



## Case Study: Dimension Data – GSOA Quality Assurance

### About the Company

Dimension Data (DD) is a global IT services and solution provider that helps customers plan, build, and support their IT infrastructures. The company is listed on the London Stock Exchange [DDT LSE] and operates in 30 countries on five continents. DD applies its more than 23 years of experience in technology infrastructures, networking, security, operating environments, storage, and contact center technologies and its unique blend of skills in integration, consulting and managed services. The aim is to create solutions that can help clients to realize a greater return on their IT investments. To achieve this, DD delivers solutions using its proprietary **Application Network** architectural framework.

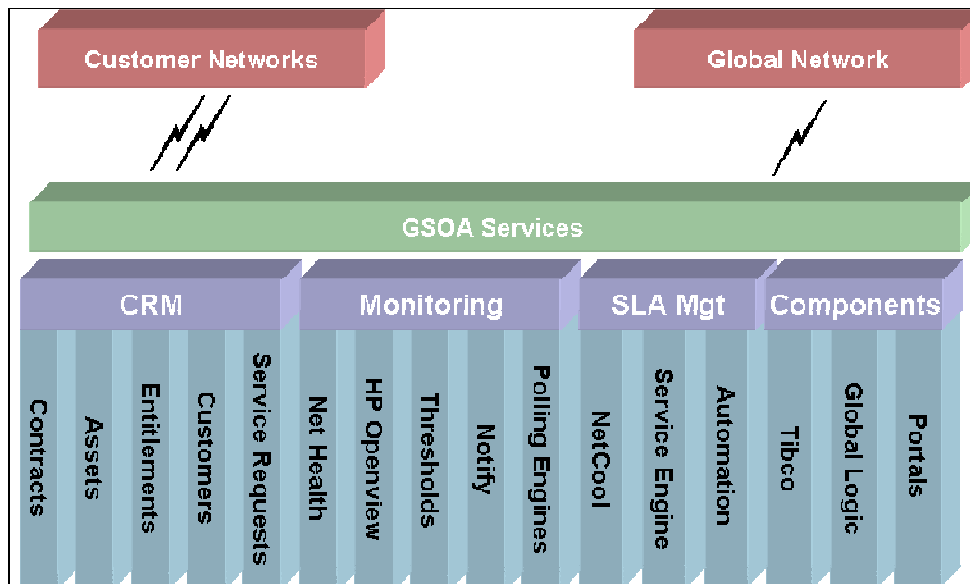
### Project Description

The Global Services Operating Architecture (GSOA) was developed by DD as its Services Operating System Platform for all its Global Online Services initiatives. GSOA is a complex Eco-system consisting of commercial software tools, in-house software and application-to-application integration modules that allows all of the various system components to interact as a single system.

The Global Services Operating Architecture allows a consistent and seamless provision of services to multi-national customers as well as regional and country organisations. Service management is consistent and offers an unequalled value proposition to the corporate world.

The components of the Global Services Operating Architecture include:

- CRM component in Siebel Systems
- Global Logic Engine
- Set of correlation and event management tools from Micromuse/Netcool
- Performance management and reporting tools from Concord
- Active agents
- An advanced Poller mechanism
- Automated diagram generator
- Automated systems configuration module
- Advanced integration modules
- Customer services portal





To cater for Dimension data's business requirements, the GSOA Siebel instance has been heavily customised over a period of time. These customizations have led to GSOA specific business flows. Any issues with these business flows disrupt the day to day functioning of the Operation Centre. Hence, it is necessary to test these flows before each release so as to maximize system usage and availability.

### **Business Challenges**

- GSOA operations needed to be built upon strong release and deployment methodologies to ensure high system availability.
- DD further struggled to standardise GSOA architecture across different regional instances. Due to setups in 5 different locations, management was unable consolidate organizational level statistics for improvement and strategizing.
- Design and Implementation challenges and heavy customization in Commercial products such as Siebel meant a substantial effort and cost
- There was a pressing need to ensure improved system availability and fewer application failures to protect existing business and target new customers.

### **Nihilent's Role**

Nihilent's Quality Assurance group is responsible to define and execute test strategies and plans for every GSOA release to improve the overall system stability and availability.

- Test Strategy Definition
  - Testing Mechanisms
  - Testing Tool Selection
  - Test Scenario Definition
- Testing Automation
  - Design scenarios to be automated
  - Develop / Script automated test cases
  - Functional, Performance and Security Testing
- Manual Testing
  - Development/Updation of Test Cases
  - Multiple rounds of end-to-end System Testing before every major release
- Performance and Stress Testing of critical functionalities
- Quality Management
  - Development & Testing methodology
  - Code reviews
- Documentation Management – central repository & update
- Rollout Management
  - Preparation for Major Releases (Support & Development Cycles)
  - Rollout Management for critical business functionalities



## **Platform and Technologies**

- Platforms: Microsoft, Linux, Sun Solaris
- Packaged Applications: Siebel, Micromuse Netcool, Concorde NetHealth, SAP
- Integration Applications: TIBCO, Siebel - SAP Integration, XML, Biztalk
- Programming Technologies: Java, C, Perl, Shell scripting, CGI, PHP, dotNET
- Web Servers: Apache, Tomcat, IIS, Axis
- Databases: MS SQL Server, Oracle, Mysql
- Networking Protocols: TCP/IP, SNMP, ICMP, Telnet, SSH
- Automation Tools: Mercury

## **Business Benefits Delivered**

- By using ISO 9001:2000, CMMi and ITIL best practices, and Nihilent's own Software Testing methodology, Nihilent has been successfully able to improve the overall system stability and reduce application failure. This meant substantial reduction in support effort and costs
- By means of aggressive test automation using tools like Mercury QTP and custom scripts for load testing, Nihilent has been able to bring the functional testing time from several months taken by DD down to weeks. Similarly, regression testing time has come down from weeks to days. This has significantly reduced the time to market for new DD services and solutions, and ensuring high quality delivery into production
- Overall investments in Quality Assurance, resulting into reduced service delivery management effort, has led to DD being able to focus more on new solutions and functional enhancements, including ITIL implementation and Security
- The ability to bring new services and solutions to the market quickly has led to an enhanced Service Portfolio, enabling DD to be much aggressive in their strategies to pursue new opportunities and react to competitors actions