Performance Tuning and Testing for the TMS HTML Browser

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Session S10

Acknowledgements

- Many thanks to the OCUG for this opportunity to present this tutorial.

- Many thanks to the OCUG Planning and Review Committee and Chairs for their infinite patience in receiving and expeditious review of this presentation

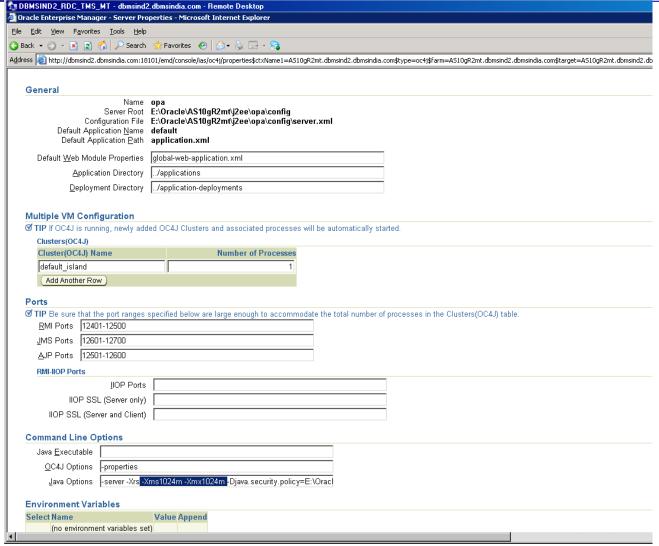- Many thanks to everyone who participated in the development of presentation.

Agenda

- JVM Heap Size
- Web Cache
  - Timeouts
  - Origin Servers
  - Rules
- HTTP Server
- Timeout settings
- Registry SharedSection

Presented by: Sunil G. Singh, Bill Caulkins, Denise Clark & Jose A. Garcia

JVM Heap Size

- Login to AS10g Oracle Enterprise Manager
- Click the MT Instance link
- Click the link for the "opa" component
- Click Administration
- Click Server Properties
- Add "-Xms1024m -Xmx1024m" after "-Xrs" in Java Options field
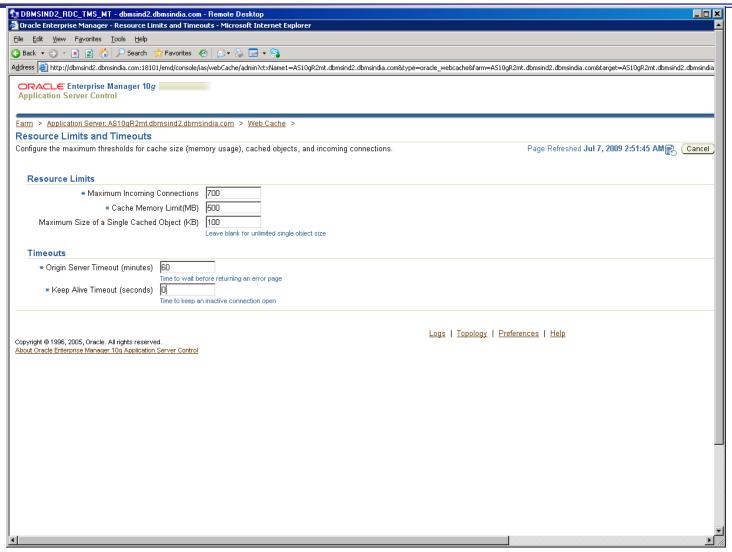- Restart "opa" component

JVM Heap Size (2)

Web Cache Timeout

- Login to AS10g Oracle Enterprise Manager
- Click the MT Instance link
- Click the link for the "Web Cache" component
- Click Administration
- Click Resource Limits and Timeouts
- Set Maximum Incoming Connections to 700
- Set Cache Memory Limit (MB) to 500
- Set Maximum Size of a Single Cached Object (KB) to 700
- Set Keep Alive Timeout (seconds) to 0
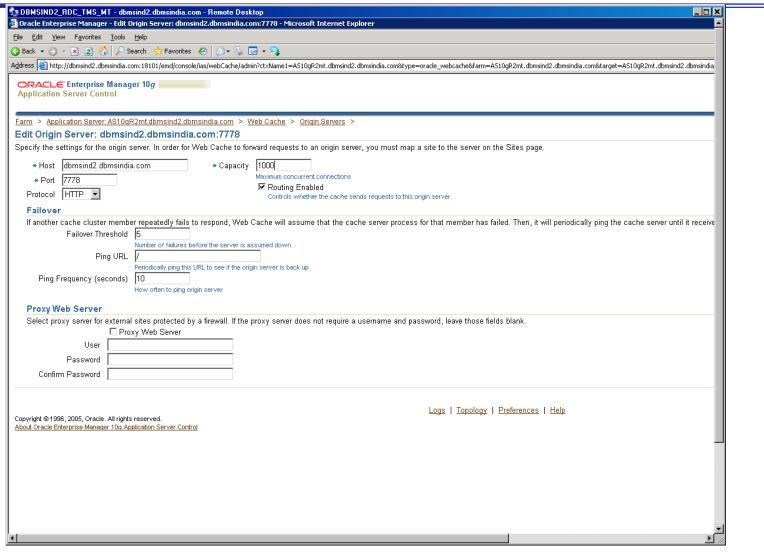- Restart "Web Cache" component

Web Cache Timeout (2)

Web Cache Origin Servers

- Login to AS10g Oracle Enterprise Manager

- Click the MT Instance link

- Click the link for the "Web Cache" component

- Click Administration

- Click Origin Servers

- Click Edit

- Set Capacity to 1000

- Restart "Web Cache" component
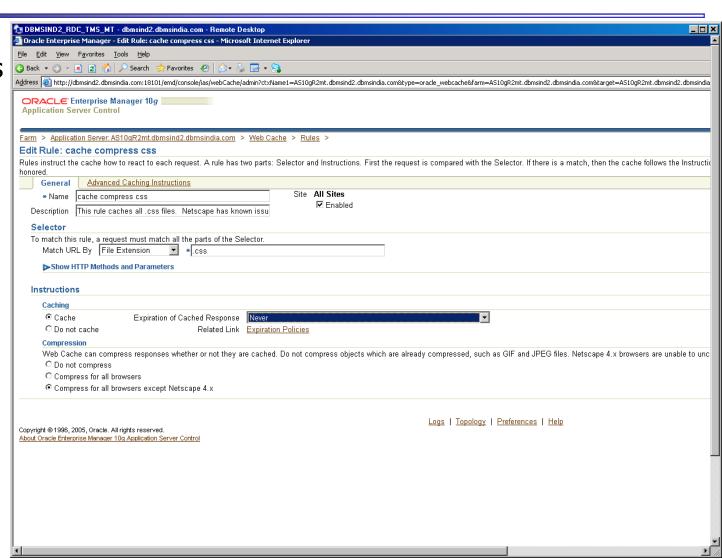
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Web Cache Origin Servers

Web Cache Rules

- Login to AS10g Oracle Enterprise Manager
- Click the MT Instance link
- Click the link for the "Web Cache" component
- Click Administration
- Click Rules
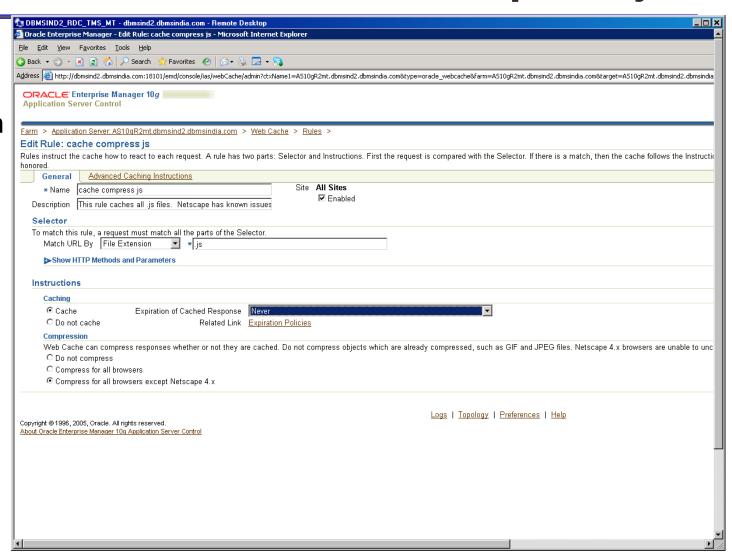
Web Cache Rule – cache compress css

- Click cache compress css

- Set Expiration of Cached Response to Never

- Click OK
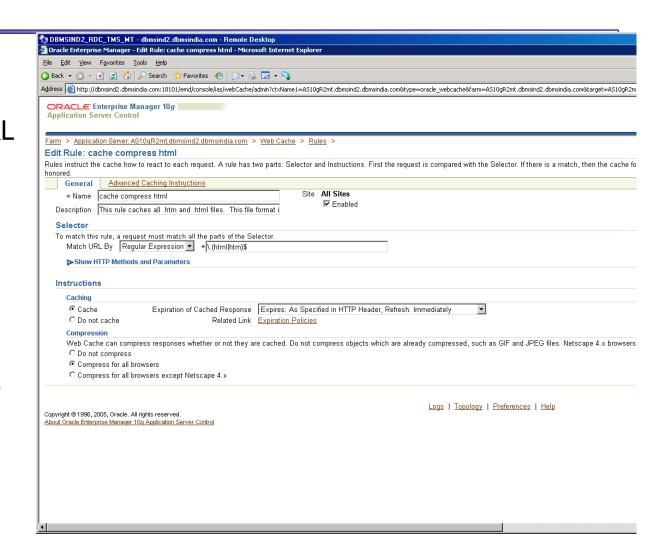
Web Cache Rule – cache compress js

- Click cache compress js
- Set Expiration of Cached Response to Never
- Click OK

Web Cache Rule – cache compress html

- Click cache compress html
- Choose Match URL By "Regular expression" with value: \.(html|htm)$
- Set Expiration of Cached Response to Expires: As Specified in HTTP header, Refresh: Immediately
- Click OK

HTTP Server httpd.conf

- Backup and edit the file <drive>:\Oracle\AS10gR2mt\Apache\Apache\conf\httpd.conf

- Set MaxKeepAliveRequests to 0

- Set KeepAliveTimeout to 900

- Set MaxSpareServers to 100

- Set MaxRequestsPerChild to 0

- Set MaxClients to 600

Registry: SharedSection

- Run Regedit

- Navigate to HKEY_LOCAL_MACHINE -> System -> CurrentControlSet -> Control -> Session Manager -> Subsystems -> Windows

- Change SharedSection value to 1024,3072,4096,4096

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Lite Browser Timeout – bc4j.xcfg

- Change Lite Browser timeout to 60 minutes.
- Backup and edit file <drive>:\oracle\as10gr2mt\j2ee\opa\applib\oracle\pharma\opa\bc4j\common\bc4j.xcfg:
- Change line <jbo.ampool.maxinactiveage>120000</jbo.ampool.maxinactiveage> to <jbo.ampool.maxinactiveage>3600000</jbo.ampool.maxinactiveage>

Lite Browser Timeout – bc4j.xcfg

```
bc4j.xcfg - WordPad
File  Edit  View  Insert  Format  Help

<?xml version = '1.0' encoding = 'UTF-8'?>
<BC4JConfig>
    <AppModuleConfigBag>
        <AppModuleConfig name="OpaRootAppModuleLocal">
            <jbo.ampool.maxinactiveage>3600000</jbo.ampool.maxinactiveage>
            <AppModuleJndiName>oracle.pharma.opa.bc4j.OpaRootAppModule</AppModuleJndiName>
            <DeployPlatform>LOCAL</DeployPlatform>
            <jbo.ampool.connectionstrategyclass>oracle.pharma.opa.bc4j.fwk.OpaConnectionStrategy</jbo.ampool.connectionstrategyclass>
            <jbo.poolmaxavailablesize>200</jbo.poolmaxavailablesize>
            <JDBCName>sun5x12_rejndrup</JDBCName>
            <ApplicationName>oracle.pharma.opa.bc4j.OpaRootAppModule</ApplicationName>
            <jbo.maxpoolsize>0</jbo.maxpoolsize>
            <jbo.ampool.maxavailablesize>200</jbo.ampool.maxavailablesize>
            <jbo.ampool.sessioncookiefactoryclass>oracle.pharma.opa.bc4j.fwk.OpaSessionCookieFactory</jbo.ampool.sessioncookiefactoryc
            <java.naming.factory.initial>oracle.jbo.common.JboInitialContextFactory</java.naming.factory.initial>
            <jbo.poolminavailablesize>0</jbo.poolminavailablesize>
            <jbo.server.internal_connection>bc4j_internal</jbo.server.internal_connection>
            <jbo.ConnectionPoolManager>oracle.jbo.server.ConnectionPoolManagerImpl</jbo.ConnectionPoolManager>
            <TransactionFactory>oracle.pharma.opa.bc4j.fwk.OpaDatabaseTransactionFactory</TransactionFactory>
            <jbo.ampool.minavailablesize>0</jbo.ampool.minavailablesize>
            <jbo.ampool.monitorsleepinterval>120000</jbo.ampool.monitorsleepinterval>
        </AppModuleConfig>
    </AppModuleConfigBag>
    <ConnectionDefinition name="sun5x12_rejndrup">
        <ENTRY name="JDBC_PORT" value="1529"/>
        <ENTRY name="ConnectionType" value="JDBC"/>
        <ENTRY name="HOSTNAME" value="opasun5"/>
        <ENTRY name="user" value="rejndrup"/>
        <ENTRY name="ConnectionName" value="sun5x12_rejndrup"/>
        <ENTRY name="SID" value="sun5x12"/>
        <ENTRY name="JdbcDriver" value="oracle.jdbc.driver.OracleDriver"/>
        <ENTRY name="password">
            <![CDATA[{904}05FB828C5AF68AB5E07720220818A94B7D1F2C47D61925CEDF]]>
        </ENTRY>
        <ENTRY name="ORACLE_JDBC_TYPE" value="thin"/>
        <ENTRY name="DeployPassword" value="true"/>
    </ConnectionDefinition>
</BC4JConfig>
```

Lite Browser Timeout – web.xml

- Change Lite Browser timeout to 60 minutes

- Backup and edit file

- <drive>:\oracle\as10gr2mt\j2ee\opa\applications\tms\tmsUix\WEB-INF\web.xml:

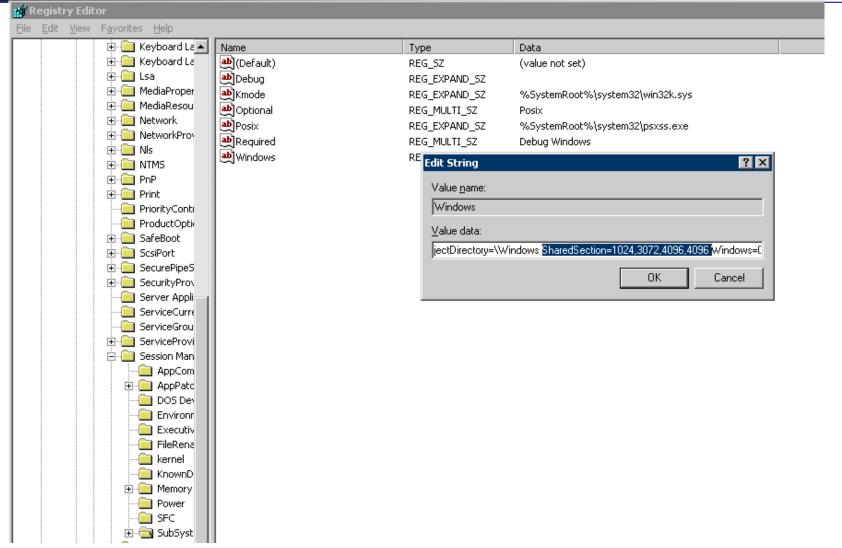- Change line <session-timeout>20</session-timeout> to <session-timeout>60</session-timeout>

Lite Browser Timeout – web.xml

```
web.xml - WordPad
File  Edit  View  Insert  Format  Help

<?xml version = '1.0' encoding = 'windows-1252'?>
<!DOCTYPE web-app PUBLIC "-//Sun Microsystems, Inc.//DTD Web Application 2.3//EN" "http://java.sun.com/dtd/web-app_2_3.dtd">
<web-app>
  <description>Empty web.xml file for Web Application</description>
  <servlet>
    <servlet-name>uix</servlet-name>
    <servlet-class>oracle.cabo.servlet.UIXServlet</servlet-class>
    <init-param>
      <param-name>oracle.cabo.servlet.pageBroker</param-name>
      <param-value>oracle.pharma.opa.uix.OpaPageBroker</param-value>
    </init-param>
    <!-- Specify the PageFlowEngine -->
    <init-param>
      <param-name>oracle.cabo.servlet.event.PageFlowEngine</param-name>
      <param-value>oracle.pharma.opa.uix.OpaPageFlowEngine</param-value>
    </init-param>
    <init-param>
      <param-name>oracle.cabo.servlet.loggedInKey</param-name>
      <param-value>oracle.pharma.opa.loggedIn</param-value>
    </init-param>
    <init-param>
      <param-name>oracle.cabo.servlet.io.FileUploadManager</param-name>
      <param-value>oracle.pharma.opa.uix.fileupload.OpaFileUploadManager</param-value>
    </init-param>
    <load-on-startup>1</load-on-startup>
  </servlet>
  <servlet-mapping>
    <servlet-name>uix</servlet-name>
    <url-pattern>*.uix</url-pattern>
  </servlet-mapping>
  <servlet-mapping>
    <servlet-name>uix</servlet-name>
    <url-pattern>/uix/*</url-pattern>
  </servlet-mapping>
  <session-config>
    <session-timeout>60</session-timeout>
  </session-config>
  <mime-mapping>
    <extension>html</extension>
    <mime-type>text/html</mime-type>
```

Registry – SharedSection

Question and Answers

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Biographies

Sunil G. Singh, President & CEO, DBMS Consulting, Inc.

- Sunil is a Global Oracle Health Sciences deployment expert for DBMS Consulting. He has been an active member of the OCUG community since 1996 and is extremely grateful for this opportunity to makes these presentations at OCUG 2009.

Bill Caulkins, Director, Global Application Development and Deployment, DBMS Consulting, Inc.

- Bill has worked with Oracle databases since 1987 as an application developer, database administrator, systems analyst, and project manager. He has worked in the pharmaceutical industry since 1991, primarily in the clinical trials arena. His interests and areas of expertise include information sharing, data integration, performance tuning, and getting the most out of PL/SQL. He enjoys implementing solutions which enable people to focus more of their time on business challenges, and less of their time on technology.

Jose Garcia, Vice President, DBMS Consulting, Inc.

- Jose is the VP of systems architecture and performance/capacity planning for DBMS Consulting. He is responsible for developing methodologies and standards and best practices for architecting high throughput enterprise class Oracle RDBMS based solutions. He is also responsible for developing methodologies for the troubleshooting of performance problems on Oracle RDBMS based systems. Jose has over 13 years of experience assisting clients in both the health and financial services sectors.