



Using JBoss to Manage PDH, SDH and ATM Transport Networks

Ermanno Cavalli, JBoss World 2005, Atlanta, March 1st, 2005

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Agenda

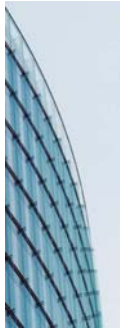
- Project Framework: The NetViewer Suite
- System Architecture
- Why JBoss?
- The Future



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Project Framework: the NetViewer NME Suite



The NetViewer NME Suite is the application solution for **Network Management** developed by the Microwave Networks Business Unit of Siemens Mobile Communications Spa

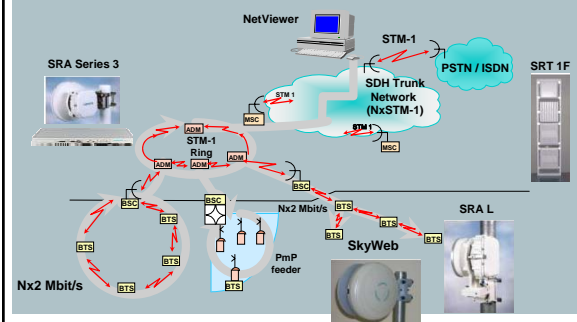
The NetViewer NME Suite is seamlessly integrated with other Network Managers developed by other Siemens Business Units, in order to offer a complete management solution for both **fixed** and **mobile** telecommunication networks, **wired** or **wireless**.

The NetViewer NME Suite offers also a set of **open, standard interfaces** in order to ease the task of integrating it with Network Management applications from other manufacturers, based on transport technologies as **SNMP, CORBA, OSSJ/XML/SOAP**.

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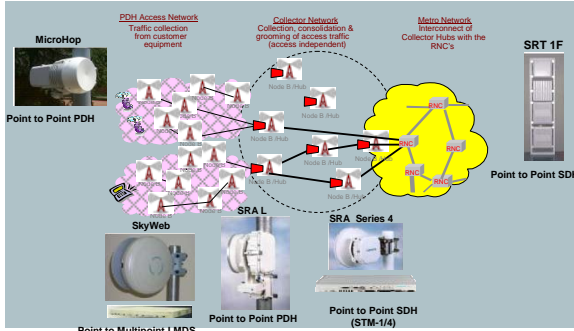
Project Framework: the NetViewer NME Suite Microwave Radio role in 2nd Generation Mobile Networks (GSM)



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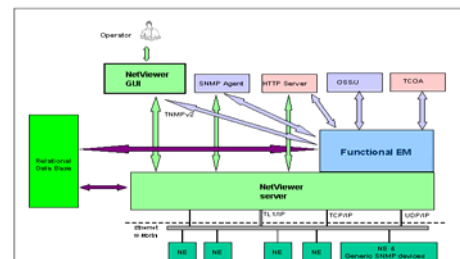
Project Framework: the NetViewer NME Suite Microwave Radio role in 3rd Generation Mobile Networks (UMTS)



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Project Framework: the NetViewer NME Suite The NetViewer NME Suite



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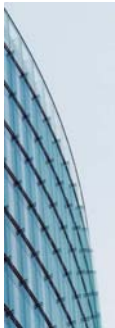
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System Architecture

The system software architecture is described, as well as the evolutionary path from a C++-based Client-Server architecture to a **J2EE multi-tier application**.

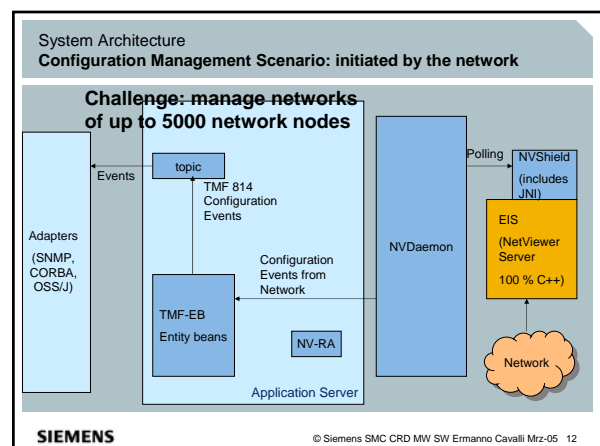
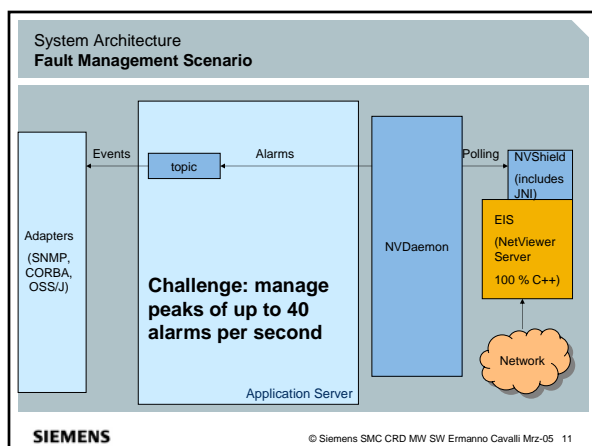
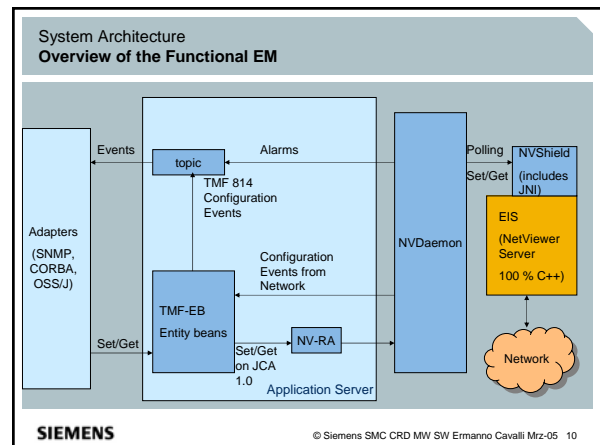
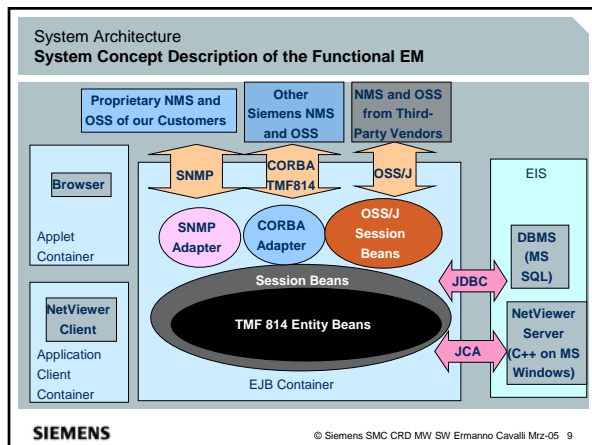
The benefits of choosing a J2EE Application Server are introduced, including:

- Facilitates support for **integration of legacy components** of the NetViewer Suite, therefore allowing to migrate one component at a time, rather than abruptly discarding everything and restarting from scratch;
- Facilitates implementation of chosen **data model** (TMF 814);
- Facilitates implementation of the **northbound interfaces** SNMP, CORBA, OSSJ/XML/SOAP.

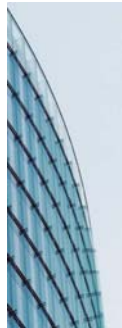


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System Architecture Drawback of JCA 1.0 for Network Management Applications



JCA 1.0 does not fit to applications where most of the spontaneous events are initiated from the EIS rather than the client side.

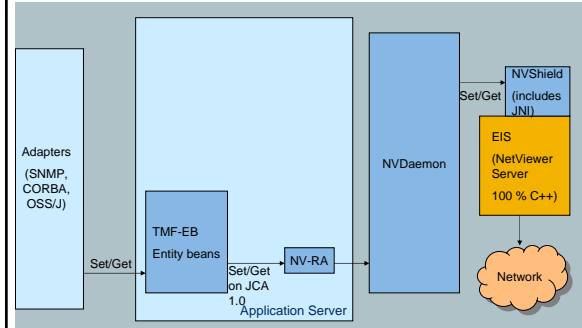
JCA 1.0 does not support the management of inbound events: therefore we had to introduce a separate process, NVDaemon, that polls for events, and which lives across the boundary of the application server.

This problem should be overcome by JCA 1.5, which will be integrated into J2EE 1.4 specifications.

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System Architecture Configuration Management Scenario: initiated by operator

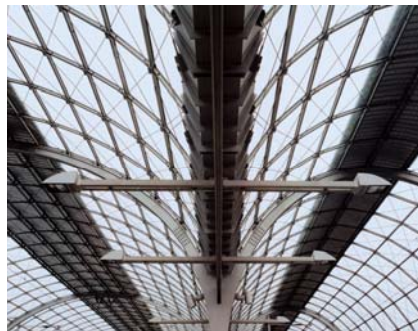


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Why JBoss and not other commercial application servers



JBoss has been chosen after having evaluated two other commercial application servers.

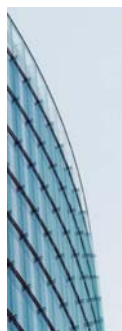
JBoss has highlighted an almost complete absence of faults and very good performance.

Economical advantages of using JBoss are evident.

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Why JBoss and not other commercial application servers Comparison with other Application Servers



The first application server evaluated was Sun ONE AS 6.0, but we discarded it because of a number of problems in its integration with MS Access and because its IDE (Sun ONE Studio) had a number of issues, at the time.

The second one was Borland BES 5.1, but we discarded it because it appeared to be too much dependent on a CORBA framework, therefore we encountered problems in interoperating with other J2EE applications based on JBoss and BEA WebLogic.

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Why JBoss and not other commercial application servers Very good quality and performance



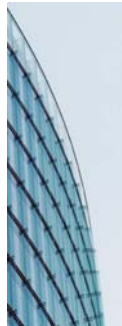
We have been using JBoss for almost two years and have faced almost no bugs: the only major one was a problem with **cascade deletes** in JBoss 3.2.6.

The performance on the Microsoft Windows platform are very good: the only doubt is in JMS persistence on disk when queues are too large for memory.

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Why JBoss and not other commercial application servers Economical Advantages



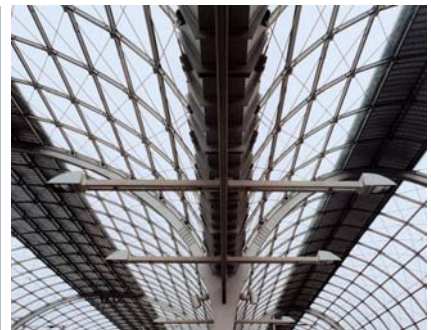
The economical advantages are evident.
TCO for development licences has gone to zero: this is a very big advantage for large companies with large number of developers.
The cost of run-time licences is zero: all the incomes from customers directly contribute to EBIT.

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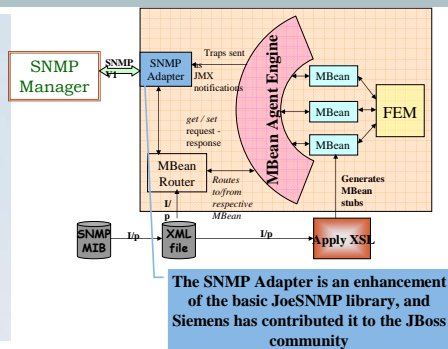
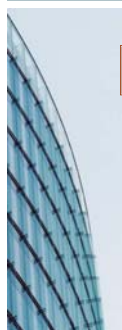
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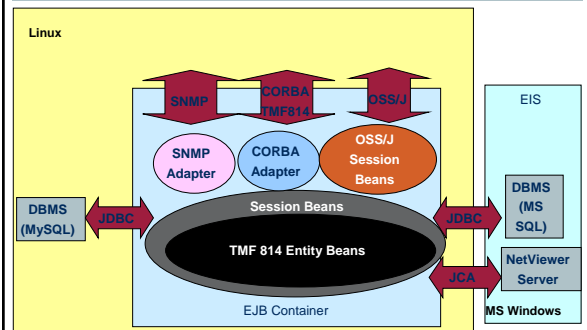
The Future Rebase of SNMP Agent, with a contribution to the JBoss community



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The Future Rebase of Functional Element Manager on Linux and MySQL



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Thank You Very Much for your attention



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