



# Resilient, Real-time, Low Latency Server Sync

Automate, visualize, and accelerate file delivery 10x faster across any server environment—to keep your business running

## Introduction

Data-driven organizations trust Resilio to rapidly synchronize files across servers running a diversity of web and application workloads.







Keep all files current and accessible 24x7 while accelerating performance up to 10x faster than conventional file sync tools. And with built-in centralized management, automation, and visualization, it's easy to keep even 100s of millions of files in sync. Resilio is built to sync any size and type of file across any distance, in any direction.



Resilio empowers you to meet your organization's high availability goals for maintenance and Disaster Recovery (DR). It is resilient by design, eliminating single points of failure. Resilio Connect seamlessly routes file sync jobs around failures. Recovery times are reduced from days to minutes—and files updated in seconds.

## Use Cases

Resilio's solution for server sync is ideal for:

-  **Web and App Server Sync**  
Rapidly sync web and app servers across the local network or wide-area network (WAN).
-  **File Server Sync**  
Sync up to many millions of files of any size and type at full speed among an infinite number of servers (on-prem and cloud) running your OS of choice.
-  **DFS Replication & Sync**  
Easily replace DFSR with a highly reliable, highly available, fast and scalable server sync solution.
-  **WAN Optimization**  
Overcome latency and packet loss to move data fast and predictably across any IP network, over any distance.
-  **Hybrid Cloud**  
Sync data between on-premises and the cloud or between clouds.
-  **Data Migration**  
Reliably migrate files and metadata across servers, storage environments, and locations.

## Challenges

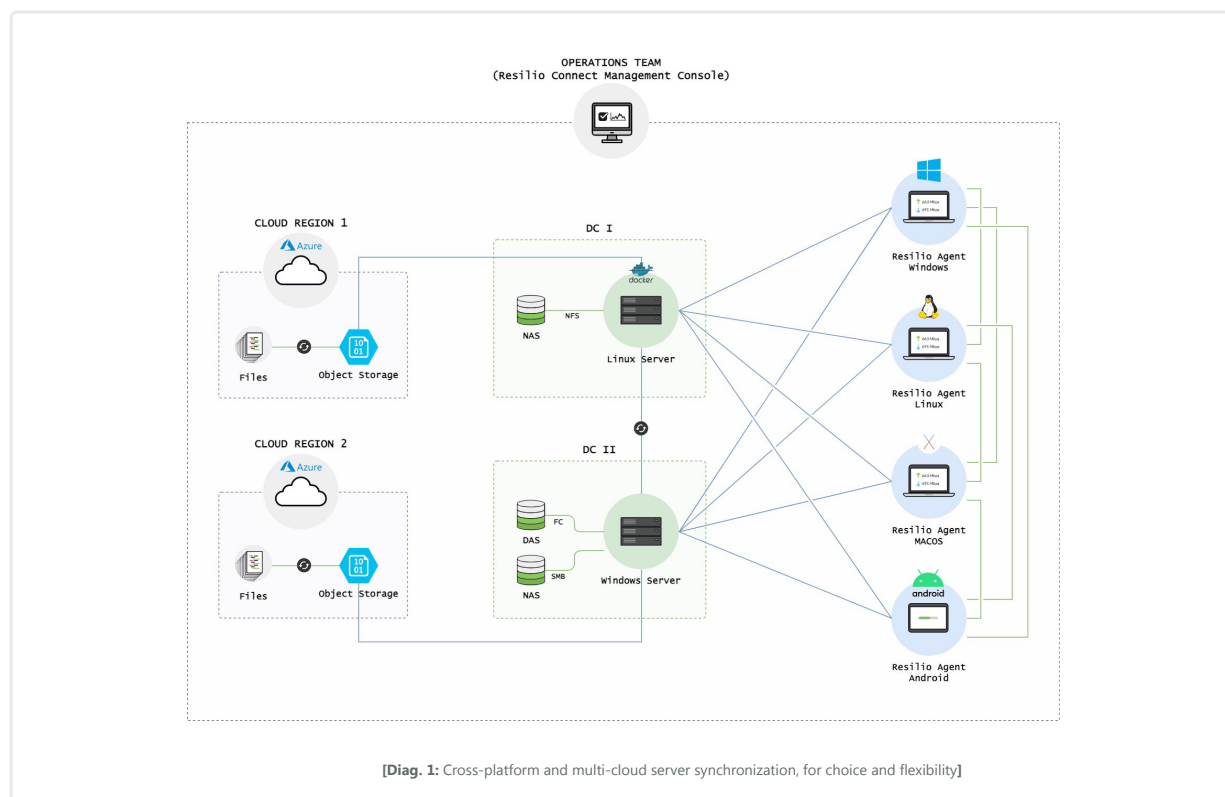
With the evolution from physical to virtual to containerized server environments, it's easier than ever to deploy and use apps and workloads on-prem and in the cloud. Alas, the challenges of keeping files current and accessible to your organization—across locations, multiple servers, and storage silos—are ongoing and increasingly complex. The explosive growth of file-based data spawns increasingly larger file sizes and numbers of files, breaking legacy systems.

Challenges include:

- **Files out of sync:** A change to a file located on one server may not be fully synchronized across multiple servers due to scalability limitations, latency, or unreliable connections.
- **Lack of scalability:** Traditional tools do not scale transfers beyond 2 servers. Keeping files current across 3 or more servers is problematic.
- **Poor file system scalability** leads to poor performance. File systems containing millions of files may not be fully synchronized.
- **File size limitations.** Restrictions on file sizes limit the suitability of conventional sync tools to smaller files.
- **Outages and downtime.** Relying on active-passive HA and unreliable file synchronization tools may have negative rippling effects for end users and the business—from lost time to lost revenue to lost data.
- **Poor performance over wide area networks (WANs).** Conventional solutions do not perform well in multi-site or hybrid cloud configurations across high latency or unreliable WANs. In-band WAN optimization appliances and software were not designed to efficiently synchronize the majority of bulk files across WANs at scale.
- **Poor visibility and diagnosability** wastes valuable time for IT, forcing administrators to spend countless hours troubleshooting backlogs, failed replication jobs—and potentially recovering files from backup copies.

## Solution

Resilio Connect is a software-only, agent-based solution. Resilio agents are installed on each server participating in file delivery jobs such as Distribution, Consolidation, Scripting, and Synchronization.



All functions are centrally managed through the Resilio Connect management console. Administrators assign and control agents, manage users, create and run jobs, control bandwidth allocations, and deploy job instructions across the organization.

Events and notifications are tracked and collected in reports and sent via email. Optionally, Resilio's API and scripting capabilities support automating all functions.



## Advantages and Benefits



### Efficiently replicate changes in real-time

When a file changes, only the changed portion of the file is synchronized. Sync jobs are fast, reliable—and real-time. File updates are automatically propagated within seconds.

- **Save bandwidth** and use allocated bandwidth more efficiently.
- **Preserve permissions** and transfer metadata with files as needed.
- **Overcome latency** to obtain full-utilization of bandwidth across any distance. Speed up file delivery across any network (LAN or WAN). WAN optimization is built in, enabling fast sync across any high latency network.



### Rapidly accelerate and scale performance on-demand

Resilio rapidly and efficiently synchronizes up to 100s of millions of files of any size and type in a single job.

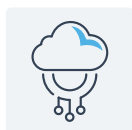
- **Reduce time to access files.** End users, applications, and workflows have immediate access to file updates.
- **Deliver files on-time all the time,** across as many servers, file systems, storage devices, and sites as needed.
- **Scale as you grow.** Simply allocate more bandwidth and agents increase performance. Performance scales with bandwidth: add bandwidth to increase performance.
- **Scale file delivery in any direction.** Concurrently synchronize files in any direction: one-way, two-way, one-to-many, many-to-one, and many-to-many for N-way sync.



### Resilience for high availability and non-disruptive operations

Resilio's non-disruptive, highly available architecture eliminates single point of failures (SPOFs).. Sync jobs reliably "just work" in predictable, measureable timeframes. Feel confident knowing you can meet or exceed recovery times and keep files continuously available to your organization.

- **Keep business running 24x7,** and feel confident knowing that you can meet or exceed your goals for DR.
- **Reduce recovery times** from hours and days to minutes and seconds to achieve or exceed RTOs.
- **Keep files in sync** within seconds to meet RPOs across sites.
- **Simplify upgrades and maintenance to reduce downtime.** Updates to servers are rapid and non-disruptive.



### Cross-platform and multi-cloud for choice and flexibility

Resilio Connect Agents run on popular operating systems and cloud platforms. Resilio supports popular cloud object storage using any S3-compatible cloud provider.

- **Use any type of storage:** direct-attached (DAS), storage-area network (SAN), or network-attached (NAS).
- **Avoid vendor lock-in.** Sync jobs may be run across OS and cloud platforms or on your platform of choice.
- **Reduce costs** by building on what you know—and utilizing IT infrastructure you already own and manage.





### Easy to manage at any scale

The Resilio management console simplifies managing all global file delivery across the enterprise: centrally control, monitor, and visualize all file delivery operations. Optionally, all server sync functions can be easily automated through the command-line via job scripting and APIs.

- **Save administration time.** One [Resilio customer saves 14 hours per week](#).
- **Get results faster.** Monitor the status of all jobs and diagnose problems plus view real-time performance metrics, drill into the status of individual jobs, and receive notifications via email and Webhooks.
- **Automate everything** through job scripting and APIs. It's easy to write, call, and embed scripts with sync jobs. Scripts can be run prior, during, or after a job completes.



“Resilio Connect runs as a service on our servers here and abroad. File synchronization is completely automated. As new files arrive and are processed, other data sets are concurrently sent out to multiple partners. This way, we ensure all of our local and partner data is in parity.”

– Luke Marchant, Sunrise Productions' Head of Technology



### For More Information

For more information about Resilio Connect, please visit <https://www.resilio.com> or contact [sales@resilio.com](mailto:sales@resilio.com)

### About Resilio Connect

Resilio Connect is a software-only, agent-based server synchronization solution. Agents are installed on all servers participating in jobs. Job types include Distribution, Consolidation, Scripting, and Synchronization. Resilio Connect agents support popular operating systems, virtualization platforms, servers, storage, NAS devices, networks, and cloud providers. Server agents are available for Windows Server, Linux, macOS Server, and FreeBSD.

The Resilio Connect management console offers a centralized, web-based UI to manage and monitor all agents and job functions. Control agents, manage users, create and run jobs, control bandwidth allocations, and deploy job instructions across the organization. Once jobs are running, Administrators can monitor and collect statistical data globally. Events and notifications are tracked and collected in reports and sent via email.

Resilio's complete API set automates all functions. The management console runs on Windows and Linux servers. Please see [Resilio.com](https://www.resilio.com) for the latest System Requirements.