



# RED HAT AND THE TELECOMMUNICATIONS INDUSTRY

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## ABSTRACT

The telecommunications industry is in a constant state of great change and opportunity. To remain technologically viable and seize market opportunities as they arise, telecoms need flexible, high-performing, carrier-grade solutions. That's why Red Hat offers the JBoss Communications Platform, a reliable middleware platform, already deployed in production by top-tier telecoms, that simplifies rapid development of converged voice, video, and data services. And, with Red Hat Enterprise Linux, these leading telecoms get the performance, adaptability, and broad vendor support they need to thrive in this very dynamic and competitive environment.

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## THE CHANGING LANDSCAPE

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Three factors drive the adoption of commodity platforms in the telecommunications industry: the maturity of the technology, the maturity of the technology provider, and the new competitive dynamics of the industry that operators, equipment providers and telecommunications solution providers are faced with.

The competitive theme is change. Convergence is becoming a reality. Wireless and wire-line networks are being linked to create a seamless and rich end user experience, and triple play services that combine voice, data and video in new ways are beginning to emerge – services that can be delivered anytime, anywhere, and on any device.

The merger and acquisition activity surrounding carriers and equipment providers is accelerating. Opportunities to expand market presence and eliminate redundancies to exploit economies of scale are fueling this consolidation.

New telecommunications-specific market segments like Internet Protocol-based Television (IPTV) and Internet Protocol-based Multimedia Subsystem technology (IMS) have grabbed the interest of the investment and analyst communities. The economics of even a simple phone call are changing. Companies like Skype provide low-cost and no-cost alternatives to traditional phone service. They are forcing incumbent telecommunications companies to rethink how they will build a competitive advantage and remain profitable. On-line service providers are becoming competitors as well: Microsoft, Google, Yahoo, AOL and the leading Cable and Satellite providers all now offer telephony services, and each has the potential to provide rich services and compete directly with the incumbent telecommunications companies.

The race is on to provide new and innovative services faster and at a lower cost than the competition while still growing Average Revenue Per User (ARPU). This, in an environment where phone calls are free, and new services are extremely price sensitive. Competing successfully, then, means being able to bring new services to market faster, while closely managing expenditures across the board.

## EMERGENCE OF OPEN PLATFORMS

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Open platforms now perform as well as or better than traditional proprietary platforms in most respects while providing greater value. Open platforms based on Red Hat Enterprise Linux and industry standard hardware are now considered carrier-grade and suitable as the underlying technology platforms for network data center solutions.

For operators, open platforms are flexible, cost-effective, and easier to target with new development and innovation, while reducing time to market. Proprietary solutions embody have few of these characteristics.

Industry Linux leader Red Hat, combined with key partners Cisco, IBM, Hewlett-Packard and Intel, however, can provide these benefits.



Individually and collectively, these organizations have a track record of commercial success, mature and proven products, extensive worldwide support organizations and a vibrant ecosystem that supports telecommunications Independent Software Vendors (ISVs), equipment providers, and Original Equipment Manufacturers (OEMs).

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**“Telecommunications infrastructure vendors and operators are looking for reliable, telco-grade suppliers of Linux. Red Hat’s telecommunications partner initiative and existing customer base show that it is ready to be a player in the building of the next-generation of IP-based telecommunications infrastructures such as FMC and IMS for VOIP, IPTV and yet-to-emerge services.”**

**Elisabeth Rainge, Director, IDC**

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But the Red Hat value proposition to telecommunications companies extends beyond the partner ecosystem, and the capabilities of the platform. Linux is Free Open Source Software (FOSS), based on the GNU Public License (GPL), which provides customers with the assurance that the source for their platform will always be freely available. This ensures that the customer cannot be locked-in to one platform, or driven to a particular architecture by closed binary dependencies. On the other hand, open source licenses such as the Common Development and Distribution License (CDDL), created by Sun Microsystems for OpenSolaris, permit the mixing of open and closed proprietary code. These licenses are not “open” in the sense that most people understand the term. They can and do lock customers into a proscribed vendor-friendly solution set, rather than unlocking the real possibilities for customers that a truly open platform provides.

## **RED HAT IS CARRIER-GRADE**

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Red Hat Enterprise Linux is a carrier-grade operating system, and works with leading Network Equipment Providers (NEPs), ISVs, and operators to define requirements and ensure that Red Hat Enterprise Linux can be deployed in carrier-grade settings.

The single Red Hat distribution supports both enterprise and telecommunications requirements. The distinction between the platform requirements for mission critical enterprise applications and carrier-grade applications is a difference of degree, not of kind. This platform meets the reliability and performance requirements of carrier-grade telecom infrastructures. The single-platform approach enables Red Hat to leverage its stable of certified OEM and ISV partners across markets.

Value is also provided through Red Hat’s close collaboration with strategic partners such as Cisco, Hewlett-Packard, Intel, and IBM. Coordinated product development efforts, joint service and support offerings, and shared technology roadmaps ensure that the integrated platforms reflect an integrated strategic approach – not just a cobbled-together collection of related technologies.



Solutions based on open source software and industry standard hardware platforms provide undisputed cost, flexibility, innovation and time to market benefits over proprietary alternatives. Open platforms from Red Hat and partners like Cisco, Hewlett-Packard, Intel, and IBM offer this plus the benefits of working with industry leaders – leaders with a global presence, clear strategic objectives, world-class services, consistent financial performance, and staying power.

Together with these partners, Red Hat is cultivating a growing ecosystem of telecommunications partners, establishing comprehensive solution stacks targeted at individual telecommunications market segments. Red Hat also works closely with NEPs and telecommunications ISVs to drive the adoption of open platforms based on industry standard hardware, and Red Hat Enterprise Linux.

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**“Solutions based on industry-standard hardware and Linux are gaining momentum in the telecommunications industry as a more cost-effective and flexible alternative to expensive proprietary platforms”  
... “IBM is pleased to partner with Red Hat to build carrier-grade platforms and solutions with IBM’s Platform For Telecom (IPT) and Red Hat Enterprise Linux.”**

**Scott Handy, Vice President, Worldwide Linux and Open Source, IBM**

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## **CARRIER-GRADE MIDDLEWARE OFFERING**

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JBoss, the global leader in open source middleware, offers carrier-grade middleware platforms and frameworks for the telecom industry. JBoss simplifies the development of Enterprise Java applications, enabling telecommunication companies to accelerate time to market with flexible, cost-effective solutions. JBoss Enterprise SOA Platform and JBoss Enterprise Data Services Platform help telecom companies integrate their disparate infrastructure and data sources. This enables them to be agile and respond quickly to changing market dynamics.

Additionally, Red Hat also offers JBoss Communications Platform, a carrier-grade platform that simplifies rapid development of converged voice, video, and data services. JBoss Communications Platform is based on the Mobicents open source project and JBoss Enterprise Application Platform. It also uniquely combines SIP, JSLEE, Media Server and Presence capabilities in one package. This platform represents a tried and tested technology deployed in production by top tier Telecoms.



## CONCLUSION

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The telecommunications industry is changing rapidly. Remaining competitive and profitable in this dynamic environment will require that operators embrace innovation, while controlling costs and avoiding solutions that are overpriced or lock them in.

Red Hat is helping customers meet these challenges with a carrier-grade platform hardened in the enterprise and supported by a solid and established ISV and OEM base. Starting with this base, Red Hat has built an ecosystem of telecommunications partners that includes Cisco, Hewlett-Packard, Intel, and IBM – and is teaming with customers to target individual segments of the telecommunications industry.

All of these factors combine to provide a value set that is unique in the marketplace: the value of the integrated platform; the price, value, and choice equation; the platform transparency and openness ensured by the GPL, Free Open-Source Software (FOSS) and Linux, and the value that comes from partnering with key industry leaders to bring open platforms to the telecommunications market.

## RELATED MATERIAL

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The new standard for Telco

<http://www.redhat.com/solutions/telco/>

JBoss Communications Platform

<http://www.jboss.com/products/platforms/communications>

Telecommunications Success Stories

<http://customers.redhat.com/category/industry/telco/>



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