

Extending WebLogic Domain

datAvail

Presented by Will Williams
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About Me

- Ⓜ Sr. Lead Applications Developer, Datavail
- Ⓜ Bachelors in Computer Information Systems
- Ⓜ More than 20 years experience
- Ⓜ IT professional in healthcare, finance, telecom and DOD
- Ⓜ Expert in Java/JEE on WebLogic



About Datavail

- ④ Focused on data management and database support
- ④ Oracle, Oracle Applications, SQL Server, DB2, MySQL, MongoDB and SharePoint
- ④ Supports managed services to projects, staff augmentation to 24x7 operational support
- ④ The largest data management and database services company in North America
- ④ Clients include Fortune 100 to mid-sized companies and startups that rely on 24x7 monitoring and response for critical database infrastructure

When, Why and What to Keep in Mind

- ⤴ Typical Cases
- ⤴ Short Term & Long Term Vision
- ⤴ New Development
- ⤴ Forgotten Requirements
- ⤴ Business & Stakeholder Requirements
- ⤴ End of Life
- ⤴ Developing a Plan
- ⤴ Execution

Case 1: Sleeping Giant



Story:

A company has an existing application running on an existing WLS domain. However the application is seeing increased transaction volume due to an increase in customers. The application starts to experience high memory usage and locked/block threads.

Existing WebLogic platform:

1 Admin Server

1 Managed Server

Case 2: Godzilla



Story:

The company is growing and to meet the needs of the customers, they are developing a new mobile application to provide customer account information and services. The new application is using new technology. Moreover, the company is anticipating an increase in transaction volume.

Existing WebLogic platform:

- 1 Admin Server
- 2 Managed Servers

Case 3: Almost Dead



Story:

The hardware has reached the end of its service warranty. The company is looking to replace with new hardware and a virtualization solution.

Existing WebLogic platform:

- 1 Admin Server
- 2 Managed Servers

Short and Long Term



- ⓘ Development around the corner?
- ⓘ Forgotten requirements: Scalability, performance, HA and DR
- ⓘ Business needs, plans and forecast from stakeholders
- ⓘ EOL of hardware and software

New Development

- Ⓜ An application is being developed that exceeds the existing platforms capability
- Ⓜ New technology stack
- Ⓜ New Java requirement
- Ⓜ Performance
- Ⓜ Service Level Agreement (SLA)



Forgotten



- ⤴ High Availability
- ⤴ Disaster Recovery
- ⤴ Scalability

Business/Stakeholder Requirements



- Ⓜ Projected line of business forecast (i.e. acquisitions)
- Ⓜ Business requirements (i.e. security, employee growth, acquisitions)
- Ⓜ Forgotten requirements (i.e. software compatibilities)

End of Life



- ⓘ Oracle WebLogic has reached EOL
- ⓘ JDK has reached EOL
- ⓘ Hardware out of warranty

Time to Plan



- ⬆ Things to consider
- ⬆ Procedures
- ⬆ Fallback
- ⬆ Network Verification
- ⬆ Application Verification

Things to Consider

- Ⓜ Is the domain distributed?
- Ⓜ Hardware Resources
- Ⓜ Network Load Balancing
- Ⓜ Network configuration (i.e. firewalls and ports)
- Ⓜ Network Storage
- Ⓜ SSL Security Configuration
- Ⓜ Application Deployment
- Ⓜ Downstream Services & Resources



Downstream Services and Resources

ⓐ Data Sources

- Is there a need to increase the number of connection parameters?

ⓐ SOA Services

- Will there be an increase number of requests?
- How will this impact application deployment?

ⓐ Messaging Services

- Will the deployment change?



Procedures

- ④ Gather Network Configuration
- ④ Plan Outage
- ④ Shutdown the Domain
- ④ Perform Backup (i.e. use pack and unpack)
- ④ Extend Using WebLogic Configuration Wizard
- ④ Restart Domain
- ④ Server Verification
- ④ Application/Deployment Configuration



Fallback



- ⓘ Recover the original domain configuration using pack and unpack tools
- ⓘ Pack command creates a template archive (.jar) file that contains a snapshot of the entire domain
- ⓘ Unpack command will recreate the full domain
- ⓘ Redeploy applications (by default application files are not included in a Managed Server template)

Conclusion



- ⤴ When to extend WebLogic
- ⤴ Why to extend WebLogic
- ⤴ What to keep in mind before executing

Open to Questions



- Ⓜ For further questions
- Ⓜ Contact us: 866-600-2995
- Ⓜ www.datavail.com