ManageEngine Applications Manager in Financial Domain

Abstract:

A leading bank with thousands of branch offices deployed Applications Manager to monitor their back office applications used in different countries. Some of the applications they have like Loan processing, account creations and approvals, B2B transactions are custom built web applications. These applications form an important part of the banks functioning and are used by 1000s of employees of the bank. These N Tiered applications deployed on popular J2EE Servers need to be fast (good response times) enough to ensure faster customer handling and better employee productivity.

This Business Case will enable you to visualize how ManageEngine Applications Manager is used in by a financial institution to ensure better end user satisfaction. The emphasis was on monitoring the web applications used for their back office work processing.

Customer Environment:

The operations of the financial institution are spread across the world. They have two primary data centers – one in UK and another in Australia. Their servers primarily consist of UNIX, Windows, Linux and Solaris flavors. They have lot of critical web applications hosted on a WebSphere Application Server that uses Oracle as the backend. They also have other custom Java applications that perform specific tasks that use MS SQL Server and other databases.

The two data centers have strict firewall rules that do not allow too many ports to be opened. Hence they decided to deploy ManageEngine Applications Manager Enterprise Edition – which supports a distributed architecture. They deployed Applications Manager - Managed Server in each of the locations. They then ran the central server, which is an Applications Manager Admin Server in UK.
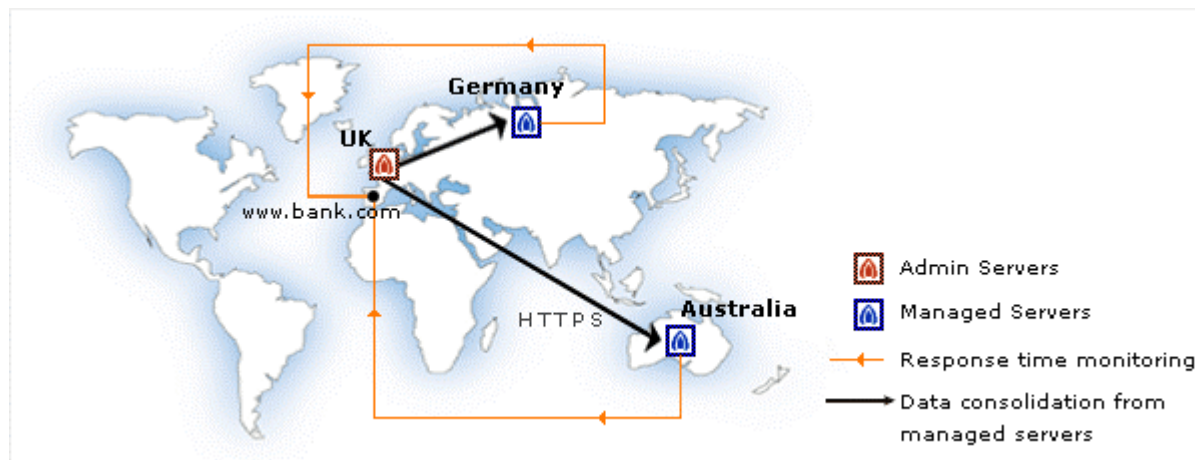
Evaluation and Team Setup:

The Manager of IT, Mr. Daniel Carter guided the setup of the monitoring tool. He decided on the policies and set up guidelines that helped the rest of the Application Support team.

The Applications Support Team is located in Europe. They have lots of mission critical business applications which help the financial institution run their operations in Europe and rest of the world.

The primary job of the Applications Support Team is to ensure that the applications and application infrastructure components are running smoothly. Applications Support Team manages the application servers, servers and databases for their internal business services teams. For them, these internal application teams are customers. They support hosting of business applications in various data centers and ensure that they meet the predefined SLAs for uptime and application performance.

 The team comprises of Operators and Administrators who are experts in their domain. The following are some of the key stakeholders:
- WebSphere Administrators
- Oracle DBAs
- Server specialists
- Line of Business Managers

Administrator: The Administrator sets up ManageEngine Applications Manager for monitoring and configuring alerts etc.

Operators: They work on a 24x7 mode, with 3 shifts and take care of any outage.
The operators too login to the same web console and have views that are specific to their area of focus. The operator takes corrective action and will be involved in firefighting if the need arises.

All Monitors

Name	Availability	Health
demo-zohovo.idc.adventnet.com_JBOSS-server	red	red
demo-zohovo.idc.adventnet.com_WEBLOGIC-ser...	red	red
192.168.112.233	green	red
MyServiceService	green	red
192.168.105.149_ORACLE-DB-server_adventdb ...	green	red
192.168.113.114_DB2-server	green	red
192.168.113.114_JMX1.2-MX4J-RMI_11099	green	red
Production-MySQL-1	green	red
data file	green	red
192.168.105.149	green	red
demo-appmanager_Tomcat-server_80	grey	red
Application Manager	green	green
Forums Home Page	green	green
AppManager Forums	green	green
192.168.105.149_IIS-server	green	green
192.168.105.149_MSSQL-DB-server	green	green
Switch-SZ-15	green	green
192.168.105.149_WEBLOGIC-server_7001	green	green
192.168.105.149_WebSphere-server	green	green
192.168.113.114_Apache-server	green	green
AdventNet Sequence	green	green
192.168.113.114_JBOSS-server_18080	green	green
192.168.113.114_JDK1.5_11099	green	green
console	green	green
Internet Demo APM	green	green
192.168.113.114_ORACLE-APP-server_7200	green	green
192.168.113.114_Tomcat-server	green	green
192.168.113.114_WTA_55555	green	green
demo-appmanager_Apache-server	green	green
Production-MySQL-demo-2	green	green
demo-appmanager-80	green	green
demo-zohovo.idc.adventnet.com_Apache-server	green	green
demo-zohovo.idc.adventnet.com	green	green
demo-zohovo.idc.adventnet.com_Tomcat-server	green	green
AppManager Home Page	green	green

All Alerts-Critical and Warning

Monitors	Type	Status	Time
Database Cluster	Monitor Group	red	Nov 1, 2007 3:04 AM
Production-MySQL-1	MySQL	red	Nov 3, 2007 11:09 PM
demo-zohovo.idc.adventnet.com_JBOSS-s...	JBoss	red	Nov 21, 2007 5:13 AM
demo-zohovo.idc.adventnet.com_WEBLOGI...	WebLogic	red	Nov 21, 2007 5:18 AM
192.168.105.149_ORACLE-DB-server_adve...	Oracle	red	Nov 26, 2007 10:09 AM
data file	Files	red	Nov 27, 2007 12:36 AM
NewYork DC	Monitor Group	red	Nov 27, 2007 12:36 AM
demo-appmanager_Tomcat-server_80	Tomcat	red	Nov 28, 2007 8:02 AM
MyServiceService	Web Service	red	Dec 1, 2007 2:24 AM
App Server Cluster	Monitor Group	red	Dec 1, 2007 2:25 AM
192.168.112.233	Unknown	red	Dec 1, 2007 2:29 AM
192.168.105.149	Unknown	red	Dec 1, 2007 2:29 AM

Monitor Groups

Name	Availability	Health	Monitors' Status
Customer Portal Business Service	red	red	2/6 in error
Monitoring Demo	red	red	3/16 in error
loan processing Application	green	red	2/7 in error

How ManageEngine Applications Manager is used?

Their policy is to be proactive and not reactive. They set Thresholds and Alerts and track Reports to ensure that all applications, especially their WebSphere Servers are functioning as per the requirement.

Mr. Daniel Carter ensures that line of business managers (the managers of various business units like Loan Processing, Credit Cards etc.) are happy by ensuring that the IT resources maintained by his team are running with good performance. He sends reports generated by ManageEngine Applications Manager, to Business Managers on a weekly basis.

Business Service Centric View to Management: Loan Processing Application

Let us explore the Loan processing Application of this bank in detail. The ultimate concern would be to have maximum uptime for the loan processing application. The top level SLA would be to maintain 99.95% uptime for this application.

This Business Application comprises of

- Application Servers – Clustered WebSphere
- Databases – Clustered Oracle
- Servers – Solaris, Linux clusters
- Web Servers

Each of these resources can be grouped as Sub-Groups for effective management. Dependencies are then set out for the various sub groups to ensure load balancing is factored in while deciding application uptime. Network Devices are grouped as a separate group. Similarly slave and master databases are put into a group of its own, with rules that if any one is up, the database is still up. However alert emails get sent out to operations to take care of the database that is now offline.

Additionally with alerting and fault management in place operators can be notified when there is a problem. Operators will also be able to better appreciate the impact to the business as they get alerts that inform them on what business services are impacted.
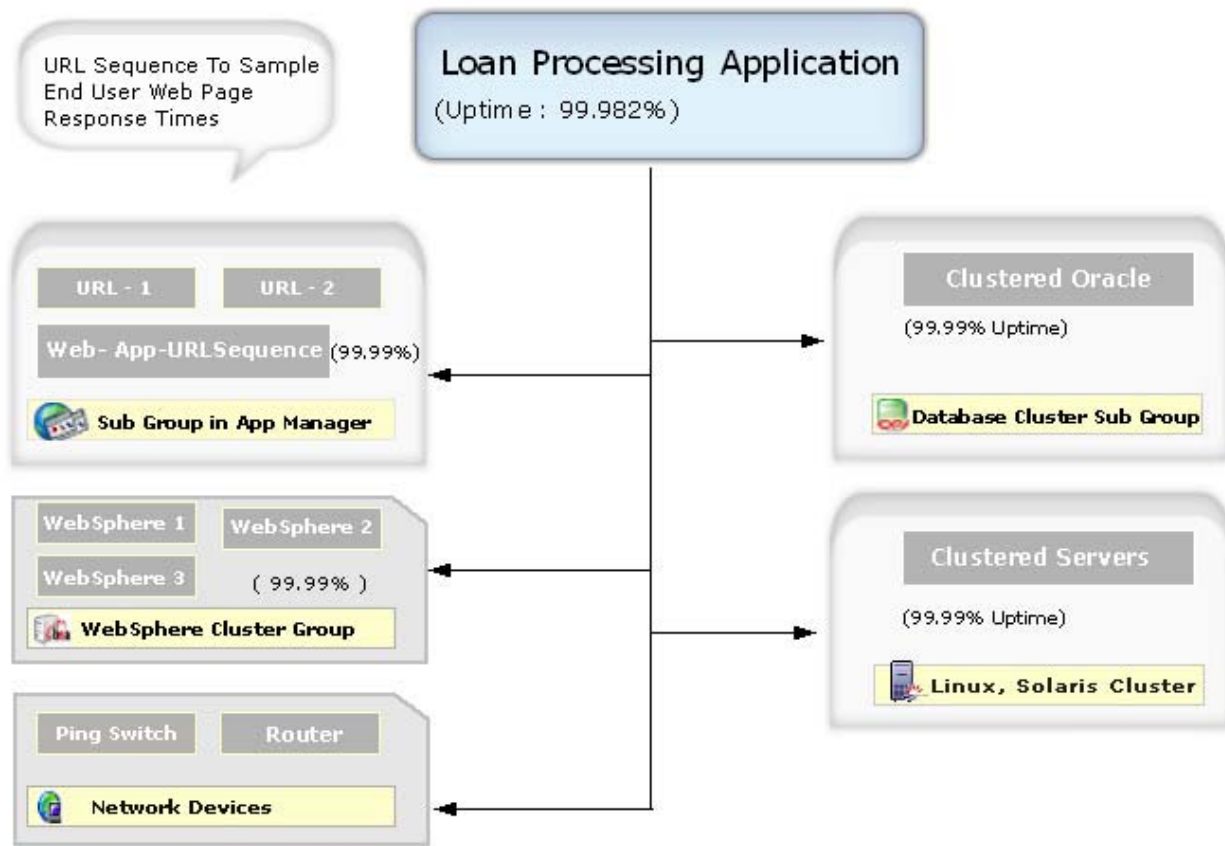
Applications Manager collects performance metrics for the databases and application servers. These stats are archived and history is maintained for long periods of time. This helps managers to plan and take better decisions about their resource usage. The URL sequence monitors also give a better picture on how the web applications respond, giving an insight in to an end user experience.

Many other financial institutions all over the world have also deployed ManageEngine Applications Manager to take care of their monitoring requirements.

Visit the **ManageEngine Applications Manager** website, www.appmanager.com and download your free trial.

ManageEngine® is the leader in low-cost Enterprise Management Software. Our IT Management solutions cover Networks, Data Centers and Desktops. www.manageengine.com