IBM Tivoli Netcool/OMNIbus on IBM BladeCenter delivers superior performance and cost efficiency solution

Highlights

- ***Help increase efficiency by consolidating network and IT operations under a single management solution with automated fault deduplication, isolation and resolution capabilities to minimize problem resolution time***

- ***IBM BladeCenter family provides a scalable, open standards based platform for next generation networks applications***

Telecommunications service providers have expanded beyond traditional voice services to include additional IP-based services like video, music, gaming and online shopping. Many of these service providers recognize that they must focus on content, customer satisfaction and quality of service in order to differentiate their services and achieve their long-term goals

IBM Tivoli Netcool®/OMNIbus™ software delivers real-time, centralized monitoring of complex networks and IT domains. With scalability that exceeds millions of events per day, Netcool/OMNIbus offers around-the-clock management and automation to help you deliver continuous uptime of business services and applications, optimize operations costs and efficiency, and improve time to market. Environments supported by Netcool/OMNIbus software include a vast array of network devices, Internet protocols, systems, business applications and security devices. Because the software offers breadth of coverage, rapid deployment, ease of use and exceptional scalability and performance, enterprises and service providers worldwide can leverage the Netcool/OMNIbus suite to manage the world's largest, most complex environments.

Many customers use IBM Tivoli Netcool/OMNIbus to manage tens of millions of events daily.The software can be deployed in a distributed, parallel or hierarchical fashion to support complex operations environments that span diverse geographic boundaries. Because it couples scalability with a flexible architecture, the software can deliver robust event management to support environments of any size. When the software detects faults, they are processed in the ObjectServer, a high-speed, in-memory database that collects events from across the infrastructure in real time. Netcool/OMNIbus then eliminates duplicate events and filters events through an advanced problem escalation engine. The software enables your staff to hone in on the most critical problems and even automate the isolation and resolution of those problems.

"Next generation networks demand infrastructure that offers the right combination of performance, scalability, reliability and cost. IBM's Tivoli/Netcool team is excited to now demonstrate significant performance advantages for our OMNIbus solution on the IBM BladeCenter, a platform that delivers outstanding performance and reliability at significant cost savings for our customers."

— Thomas Axbey
Tivoli/Netcool team
IBM

By using the IBM BladeCenter with the Tivoli Netcool/OMNIbus, you can gain even greater efficiencies. Recent IBM testing of the Tivoli Netcool/OMNIbus solution demonstrated that the IBM BladeCenter using the Intel-based, HS21 servers can deliver significantly greater event capacity when compared to similar Sun V440 configurations — up to 340%. Testing demonstrated the following results:*

- *IBM HS21 = 450K to 475K events*
- *Sun V440 = 130K to 140K events*

In addition, the IBM BladeCenter platform offers compelling cost savings over traditional 1U/2U rack server deployments. For example, when comparing 42 1U rack servers against a comparable IBM BladeCenter configuration, rack space and associated "real estate" savings can be significant — approaching 50% in some instances. The IBM BladeCenter can also reduce system complexity and ease deployment by reducing the number of cables — saving cost while improving airflow for cooling .

Another example of improved power efficiency is the IBM BladeCenter thermal solution. In an effort to reduce the number of power consuming parts, IBM removed all fans from the individual servers and switches. The IBM BladeCenter uses hot swap, highly energy efficient N+N blowers providing

Reducing complexity

Per 42 Servers	1U Servers	Blades	Reduction
Rack Space	42U	21U	-50%
Ethernet Cabling	84	6 / 24	-71%
Fibre Channel Cabling	84	12	-86%
KVM Cabling	42	0 / 3	-93%
Systems Mgmt Cabling	42	6	-86%
Power Cords	84	12	-86%
Power Distribution Units	8	4	-50%
KVM Switches	6	0 / 1	-83%

Server configuration with IDE, dual SAN, dual Ethernet, KVM, redundant power.

* The IBM BladeCenter configuration consisted of three HS21 (8853) blade servers, two with two dual core Xeon 2.66Ghz processors (5150), 4GB memory, and a 73GB SAS drive and one with two dual core Xeon 2.33 GHz processors (5140), 4GB memory, and a 73GB SAS drive. All blades were running Red Hat Enterprise Linux AS 4 update 4 and operating in a single 8677 BladeCenter Enterprise chassis. The Sun configuration consisted of three Sun V440 servers each with four 1GHz Ultrasparc III processors, 8GB RAM, and four 36GB hard drives. All Sun servers were running Solaris 10 operating system. The Netcool software used in both tests was Netcool/OMNIbus 7.1 (part number C924SIE for Solaris and C10R9EN for Linux).

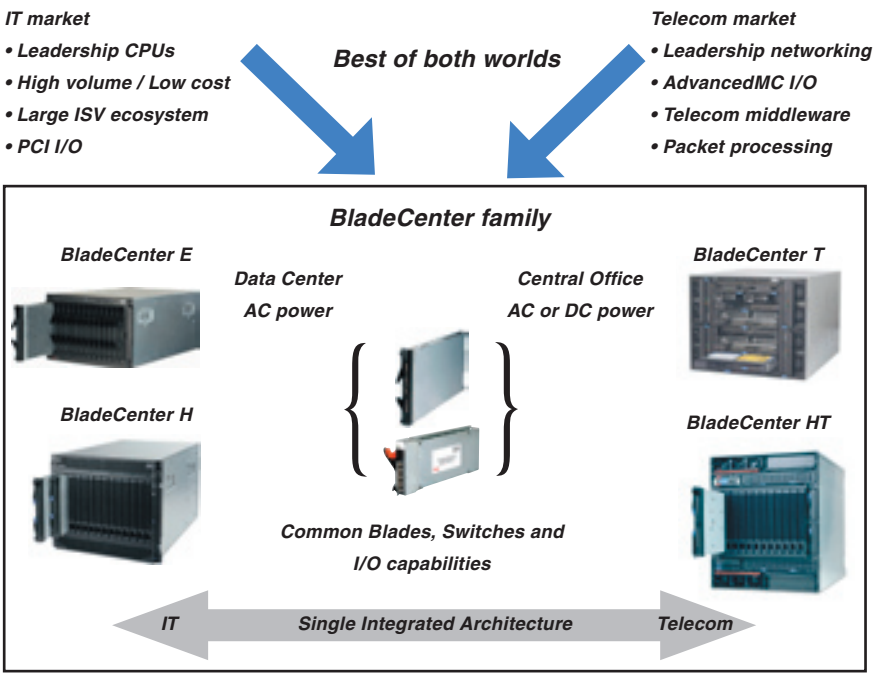
cooling for everything in the chassis and uses approximately 120W at normal operating conditions. Sharing blowers across 14 servers means less power required for cooling. Other manufacturers require as many as 112 non-hot-swap fans which can be costly - 112 fans each drawing over 5W means over half a kilowatt of power is needed just to move air for cooling. Power efficiency in the IBM BladeCenter is further improved using innovative designs like the Calibrated Vectored Cooling which improves airflow by approximately 20%, furthering cooling efficiencies.

IBM BladeCenter family — for every customer need

The IBM BladeCenter T chassis provides hardware redundancy (power supply, I/O modules, management modules, L2 switching, mid-plane, etc.) thereby reducing potential points of failure in the solution.

The IBM BladeCenter is an advanced blade system which integrates servers, storage and networking into a single chassis — yielding significant simplification, improved density and potential TCO savings . A single family of common server blades, storage, I/O, switches and networking modules are

Advantages of the IBM BladeCenter



Source: IBM

fully supported and interchangeable across the family of BladeCenter chassis. The IBM BladeCenter chassis is designed as the ideal solution for data center deployments. The IBM BladeCenter H is for high performance computing platform, while the IBM BladeCenter T chassis is specifically designed for telecom central office deployments.

The IBM BladeCenter HT — a new, telecom optimized version of the BladeCenter H — opens new market opportunities with a powerful NGN platform ideally suited for telecom equipment and service providers.

The IBM BladeCenter T and BladeCenter HT deliver rich telecommunications features and functionality, including fault-tolerant capabilities, hot-swappable redundant DC or AC power supplies and cooling, and built-in systems management resources in a 20" deep chassis. The rigorous Network Equipment Building System (NEBS) Level 3 and European Telecommunications Standard Institute (ETSI) outline requirements typical of telecom central office environments in the areas of electromagnetic compatibility, thermal robustness, fire resistance, earthquake and office vibration resistance, transportation and handling durability, acoustics and illumination, and airborne contaminant resistance. The IBM BladeCenter T and BladeCenter HT chassis meet the NEB Level 3 / ETSI requirements[1].

IBM BladeCenter and Tivoli NetCool: a winning combination

The combination of Tivoli Netcool OMNIbus and IBM BladeCenter family delivers the performance, reliability and affordability demanded by mission critical telecommunications applications. The IBM BladeCenter is the ideal platform for the deployment of these services providing a single platform to help reduce operating costs and complexity.

For more information

Learn how IBM Systems can help your company achieve more revenue and reduce your costs, while helping you keep your profitable customers.

Have questions? Contact the IBM Telecommunications team today on how we can help you take advantage of our extensive industry expertise. Please visit us on the web at:

ibm.com/telecom/systems

For more information about Tivoli Netcool/OMNIbus, visit:

ibm.com/software/tivoli/products/netcool-omnibus

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November 2007

[1] For additional details, please refer to Underwriter's Laboratory (UL) certified NEBS Level 3 / ETSI test report.

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