Flash Networks Harmony and IBM BladeCenter
Delivering Advanced Mobile Services for Telecom Service Providers

With accelerating data traffic growth, many wireless service providers are migrating to IP-based, Next-Generation Networks (NGN). As this migration occurs, service providers will need to cope with ever increasing network traffic while flat rate tariffs will keep revenues stagnant. Service providers want to offer value-added services to help them generate additional revenues, increase subscriber loyalty and avoid being marginalized as undifferentiated “bit pipe” providers.

To realize the commercial potential of advanced wireless broadband technologies, products and services, service providers face the challenge of improving the subscriber’s Quality of Experience (QoE) while maximizing the efficiency of their mobile Internet infrastructure. With the ever increasing variety of new and diverse services, the potential adverse impact to latency and reliability could compromise the user experience. The complex web of network elements can lead to costly duplication in operations, management, administration and provisioning which can slow new service introduction while increasing associated CapEx and OpEx.

Wireless service providers need to streamline the flow of data traffic within the network, both reducing the complexity of introducing multiple new services and eliminating latency in user service access.

Flash Networks has developed Harmony, a platform of integrated, best-of-breed technologies which provides a comprehensive and complete set of services specifically designed to deliver an improved QoE. These intelligently combined technologies provide the best user experience while maximizing resource utilization. In order to provide content acceleration, web-to-mobile adaptation, video adaptation, content control, secure content, mobile advertising and user insight services during the same user sessions in an efficient manner, the required technologies must be harmonized to work in concert.

Flash Networks Harmony provides a carrier-grade solution that serves as a central platform for rationalizing core proxy applications currently in use, and facilitates the timely implementation of

**Highlights**

- **Comprehensive set of services specifically designed to deliver improved Quality of Experience**
- **Increase ARPU through mobile data services while improving operational efficiency and accelerating time to market of new services**
- **IBM BladeCenter family provides a scalable, open standards based platform for next generation network applications**
“The Harmony platform together with IBM’s BladeCenter provides mobile operators increased operational efficiency and flexibility by enabling them to streamline their mobile Internet infrastructure on a single scalable, reliable and manageable blade platform.”

— Amir Lapid
Director
Product Management
Flash Networks

new services with minimal integration efforts. The platform meets the strategic objectives of mobile service providers who want to increase ARPU through mobile data services, generate new revenue streams from current infrastructure, while improving operational efficiency and accelerating their time to market with the introduction of new revenue-generating services.

An integrated QoE solution simplifies the process of service orchestration by selecting the most appropriate services based on device capabilities, user profiles, and real time network conditions. Some services that can be orchestrated by the Harmony offering include:

- Mobile Network Optimization
- Content and Parental Control
- WAP 2.0 Services
- Web and Video Adaptation
- Video-streaming Shaping and Advertising
- Personalization and Branding

The Harmony offering from Flash Networks is able to provide mobile service providers with increased operational efficiency and flexibility by enabling them to streamline their mobile NGN infrastructure on an integrated, open, scalable, reliable and manageable blade platform — the IBM BladeCenter.

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Flash Networks Harmony system architecture

Source: Flash Networks
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. 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.

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Flash Networks and IBM:  
a powerful combination

The combination of Flash Networks and the 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 Flash Networks, visit:

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Research Triangle Park, NC
U.S.A., 27709
December 2008
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[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.