Prior to the release of the System Management Console (SMC), Northrop Grumman’s system maintenance and administration was performed in an ad-hoc and reactionary manner. Northrop Grumman did not have a good tool for aggregating and filtering the information contained within various log files distributed over a remote file system. Administrators used UNIX commands to monitor log files, which proved to be insufficient when dealing with rolling log files. Due to the various methods of monitoring the system, users were left with an inconsistent view of overall system health.

**:: Motivation ::**

Northrop Grumman is a multi-billion dollar global defense and technology company who provides innovative systems in the fields of information services, electronics, aerospace and shipbuilding to government and commercial customers worldwide.

**Development Technologies**

- Trac
- Subversion
- JUnit
- Abbot

**Application Technologies**

- Windows Server 2003
- Apache log4j
- Apache Tomcat
- JEE
- Java 1.5
- Oracle 10g

**:: Final Product ::**

- Display the contents of multiple logs from multiple folders simultaneously
- Update the display as the log files are updated
- Handle rolling logs seamlessly
- Provide the ability to filter or restrict displaying of log files
- Export selected log messages to XML and CSV formats
- Deliver email and visual alerts based on user-defined conditions
- Provide the functionality for users to query a database
- Provide data and statistics acquired from log files and the database through a web service

**:: High Level Architecture ::**

- Log Files
- << SMTP >>
- Mail Server
- << JEE/REST >>
- Northrop Grumman Intranet
- System Management Console Server
- << SQL >>
- Oracle 10g
- << Socket >>
- SMC Client 1
- << Socket >>
- SMC Client 2
- << Local ID >>

**:: Process / Methodology ::**

- Cumulative Cost
- Progress Through Steps
- Identify & Resolve Risks
- Commitment
- Partition
- Review
- Plan for the next iteration
- Release
- Milestone 1
- Milestone 2
- Milestone 3
- Final Milestone
- Perform Performance Metric Gathering
- DESIGN VALIDATION AND VERIFICATION
- SOFTWARE PRODUCT DESIGN
- INTEGRATION AND TEST PLAN
- DEVELOPMENT PLAN REQUIREMENTS VALIDATION
- SOFTWARE RQTS PLAN
- LIFE CYCLE Plan Concept of Operation
- RISK ANALYSIS
- RISK ANALYSIS
- RISK ANALYSIS
- MILESTONE 1
- MILESTONE 2
- MILESTONE 3
- FINAL MILESTONE
- UNIT AND ACCEPTANCE TESTING
- SYSTEM FEATURES
- SYSTEM FEATURES
- PROCESS / METHODOLOGY

**:: System Features ::**

- Display the contents of multiple logs from multiple folders simultaneously
- Update the display as the log files are updated
- Handle rolling logs seamlessly
- Provide the ability to filter or restrict displaying of log files
- Export selected log messages to XML and CSV formats
- Deliver email and visual alerts based on user-defined conditions
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