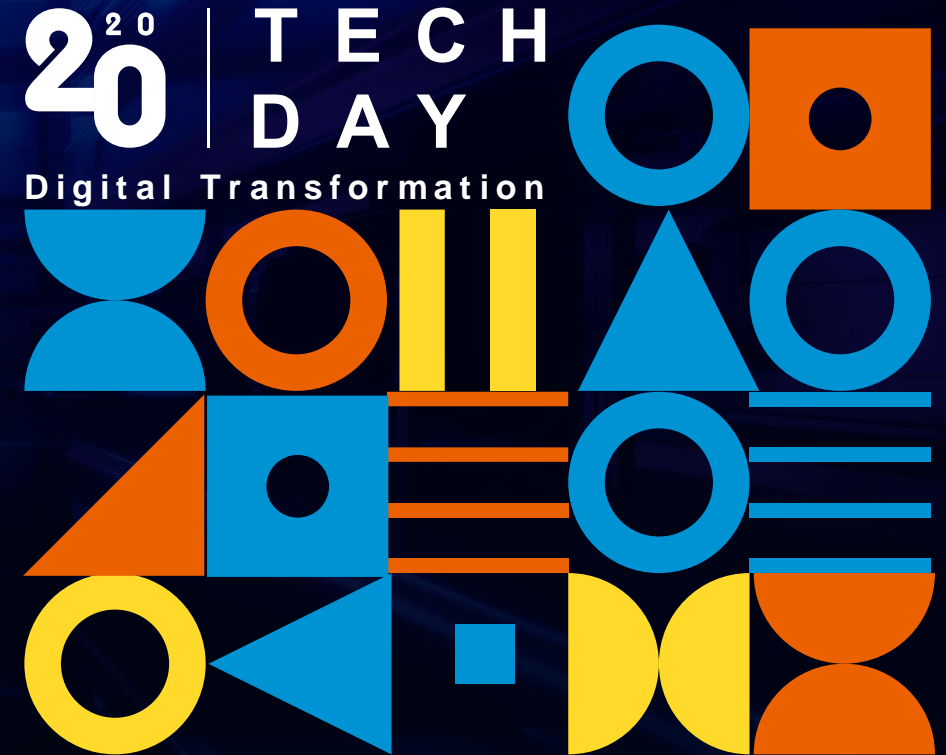


QTS 4.4.1

Cloud Storage Gateway



Outline

- 1 | Demand And Problem of Hybrid Cloud Solution
- 2 | QNAP's Cloud Storage Gateway
- 3 | File-based Cloud Gateway – HybridMount
- 4 | Block-based Cloud Gateway – VJBOD Cloud
- 5 | Use Scenario
- 6 | Recommended NAS Models



Hot data storage trends



More hot data is accessed from the cloud

- 80%+ organizations has hybrid-cloud environment and
- Most businesses use multiple clouds



More data is stored on the cloud

- Backup, remote backup to the cloud
- Cloud computing services



The demand for cloud data backup



1

Low latency access

- Near-LAN access speeds
- Use the same applications and standard protocols

2

Integrate multiple clouds

- Access different clouds using the same method

3

Efficient Management

- Centrally manage multi clouds
- Centrally manage access permission settings

4

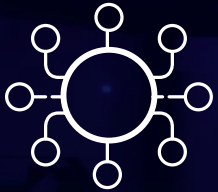
Cost Saving

- Reduce cloud storage used
- Minimize network usage



Benefits of cloud storage gateway

Support more access protocols



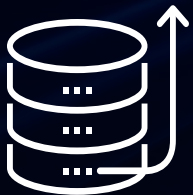
Featuring protocol conversion, the Cloud Gateway allows you to access the cloud storage using standard SMB, FTP, NFS, AFP, iSCSI protocols. Windows, MAC, Linux users can all easily access the cloud.

Near-LAN access speed



Keep the frequently-accessed data in NAS cache space, allowing you to enjoy low-latency access to cached cloud files with near-LAN speeds via the Internet.

Cloud usage efficiency



Cloud Storage Gateway fully integrates with public cloud storage to centrally store data generated from multiple locations with the flexibility and convenience of cloud storage expansion.

Minimize network usage cost



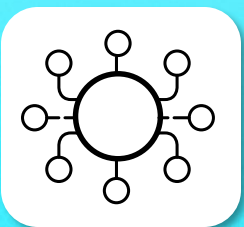
When many users need to access the same file, they can access the cached file instead of each downloading a copy, greatly reducing network usage charges.

QNAP Cloud Gateway



File-based Cloud Gateway HybridMount

Multi-point file sharing and syncing



Protocol
conversion



Low-latency
access

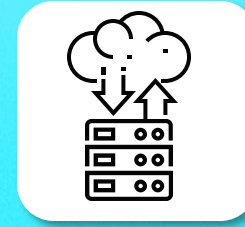


Multi-cloud
management



Block-based Cloud Gateway VJBOD Cloud

Local data cloud backup



Storage space
transformation

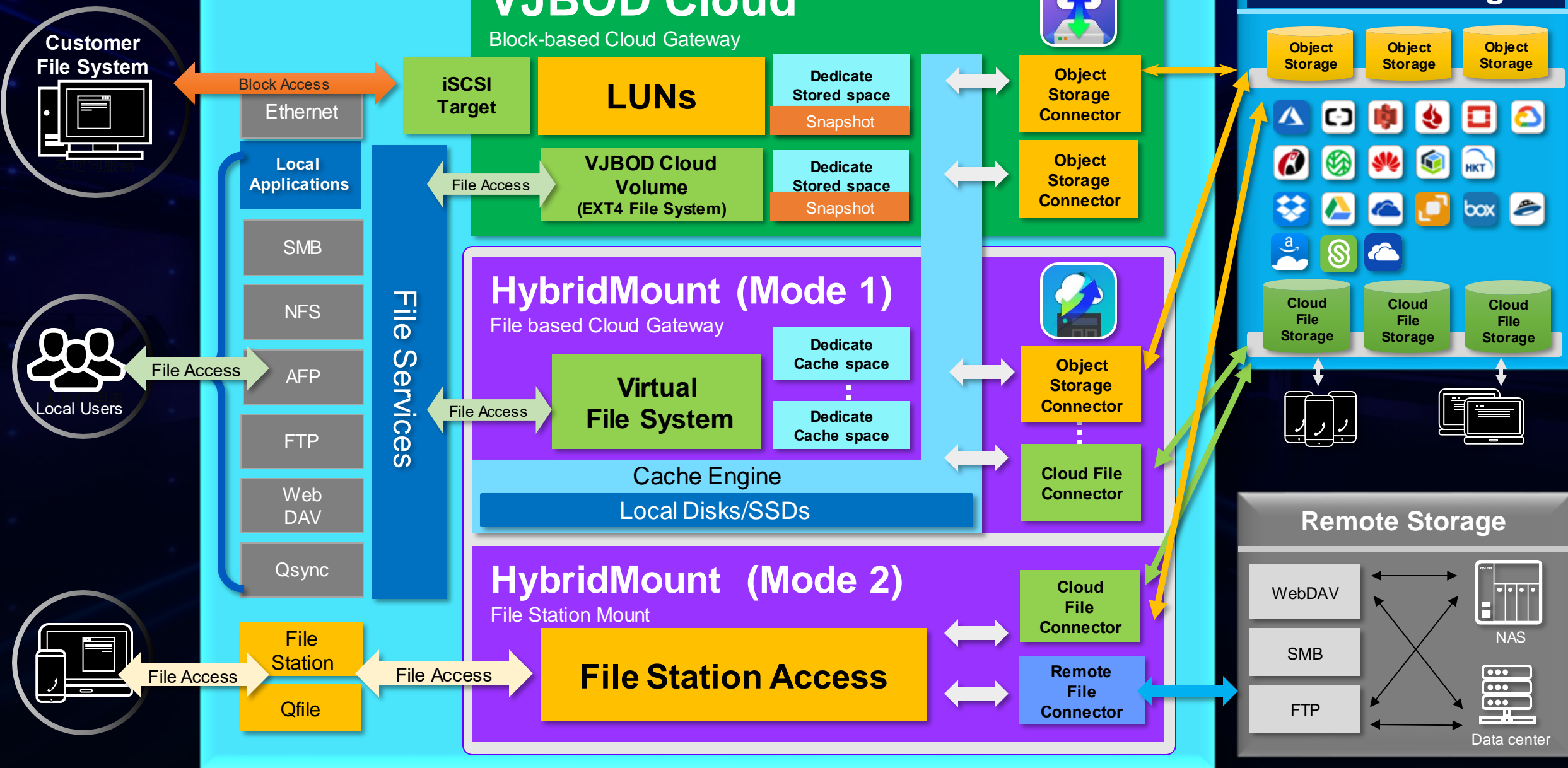


Snapshot
Protection



Local service
uninterrupted

QTS cloud storage gateway and mount



QNAP Cloud Storage Gateway



File-based Cloud Gateway **HybridMount**



Block-based Cloud Gateway **VJBOD Cloud**

Features

1. Remote mount, centralized management
2. Multi-point sync of cloud data
3. Cloud service app can leverage the data

1. Centrally manage multiple cloud
2. Reducing backup time by only back up changed data to the cloud

Snapshot & Restoration

Not Supported

Supported

Access on cloud

Supported

Not Supported

Local access protocol

SMB 、 **AFP**、 **NFS**、 **FTP**、 **WebDAV**

iSCSI

SMB、 **AFP**、 **NFS**、 **FTP**、 **WebDAV**

BYOC - Bring your own cloud

Advantages

1. Direct access to existing cloud data
2. Simultaneously using multi clouds
3. Support major cloud storage services



File-based Cloud Gateway
HybridMount



Block-based Cloud Gateway
VJBOD Cloud

Object-based Storage



Alibaba



AWS S3



Azure



Backblaze



Google
Cloud Storage



IBM Object



HKT



Huawei



Shift



Reckspace



Wasabi



S3
compatible
services

File-based Storage



Amazon Drive



BOX



Dropbox



Google Drive



HiDrive



OneDrive Business



OneDrive



Share Drive



YanDex

Not Support

File-based Cloud Gateway HybridMount



HybridMount Provides 2 modes on your demand



	File Station Mount	File Cloud Gateway
Mount Object	Cloud Storage: 9 File based, 11 Object based Remote Device: Mount with SMB, FTP, WebDAV	Cloud Storage: 7 File based, 11 Object based
Connections	No limit	2 free and perpetual connections. Purchase license for more connections
Accessing Performance	Depends on network speed	High performance due to the cache
Access in File Station	Supported	Supported
Access through SMB / NFS / AFP / FTP / WebDAV	No supported	Supported
Integration with QTS APPs	Not support	Support Qsirch, QuMagie, Photo Station, Video Station



Mode 01

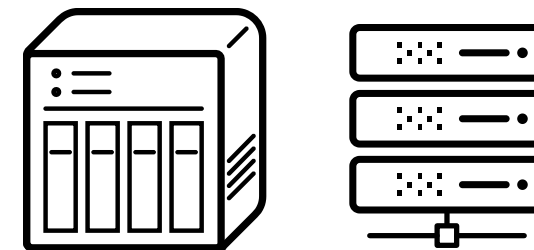
File Station Mount Mode



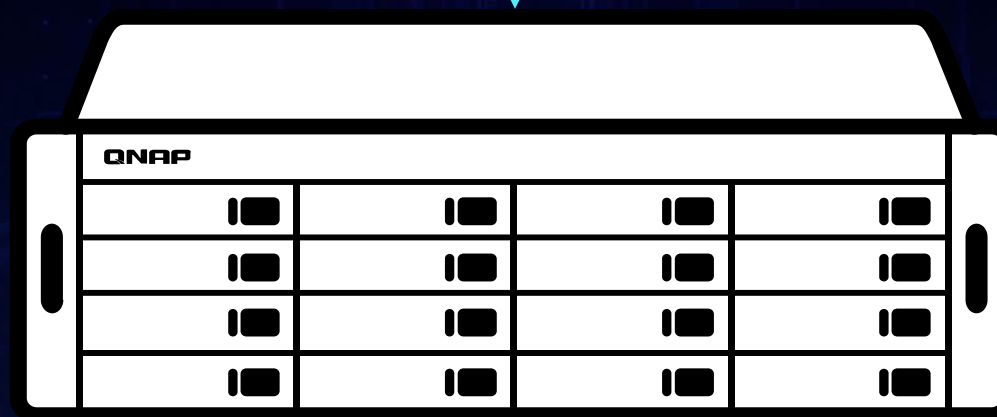
Cloud File Storage



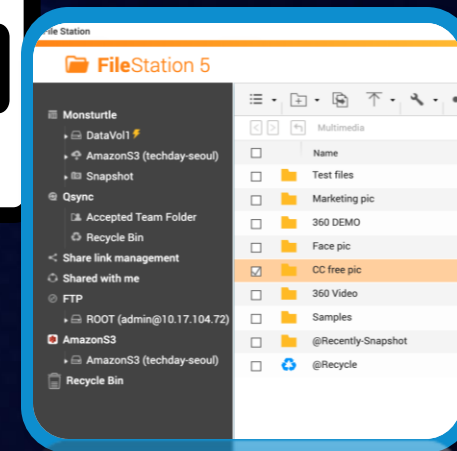
Cloud Object Storage



Remote Device



Centrally manage private and public clouds from File Station

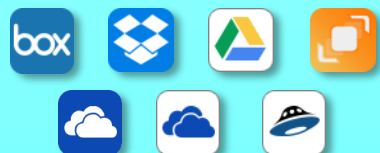


Mode 02

File Gateway Mode

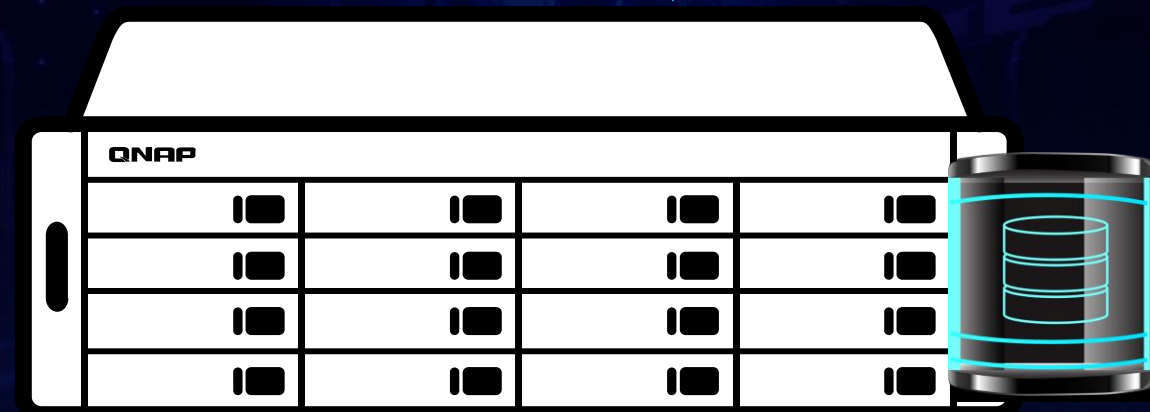


Cloud File Storage



Connect to
Cloud

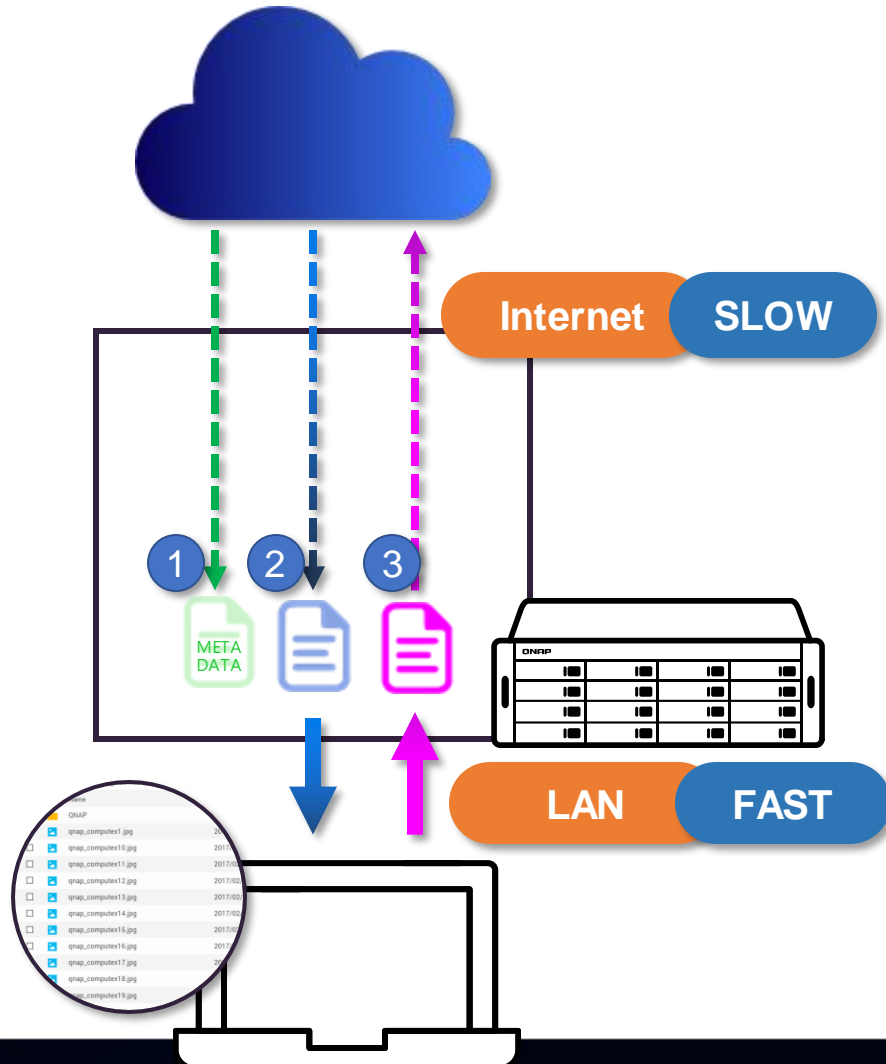
Cloud Object Storage



SMB 、 AFP 、 NFS 、 FTP 、 WebDAV



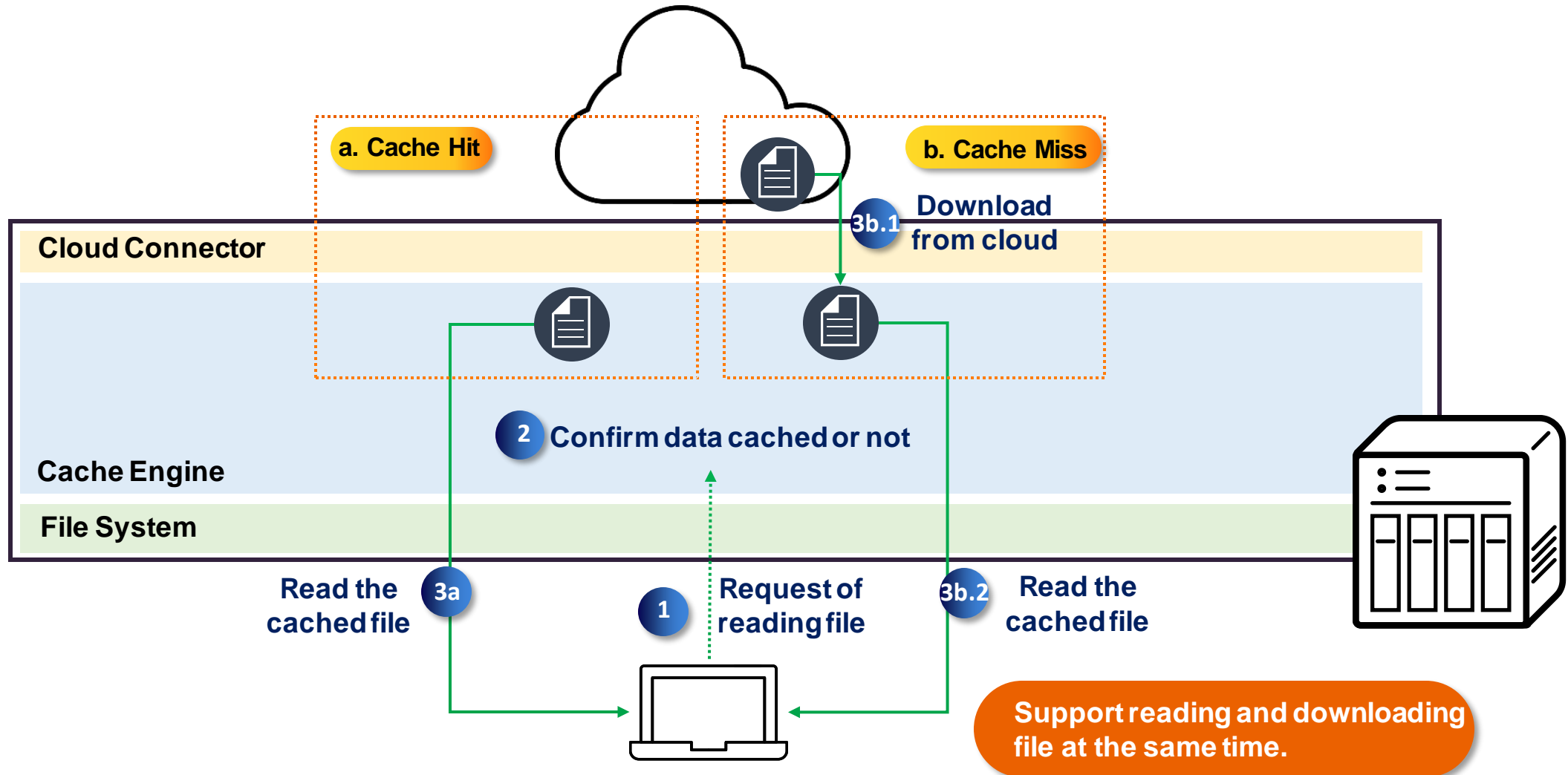
Fast access to cloud with LAN-like speeds



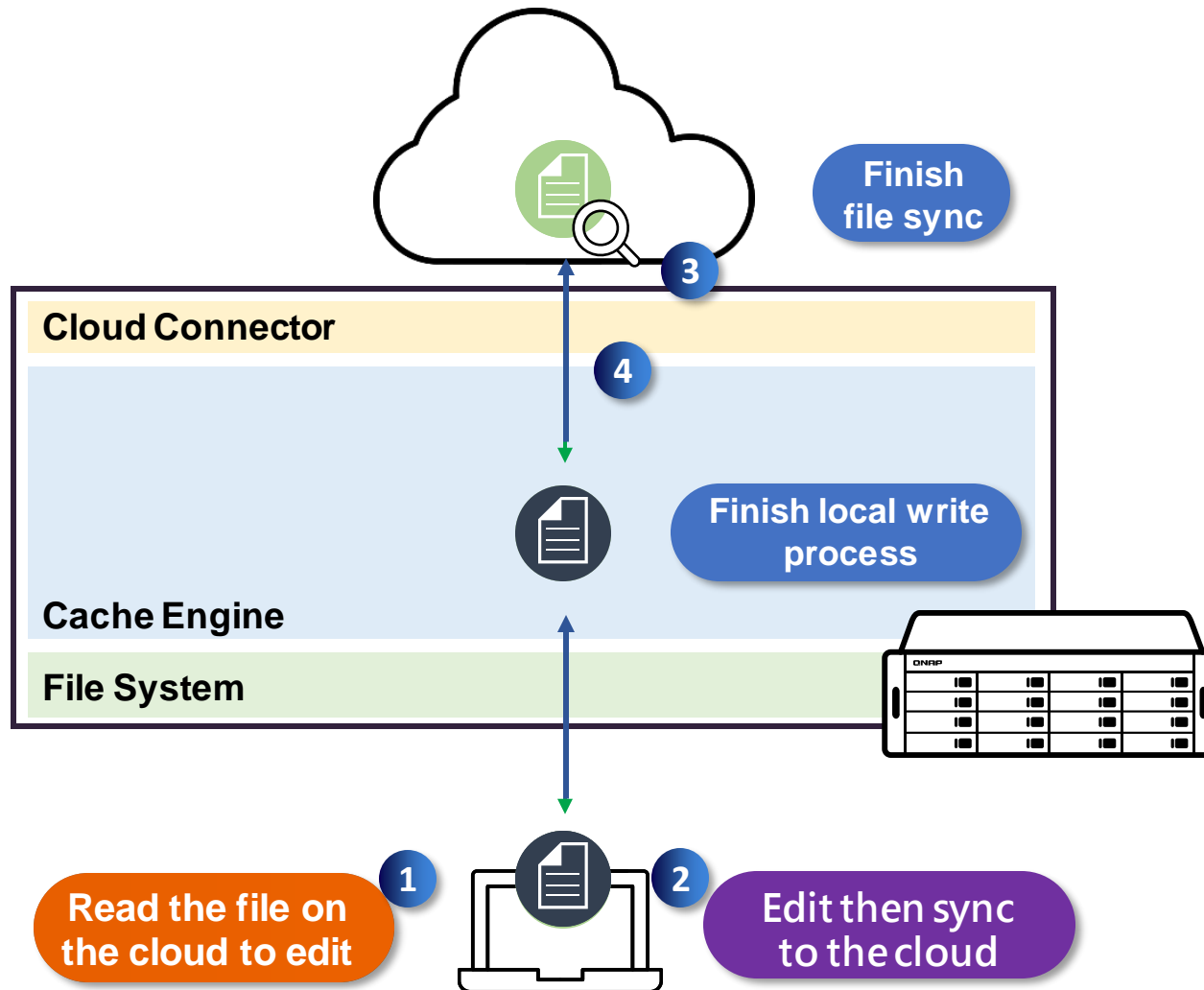
1. Sync metadata to read file list faster
2. Accelerate when reading cached files
3. Cache uploading files to reduce waiting time



Process of reading file



Process of editing and syncing



Read the file on the cloud to edit

- 1 Download the whole file from the cloud to NAS cache space.

Edit then sync to the cloud

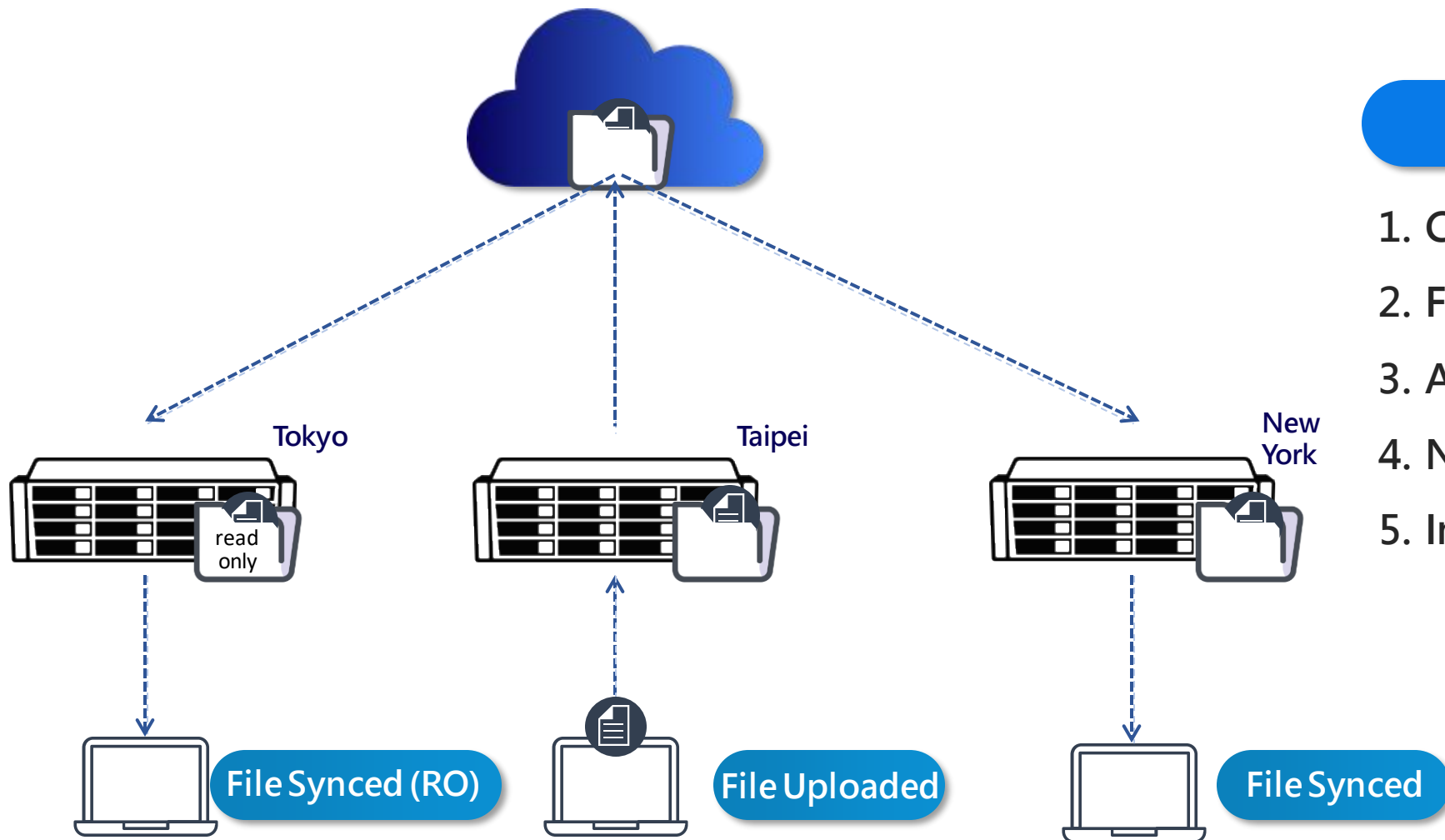
- 2 Write the file into file system and replace the original file. **Finish the local write process.**
- 3 Check the file on the cloud.
- 4 Upload file to the cloud. **Finish file sync.**

Use Scenario

HybridMount File Sync & Sharing Solution for Enterprise



Multi-site File Share & Sync via Cloud

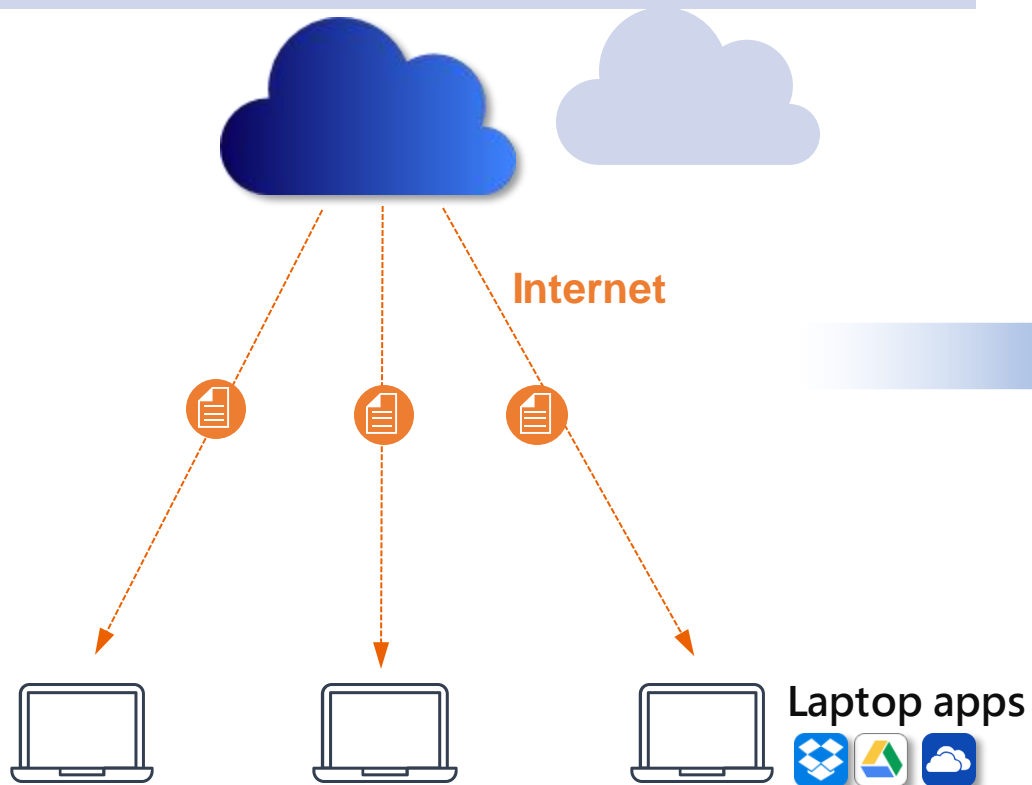


Advantages

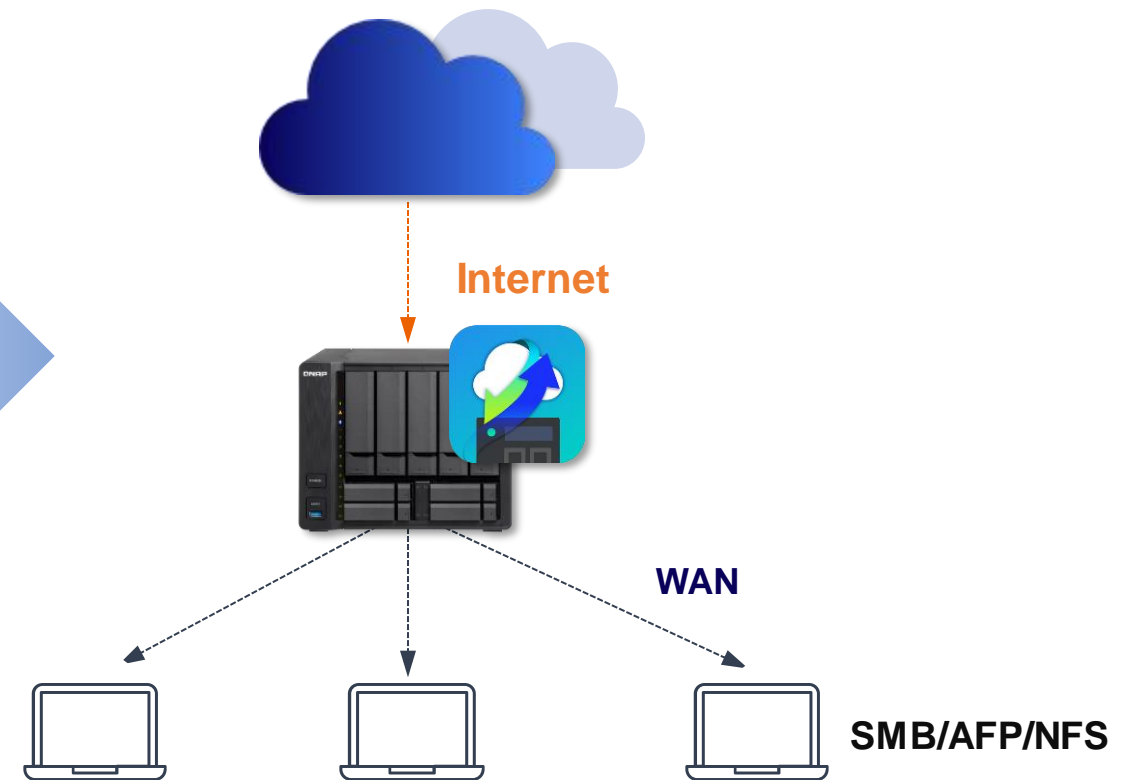
1. Centralize data to cloud.
2. Flexibly extend cloud storage.
3. Access via standard protocol.
4. Near LAN-access speeds.
5. Integrate with QTS Apps.

Cost-optimized Bandwidth Utilization

Bandwidth waste caused by repetitious data from independent work



NAS as the storage gateway between local PCs and Cloud to reduce uplink bandwidth

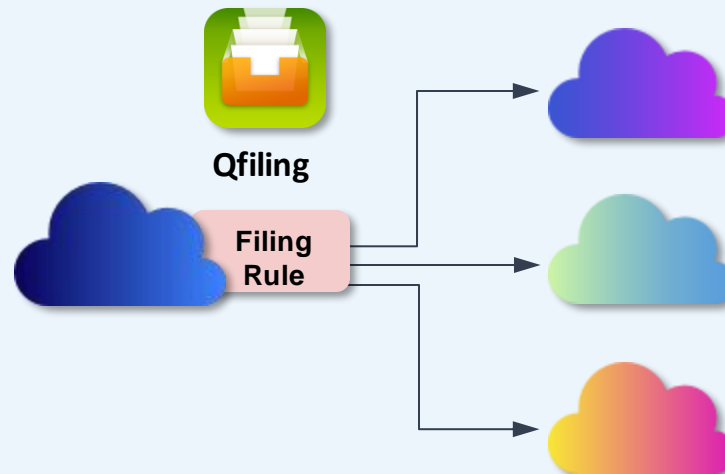


Integration with QTS Apps

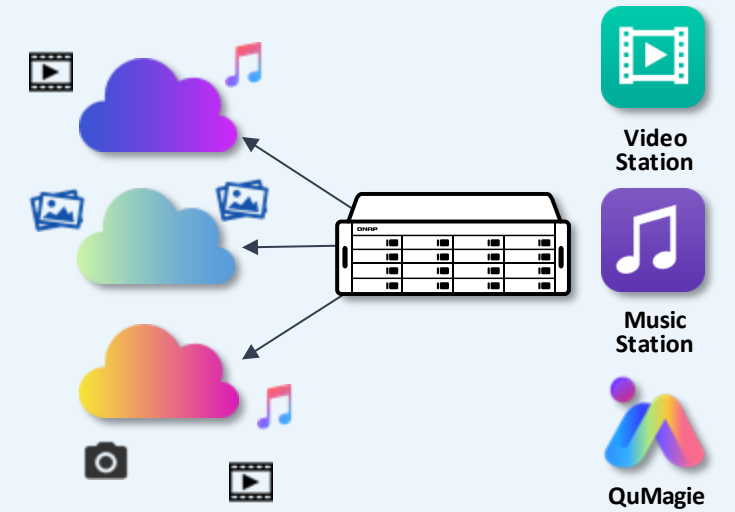
Search data across clouds



Cloud-to-cloud migration and archive



Enjoy abundant multimedia service



**LIVE
DEMO**

**File-based Cloud Gateway
HybridMount**

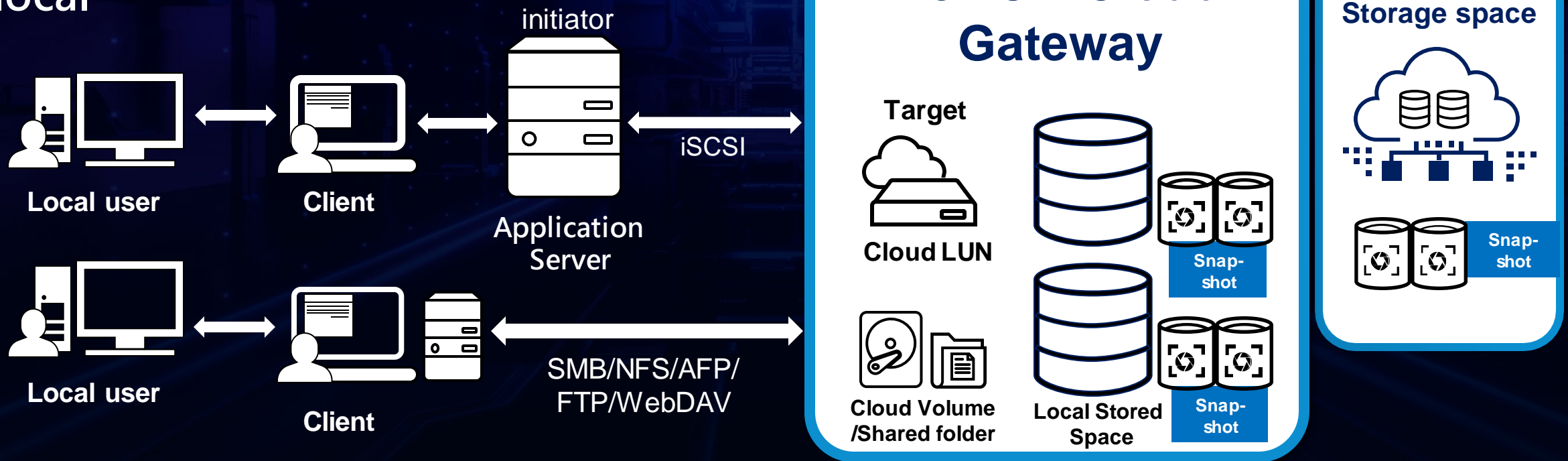


Block-based Cloud Gateway VJBOD Cloud



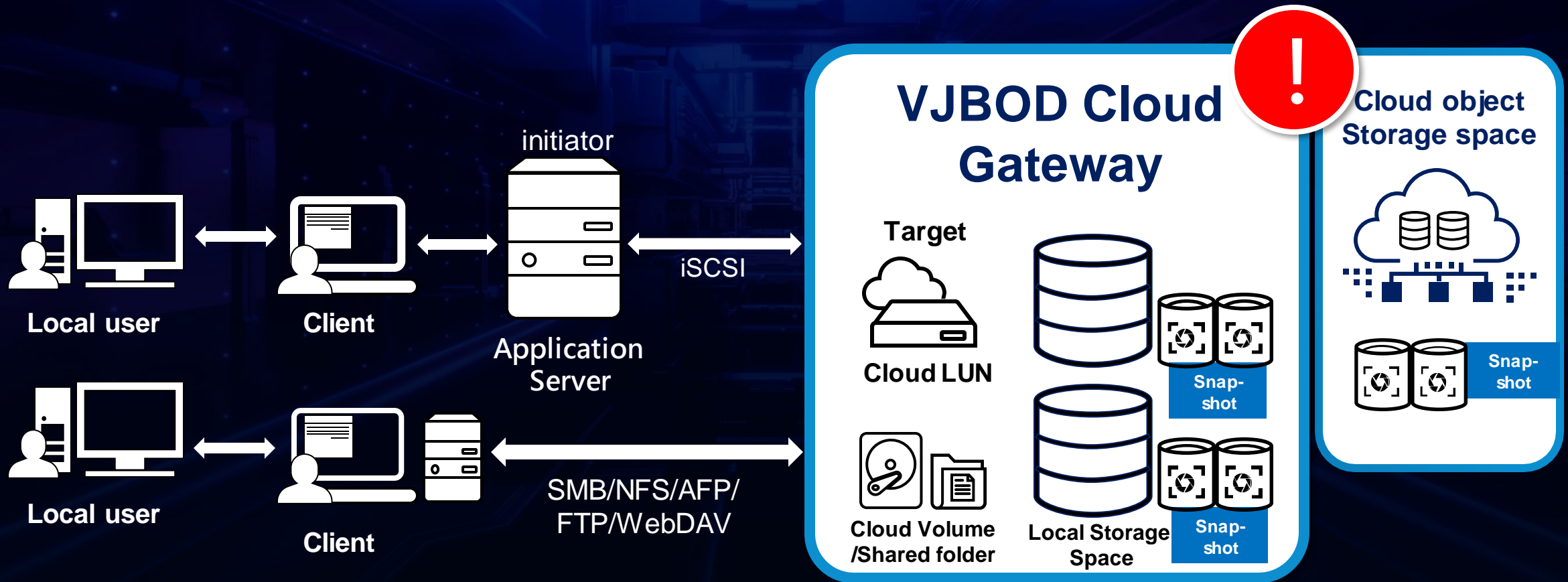
Local Storage Mode + Snapshot = Data Security

- Deploy larger local storage space for snapshots to support disaster recovery
- Restore snapshot sites from cloud to local



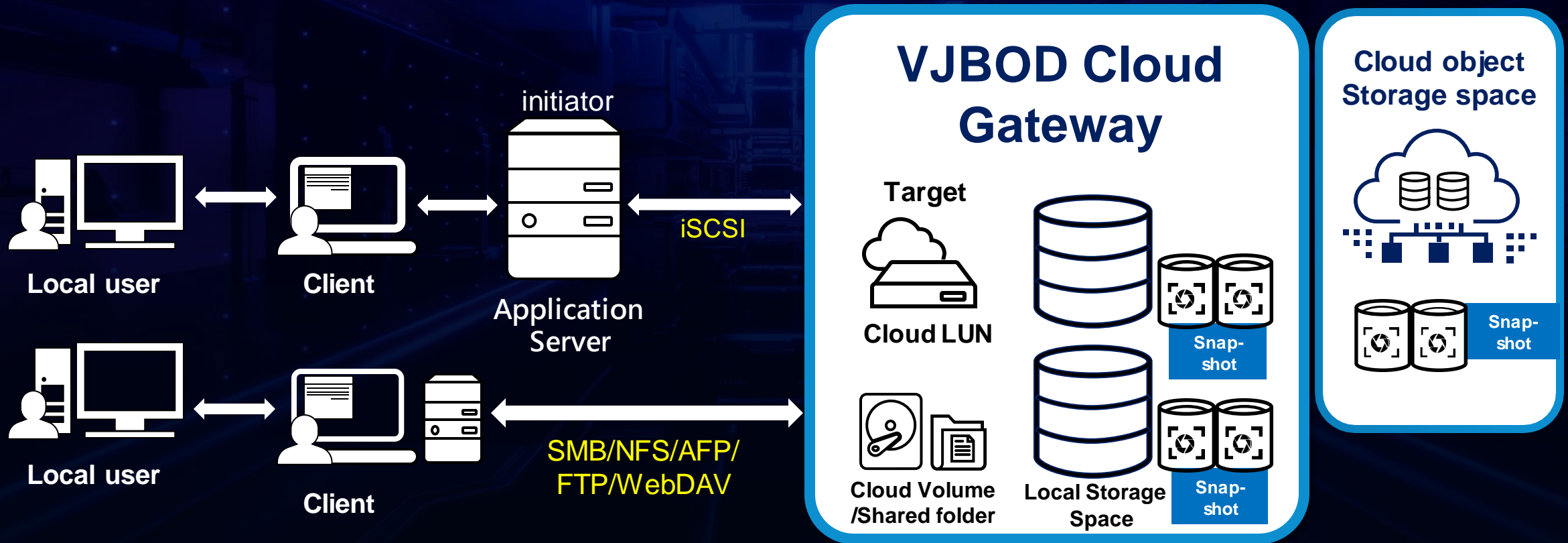
Uninterrupted Local Access When Disconnected

Local storage mode: Storing data at local storage space




Access Protocol Conversion

Supports existing applications such as iSCSI , NFS, SMB, AFP, FTP and WebDAV.



Advantages of VJBOD Cloud

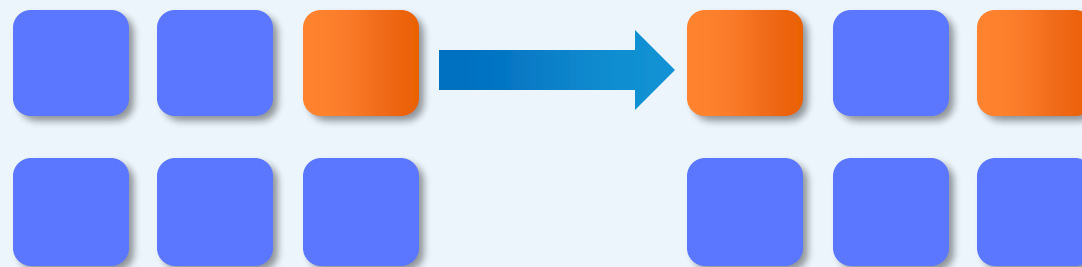
Transmit only the blocks (variables) to the cloud to speed up backup time and avoid wasting bandwidth.

 Original data

 Modified data

Block Level

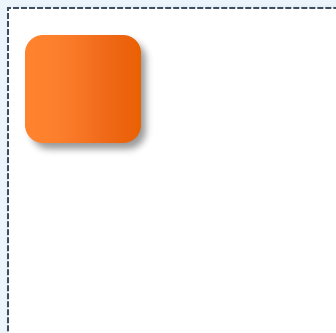
Only the blocks (variables) of the modified data need to be transmitted to the cloud.




Only upload blocks that have been modified

File Level

To modify a file, all files must be re-uploaded.




Upload the entire file



**LIVE
DEMO**

**Block-based Cloud Gateway
VJBOD Cloud**

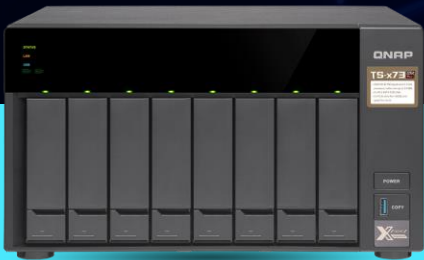


Recommended Model

SMB Entry

TS-873

- VJBOD Cloud Suggested Max Cloud Volume/LUN: 4
- HybridMount Suggested Max File Share: 2
- 8 bay
- AMD R-Series RX-421ND quad-core 2.1 GHz processor (Turbo Core to 3.4 GHz)
- Max 8GB RAM



SMB Mid-level

TVS-882

- VJBOD Cloud Suggested Max Cloud Volume/LUN: 8
- HybridMount Suggested Max File Share: 4
- 8 bay
- Intel® Core™ i5-7500 quad-core 3.4 GHz processor, Max turbo to 3.8 GHz
- Max 64GB RAM



SMB High level

TS-1683XU-RP

- VJBOD Cloud Suggested Max Cloud Volume/LUN: 16
- HybridMount Suggested Max File Share: 16
- 16 bay
- Intel® Xeon® E-2124 quad-core 3.3 GHz processor (burst up to 4.3 GHz)
- Max 64GB RAM



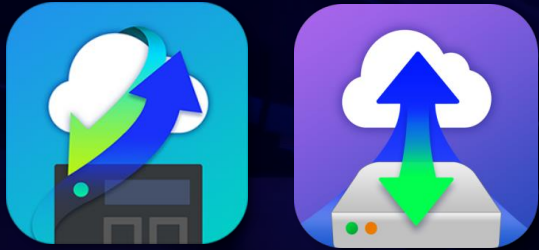
Enterprise

TDS-16489U R2

- VJBOD Cloud Suggested Max Cloud Volume/LUN: 16
- HybridMount Suggested Max File Share: 16
- 16 bay
- Intel® Xeon® E5-2630 v4 10-core 2.2 GHz
- Max 256GB RAM

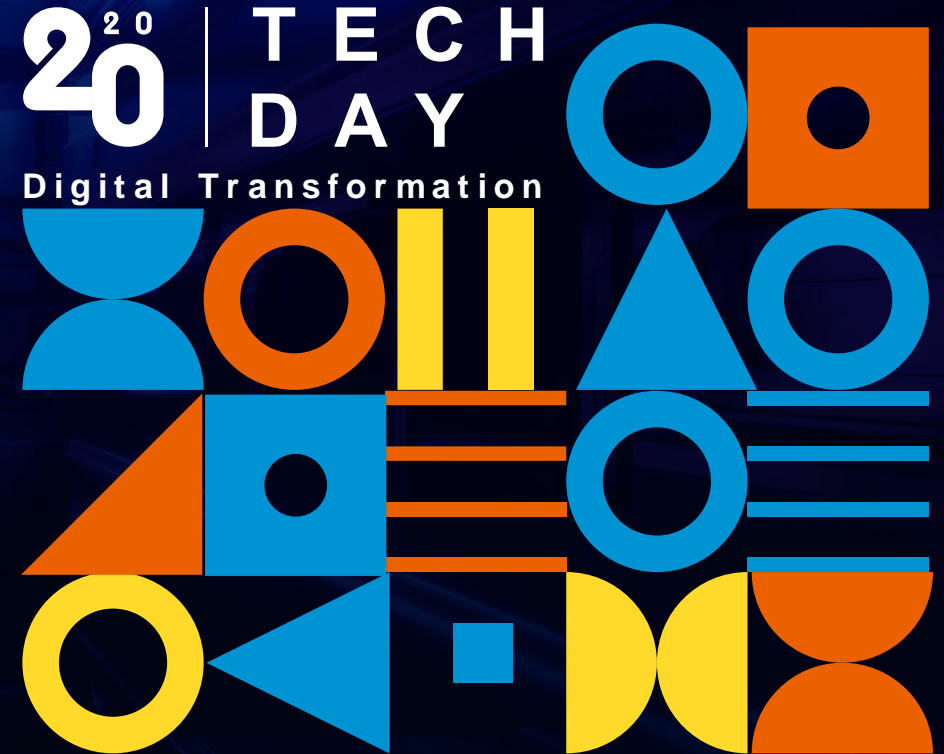


* Depending on the memory requirements, the model will have suggested maximum number of Cloud Volume / LUN for VJBOD Cloud and file share for HybridMount.



QNAP QTS 4.4.1

FILE/BLOCK CLOUD GATEWAY
THE FAST LANE CONNECTING
ON-PREMISES AND CLOUD
DATA STORAGE



QNAP

Is your Best Choice !

20²⁰ | TECH
DAY

Digital Transformation



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