Funambol and IBM: flexible personal cloud

A white-label solution that enables mobile providers to offer subscribers a branded personal digital cloud experience for any connected device and type of content

Highlights:

- Empowers mobile providers to improve loyalty, reduce churn and generate revenue
- Gives users the ability to access and manage any content on any device
- Stores content securely in a personal digital cloud that can be shared easily
- Syncs content (including PIM data) across all devices automatically
- Runs on proven, reliable computing infrastructure and software from IBM

Right now, users are struggling with the realities of digital content. Music, movies, photos, calendars, social media profiles and other data are distributed among a variety of services and devices, including computers, tablets and smartphones. Keeping all of this content safe, secure and in sync is virtually impossible. Sharing it with others is rarely convenient. There is never a guarantee that users can access exactly what they want from the device they choose.

At the same time, mobile providers are searching for new ways to differentiate and grow in an increasingly crowded marketplace. Ideally, providers need new ways to retain subscribers and minimize churn, as well as establish a platform for new revenue-generating services.

IBM and Funambol are working together to solve both challenges simultaneously with a single, powerful personal cloud solution. Combining proven IBM computing systems and software with an innovative application from Funambol, this white-label offering allows mobile providers to create a branded experience that is secure, syncs across all devices, and simplifies sharing.

Solution Overview

The centerpiece of this solution is OneMediaHub from Funambol, a J2EE application that wirelessly syncs any kind of content from any connected device — smartphone, tablet, computer, laptop and notebook.

By removing conventional barriers that limit access to a specific device, platform or type of content, OneMediaHub sets itself apart from other personal cloud solutions. It stores both user-generated and commercial digital content, including rich media (pictures, video, music), files and personal information management (PIM) data, such as contacts and calendars. It can share this content with social media networks such as Facebook and YouTube, media sharing sites such as Flickr, and email systems. Most important, OneMediaHub works no matter what device users prefer, whether PC or Mac, smartphones or tablets, or the growing list of Internet-connected TVs, game consoles and other consumer electronics.

OneMediaHub enables mobile providers to fulfill the promise users expected from day one — that they should be able to access, share and manage their content from any device at any time. Providers that implement this solution allow subscribers to keep all of their digital content in a personal cloud that is accessible through a web portal or any connected device. They can wirelessly sync all their devices automatically. Automated backups in the cloud allow subscribers to restore at any time, so content stays secure even if a device is lost or changed. OneMediaHub enables subscribers to share content easily with friends, family and business associates. Plus, all contact lists, calendars and files stay up to date across all devices.

OneMediaHub is based on Funambol's leading open source implementation of SyncML, also known as the Open Mobile Alliance Data Synchronization (OMA DS) standard. SyncML is built into more than one billion mobile phones, enabling them to work with OneMediaHub to sync Pall PIM data from contacts to notes. Virtually any mobile device with the ability to access the Internet can sync with OneMediaHub. OneMediaHub includes several components:

- **Portal.** The web portal is a cloud-based Asynchronous JavaScript and XML (AJAX) application that lets subscribers view and edit data and content that they have synced from other sources.
- **Server.** The server enables synchronization activities, receiving information from mobile devices, processing and saving it in a data store, and interacting with mobile devices.
- **Connectors.** This software connects the server to an external data source, allowing mobile devices to sync data with email servers, databases and Lightweight Directory Access Protocol (LDAP) directories.
- **Mobile and Desktop Apps.** For mobile devices without built-in SyncML, such as iPhone/iPad, Android, BlackBerry, Symbian and Windows Phones, OneMediaHub provides mobile apps for syncing. Apps are also available for Windows and Mac OS X computers.

Complementing OneMediaHub is a proven, extensive portfolio of cloud computing systems, storage and software from IBM to make sure the entire solution delivers high reliability, superior data protection and exceptional performance for mobile providers — whether it is run onsite or hosted in the cloud.

No matter what configuration mobile providers select, they can expect a turnkey solution from IBM and Funambol. Providers can choose to start with a hosted solution in the cloud and then move to an on-site infrastructure at any time. Providers can also highly customize the solution, using its Server application programming interface (API) and software development kits (SDKs), to offer differentiated services as the personal cloud market continues to evolve.

Configuration flexibility is only one of the reasons why OneMediaHub, backed by IT infrastructure from IBM, makes sense for mobile providers.

As a white-label solution, OneMediaHub empowers mobile providers to stamp the personal digital cloud with their own brand. Users associate the convenience and flexibility of the solution with the provider's brand. Plus, users come to see the provider's brand as a stable digital locker for all of the content that is important to them, which builds loyalty and improves retention.

OneMediaHub also sets the stage for revenue generation. It can be offered to subscribers as a freemium service with an initial level of storage and options to purchase storage upgrades. The solution can also be offered in a bundle with a data plan, as an incentive to attract new subscribers. Providers can also offer premium content and sell targeted advertising.

Finally, the solution from IBM and Funambol can be launched quickly. It can be easily integrated with a mobile provider's authentication, billing and customer support systems, so providers can brand the offering and move quickly to maximize share in a rapidly emerging market space.

Solution Benefits

Together, IBM and Funambol deliver a combination of pioneering personal cloud services backed by trusted cloud infrastructure, software and implementation services. The benefits of this approach for mobile providers are numerous.

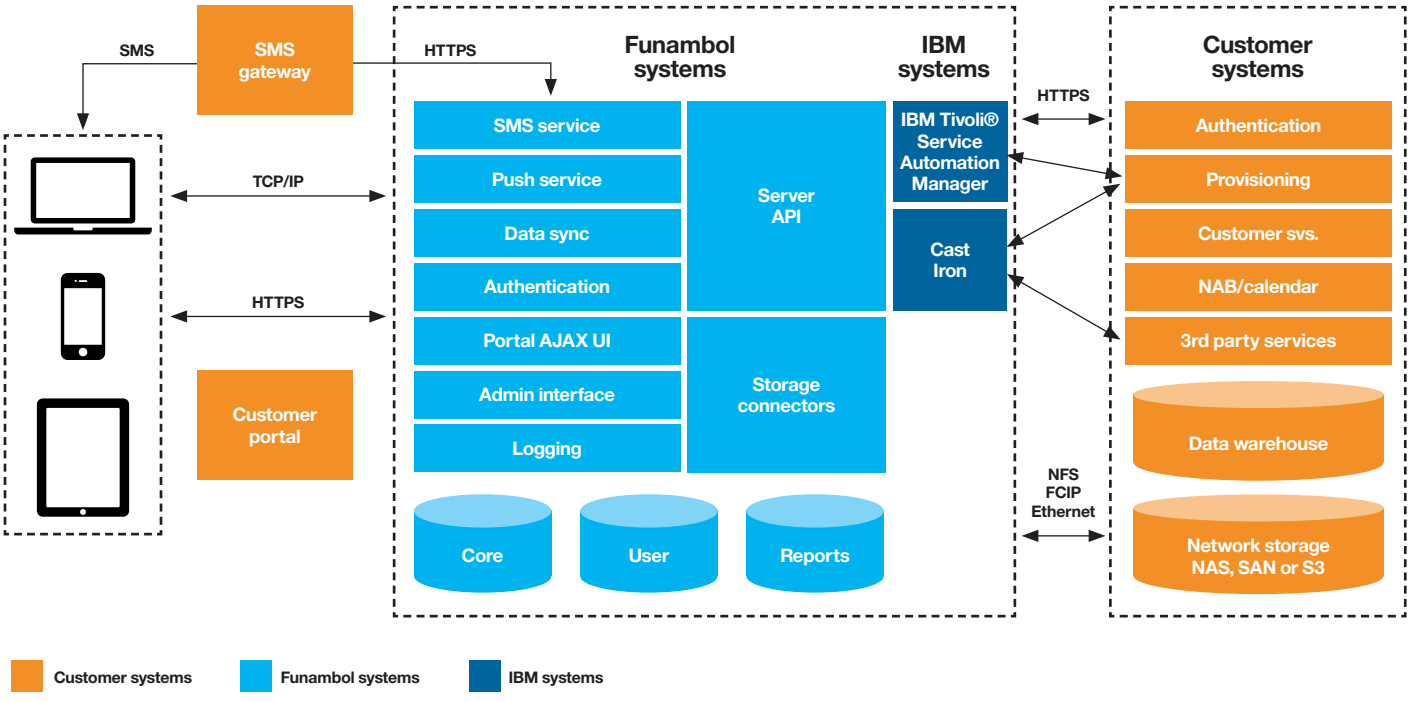
- **Lower churn.** Because the solution from IBM and Funambol is device-agnostic, it eliminates one of the primary reasons why users switch providers. It also presents users with one place to keep all their digital content secure, synced and shareable. Users will be extremely reluctant to move away from providers who are seen as the stewards of critical content.
- **Higher revenue.** Establishing a reliable content repository that crosses the boundaries of conventional storage establishes a versatile new platform for revenue generation. No matter how providers choose to monetize the solution, offering a get-anything-anywhere personal cloud will be critical for providers to compete effectively.
- **Greater flexibility.** The solution from IBM and Funambol does not lock providers into a specific framework or approach. It does not limit providers to certain devices or connections or types of content. Based on an open application that can be deployed in many ways, this solution delivers exceptional flexibility so providers can choose the best way forward.

Funambol and IBM: a closer look

Configurations of the solution from IBM and Funambol will vary considerably, depending on the needs of the mobile provider. Components of the solution from IBM may include:

- **IBM System x®.** The IBM System x3550 M3 builds on the latest Intel® Xeon® processor technology with extreme processing power plus superior energy-management and cooling features to meet demanding workloads at a lower cost per watt.
- **IBM BladeCenter®.** This highly integrated system helps reduce management complexity, increase performance and energy-efficiency, and significantly lowers costs. The IBM BladeCenter HX5 enables unprecedented performance and utilization in a blade form factor for database and virtualization.
- **IBM storage solutions.** These innovative storage technologies include IBM Scale Out Network Attached Storage (SONAS), which is designed to embrace and deliver cloud storage in the petabyte age. SONAS provides extreme scalability to accommodate capacity growth for up to 21 petabytes and manages multiple petabytes of storage and billions of files in a single file system. The IBM General Parallel File System (GPFS™) is a high-performance enterprise file management solution that enables seamless capacity expansion and high reliability/availability. IBM also offers a wide variety of tape and disk-based storage technologies.
- **IBM DB2®.** This database software is optimized to deliver industry-leading performance across multiple workloads while lowering the cost of administration, storage, development and servers. Features include pure XML, industry-leading deep compression, and multi-temperature data management.

Funambol and IBM solution architecture



Funambol and IBM: delivering the personal cloud

Funambol

Funambol is the leading provider of white-label personal cloud sync solutions for mobile providers. Funambol solutions are used by many of the leading companies in the mobile industry. The company's solutions have won numerous mobile awards for its advanced technology.

IBM

IBM works with the top 1,000 communications service providers (CSPs) worldwide, including all 20 of the largest global providers. The IBM Service Provider Delivery Environment (SPDE) is a communications industry framework that provides the foundation for much of the software that runs the world's communications services. Built on best practices and patterns from client engagements with CSPs around the world, IBM SPDE helps deliver value-added services that launch smarter services, drive smarter operations and build smarter networks. In addition, workload-optimized hardware components from IBM deliver the speed and power CSPs need to drive the latest tools and techniques for network optimization.

For more information

To learn more about IBM in telecommunications, contact your IBM sales rep or visit: **ibm.com**/telecom

To learn more about Funambol OneMediaHub, please visit: www.funambol.com

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