Weblogic Administration for a leading company in global business process outsourcing industry by UBN

- Case-1

  The Challenge

  One of leading companies in global business process outsourcing industry wanted support for the design, planning, management, and operational support of their Enterprise Middleware/Weblogic infrastructure. This global CRM industry leader wanted to implement early warning system to alert its engineering team upfront of any issues in their weblogic servers. At the same time Client wanted not to degrade server performance like high CPU or memory usage due to these continuous monitoring systems.

  The Solution

  UBN's weblogic administration team carefully analyzed each of the requirement items. Requirement items were performed in accordance to the developed and agreed-upon design documents & provided the following solutions

  - UBN's weblogic administration team implemented Automated Warning System for client's weblogic servers (10.3.6, 10.3.0 & 8.1.6)
  - This Automated Warning System sends out two brief emails, i.e. one describing server state, other describing server's warning state reason due to stuck threads, low free memory available in server or JDBC connection pool of any app not in running state or JMS alerts or server in RUNNING state but health Overloaded due to server is low on memory.

  The Benefits
  - This early warning system prevented outage of mission critical systems.
  - This automated alert system reduced workload of client's engineering team.
  - It generated automated thread dumps which helped in root cause analysis of any incidents raised by client's customers.

  The Technology
  - Implemented WLST for accessing Weblogic Server MBeans.
  - UBN's weblogic admin team wrote Weblogic Monitoring Script in WLST which could monitor JVM, Execute Queue, JDBC and JMS resources of all the Weblogic instances running in a domain and generate early warning system for client's engineering team to prevent servers going into WARNING or SHUTDOWN state.

- **Case -2**

The Challenge

One of leading companies in CRM BPO support services wanted to implement load balancer to handle user load, prevent direct access to managed servers and preferred a solution which ensures scalability, continuous availability of mission critical applications without any major expense.
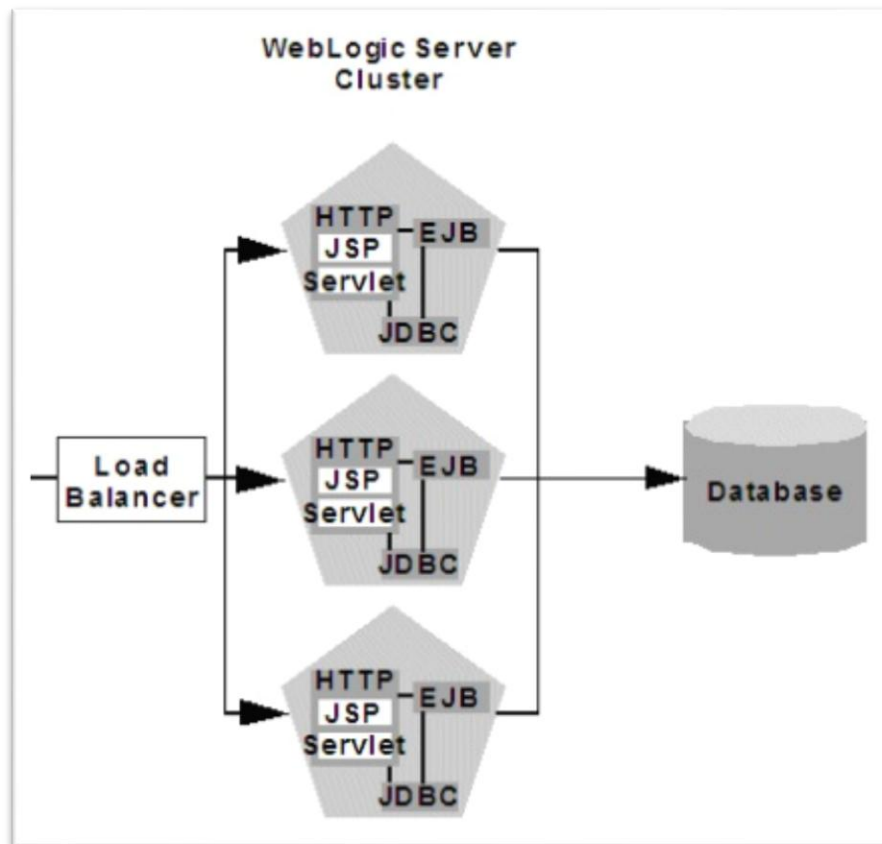
The Solution

UBN's weblogic administration team provided the following solutions

- o Analyzed carefully the existing options to implement load balancer with weblogic.
- o Carefully studied all available options and decided the best option suitable for the requirement without any major expenses.

The Benefits

- o Call center agents used to hit front end proxy URL and did not Keep each URLs of same application running in different managed servers.
- o This helped secure managed servers and distribute load across managed servers in cluster.
- o It ensured continuous availability with scalability of mission critical applications.

The Technology

- o Weblogic Server supports the following Web servers and associated proxy plug-ins:
  - Weblogic Server with the HttpClusterServlet
  - Sun One Web Server (formerly known as Sun One Web Server) with the Netscape (proxy) plug-in
  - Apache with the Apache Server (proxy) plug-in
  - Microsoft Internet Information Server with the Microsoft-IIS (proxy) plug-in
  - o Installed the Apache HTTP Server Plug-In as a Dynamic Shared Object
  - o Configured SSL with Apache plug in
- **Case -3**

  The Challenge

  One of our MNC clients wanted to do memory analysis, performance analysis of their applications before going to production which would help them detecting issues due to memory leak, unhandled exceptions before the apps goes to production.
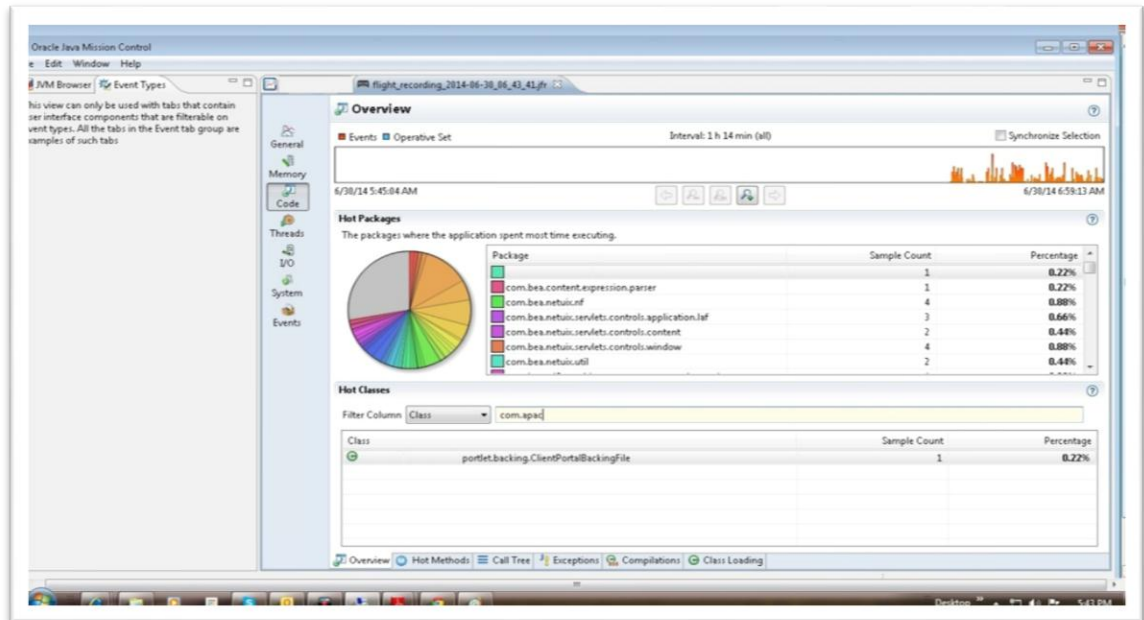
  The Solution

  UBN's weblogic administration team provided the following solutions

  - o UBN's weblogic admin team did memory analysis to detect memory leak if any in the apps developed by client's engineering team.
  - o UBN's weblogic admin team did performance analysis of client's app to detect Hot methods or classes using more memory

  The Benefits
  - o Memory analysis by UBN's weblogic admin team ensured client's weblogic infrastructure remains healthy, memory leak detected upfront.

- Performance analysis helped client's server remains healthy, detecting the bug in code before going to production.

The Technology

- Analyzed available options and choose to use Oracle Java Mission Control for memory analysis.
- Tried to get insight into every object created by application, identified memory leaks caused by unintentional object retention (loitering objects).
- Did flight recording, while running test cases, analyzed JFR file created through flight recording and viewed all of the objects created by our use case that remain in the heap for further analysis.
- Pie charts through JMC showed latencies for various operations which helped detect bottleneck in app.