IBM Cloud Object Storage and Nasuni enterprise file service technology

Speed collaboration with faster, more flexible storage and file sharing

Benefits

- Consolidates storage and file sync-and-share into one global namespace for accelerated access and virtually unlimited capacity
- Avoids the cost of separate backup and disaster recovery technology
- Transforms workflow and data exchange to encourage greater innovation, efficiency and collaboration
- Helps streamline and simplify administration for both file management and the storage system

Video, image, audio, Internet of Things (IoT) data — enterprises face explosive growth in the number and size of files that users need to access, collaborate over and store. Network attached storage (NAS) or storage area network (SAN) arrays and existing backup, disaster recovery (DR), distributed file system and recovery technologies struggle to meet business requirements for speed, agility and always-on availability. As a result, users are turning to third-party enterprise file sync-and-share (EFSS) solutions that can add cost and complexity and make it difficult for IT to enforce security policies.

IBM® Cloud Object Storage provides virtually unlimited scalability and industry-leading availability and reliability to facilitate consistent enterprisewide data flow. Nasuni Corp. provides a cloud-scale EFSS solution that helps you store, protect, access and manage fast-growing unstructured data. Combined, Nasuni innovation and IBM Cloud Object Storage offer a unified file services platform that can more easily meet your needs for:

- Highly scalable NAS
- Advanced data protection
- Flexible, global file access
- Simplified management
- Reduced cost

Consolidating storage and file sync-and-share with virtually no limits

Using the IBM Cloud Object Storage and Nasuni solution, you can replace the costly, on-premises storage infrastructure needed to deliver home directories and group shares with a cloud-scale solution that does not require the complete overhaul of an IT infrastructure, or a “forklift upgrade.” The combined solution can support your enterprise in data centers, in dedicated or public clouds or even in a hybrid environment, depending on your needs.

Storage capacity scales more quickly and easily to meet your growing data file sizes and provisioning new capacity is designed to be simple and immediate. There is virtually no limit to the number and size of directories and files or to your file storage capacity. The solution also helps you transition from a capital expenditure (CAPEX) file infrastructure model to a less costly, more predictable operating expense (OPEX) "as a service" solution.

These capabilities facilitate:

- **Easier, highly secure access**. Files are accessed on-premises through standard NAS protocols, including Server Message Block (SMB), Common Internet File System (CIFS) and Network File System (NFS) protocols.
- **Storage consolidation**. NAS and file sync and share silos are consolidated into a single global namespace.
- **IoT platform storage**. The potentially millions of files generated by new Internet-connected machines are more easily stored, protected and accessed.

Avoiding the cost of separate backup and DR components

The solution provides continuous file versioning, designed to automatically capture every change to every file and store the changes in the IBM cloud. This avoids the need for a separate file backup infrastructure and helps ensure that any version of any file can be recovered in minutes, which improves recovery point objectives and times. It also eliminates the cost of separate file backup software, hardware and administrative overhead (see Figure 1).

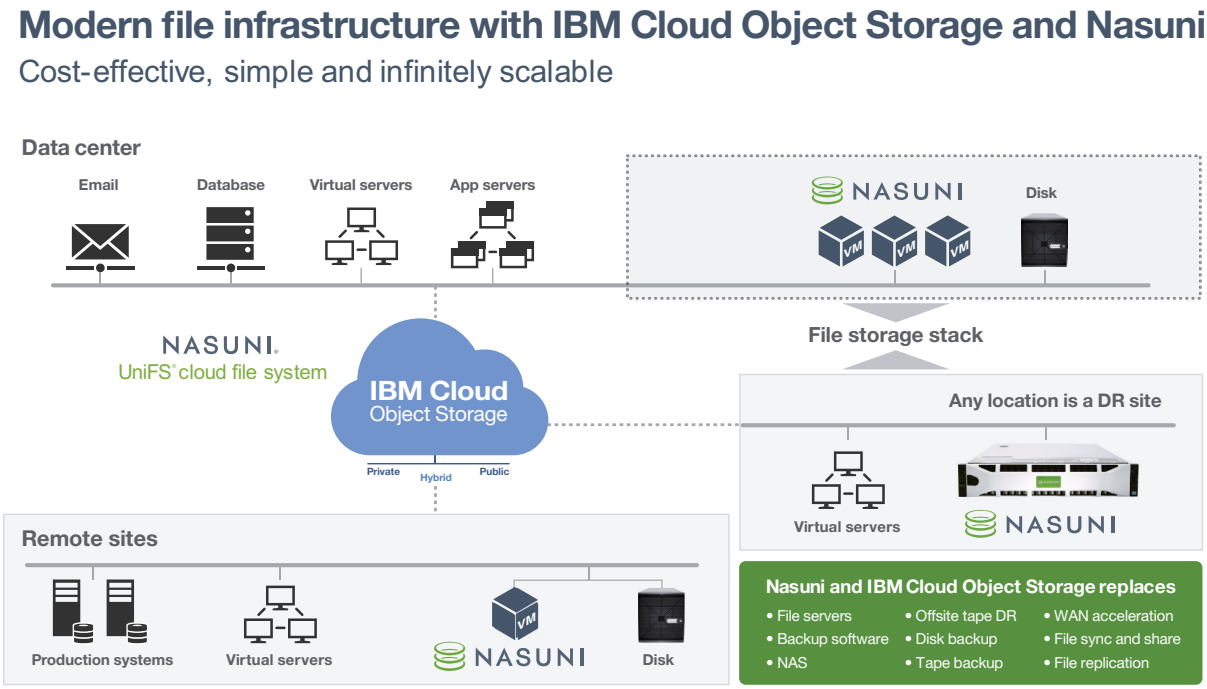

Figure 1. The IBM and Nasuni solution can provide a modern file infrastructure that is simpler, more cost-effective and highly scalable.

What's more, building on IBM Cloud Object Storage means that copies of files are automatically geodispersed in multiple locations using patented technology to facilitate high data reliability and availability. Access to these files in the event of a disaster is assured through built-in, fault-tolerant IBM design and Nasuni's rapid DR deployment capability. These capabilities help you eliminate expensive replication technologies such as Multiprotocol Label Switching (MPLS), duplicate NAS and SAN infrastructure, and regional data centers.

Transforming data exchange to encourage collaboration, efficiency and security

Users can read and write files from virtually any global location — and use mobile devices through Microsoft Windows and Apple Corp. iOS applications and a web browser. Highly accessible, analytics-ready data repositories can unlock the value of older data without the delays of traditional archive solutions. These capabilities can greatly enhance employee efficiency and collaboration (see Figure 2).

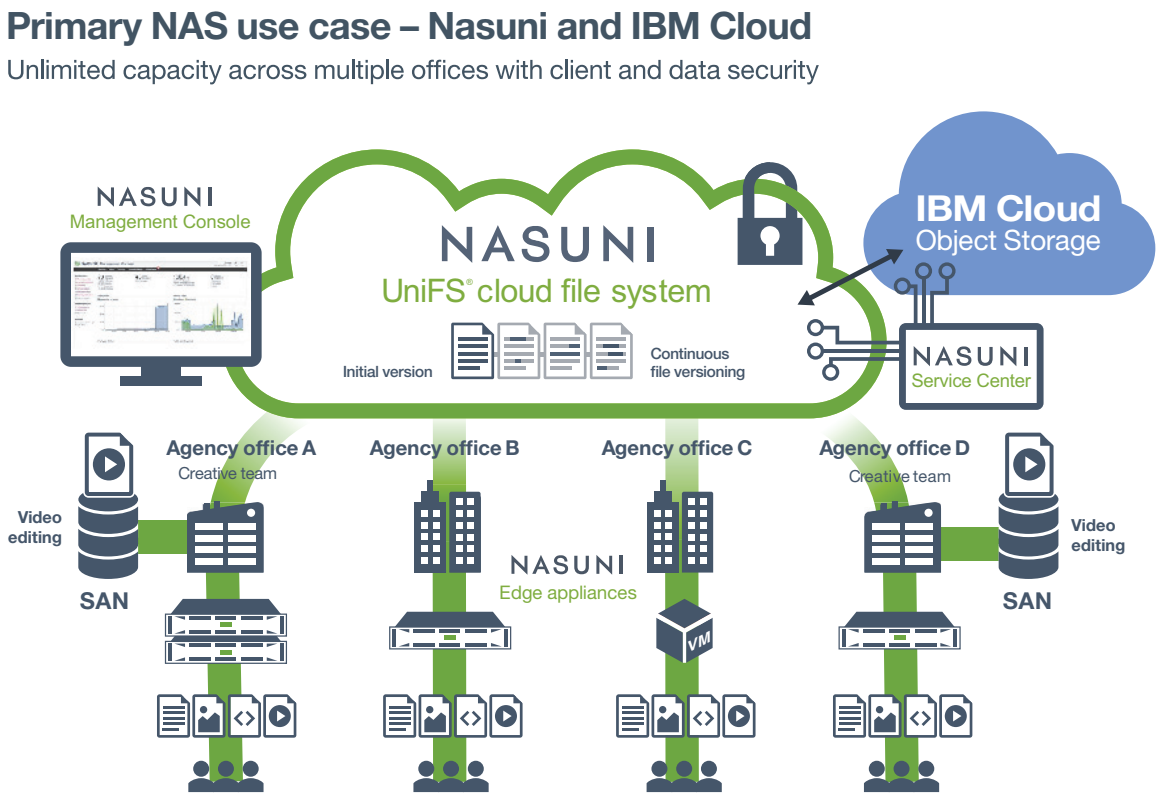

Figure 2. The Nasuni and IBM Cloud Object Storage platform consolidates storage and file access into a single global namespace.

The distinctive IBM Cloud architecture helps ensure that users always access the same file while Nasuni global locking technology helps ensure that there is only one writer. This decreases the threat of data loss from simultaneous edits and helps make creative content, engineering and design workflows more efficient. In addition, the details of file access are captured on a per-user basis to give enterprises a more complete, authoritative audit trail.

Data stored in IBM Cloud Object Storage is strongly encrypted before it is transmitted by Nasuni using private, customer-controlled encryption keys that give you control of your content. Remote wipe and two-factor authorization help you provide access to company data more securely across multiple locations. Additional Nasuni security provisions include faster ransomware and malware remediation features.

Helping to streamline and simplify administration and encourage growth

Nasuni Edge appliances that provide local access to files can be configured and managed as one through a centralized web interface. Similarly, IT managers can scale out the IBM platform to accommodate hundreds of thousands of servers and tens of thousands of users, while retaining the ability to control and manage them using a central console. These centralized control features help you:

- Set and enforce compliance policies
- Take advantage of big data analytics applications
- Accelerate smart machine and IoT initiatives
- Enhance the ability to support global growth
- Streamline support for mergers and acquisitions

IBM and Nasuni solution components

Working from either inside the IBM Cloud Object Storage cloud or connecting to it externally, the Nasuni platform can seamlessly integrate IBM's cloud services, web applications, mobile device applications, on-premises software, and optional on-premises hardware into a single, easier-to-manage hybrid cloud solution with these features:

- A cloud-native file system that **offers an authoritative global namespace**, storing Microsoft Windows "Gold copies" of files and file versions in IBM Cloud Object Storage
- On-premises appliances that **cache only the active files** for more secure, high-performance access
- **Single-pane-of-glass management, control and monitoring** of Edge Appliances, file shares and protocols through a standard web browser
- **Ability to access files virtually** anytime, anywhere, through just about any device using iOS and Google Android apps, sync apps for Windows and MacOS, and a web browser interface
- Robust **monitoring of IBM Cloud Object Storage and Nasuni Edge appliances, and administrative support** to help ensure availability, optimize performance and support collaboration without file conflicts

The IBM and Nasuni advantage

Together, the IBM and Nasuni solution helps you:

- Scale your infrastructure more easily and facilitate always-on access from multiple locations
- Streamline and simplify administration of file data management and storage
- Provide a single, robust solution for global file access, backup and collaboration
- Improve flexibility with a choice of on-premises, cloud or hybrid deployment (see Figure 3)
- Achieve up to a 60 percent reduction in traditional NAS

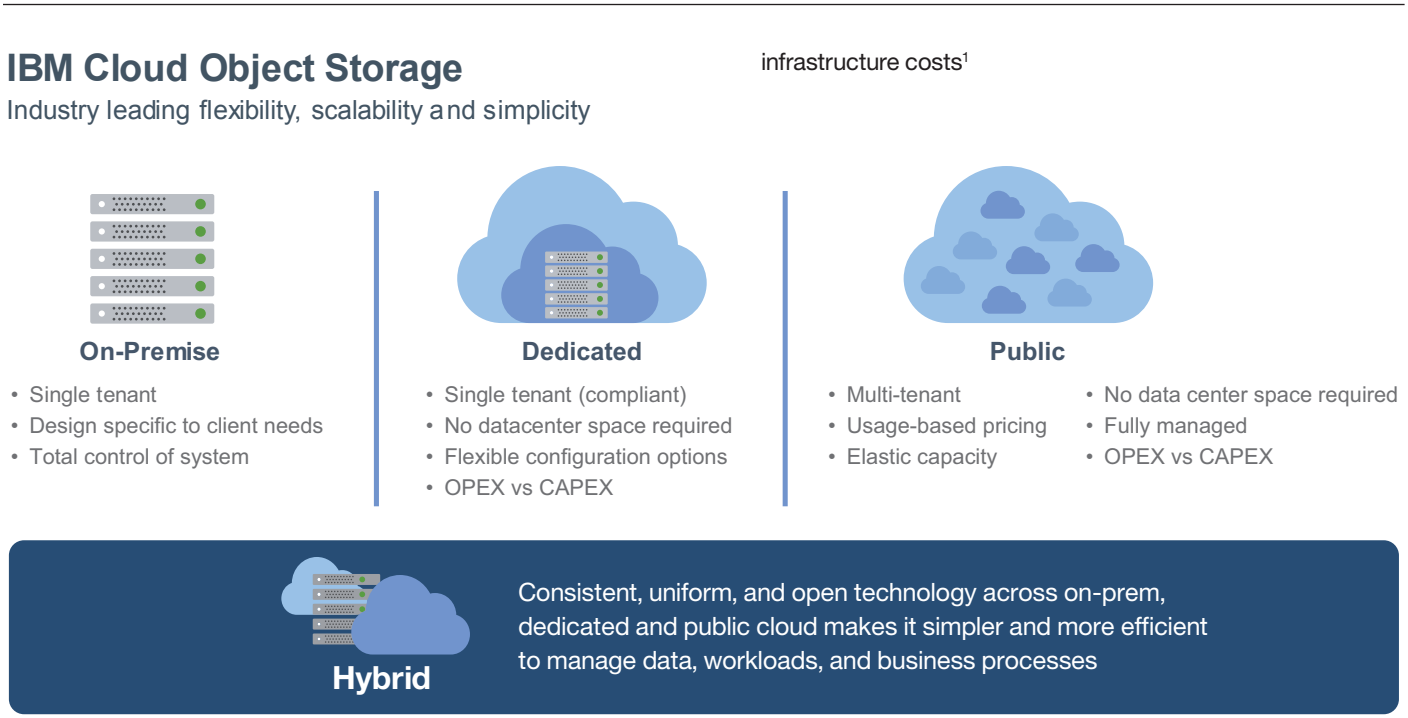

Figure 3. IBM Cloud Object Storage offers flexible deployment options.

About Nasuni

Nasuni (NAS Unified) is a leading provider of cloud-scale enterprise file services. Powered by UniFS, the innovative cloud-native file system, Nasuni capitalizes on IBM Cloud Object Storage to integrate and surpass the silo capabilities of traditional NAS, distributed file systems, data protection software, file synchronization and share solutions and disaster recovery infrastructure. With Nasuni's virtually unlimited primary storage capacity, industry-leading recovery points and recovery times, global file access and unmatched scalability, enterprises can meet "cloud first" and business growth objectives, extract more value from their file data and transform expensive storage infrastructure into a more affordable, as-a-service asset. For more information, visit www.nasuni.com

IBM Cloud Object Storage

IBM Cloud Object Storage provides the flexibility, scalability and simplicity needed to store, manage and access today's rapidly growing volumes of unstructured data in a private, public or hybrid cloud environment. IBM's solutions transform storage challenges into business advantages by reducing storage costs while reliably supporting both traditional and emerging cloud-born workloads for enterprise mobile, social, analytics and cognitive computing.

IBM Cloud Object Storage is built on technology from object storage leader Cleversafe®, which was acquired by IBM in 2015. Some of the world's largest repositories rely on IBM Cloud Object Storage. To learn more about IBM Cloud Object Storage, please visit:
ibm.com/cloud-computing/products/storage/object-storage

References

1. "ESG Economic Value Validation — Quantifying the Value of Nasuni." Enterprise Strategy Group, 01 Jan. 2017.

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