

Use Case

Vodafone / ARD - Transport Network



Vodafone's customer is ARD, a German consortium of public broadcasters. ARD has 12 different distributed central stations where content and data are exchanged. In order to streamline the complex processes and allow the user to focus on their daily jobs (seamless transport of data/content), ARD issue an RFP in 2009 to have a production system by 2011. After an extensive selection process, Vodafone was selected as the prime contractor and granted Dimetis with supplying the OSS solution. Dimetis implemented and adapted a solution over the next 18 months, based on **BOSS Link Manager®**.

Communications Service Provider

- Vodafone Group plc "Vodafone", headquarters in London
- Ranked 2nd worldwide in the number of connections (2014)
- Owns and operates networks in 26 countries and has partner networks in over 50 additional countries

Challenges (for Vodafone's customer, ARD and their users)

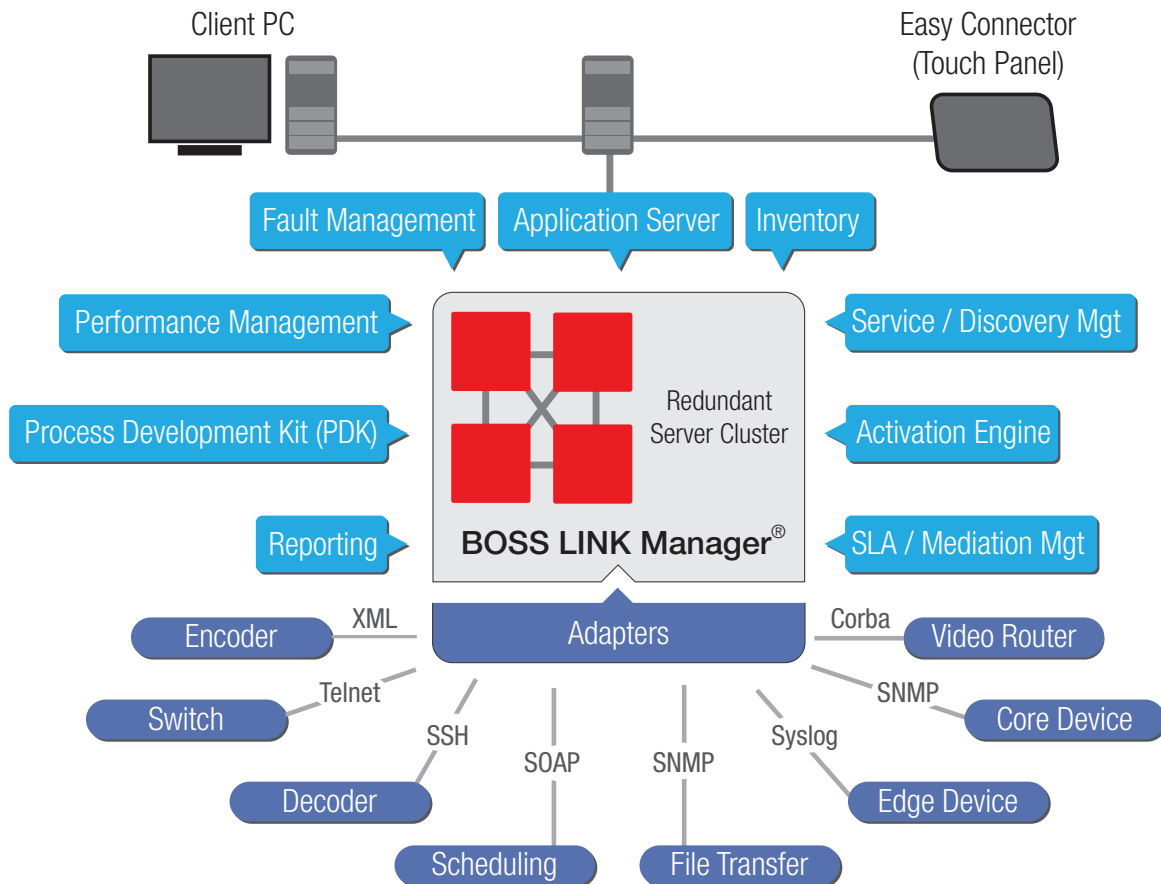
- Delivery of mission critical content to sensitive viewers
- Management of a complex networks with multi-vendor hardware
- Lack of network configuration and scheduling tools
- Hard to troubleshoot network issues in real-time
- Danger of losing revenue by feed content failure
- Lack of effective resource management
- Resource intensive provisioning of services across multi domain/technology
- 24x7 operations, live feeds and coordination of maintenance
- Lack of monitoring, fault management and resource/bandwidth management tools

Solution

BOSS LINK Manager is a provisioning system that dynamically configures, schedules and controls video, audio and data networks. It *simplifies* engineering, planning and operation of networks independently from the infrastructures and technologies deployed. Service providers can create and deliver services across wide area networks in seconds through a simple graphical user interface, enabling them to increase revenue generation and reducing operating costs. Any type of service connection can be configured, scheduled, bandwidth-managed and monitored by simply selecting options on a graphical user interface instead of complicate operations.

BOSS LINK Manager is the precursor to the full orchestration system, OpsNGN, which includes dynamic inventory, service life cycle management and additional analytics. BOSS LINK Manager supports the TM Forum NGOSS standards: SID, OSS/J and eTOM. The application is designed based on Service Oriented Architecture (SOA) and runs on commercial products such as Oracle Database, IBM Websphere and Oracle Weblogic as well as open sources such as JBOSS, Tomcat and OpenStack.





The user clients are based on Web 2.0/Ajax, reducing the maintenance effort for the system. With its NGOSS components, multiple instances of the same component can be started and deployed separately, making BLM a very scalable solution.

BOSS LINK Manager features:

- Network configuration – Sites, nodes, local loops & customers
- Scheduling - Network routing, connection bookings & conflict resolution
- Bandwidth management
- Monitoring & alarming
- Customer self-controlled OSS
- Support for point-to-point, point-to-multipoint, VPN for IP, Ethernet VLAN, VPLS and VLL QoS environments.
- Self-healing/protection schemas based on customer needs

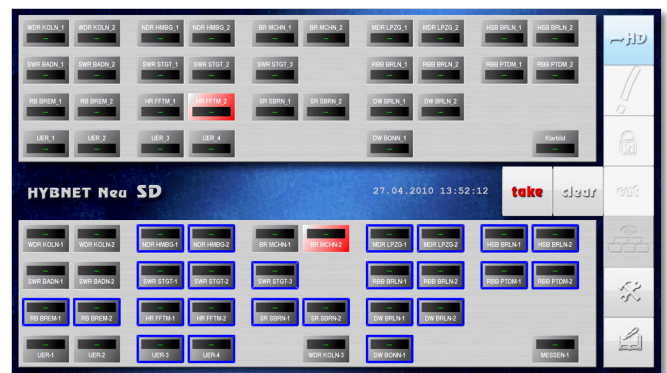
BOSS LINK Manager can be deployed in multi-vendor networks because of its unique capability to interface to virtually any hardware through any of the commonly used interfaces, including SNMP, CORBA (Common Object Request Broker Architecture) and XML. Independently from the service that need to be transported and the technology used, BOSS LINK Manager can support point-to-point and point-to-multipoint configurations and provide automatic re-routing on path failures or in case of conflicts.

Parameters of Application

- Start of operation – 2011
- Connecting *all* ARD broadcast members with audio, video, and data signals
- Connection to & from major foreign studios (Paris, Washington, Moscow and others)
- Up to 50 Gbps/link
- Total bandwidth usage - 300 Gbps
- Two identical networks and all connections are provisioned in parallel in both networks
- Hardware – Alcatel SR 7750 & MediaLinks MD8000
- Size: 200 Nodes & 5000 Ports
- Permanent Services: 600 connections
- Occasional Services: 100 - 200 / day
- Touch Panels in all ARD master control rooms
- Private network for one customer
- Interface to Service monitoring system

Benefits

End users within ARD could log into their touch panel and easily select and choose the service profile. Based on service profile (VPN, HD, 100Mb), ports with respective matched criteria were then displayed. This high degree of automation allow ARD end user to turn on/off services within seconds without hassling through technical difficulties of different service profiles, port selection and understanding the core network. Furthermore users visibility of ports were defined based on their access rights throughout the network.



Dimetis is a leading company in managing hybrid networks over the last 25 years with various projects in the telecom and broadcast OSS domains. Dimetis global installed base of customers include such operators as Deutsche Telekom, AT&T, A1 Telekom (former Telekom Austria), AboveNet, GlobeCast France, Hibernia (USA + Europe), Telstra Australia, and Telenor Norkring Norway.

Dimetis is a member of the TMF, IETF, ETSI NFV, EBU bodies, which are dedicated to defining functional requirements and standards for the next generation networks and emerging architectures.

The paradigm shift of digital transformation in the network is also dramatically transforming the OSS requirements for the management of these digital networks. The transformation of OSS into Service Orchestration creates new challenges for legacy management systems, which were focusing on configuration of static networks.

BOSS LINK Manage is the precursor to Dimetis OpsNGN which provides a three-layered orchestration approach:

- Application Orchestration
- Service Orchestration
- Network Orchestration

While the Network Orchestrator allows for bulk operations on maintaining network configurations, the Service Orchestrator enables a seamless end-to-end service deployment across multiple network technologies and vendors. The underlying service activation workflow empowers hybrid networks of legacy networks as well as new protocols based on NetConf/Yang, SNMP, Telnet, Corba, and TOSCA.