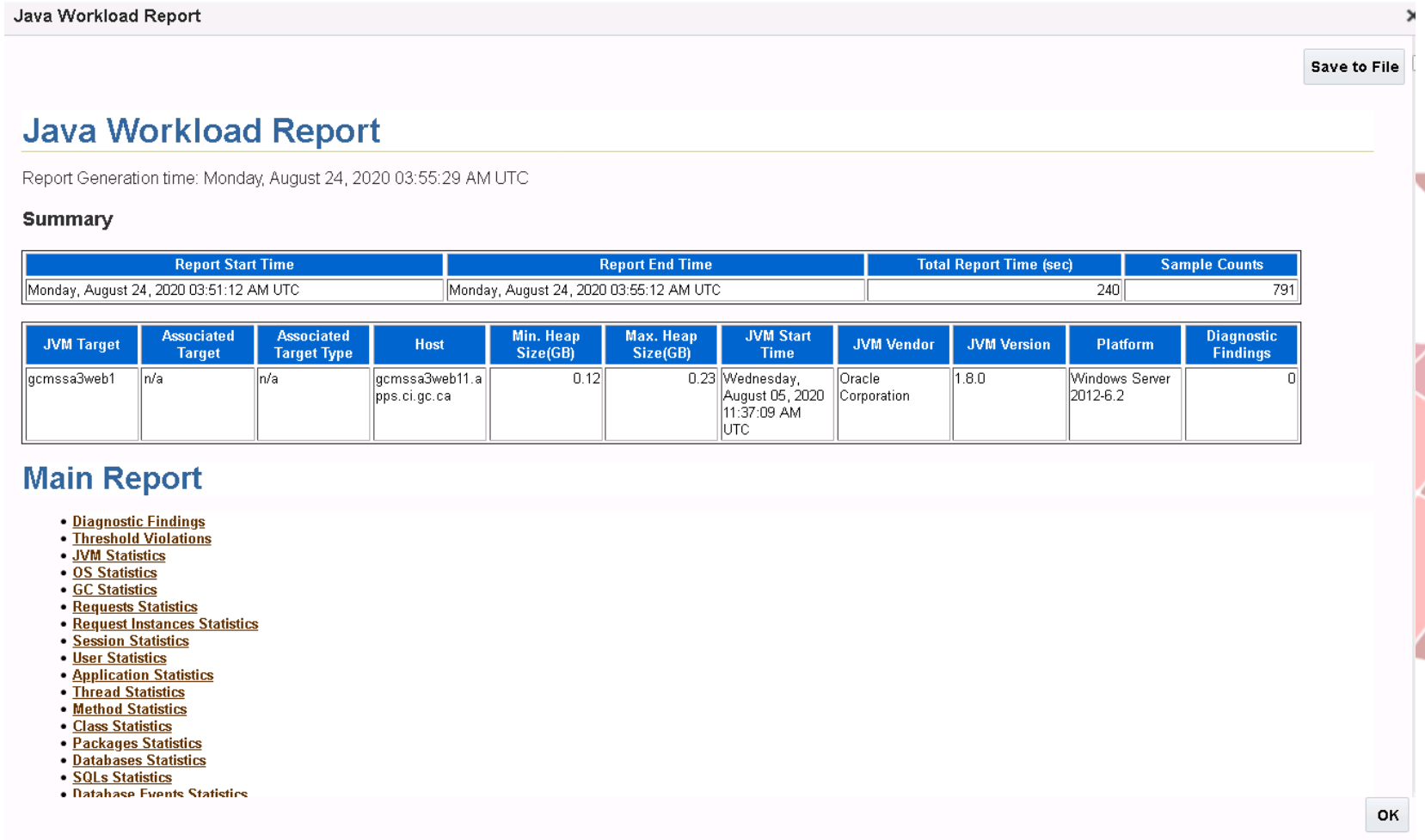
JVMD – Generate Detailed Workload Reports



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Challenge:

How can I Reduce the time to Deploy Siebel/Migrate changes?

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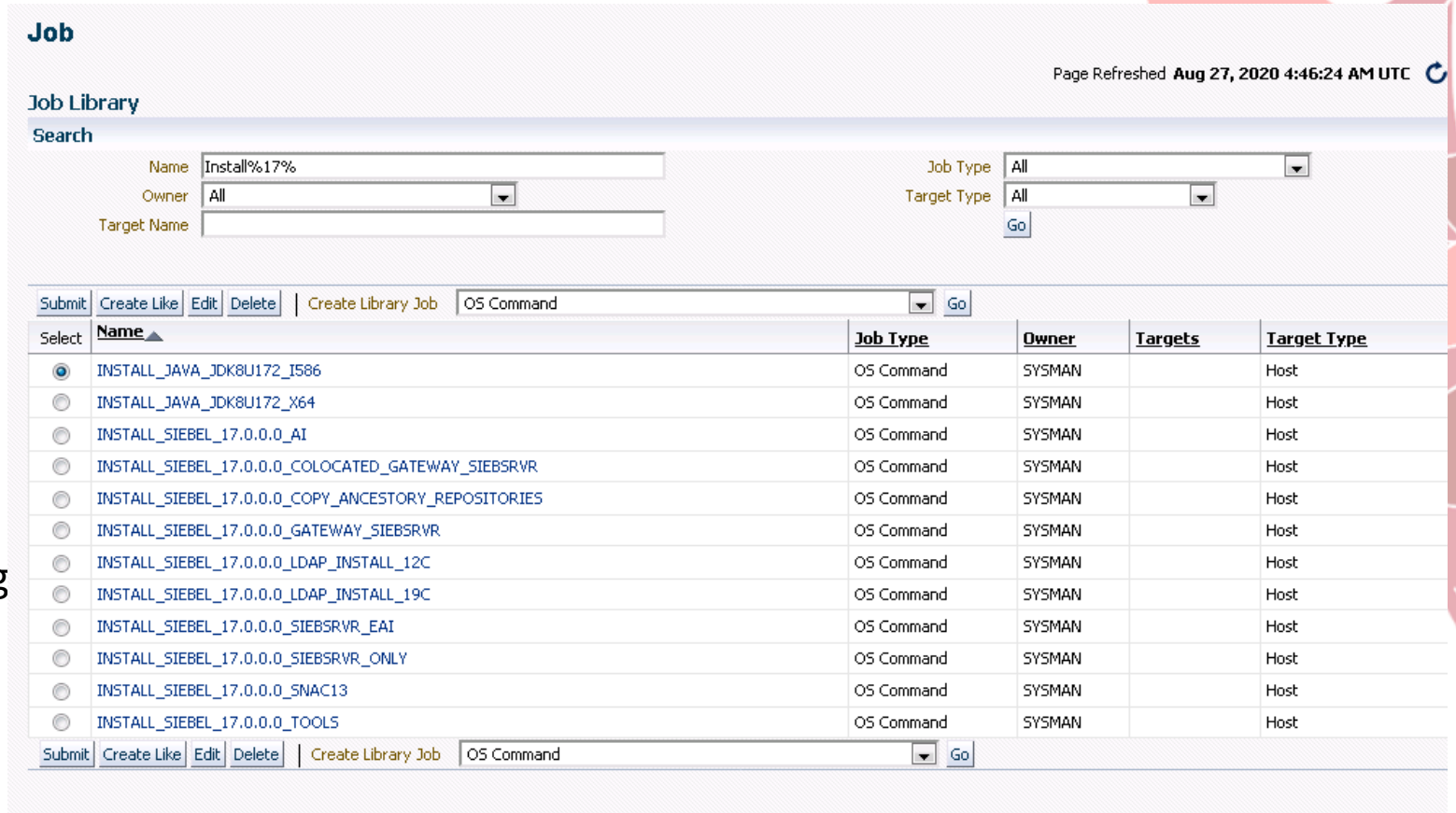
Solution – Leverage OEM Job Templates

- Centralize Software library to a single share/NFS mount point accessible to all servers
- Create shell scripts to call Silent Installs
- Run the job on multiple servers simultaneously.
- Repeatable Process
- Push out (actually pull) configuration files to all servers in seconds
- Create Job Templates to start/stop environments
- Rotate/Compress Log files
- Schedule nightly jobs – emails can be sent on success/failures
- Could be used in stead of a Repeating Component Request (RCR)



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Monitoring Siebel CRM in the Cloud

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Customer Driven Innovation

We need to be ahead of impending functional issues and detect them proactively so we have time to address them

We need to focus our IT resources on advanced technology projects

How can we further automate the management of Siebel?

We need to reduce the effort spent handling faults during key business processes or daily operations

Solution: Autonomously scan known issue root causes, automatically create SRs with required collections and route to experts.

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Time to simplify.

Proactive Monitoring for Siebel CRM in the Cloud

New Innovation: Smart Sensors for Siebel CRM on Oracle Cloud Infrastructure

- Co-innovation built by Oracle Support and Oracle Advanced Customer Services
- Automatic monitoring of all system technical parameters
- Standard Enterprise Manager Plug-in allow sensors to track system performance
- Can run on all supported versions of Siebel CRM
- ~100 Smart Sensors for Siebel CRM today
- SQL scripts that scan the database for faults and corruptions
- Tracking functional issues across modules Marketing, Loyalty, etc.
- Continuously increasing capabilities
- No additional cost for functional monitoring
- Included in Premier Support

Siebel CRM on Oracle Cloud

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Automatic Functional & Health Monitoring

Key Features for Siebel CRM:

- 24/7 monitoring
- ~100 Sensors across the Siebel CRM application
- Automatic creation of SRs, routed to support engineers, with pertinent diagnostic data included
- Available for all Applications Unlimited running on Oracle Cloud Infrastructure (OCI)
- Delivery Manager – one contact for OCI and one for Application Monitoring
- Personalized governance
- Management and progress reporting

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Features and Benefits

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Applications

Siebel CRM
E-Business Suite
PeopleSoft
JD Edwards

Service features

- 24/7 applications fault and health-check monitoring
- Proactive identification of potential issues before they become problems
- Automatic creation of Service Requests with diagnostic data
- Accelerated routing of Service Requests to apps experts
- Intuitive service dashboard for status reporting
- Easy agent deployment and target discovery

Benefits and value

- Increase efficiency
  - ✓ Reduce the effort and number of tasks IT staff need to perform to support the SR process
  - ✓ Prevent critical issues and enable faster resolution
  - ✓ Increase business productivity
- Accelerate workflow processing
  - ✓ Detect potential business flow or closing problems before they happen
- Increase operational visibility

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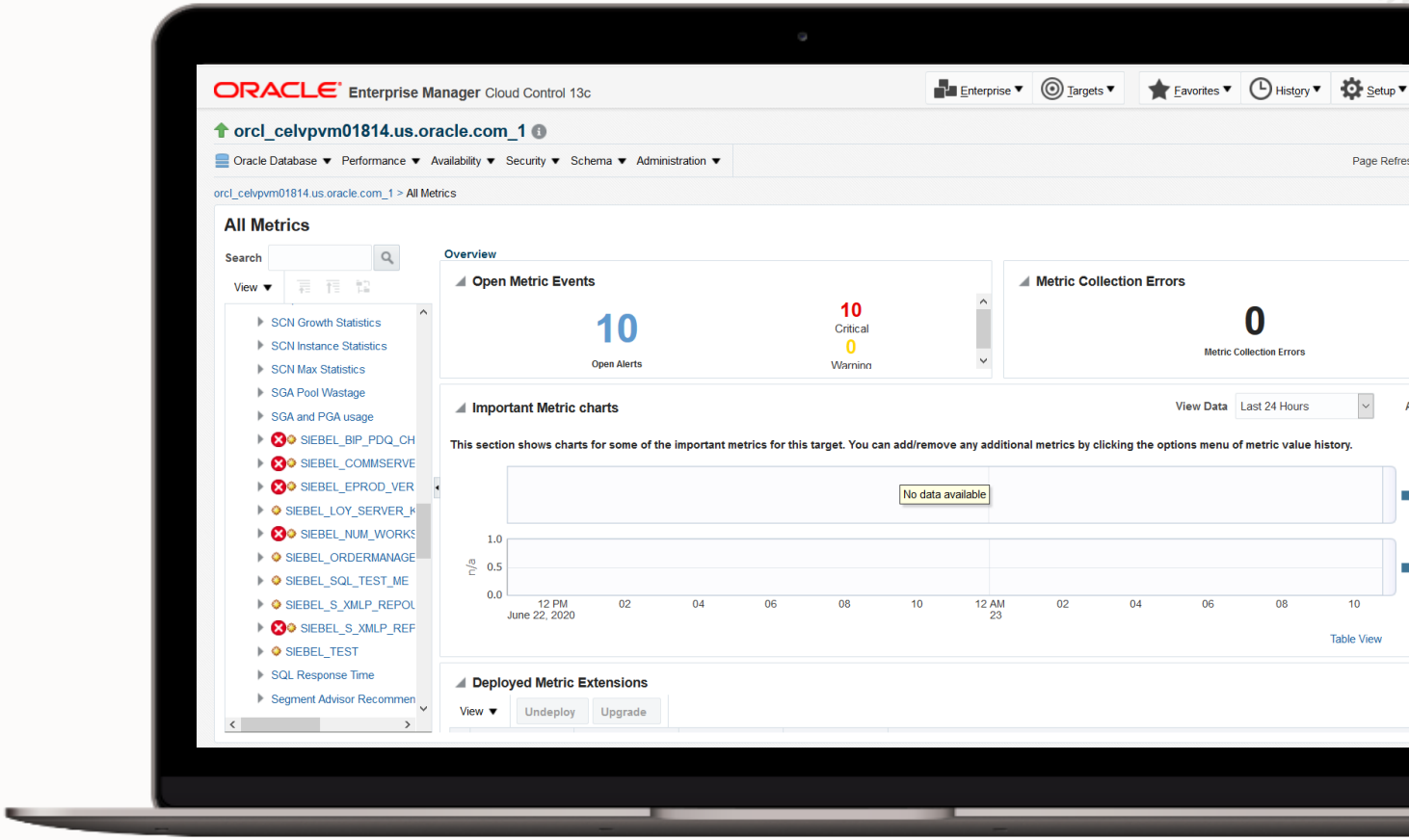
Intelligent Detection & Business Impact

Critical Error Detection

- Leverage knowledge gained from working thousands of customer service requests.

Prioritization

- What issues do customers experience frequently?
- What is the business impact of these issues?



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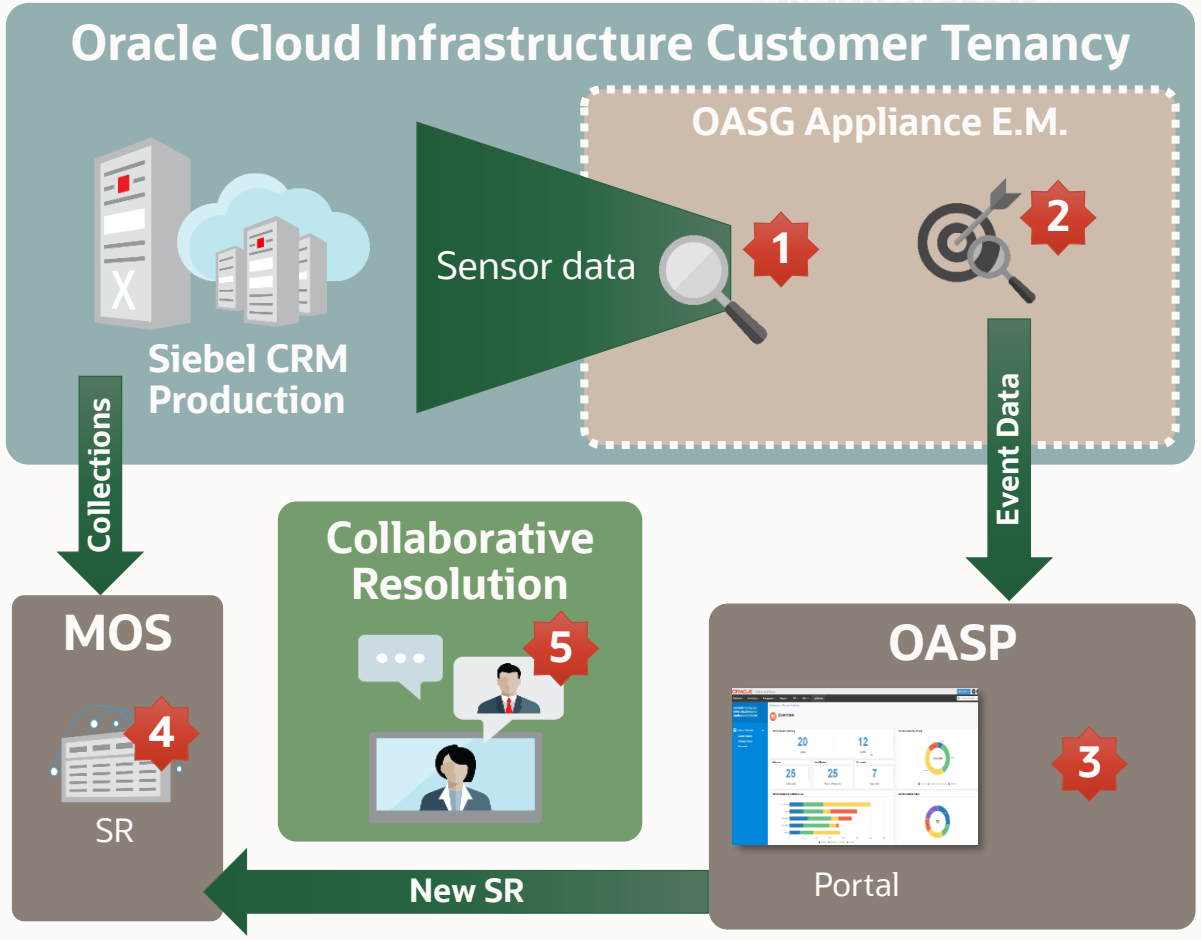
Architecture, Process Flow and Components

1. Sensors scan Siebel CRM periodically, OASG looks for issues using EM technology
2. If match found, data sent to OASP@oracle
   Rules applied: new SR? existing SR? etc.
3. SR is created or updated and assigned
4. Engineer engages, notifying of solution or action plan. Collaborative resolution begins
5. Fast resolution time because details of issue detected are known



MOS: My Oracle Support
OASG : Oracle Gateway
OASP : Oracle Platform

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Default Monitoring for Siebel CRM on OCI

Application Management Pack for Siebel CRM:

- Proactive scan that ensures application availability and optimal system performance at all times
- Achieved through the OEM plugin seeded sensors
- 50+ sensors that scan the Siebel CRM-specific targets for technical issues

Application Management Suite for Siebel CRM applications

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Sensor Types

Functional

Proactive/predictive scan of conditions known to cause failures in business processes e.g. :

- Failure of Bulk requests due to changes to product structure
- Monitor Performance issues with Product Configurator related to increasing number of workspaces
- Loyalty transactions not being processed
- Email been lost or causing an inbound email processing halt

Technical

Scan of technical conditions known to cause failures that impact processes across the entire application

- Queued Workflow Jobs in S_SRM_REQUEST table
- Monitoring of daily batch jobs for queued & failed
- Monitors the remote transaction tables for gaps identified

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Functional Example: Siebel Loyalty

Transactions not Processing / Performance Issues with Transactions

Description

Oracle's Siebel Loyalty is a multichannel application that enables companies to create dynamic, cross-industry loyalty programs that drive strategic customer initiatives.

Business Impact

- It is important to businesses that loyalty transactions process normally.
- Can impact consumer credibility.

Cause

- Corrupted server key, incorrect transaction key parameter updated recently might be causing issue.

Detection

- Proactive smart sensor monitors the Loyalty transactions every 24 hours
- Looks for records which are not processed
- Alerts the customer and support via SR
- Support engineer will suggest proper solution steps to take action before it gets delayed or failed.

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Functional Example: Siebel Loyalty

Negative Points

Description

The Loyalty Negative Points monitoring use case determines whether there are any negative point's balances.

The solution of offered by this service provides early detection of negative points balances and gives the customer ample time to address and fix the issue.

Business Impact

- As a negative balance means that a member technically owes money to the customer running the Siebel application being monitored.
- This can cause member dissatisfaction.

Cause

- Concurrency setting know to cause this issue.

Detection

- The smart sensor periodically queries the underlying application tables
- Identifies such negative balances.
- Alerts via SR and support engineer contacts the customer with proposed solution

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Functional Example: Siebel Communications Server

Inbound Emails not Getting Processed

Description

Siebel Email Response enables organizations to manage and respond to a high volume of incoming email.

We are proactively monitoring Inbound emails processing delays or mails not processed.

Business Impact

- Inbound Email processing would not work and the entire inbound email functionality will get hampered, important business emails will be delayed or lost.

Cause

- CommSrvr crashes caused due to incorrect settings
- Recent changes to parameters
- High CPU utilization for CommInboundRcvr component

Detection

- Smart sensor proactively detects any parameter changes
- Executes profile monitoring
- If issues are detected a SR is created and the support engineer will contact the customer to pinpoint the cause and implement an adequate solution.

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Functional Example: Siebel Order Management

Possible Performance Issues with Product Configurator

Description

Siebel Order Management allows employees such as salespeople and call center agents to create and manage quotes and orders through their entire life cycle.

It will identify the delays or performance issues with order processing, bulk request processing.

Business Impact

- Delays in processing will lead to business revenue loss.

Cause

- Product configurator setting changes
- System load

Detection

- Smart sensor monitors related tables to find any missing seed data related to LOV
- Product structure changes
- Number of workspaces and alerts
- If detected a SR will be created and the support engineer will contact the customer to resolve the issue

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Functional Example: Siebel Remote

Remote Transactions not Processed

Description

Siebel Remote functionality allows a Siebel Mobile Web Client that typically runs remotely while disconnected to do synchronization, which is the process of synchronizing the data that resides on a remote computer with the data that resides on the Siebel Server.

.

Business Impact

- Transaction processing without any delays or stuck is key to make sure Siebel remote users are getting up to date data.
- Business can experience delays on processing and routing transactions to remote users.

Cause

- Router is not routing the .DX files or there are routing performance issue / DX Files accumulating in docking/TXNPROC directory

Detection

- Smart sensor queries for remote specific tables.
- Alert in case any backlog accumulation suspected
- Support engineer will investigate along side the customer.

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PUMA (Proactive Upgrade and Migration Assistance)

Proactive Support Engineers share best practices and knowledge

Oracle Support provide a **FREE service** to help with Upgrade planning and execution to the latest Siebel CRM release

Installation Review

- Certification
- Architecture changes
- Critical steps for IP2017 Installation

Upgrade Planning

- Pre-upgrade tasks
- **Upgrade execution – in-house execution with Customer Repository**
- Upgrade path and environment recommendations

Execution

- One main contact identified at Client side
- One main contact identified at Oracle Support side
- Client is responsible for the Upgrade execution

Benefits

- A technically accurate Action Plan
- Minimize risk of issues during upgrade
- Maximize likelihood of success
- Establish a strong partnership between Oracle and our customers

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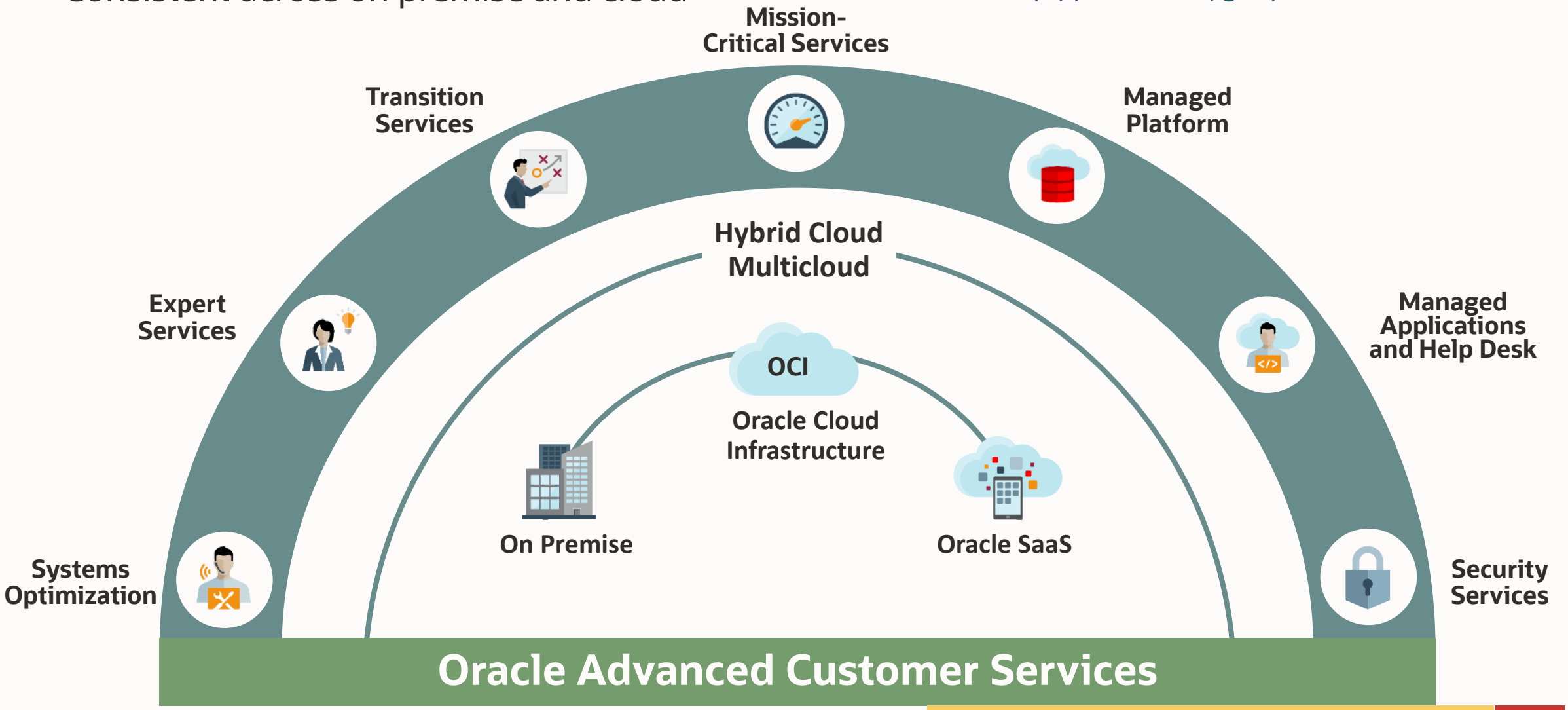
Related Session: How Oracle can help you Transform your Siebel CRM application

Advanced Customer Services portfolio

Consistent across on premise and cloud

Find Out More at http://oracle.com/goto/acs

ORACLE Advanced Customer Services



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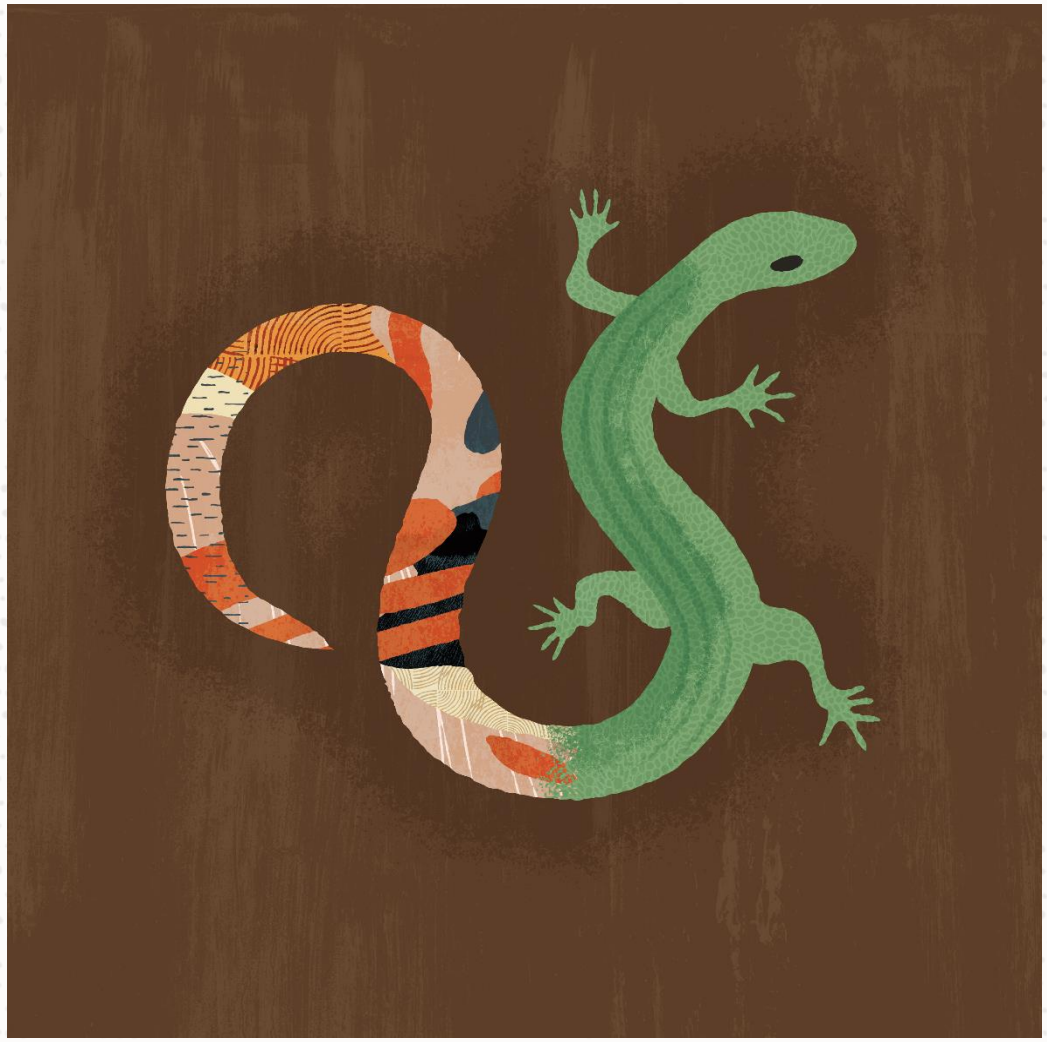
Related Session: American Airlines' Transformation to Oracle Cloud Infrastructure

Key Takeaways

1. **Simplify IT**. Oracle Enterprise Manager for Siebel CRM to ensure system health and availability

2. **Intelligent Service**. Smart Sensors for proactive issue detection and resolution

3. **World Class Support**. Innovative solutions for our customers to provide best in class services for the Cloud



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Thanks!

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ORACLE

Poll:
What is the primary solution to monitor your Siebel deployments?

Custom solution

Oracle Enterprise Manager Siebel Plugin

Third-party monitoring solution

Siebel Server Manager and native tools

Poll Result:
What is the primary solution to monitor your Siebel deployments?

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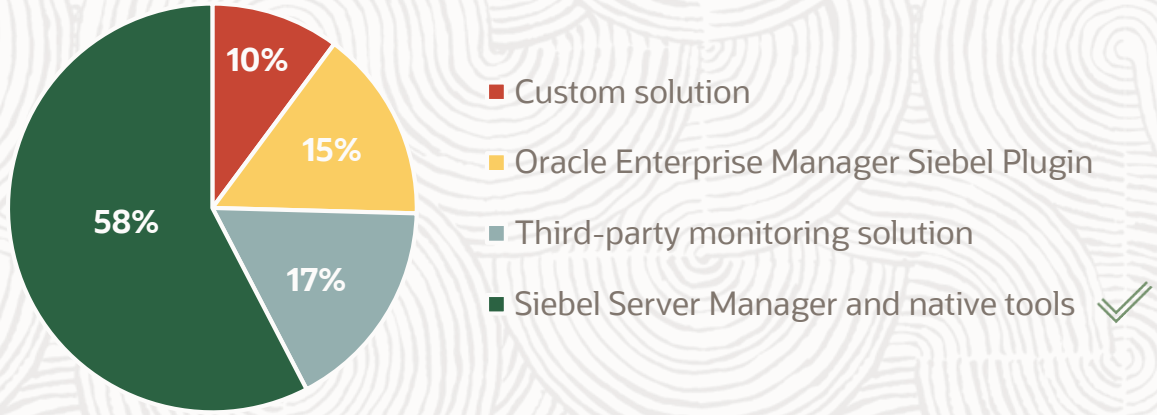

Take the Siebel CRM Innovation Survey

Let us help you kickstart your Siebel CRM transformation

https://go.oracle.com/siebelcrm-innovation

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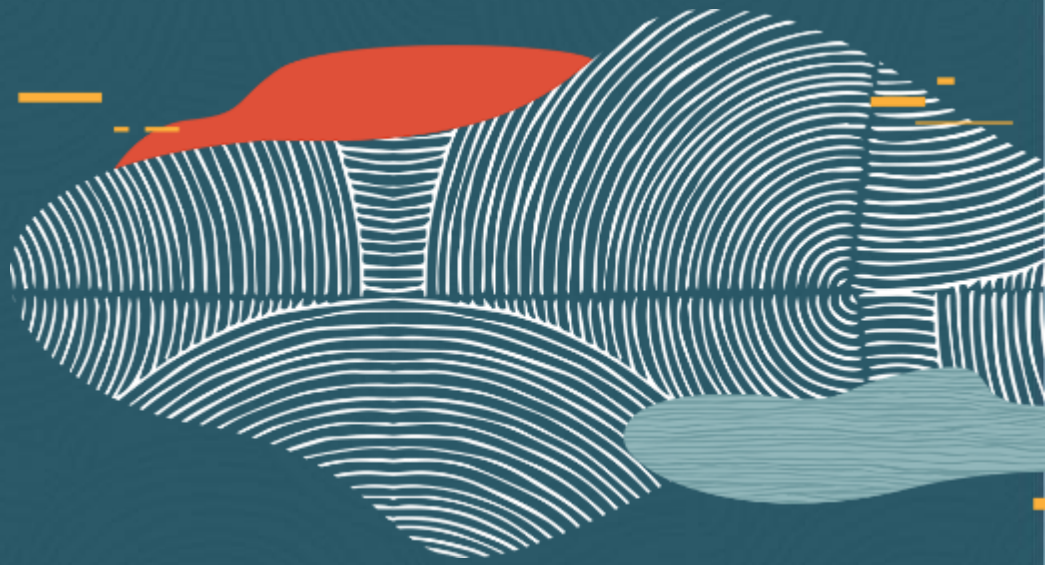

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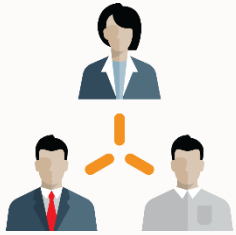
Siebel CRM Release Updates
Siebel CRM Premier Support
Datasheets – Features by Release
Siebel CRM Ideas (Collaboration)



Siebel CRM Customer Connect CAB portal
LinkedIn Customer Connect
Newsletter Email Distribution list (Customer) & (Partner)
Virtual CAB replays

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