

## Xeround IDG and IBM BladeCenter – Converged Subscriber Data Management Solution for Telecom Service Providers



---

### Highlights

---

- ***Provides data virtualization capabilities and geo-distribution***
- ***Supports real-time data access that can scale to support millions of subscribers***
- ***High availability of data management***
- ***IBM BladeCenter family provides a scalable, open standards based platform for next generation networks applications***

### **Subscriber-centric data management**

As the telecommunications industry migrates from a network-centric to a subscriber-centric model, telecommunications service providers are redefining their business models to deliver personalized and flexible services. This has created a new set of requirements with implications to the underlying data management infrastructure and how subscriber data gets managed.

One of the service provider's key assets is their subscriber data and the insights they can derive from this data. Today that valuable data is tightly bound to individual applications and is not easily shared across bundled applications, converged networks or new services. This can hamper rapid innovation and confines service providers to disparate

data silos and unwieldy data partitions that can be prone to synchronization errors. To address these limitations, many service providers intend to migrate their subscriber data into a single, unified subscriber data store that can be shared across multiple services.

This approach can be operationally disruptive and costly if a service provider has to migrate to a new system. To facilitate the transition to a subscriber-centric data management solution, service providers need the ability to leverage existing assets while at the same time investing in a "go-forward" architecture for future needs.

Designed specifically for the rigorous demands of the telecommunications industry, Xeround developed a highly scalable Intelligent Data Grid™ (IDG™) based on advanced and groundbreaking cloud computing database technology with unique data virtualization capabilities. Xeround IDG can effectively eliminate the dependencies between applications and data. Deploying the Xeround IDG solution on the advanced IBM BladeCenter platform can accelerate time-to-market and performance while helping reduce costs.

*“The Xeround Intelligent Data Grid solution running on the IBM BladeCenter provides a quantum leap in cost and performance improvements for converged subscriber data management. It eliminates a major performance bottleneck in multiple areas of a service provider’s business infrastructure.”*

*— Charlotte Yarkoni  
Chief Executive Officer  
Xeround Systems*

#### **Xeround IDG Data Model**

With Xeround, existing databases can be unified to facilitate the rapid launch of more profitable services:

- *Unique virtualization capabilities, which enable a single, logical view across the many legacy databases found in today’s environments*
- *Unified and scalable data store using unique virtualized partitions, which ensure real-time access to data*

The Xeround IDG data model is specifically tuned for telecommunications applications, which include subscriber-centric transactions found in many network elements, value added services and back office systems. Xeround IDG is optimized to enable:

- *Low latency transactions (minimum hops and minimal locking)*
- *ACID compliant, flexible, multiple operations transactions support*
- *Internally managed indexes for fast data access using different search criteria*

#### **Xeround IDG Architecture**

Xeround IDG delivers on key requirements for entity-centric data management, including:

- *Scale-out and –in performance*
- *High availability and resiliency even in the event of a failure*
- *Low read and write latency*
- *Unified data model with network and geographical distribution*
- *Industry standard interfaces and transaction handling for SQL, LDAP and XML*
- *Optimized for blade architectures and near zero administration*

#### **Delivering results**

Recent testing demonstrated exceptional linear performance capabilities running Xeround IDG on the IBM BladeCenter platform, including:

- *Linear and online scaling of throughput, supporting 10-40 million subscribers, with transaction rates of up to 69,731 TPS and ~ 1.13 ms average latency.*
- *Linear and online scaling supporting up to 100 million subscribers.*
- *Maximum throughput load of 80,292 simulating 149 million subscribers .*

The combination of the Xeround IDG and IBM DB2, IBM’s world leading enterprise-class data processing tool, provides service providers with an unparalleled unified data management solution.

**IBM BladeCenter family —  
the IT and network convergence platform**

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 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 new, IBM BladeCenter HT — a new, telecom optimized version of the BladeCenter H — opens new market opportunities with a new and 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 NEBS Level 3 / ETSI requirements<sup>1</sup>.



### **Xeround and IBM: a winning combination**

The combination of Xeround IDG and IBM BladeCenter family delivers the performance, reliability and affordability demanded by mission critical telecommunications applications. Running with Linux and other operating systems, Xeround IDG is equally comfortable embedded inside network elements or deployed in a data center. It leverages the latest 64-bit and multi-core technologies. 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](http://ibm.com/telecom/systems)**

For more information about Xeround Intelligent Data Grid, visit:

**[xeround.com](http://xeround.com)**

© Copyright IBM Corporation 2008

IBM Systems and Technology Group  
Department XVXA  
3039 Cornwallis Road  
Research Triangle Park, NC  
U.S.A., 27709

July 2008  
All Rights Reserved.

BladeCenter, IBM, and the IBM logo are trademarks of International Business Machines Corporation in the United States, other countries or both.

Intel and Xeon are trademarks of Intel Corporation in the United States, other countries or both.

Linux is a trademark of Linus Torvalds in the United States, other countries, or both.

Other company product and service names may be trademarks or service marks of others.

References in this publication to IBM products or services do not imply that IBM intends to make them available in all countries in which IBM operates.

IBM hardware products are manufactured from new parts, or new and serviceable used parts. Regardless, our warranty terms apply. For a copy of applicable product warranties, write to: Warranty Information, P.O. Box 12195, RTP, NC 27709, Attn: Dept. JDJA/B203.

The information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

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

♻️ Printed in the United States of America on recycled paper containing 10% recovered post-consumer fiber.