File server Extension with Tiger Bridge

Microsoft Azure

You need more storage space for all your data. You want to avoid downtime, disruption, and additional on-premises hardware. File server extension with Tiger Bridge enables organizations to infinitely scale storage on-the-fly and keep all data accessible to users and legacy applications with no change to workflow.

Extension Goals

Scale storage capacity without disruption
Preserve file access
Reduce on-premises hardware
Blend local and cloud storage
Reduce size of VM backups

Extension Requirements

Access all data in a single namespace
Maintain low-latency access
Respect Active Directory ACLs
Increase efficiency with partial restore
Defend against ransomware and malware

Typical server expansion approaches

Scaling file server storage means adding capital expense hardware and interrupts operations while drives are added, and the data is copied.

Even on-premises object storage adds to capex, is not native to NTFS, and is not supported by legacy applications.

Cloud storage is cost-effective and reliable, but 3rd party products add complexity and tamper points to the data path and lock data to a specific vendor.

Object and cloud storage are not compatible with current software programs and increase latency.

All these approaches interrupt operations while they are added and configured.

Pain points

- Disruption and downtime
- Hardware capital expense
- Vendor lock and incompatibility
- Real estate, HVAC, maintenance, support
- Tamper points
- Latency

The Tiger Bridge approach

An ideal file server extension solution should provide maximum flexibility, enabling infinite on-the-fly scaling without disruption or downtime, and allowing direct integration into a Windows environment including Active Directory ACLs. Data should be preserved in its native file format, so it is accessible to users with existing applications and processes, not with proprietary products and re-training. Access should be low-latency in order to sustain local high-performance and productivity, and data needs to be protected from crippling ransomware and malware attacks, and the solution should support VM backups.

With Tiger Bridge, a kernel-level software-only file system filter native to Windows, file server extension is achieved without additional hardware, vendor lock, or tamper points, and is transparent to users and applications.

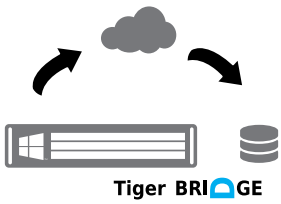
Tiger Bridge blends on-premises disk, tape, object, and infinite cloud storage into a seamless, single namespace and assigns data to the storage tier suited to its lifecycle stage, such as hot, cool, or archive. Files are stored in their native format and are visible to users and applications regardless of their actual location. Files are served on-demand with low-latency and respect Active Directory ACLs. Partial restore makes it fast and easy to retrieve only the needed portion of a file, not the complete load.

Tiger Bridge is fully compatible with Veeam Backup & Replication as co-install or external to the VM with backups replicated to NAS, tape, or Azure, and includes intelligent malware protection that prevents corrupted files from being replicated to any target, so backups, DR, and archives are not compromised.

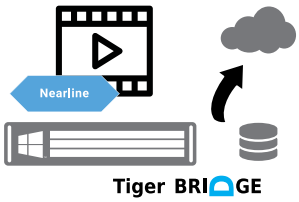
Infinite, on-the-fly scalability
No hardware expense

Transparent
No disruption
Optimizes VM backups

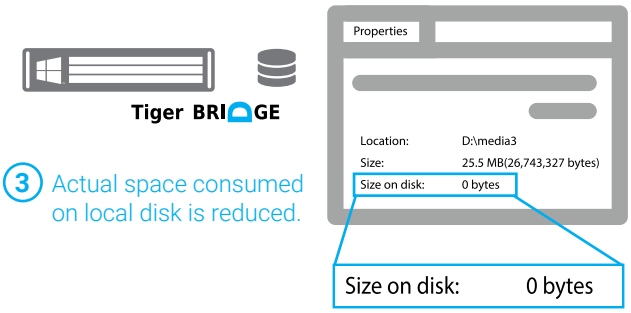
Malware protection
Native and open
No vendor lock



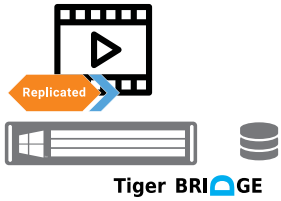
1. **Tiger Bridge** blends local storage with Azure.



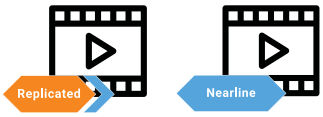
2. When local storage is full, disk space used by cold and infrequently accessed data is replicated to Azure and then reclaimed (purged from local storage) and replaced with zero-byte stub files.



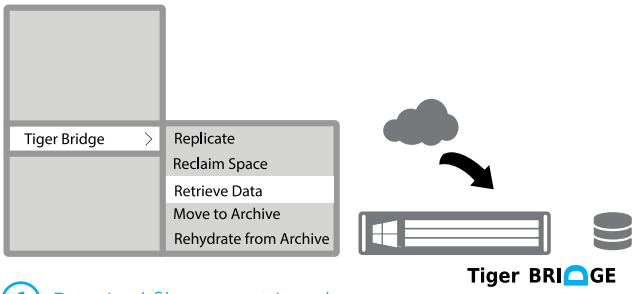
3. Actual space consumed on local disk is reduced.



4. New files are written to local disk.



5. The replicate / reclaim cycle continues. The total quantity of stored data increases without adding additional hardware.



6. Required files are retrieved on-demand by users and applications.

Summary

Tiger Bridge is an ideal solution for File Server Extension. It enables infinite, on-the-fly scalability with no hardware expense or change in workflow. Tiger Bridge is transparent to users and applications, avoids vendor lock by preserving data in its native format, and supports Active Directory ACLs. This hybrid on-premises / cloud approach brings Azure scale and power to you.

Tiger Bridge is the only non-proprietary, software-defined data and storage management system to blend on-premises and multi-tier, multi-cloud storage into a single space. This human-friendly, transparent, and seamless file and application server extension enables millions of Windows server users to benefit from cloud scale and services, while securely preserving legacy applications and workflows. Native, kernel-level, and highly-tuned low-latency bi-directional integration into the file system enables unique, AI meta workflows and brings cloud scale, power, and services directly to users' current operations without disruption.