Efficiently deliver next generation services and help maximize the flexibility of your IP-based services plane.

Highlights

- Rapidly deliver new telecommunications services to market
- Build, deploy and manage rich multimedia applications that attract customers — and drive revenue
- Help maximize responsiveness by leveraging modular infrastructure and application components
- Help minimize the cost of developing and managing services by using commercial off-the-shelf software
- Assure the quality of converged services with real-time, end-to-end performance visibility

Address increasing demands for faster delivery of richer services with an IP-based services plane

In the telecommunications industry, competitive pressures seem to grow daily. You look to your left, and there's another new offering that you need to respond to. Look to your right, and there's another nontraditional player starting to offer more traditional telecommunications services. All the while, you're trying to understand your customers' desires and create the new services that will put the heat on your competitors.

Faced with this environment, you have to be fast and creative. But that's difficult when you're trying to rapidly design new services that span existing mobile, fixed-line and data networks. And when you have to manage the interactions between these telecommunications networks and the complex infrastructure and systems that support them.

That's the bad news. Here's the good news: the proliferation of Internet Protocol (IP) technology and the corresponding movement towards IT-style telecommunications infrastructures create the opportunity to deliver enhanced services to your customers more rapidly and cut the costs of developing and managing these services.

To capitalize on these opportunities, today's service providers must find a solution that enables them to develop, deliver and manage rich,

converged applications independent of the underlying network infrastructure. The solution should leverage reusable building blocks and open standards to gain efficiencies and derive additional value from existing service elements. It must help minimize time to market by simplifying service creation and integration. And it must assure the quality of converged services with real-time, end-to-end performance visibility.

Leverage IBM's telecommunications industry expertise to transform your services plane

IBM solutions for the telecommunications industry bring together the extensive IBM portfolio of hardware, software and high-value services — and its wide network of Business Partners — to address the most prevalent challenges for clients in the industry. IBM solutions and telecommunications industry experience help each client accelerate its progress in becoming an On Demand Business — so it can respond with flexibility and speed to virtually any customer demand, market opportunity or external threat.

Creating business processes with a *service orientation* has emerged as the best way to achieve that flexibility and speed, as well as agility and resilience. Service orientation takes everyday applications and service enablers and breaks them into individual tasks, called services. These services can then be shared with other departments within your company, integrated with your trading partners and exposed directly to customers to create new or modified business processes. As a result, you have the flexibility to easily respond to changing market requirements. And because these services can tie together existing applications and service enablers, such as an existing conferencing application, a push-to-talk service or a back-end billing system, there is no "rip and replace" required. Furthermore, these componentized services can be reused across multiple processes — rapidly, easily and consistently — to help drive improved time to value and reduced costs.

IBM software, a key building block of the IBM solutions for the telecommunications industry, is vital to employing a service orientation strategy. It helps our clients achieve business flexibility by enabling them to model, assemble, deploy and manage business processes for today's on demand business environment.

IBM combines its expertise in telecommunications service delivery platform environments with its strengths in software to deliver a comprehensive services platform that companies can use to create, integrate, execute and present next generation services. IBM next generation services platform for telecommunications supports emerging standards such as IP Multimedia Subsystem (IMS) and Session Initiation Protocol (SIP). Furthermore, it helps service providers adopt a service orientation in the telecommunications network environment — reusing individual service components and separating the creation and execution of new service applications from the underlying network.

IBM next generation services platform for telecommunications helps you extend this service orientation strategy to the telecommunications service delivery environment, helping your organization:

- Unify and streamline service creation to speed time to market and maximize your flexibility to work with a broad development community.
- Flexibly integrate service components to deliver rich composite services and efficiently connect them with back-end operational support systems (OSS).
- Optimize service execution by deploying a common HTTP/SIP application server environment and by leveraging IMS enablers to accelerate service delivery.
- Simplify service presentation across multiple devices to optimize both development and customer experiences.
- More efficiently monitor and manage service for improved user experience, operational efficiency and performance.

Unify and streamline service creation

When you think about all the handoffs involved in the creation of a next generation service, it's no wonder that telecommunications companies struggle to get new services to market quickly. Take the example of an interactive gaming offering, in which users use one device both for gaming and for "trash talking" with voice communications. It might rely on:

- A gaming application created by one party.
- A conferencing application created by another.
- Presence or location information in the network environment.

Exchanging information about these components and synchronizing development efforts among the various parties can be laborious. And if an organization does not manage these processes effectively, it may lack flexibility — for example, recombining the conferencing application and presence or location information with a different gaming application could be nearly as time-consuming as starting from scratch. And managing updates to any component application could also create major headaches.

In contrast, IBM next generation services platform for telecommunications helps your organization manage the entire life cycle of the service — from requirements definition to development to testing to deployment to later updates. And do it all in a common, standards-based environment, with tools tailored to various users' skill levels.

The IBM Rational® unified service creation environment is a key component of IBM next generation services platform for telecommunications and is based on the open-source Eclipse framework. It helps:

- Align business requirements and IT development efforts.
- Unify geographically dispersed and third-party teams.
- Accelerate development processes and maximize the use of existing development skills.
- Enable a broader community of developers and providers to efficiently participate in service creation.

Consequently, you maximize your company's flexibility and speed when bringing new services to market.

Flexibly integrate services

Integrating these service components can be time-consuming and complex — and can become more so as the sources and number of components making up a composite service grow. Imagine a multimedia conferencing application that permits conference attendees to share various media with each other. It requires a voice conference component and either a push-to-picture component or a push-to-video component. The application might also include a group list management component to support conference invitations and presence capabilities to inform conference attendees about the status of other invitees.

All of these components must be integrated to provide a seamless, high-quality experience to conference attendees. And they must be connected with various back-end business and operational support systems (BSS/OSS) for purposes such as billing and customer service. IBM next generation services platform for telecommunications includes IBM WebSphere® business integration software that helps you assemble service application components into rich composite services and efficiently connect them with business and OSS — and thereby facilitate quick and easy deployment.

Optimize service execution

Without a common platform for executing both HTTP- and SIP-based applications, managing composite next generation services can only be done in a piecemeal fashion. Imagine that the composite service in our interactive gaming example relies on an HTTP-based gaming application and SIP-based functions for presence and for push-to-talk or voicemail. What happens if one application component in the service goes down? How is failover managed for the entire service?

For most telecommunications companies today, it would not be possible to respond in an automated, consistent way because of the lack of integration between the HTTP and SIP environments. The result? An inconsistent quality of service to the end user.

To deliver a high-performance execution environment for converged services, IBM next generation services platform for telecommunications relies on IBM WebSphere Application Server with SIP capabilities to deliver a converged HTTP/SIP application platform. It enables you to deliver a high quality of service by leveraging features such as seamless failover handling, security, edge routing and load balancing for converged services. WebSphere Application Server helps you optimize the stability, availability and performance of your services — ultimately helping drive high-quality customer experiences.

By combining this common execution platform with a componentized approach to core service enablers, you can also extend functionality such as presence and group list management across multiple composite services. For example, the presence component of our interactive gaming example could be leveraged in an enterprise service to inform employees about the availability of colleagues and the best ways

to contact them, such as using instant messaging or by mobile phone.

To help minimize the cost and time to deliver rich composite services, IBM next generation services platform for telecommunications includes a number of key IMS enablers:

- IMS Service Control (ISC) interfaces for Call Session Control Function (CSCF), media gateways, user equipment and SIP devices, presence servers, diameter stack and more.
- Diameter stack and protocols for WebSphere software to deliver carrier-grade security and interfaces for communication with BSS/OSS.
- Presence capabilities to collect, manage and distribute real-time information about various users' "reachability," availability and willingness to communicate.
- Group list management capabilities for enabling users and administrators to define and manage network-based groups and associated lists of members of those groups.
- Telecommunications Web services capabilities to deliver a standards-based, security-rich, third-party access gateway — and thereby enable you to leverage new and existing communities of next generation application providers.

Simplify service presentation

Customizing content and applications for optimal presentation across the staggering variety of telecommunications devices available to users today can represent a substantial task. Think about presenting a Web page on hundreds of different devices that have a wide range of capabilities. Too often, telecommunications companies invest money again and again to customize content and applications for specific user communities and devices.

In contrast, IBM next generation services platform for telecommunications includes IBM WebSphere Portal software and IBM WebSphere Everyplace® Mobile Portal to help you efficiently customize content delivery based on user preferences and seamlessly deliver content to multiple types of devices. With this software, you can develop content for an application once, and then deploy it in optimized fashion to more than 1,000 devices. Your developers spend less time on repetitive device-customization tasks. And when you take advantage of the unique capabilities of devices, your customers enjoy user-friendly interfaces that help optimize satisfaction and loyalty.

Assure service performance

The success of next generation services will be measured by high service retention rates and brand loyalty, but in today's competitive environment, customers are quick to abandon services that don't perform as expected. To be successful, providers must deliver rich, value-added services, while ensuring the customer experience meets expectations. They must integrate voice, video and data traffic, without sacrificing performance. To maintain high quality of service for its customers, service providers need to deploy state-of-the-art management solutions.

Next generation service management capabilities from IBM provide customers with a comprehensive approach to help reduce the complexity of their services management environments, lowering operational costs and improving their quality of service. IBM service management capabilities, enabled by IBM Tivoli® software and IBM Tivoli Netcool® solutions, help you:

- Assure the availability, reliability and quality of complex services like VoIP, IPTV, presence, gaming and music downloads being offered over a converged IP infrastructure.
- Manage the actual "customer experience" and evaluate in real time the human perception of voice, video and data quality.
- Model relationships and dependencies to link infrastructure performance to customers and services.

- Provide near-real-time, end-to-end management capabilities — from a network/IT infrastructure to a business process and from the core network to the customer premise.
- Consolidate OSS for managing availability, performance and levels of security across new and existing service delivery environments.

As a result, service providers can gain a competitive advantage by efficiently shortening or avoiding service interruptions and assuring a high-quality customer experience.

In the end, IBM next generation services platform for telecommunications enables you to:

- Bring new composite services to market quickly.
- Make changes to existing services without requiring significant recoding of applications and interfaces.
- Flexibly and efficiently connect services with back-end business and OSS.

Business Partners help further leverage IBM software capabilities

IBM next generation services platform for telecommunications is complemented by applications and services provided by our IBM Business Partners — including the hundreds of Business Partners specializing in service orientation — helping to make this solution a world-class foundation for successful service delivery of rich next generation services. Working together with our clients, IBM and IBM Business Partners can help meet the needs of today's telecommunications companies.

For more information

IBM is unique in its combination of unmatched telecommunications industry experience, deep service orientation skills, unparalleled Business Partner network, and software and technology product excellence — and as a result is a clear leader in service orientation. We can help you get started with service orientation, whether for the enterprise, a departmental initiative or a single project. IBM is the ideal resource for telecommunications companies seeking to meet the challenges of creating enhanced, innovative customer experiences that can differentiate a company from its competitors and help reduce churn; rapidly and reliably delivering value-added services to market; and combating costly inefficiencies that stem from complex networks, pricing, products and channels.

To learn more about IBM next generation services platform for telecommunications and other telecommunications industry–specific offerings, contact your IBM representative or IBM Business Partner, or visit **ibm.com**/software/industries/telecom

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