

# ownCloud and IBM: Enabling secure and agile file sharing across the enterprise



*Robust, highly secure and elastic enterprise file sync and share solutions for organizations of myriad sizes*

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## Highlights:

- Accelerates business by securely providing access to enterprise files from mobile, desktop and web clients
  - Enables advanced collaboration with flexible and extensible file sharing functionality
  - Increases file sharing security and compliance with centralized control and visibility
  - Eases deployment and reduces cost by integrating with existing processes and systems while leveraging the current enterprise infrastructure
  - Delivers exceptional scalability, performance, agility and data economics using robust IBM storage solutions proven for use with 100's of thousands of users
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From universities and research centers to financial institutions and healthcare providers, organizations around the world depend on their ability to connect and share information. This collaboration leads to efficient services, improved outcomes and remarkable discoveries. Faced with an increasingly mobile workforce, complex enterprise infrastructure and strict compliance demands, the challenge for IT teams to deliver highly secure and dynamic sharing capabilities continues to steepen.

IT professionals must manage storage systems, servers, private cloud management tools, log managers, backup tools and many other solutions deployed across the enterprise. At the same time, they're tasked with monitoring data that exists in applications, object stores, on-premise storage or in the cloud. IT teams need a file sharing solution that can leverage the organization's existing infrastructure for growing requirements, can keep up with user demands and won't compromise confidential information.

ownCloud and IBM are working together to provide a scalable, flexible and highly secure file sync and share solution that helps IT teams meet the demands of today's mobile and collaborative workforce. By combining ownCloud's file sync and share capabilities with robust IBM storage technology, the solution delivers agile and reliable file access for users, while enabling IT teams to control sensitive data.



## **Solution overview**

Real-time collaboration and information sharing are key drivers of an enterprise's productivity and innovation. Finding solutions to enable such dynamic sharing in an enterprise setting while maintaining control, however, can be a challenge. Some organizations look to consumer-grade, cloud-based file sharing options that offer the scalability, ease of use and access users want but store sensitive company data on external servers. This exposes organizations to risks of data leaks while limiting IT visibility. Other options include using existing enterprise collaboration and content management systems that could be challenging to maintain and cumbersome for end users.

Together, ownCloud and IBM are helping enterprises across industries overcome these file sharing challenges, enabling agile, scalable and highly secure file sync and share with ownCloud Enterprise Edition and IBM storage solutions. ownCloud Enterprise Edition is powered by ownCloud's open, modular architecture to deliver convenient end-user file access and ongoing IT data control. Backed by IBM storage technologies, such as IBM Spectrum Scale™ software, the IBM Elastic Storage™ Server solution and the IBM Storwize® V7000 Unified disk system, the solution can handle an organization's most demanding storage needs.

With ownCloud, end users are able to access, sync and share files on almost any device, virtually anytime, from practically anywhere — and it's all managed, secured and controlled by IT. The solution is hosted on an organization's data center and servers, as directed by IT teams, and is supported on Windows, MacOS and Linux desktop clients, as well as Android, iOS and BlackBerry devices.

In addition to basic file sync and share capabilities, ownCloud offers end users universal file access (UFA), regardless of where the data lives. For example, organizations often have unstructured data spread across multiple silos and applications, from Windows network drives and SharePoint to FTP servers and external cloud systems, like Dropbox, each with its own set of permissions and access requirements. With ownCloud, users are able to access these files through a highly secure single interface and single sign-on (SSO) process.

Data accessed by end users remains in its original location, and the solution preserves permissions, access control lists (ACLs) and compliance requirements for individual applications, servers and silos. This means IT teams don't have to duplicate or move data or permissions during the file sharing process.

The solution's open architecture design and flexible integration APIs support smooth integration with an organization's existing infrastructure, helping enterprises leverage existing investments and preserve business processes that are already in place. This includes security and governance frameworks, as well as data loss prevention, mobile device management, event logging, monitoring and backup systems.

Organizations that already have a SAML-based identity provider (IdP) can integrate ownCloud Enterprise Edition into their existing infrastructure and authenticate with their chosen IdP. SAML via Shibboleth allows single sign-on across the organization and the globe, providing highly secure authentication within the ownCloud server, as well as the desktop clients and mobile apps.

The solution's built-in LDAP and Active Directory (AD) integration allows organizations to leverage their existing AD, LDAP or OpenLDAP directories for authentication to access files. For organizations that don't have an existing user directory, ownCloud offers a management option that enables IT to view users in a single window and sort and search users by display name, last login, group or even storage location. Administrators can add new users with the click of a button, while user avatars make it easy to see who is sharing which files and with whom.

What's more, logging and auditing applications provide visibility into account-level activities, such as logins, file sharing and file updates, to name a few. IT teams are able to see who handled which files, as well as when and where those files were accessed, to track information and help ensure compliance measures are met. IT administrators can run reports, correlate events and set alerts to support ongoing security measures.

For added security capability and oversight, IT teams can use the solution's file firewall application to control and govern access to files, using an intuitive graphical user interface with drop-down menus to set and manage policy-driven file access. Administrators are able to restrict or open access to files based on a number of variables, including group membership, device type, file size, file type, IP address range, subnet, geography, time of day and more. Furthermore, the solution's Files Drop application enables anonymous uploads for collaboration with partners and clients while restricting access to designated folders.

The solution also offers the scalability and flexibility necessary to support advanced collaboration endeavors. For instance, if multiple research centers around the world want to work together on a project that involves sensitive data, they can share files and folders using a Federated Cloud of ownCloud installations or server-to-server sharing.

The Federated Cloud extends UFA beyond the borders of individual clouds. It allows individual organizations to maintain their respective security and governance protocols while still delivering a convenient common file access layer to end users. Enterprises and Research centers can rely on robust IBM storage technology to support Federated Clouds of more than 500,000 users, handling the heavy workloads and data generated by massive ad hoc file sharing.

For custom integrations and to enable evolving and ongoing collaboration needs, IT teams can easily extend the core functionality of ownCloud by using mobile libraries, open APIs and plug-in applications. Organizations also can apply branding to their mobile and desktop sync clients by using ownBrander to customize the solution experience across the enterprise.

### **Solution benefits**

The solution from ownCloud and IBM helps organizations provide public cloud flexibility with highly secure technology and the scalability of a private cloud. Users have the collaborative, on-the-go productivity their work requires, while IT teams are equipped with the oversight and capabilities they need to help protect their corporate data from security risks.

- **Advanced collaboration for accelerated business** — The solution equips organizations with a modern infrastructure that empowers its workforce to collaborate when, where and how it wants. With this solution, users have a single interface from which they can access, sync and share files on virtually any device, practically anytime, from just about anywhere.
- **Increased control and compliance** — IT teams are able to choose the servers onto which ownCloud is installed and control where files are stored, leveraging storage across on-site devices and private or hybrid cloud storage services. The solution integrates quickly and easily with an organization's existing IT infrastructure, from user directories and security systems to monitoring and backup services, and provides IT teams with a single dashboard view for file management.

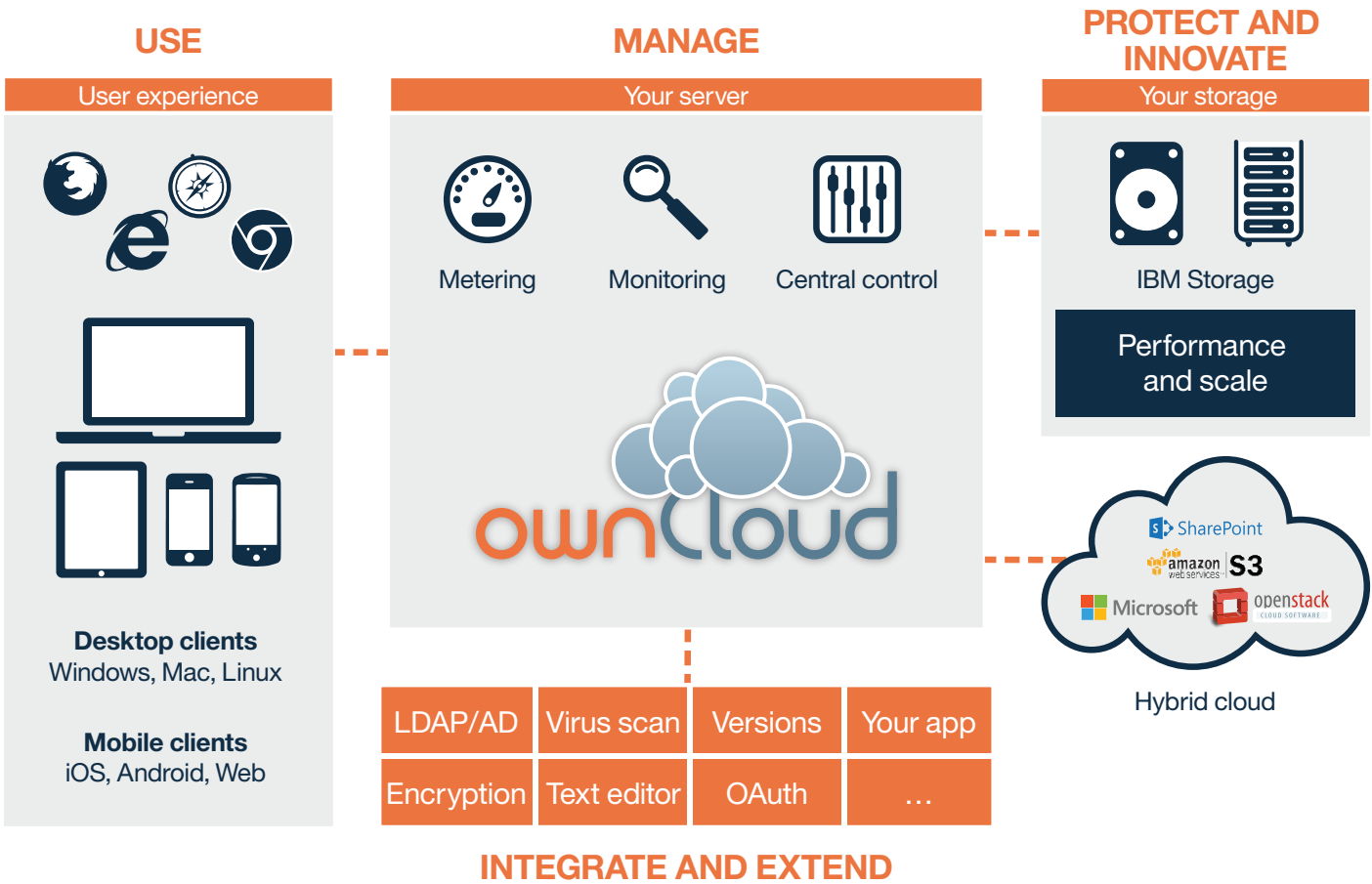
- **Powerful scalability, performance and agility** — ownCloud is backed by robust IBM storage technology. This includes flash-accelerated, industrial strength, highly scalable software-defined storage solutions, such as IBM Spectrum Scale software and IBM Elastic Storage Server solution. These storage technologies enable global shared access to data with extreme scalability and agility and can support hundreds of thousands of users. Alternately, IBM Storwize V7000 Unified disk system is able to support hundreds of users with virtualized, enterprise-class, flash-optimized modular storage.

### **ownCloud and IBM: A closer look**

Together, ownCloud and IBM are providing an on-premise enterprise file sharing solution that delivers consumer-grade user ease with the enterprise governance and control measures IT teams require. Components of the solution from IBM may include the following:

- **IBM Spectrum Scale software** — This software-defined storage solution helps enterprises simplify data management at scale. A proven, high-performance data and file management solution, Spectrum Scale software delivers world-class storage management with extreme scalability, flash-accelerated performance and automatic policy-based storage tiering from flash through disk to tape. It can reduce storage costs by up to 90% while improving security and management efficiency in cloud, big data and analytics environments.
- **IBM Storwize V7000 Unified disk system** — This storage system provides the latest technologies for unlocking the business value of stored data, including virtualization and IBM Real-time Compression™ software. Storwize V7000 Unified disk systems include a powerful new hardware platform that can support the massive volumes of data created by today's demanding cloud and analytics applications. These systems are designed to deliver outstanding efficiency, ease of use and dependability for organizations of myriad sizes, but they fit the needs of small or medium enterprises particularly well.
- **IBM Elastic Storage Server solution** — This pre-integrated and powerful storage system is based on innovative IBM server and software technology. The Elastic Storage Server solution is a modern implementation of software-defined storage, combining Spectrum Scale software with IBM servers and disk arrays. This technology unites the CPU and I/O capabilities of the IBM POWER8® processor-based architecture and matches it with 2U and 4U storage enclosures. This architecture enables IBM Spectrum Scale Native RAID software to actively manage all RAID functionality and reduce RAID rebuild times to a fraction of the time required by hardware RAID. In conjunction with ownCloud, the Elastic Storage Server solution provides a robust and highly scalable, high-performing solution for enterprise file sync and share.

ownCloud and IBM solution architecture



The solution from ownCloud and IBM empowers IT teams to control and manage files across corporate data silos. It provides users with a single interface from which they can access files from virtually any device at almost any time, regardless of where the data is stored.

## ownCloud and IBM: Empowering the enterprise

### ownCloud, Inc.

Organizations that must share confidential data internally and externally rely on the on-premise enterprise file sync and share platform from ownCloud. Only ownCloud gives IT the visibility and control required to manage sensitive data, preserve business processes and integrate with existing compliant infrastructures while offering users the modern collaboration experience they demand. This is made possible through open, modular architecture, extreme extensibility and unique federated cloud sharing capabilities from ownCloud. Company headquarters are located in Lexington, MA, with European headquarters in Nuremberg, Germany.

### IBM

IBM is helping enterprises across industries accelerate business and unlock new collaboration capabilities that drive ongoing efficiencies, improved outcomes and research breakthroughs. With robust storage and infrastructure solutions, such as the IBM Storwize V7000 Unified disk system, the IBM Elastic Storage Server solution and IBM Spectrum Scale software, IBM equips organizations with the technology they need to reliably manage heavy workloads and large user numbers, consistently operating at the high performance levels necessary to drive the enterprise.

### For more information

To learn more about IBM storage solutions, please contact your IBM sales representative or visit: [ibm.com/systems/storage](http://ibm.com/systems/storage)

To learn more about ownCloud Enterprise Edition, please visit: [www.owncloud.com](http://www.owncloud.com)



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