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COLLABORATION IN COMPLIANCE

INTRODUCING

FORTIFILE

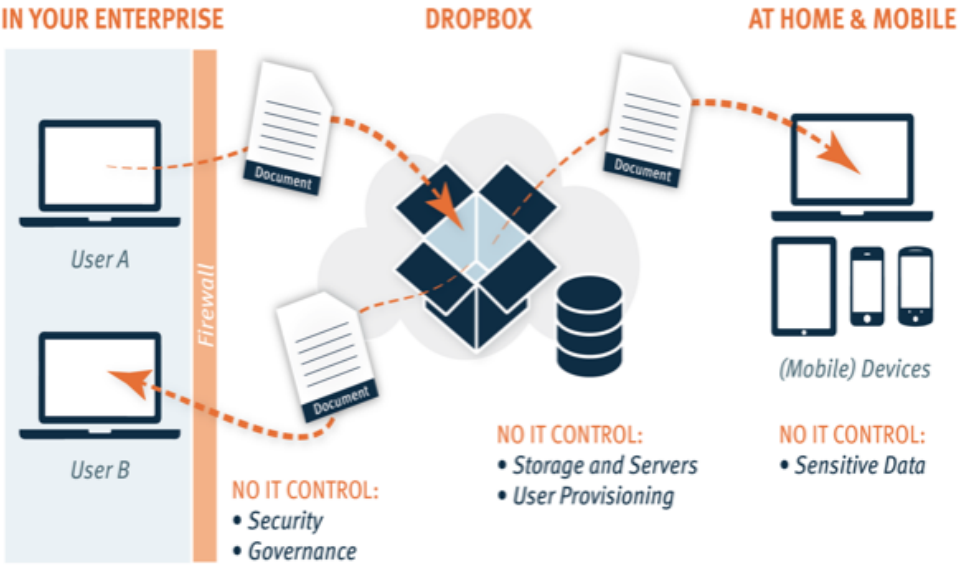
A secure, scalable and cost-effective Enterprise File Sync and Share Solution

Sharing...
the Compliance Problem

As many as three out of every four employees use consumer-grade file-sync and file-share services without IT's authorization, according to recent research. Read more to learn about a new, better solution for enterprise file-sync and file-sharing: FORTIFILE, developed in partnership with Red Hat and ownCloud.

The proliferation of consumer-grade, public cloud-storage services (e.g., Dropbox, Google Drive, etc.) presents enterprises with myriad pain points from the perspective of end users, IT administrators and executives alike. Moving forward, enterprises need a more efficient, scalable and cost-effective solution to these issues that addresses security, regulatory compliance and cost.

End users, who continue to require access to sensitive corporate data across multiple mobile devices and platforms, are relying on the convenience and ease of use that public-cloud storage provides. This situation, however, is unacceptable from the standpoint of security and compliance and only exposes enterprises to increased risk and regulatory fines.



As such, enterprises require a solution that allows more control and visibility over how end users in the enterprise share and sync files in a private or hybrid cloud environment to meet compliance and enforce security policies effectively. To allow end users to continue to sync and share files in the same manner they have grown accustomed to, FORTIFILE - developed by IIS Technology, Red Hat and ownCloud - is that very solution.

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AS MANY AS THREE OUT OF EVERY FOUR EMPLOYEES USE CONSUMER-GRADE FILE-SYNC AND FILE-SHARE SERVICES WITHOUT IT'S AUTHORIZATION

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IT MUST FIND A WAY TO MANAGE FILE-SYNC AND FILE-SHARE REQUIREMENTS WHILE REMAINING IN COMPLIANCE WITH AN INCREASED NUMBER OF REGULATIONS

Shedding Light on "Shadow IT"

Today, the speed of business in larger enterprises, such as financial institutions, health care organizations and government entities, has forced the hand of employees to use public, consumer-grade cloud services. The simplicity and ease of use that these services provide end users with are simply too attractive to pass up.

Thus, the problem of "shadow IT" has emerged as a serious security risk since IT must find a way to manage file-sync and file-share requirements while remaining in compliance with an increased number of regulations, both domestic and international.

A recent study by Workshare has revealed that as many as three quarters of employees still use consumer-grade file-sync and file-share services, such as Dropbox, among many others, without IT's permission.

The issue at hand with shadow IT is that enterprises have no control whatsoever over how public, free-to-use cloud-storage providers establish security policies; provision or deprovision underlying compute, storage and network resources; or replicate data for disaster recovery and high availability.

Regardless of the security (or insecurity) of consumer-grade cloud-storage services, simply exposing documents outside of the corporate firewall is sufficient to violate security regulations in many instances (e.g., HIPAA and Sarbanes-Oxley). FORTIFILE addresses these issues and provides enterprises with many benefits within a single, universal file-access appliance, integrated seamlessly in a private, on-premise, fully managed solution.

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FORTIFILE IS A HIGHLY SCALABLE, EFFICIENT, UNIVERSAL FILE-ACCESS APPLIANCE FULLY SUPPORTED AND IMPLEMENTED BY THE INTEGRATION EXPERTS AT IIS.

INTRODUCING FORTIFILE

FORTIFILE is a highly scalable, efficient, universal file-access appliance fully supported and implemented by the integration experts at IIS. FORTIFILE combines the scale-out capabilities of Red Hat Storage Server 3.0 for software-defined storage, decoupled from the underlying hardware to eliminate dependencies on expensive proprietary appliances, and ownCloud Enterprise Edition 7 to provide a user-friendly client available on desktops and mobile devices alike.

These two software layers sit on top of enterprise-class, purpose-built and tested dual-node HP SL4540 Gen 8 servers. Also, the appliance can scale to tens of thousands of users and scale out storage on demand to petabyte-sized capacity, giving enterprises a solution to the problem of shadow IT and its security implications, compliance violations and deficiencies.

Developed through the combined expertise of IIS, Red Hat and ownCloud, FORTIFILE addresses these pain points in a single, easy-to-deploy appliance to enable enterprise-class file-sync and file-share capabilities. Here is a drill-down into how IIS, Red Hat and ownCloud's solutions come together to implement and support FORTIFILE's beneficial features.

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WITHIN FORTIFILE, RED HAT STORAGE SERVER 3.0 PROVIDES A HIGHLY ELASTIC, SCALABLE, SOFTWARE-DEFINED STORAGE SOLUTION

Red Hat Storage Server 3.0

Within FORTIFILE, Red Hat Storage Server 3.0 provides a highly elastic, scalable, software-defined storage solution. Recently, plenty of media attention and subsequent media hype have focused on the phenomenon of "big data" in the enterprise. Regardless of where a business stands on the issue, the essential truth is clear: Enterprises have, or will have, more data-management hurdles to overcome as data continues to proliferate. The scale of the issue alone warrants the development of a next-generation, more efficient and cost-effective storage solution.

Red Hat Storage Server 3.0 enables a software-defined storage solution that eliminates the need to support proprietary hardware. Red Hat Storage Server 3.0 has the ability to operate on commodity x86 servers, which have become the de facto standard for the data centers at hyper-scale web properties, such as Facebook, Google and Amazon. What Red Hat Storage Server 3.0 brings to the FORTIFILE solution is elastic, easy-to-administer scale-out storage architecture.

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Red Hat Storage Server

Connect x86 servers into a single pool of storage … for scaling like the cloud.

- Single, shared namespace with petabyte scalability
- Seamlessly extensible and self-healing
- Data protection and HA at disk, server, and site levels
- File and object storage interfaces

As such, storage becomes less expensive to own and operate and more efficient than scaling up proprietary infrastructure to meet end-user demands. In fact, given the scope of the "big data" tsunami now inundating enterprises of every ilk, simply adding more storage capacity will no longer suffice. Enterprises need a software-defined storage solution that utilizes a scale-out architecture, which allows additional commodity hardware and infrastructure to be added as needed without disruption.

A recent benchmark test has showcased the scalability of Red Hat Storage Server 3.0's software-defined storage when it is deployed alongside ownCloud's solution. Utilizing HP ProLiant SL4540 Gen8 servers and HP ProLiant DL380 G5 servers for performance testing, Red Hat Storage Server 3.0 and ownCloud Enterprise Edition 7 were able to accommodate a simulation of as many as 25,000 active users. As enterprise data continues to proliferate, this particular architecture, combining Red Hat Storage Server 3.0 with ownCloud Enterprise Edition 7, can also potentially scale to hundreds of thousands of users, according to the same benchmark test.

ENTERPRISES REQUIRE A SOLUTION THAT ALLOWS MORE CONTROL AND VISIBILITY OVER HOW END USERS IN THE ENTERPRISE SHARE AND SYNC FILES

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RED HAT PROVIDES FORTIFILE WITH HIGHLY SCALABLE, ELASTIC, SOFTWARE-DEFINED STORAGE

ownCloud Enterprise Edition 7

Red Hat provides FORTIFILE with highly scalable, elastic, software-defined storage, so to complement this capability, ownCloud Enterprise Edition 7 provides end users and IT administrators with an easy-to-use interface that works much in the same manner as the consumer-grade services employees already use daily. The difference is that ownCloud Enterprise Edition 7 delivers this functionality within the FORTIFILE file-access appliance to address enterprise security and compliance concerns.

ownCloud Server and User Applications

Desktop Clients
Windows, Mac and Linux

Consumer-grade user experience

ownCloud Server
Your Linux and Windows Servers

- Provisioning & management
- Directory integration
- Security & encryption
- IT infrastructure integration
- Monitoring, logging, auditing
- Scaling and high availability
- Ecosystem component integration

Mobile Clients
iOS and Android

Consumer-grade user experience

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File-sharing and file-syncing software are powerful, business-critical tools for the enterprise, fostering collaboration, increasing efficiency and reducing costs. The issue at hand is when consumer-grade, public-cloud services provide these tools, security and compliance suffer greatly. OwnCloud Enterprise Edition 7 addresses these concerns by offering an enterprise-class, on-premise solution via FORTIFILE.

Within the FORTIFILE universal file-access appliance, ownCloud Enterprise Edition 7 views the software-defined storage that Red Hat Storage Server 3.0 delivers as a single pool of resources. As such, enterprises can provision resources as needed based on user role and file-access privileges within a single name-space and thus simplify administration. Public-cloud services give enterprises no such control, nor do they integrate well enough to work efficiently with other corporate applications.

As the end user's primary interface with FORTIFILE, ownCloud Enterprise Edition 7 allows enterprises to establish version-control policies as well as configure end-user permissions to a granular level. Since OwnCloud Enterprise Edition 7 is, in fact, an n-tier web application, this solution integrates well into myriad cloud environments.

OwnCloud Enterprise Edition 7 encrypts data at rest and data in transit to provide the level of security required by compliance mandates, such as HIPAA, or myriad financial industry regulations. No other file-access, private-cloud appliance offers this capability to date.
In addition, OwnCloud Enterprise Edition 7 has developed mobile software available via iOS, Android, Windows and desktop clients to hold it all together and enable truly mobile file-share and file-sync capabilities in th e enterprise - anytime, anywhere.

FILE-SHARING AND FILE-SYNCING SOFTWARE ARE POWERFUL, BUSINESS-CRITICAL TOOLS FOR THE ENTERPRISE

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AS A WORLD-CLASS TECHNOLOGY INTEGRATOR, IIS HAS ENGINEERED FORTIFILE TO COMBINE THE BEST FEATURES OF RED HAT STORAGE SERVER 3.0 AND OWNCLOUD ENTERPRISE EDITION 7

IIS' Services

As a world-class technology integrator, IIS Technolgy has engineered FORTIFILE to combine the best features of Red Hat Storage Server 3.0 and ownCloud Enterprise Edition 7 within a single, efficient appliance. Enabling software-defined solutions in the real world requires an implementation partner with the expertise, innovation and resources necessary to bring together best-of-breed software and hardware to meet any enterprise's business challenges.

Differentiators	Benefits
Security	• Support secure on premise deployment • Ensure consistency with existing data security and compliance policies
Management	• integrate with existing IT infrastructure • Use corporate IT staff to manage the solution
Lower TCO	• Consolidate application, storage and DB tiers on HP ProLiant SL 4540 servers • Reduce hardware, software license, and maintenance costs • Reduce operating costs by as much as 20% • Achieve lover cost per terabyte
Scalability	• Support seamless, dynamic and non-disruptive growth of storage infrastructures • Support demand with ownCloud standard n-tier architecture, which delivers simple and rapid scaling of storage and users • Expand the Red Hat Storage Server Layer with back-end hardware • Support multi-petabyte storage repositories
High Performance	• Improve file access times by eliminating metadata servers • Reduce the likelihood of hot spots bottlenecks and long latency times by spreading the files evenly throughout the system • Increase performance with the balanced architecture of HP ProLiant SL4540 servers • Accelerate access to frequently accessed data with HP Smart Cache technology, which uses solid-state disks (SSDs)

By taking a proactive approach to making enterprise-class cloud file-sharing and file-sync services a reality, IIS' FORTIFILE appliance solves the security issues inherent to shadow IT services, such as public-cloud storage. Likewise, by providing a package of managed services to see the implementation of FORTIFILE from start to finish, IIS allows enterprises to avoid the operational hurdles and overhead of developing in-house, custom solutions, which can be costly and lengthy projects in many cases.

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Summary of Benefits

At the end of the day, what FORTIFILE provides is a secure, scalable and cost-effective appliance to share and sync files across any device, anytime, anywhere within an on-premise solution to satisfy compliance mandates. The key benefits of FORTIFILE encompass:

1) Improved security and compliance
2) Improved scalability and performance
3) Lower total cost of ownership

A look at each of these benefits shows what FORTIFILE can do.

Improved Security and Compliance

FORTIFILE delivers a secure, on-premise deployment that integrates seamlessly into any IT shop. **Enterprises can continue to enforce existing data security policies when adding FORTIFILE to their data centers**. There is no need to disrupt current security policies to accommodate the new solution, under the guidance of the implementation experts at IIS.

With respect to regulations, FORTIFILE brings enterprises back into compliance when deploying various private-cloud solutions. End users need to be able to utilize the efficiency of consumer-grade cloud-based storage, so FORTIFILE provides precisely this kind of capability, but within the boundaries of data security mandates.

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FORTIFILE PROVIDES A SECURE, SCALABLE AND COST-EFFECTIVE APPLIANCE TO SHARE AND SYNC FILES

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FORTIFILE ALSO IMPROVES SCALABILITY AND PERFORMANCE BY MAXIMIZING THE EFFICIENCY OF INFRASTRUCTURE RESOURCES

Improved Scalability and Performance

FORTIFILE also improves scalability and performance by maximizing the efficiency of infrastructure resources. The solution enables dynamic and non-disruptive growth when adding storage capacity and increasing the number of end users. **Red Hat's capabilities allow the back end of the appliance to be expanded as needed, on demand.**

File-access time also improves after deploying FORTIFILE. The solution evenly distributes files across the system's resources to reduce network bottlenecks and latency. Enterprises can also take advantage of FORTIFILE's balanced architecture on high-performance, leading-edge servers provided by HP.

Lower Total Cost of Ownership

For many businesses, lower total cost of ownership is one of the most important benefits that FORTIFILE delivers. The solution consolidates storage, application and database layers on enterprise-class HP ProLiant SL 4540 Gen8 servers to enable an entirely new level of resource optimization. FORTIFILE helps lower the cost-per-terabyte of storage as well as reduce license and maintenance costs. **Organizations have lowered the total cost of ownership by as much as 20% after deploying FORTIFILE.**

FORTIFILE allows enterprises to take advantage of the same economies of scale that have fueled the biggest data centers in the world. These benefits can come to fruition only by deploying software-defined solutions to leverage the lower cost of commodity hardware and open-source solutions, such as Red Hat Storage Server 3.0.

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About Red Hat

As the world's leading developer of open-source solutions for cloud, virtualization, Linux and storage, among several other specialties, Red Hat provides software-defined storage to scale-out infrastructure on demand, as needed. With more than 80 offices worldwide, Red Hat stands apart as a major contributor and innovator in the open-source community.

About ownCloud

Providing open-source, enterprise-class file-sync and file-share solutions, ownCloud aims to give enterprise IT more flexibility and control over how files are shared and synced to satisfy security concerns and compliance mandates within a user-friendly interface. Founded recently, in 2011, ownCloud stands poised to become a leader in enterprise-class cloud technologies alongside Red Hat.

About IIS Technology

IIS Technology provides integrated solutions to tackle even the most bothersome enterprise IT pain points. With the partner ecosystem to take on any enterprise IT challenge, IIS delivers full turn-key solutions, such as FORTIFILE, to lift enterprise IT to new heights.

Cloud-based file-sync and file-share services have become commonplace in the enterprise, regardless of whether or not enterprise IT can govern these products to satisfy compliance mandates, such as HIPAA. To solve these pain points, IIS has teamed up with Red Hat and ownCloud to create and deploy FORTIFILE, a highly efficient solution to finally shed light on shadow IT and its inherent security risks.

For even more details about what FORTIFILE can do, contact the experts at IIS via email, at info@iisl.com, or visit IIS's website, www.iisl.com, for more information on why IIS stands apart from the rest.

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