

QNAP

An in-depth guide for

VJBOD Cloud

block-based cloud
storage gateway



Agenda

- The demand to backup data on the cloud
- The issues of data backup on the cloud

QNAP Solution

VJBOD Cloud - Block Cloud Gateway

- The Overall Architecture and Advantages
- Application Scenario
- Function Introduction
- Recommended Models

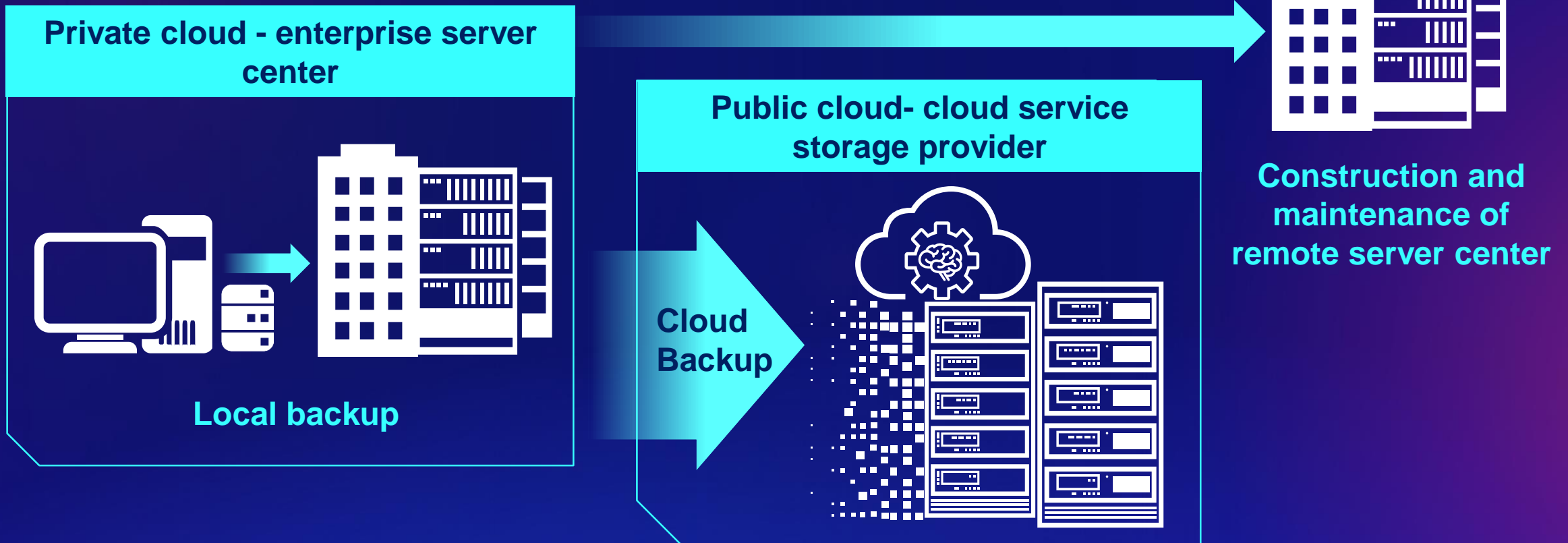


VJBOD
Cloud

The image features a dark blue background with a light blue gradient at the bottom. A large, stylized cloud shape is at the bottom, containing the text 'VJBOD Cloud'. Above the cloud, there are several server and storage icons, including a server rack and a storage cylinder, with glowing blue particles around them. A dashed white arc connects the two sides of the cloud.

The demand to backup data on the cloud

- Increased demand for private and public cloud integration.
- Consider the construction cost of remote server center.





The issues of data backup on the cloud

- Is there any way that I don't need to change my existing system or services?

(If you use the cloud gateway of CSP, it requires an additional server host. As of the local cloud resident, the program will slowly transmit, and each computer will take the bandwidth separately).

- Is there any way to upload the data to the cloud but make the data unrecognizable? The admin of the cloud operator cannot directly see the data you store?
- Is there any way to upload large nonstop data to the cloud and be more efficient?

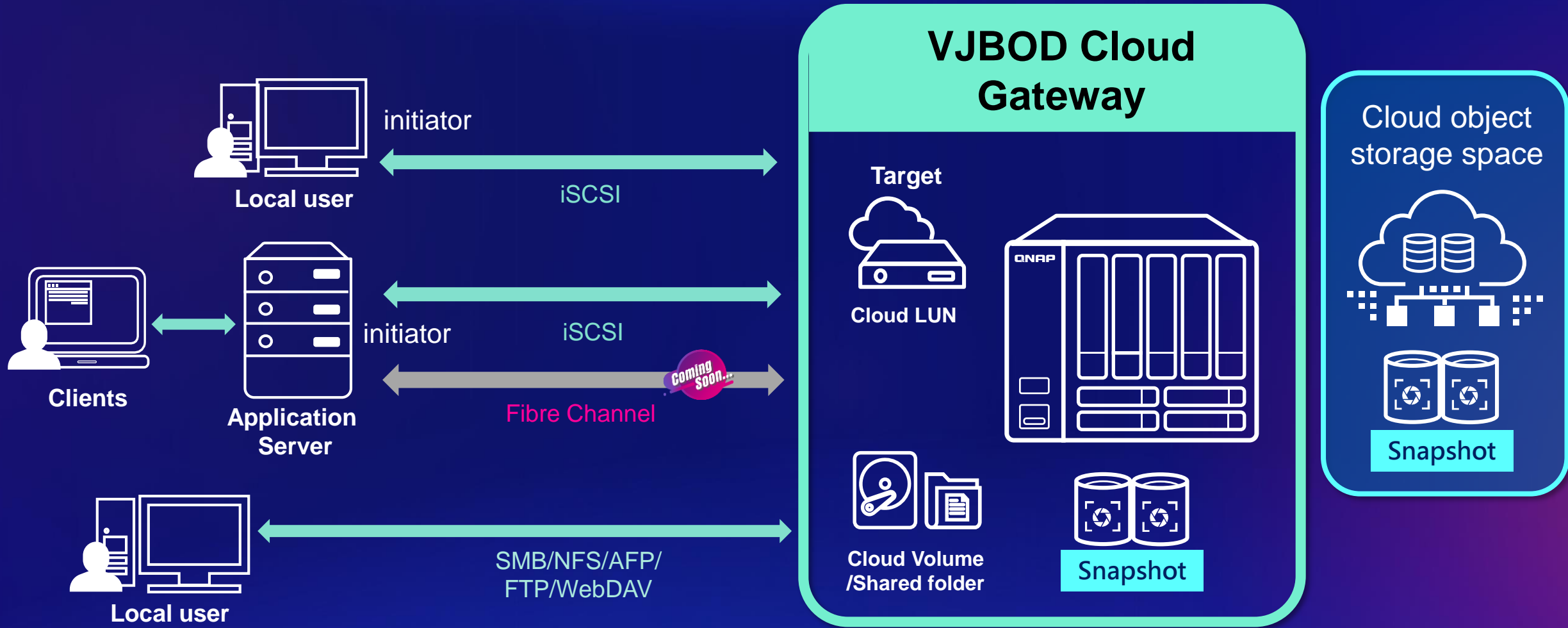
QNAP Cloud Gateway Solutions

VJBOD
Cloud



	HybridMount	VJBOD Cloud
Support cloud storag	20 (Object Storage and File Storage)	13 (Object Storage)
Gateway type	File-based cloud gateway	Block-based cloud gateway
Feature	<ol style="list-style-type: none">1. Cloud space mount, centralized management2. Cloud file multi-endpoint synchronization	<ol style="list-style-type: none">1. The best cloud backup solution of Low latency SAN2. Unrecognizable data on the cloud3. When the data upload to the cloud, only the amount of change is uploaded, and the backup time is reduced
Snapshot & restore	Not supported	Supported
Scenario	File server online collaboration and file level data analysis	<ul style="list-style-type: none">• Enterprise LUN backup• Large database backup• Confidential file backup
Local access protocol	SMB, AFP, NFS, FTP, WebDAV	SMB, AFP, NFS, FTP, WebDAV, iSCSI , Fibre Channel (coming soon)

VJBOD Cloud Block-based Cloud Gateway

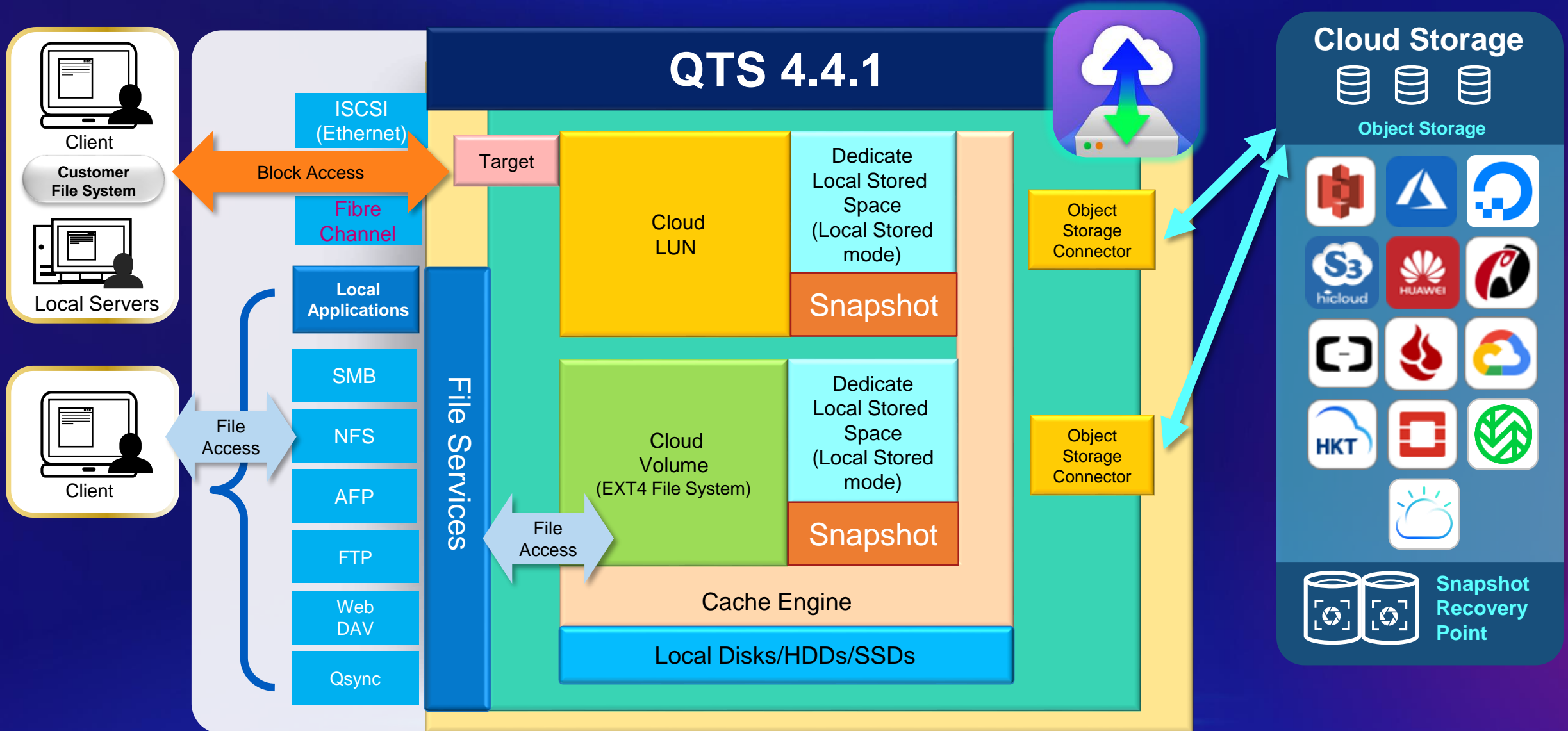


VJBOD Cloud

Architecture and advantages of
Block –based Cloud Gateway

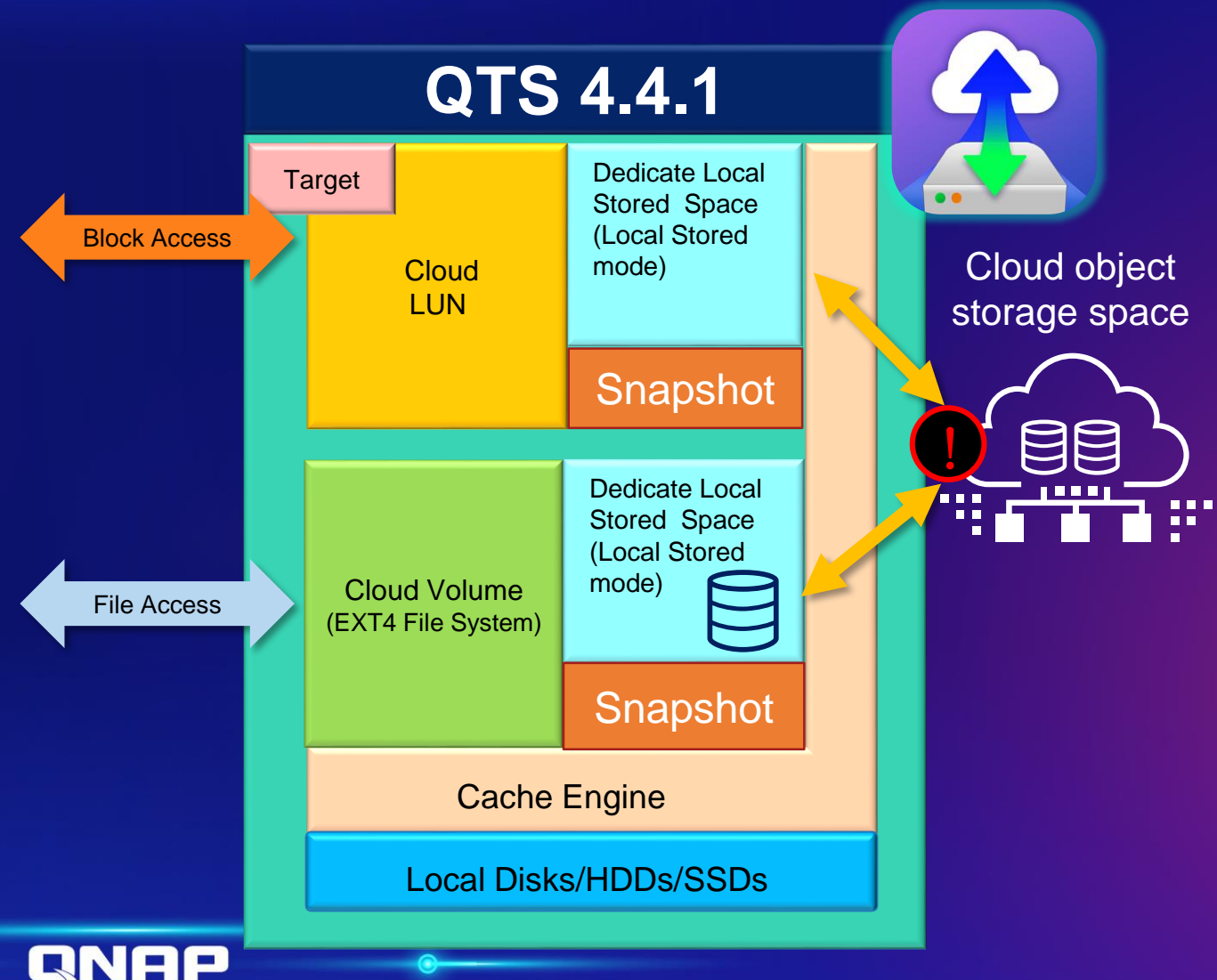


The architecture of VJBOD Cloud



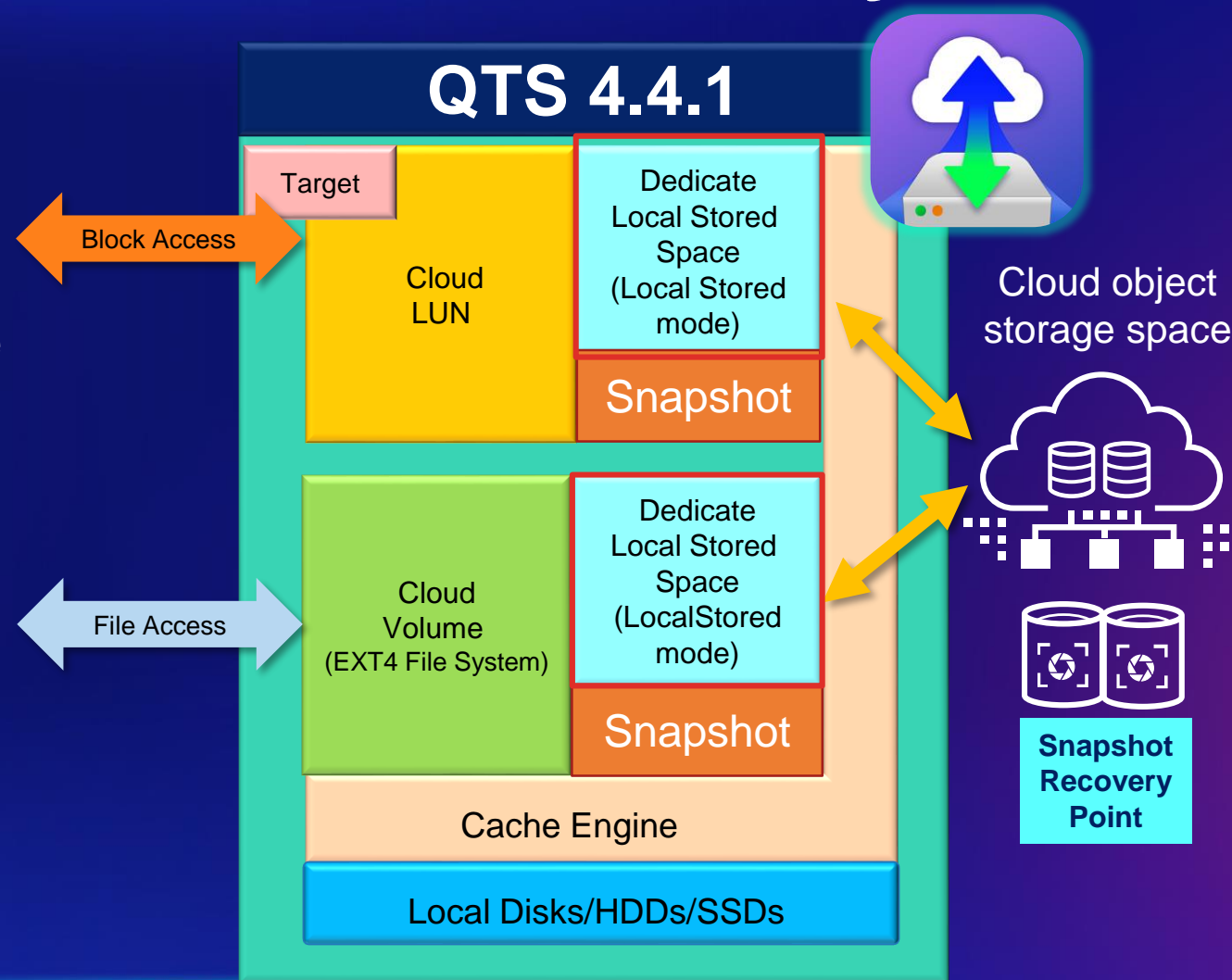
Local stored space keeps services on even the cloud service is disconnected

- Local Stored Mode
 - VJBOD Cloud uses the Local Stored Mode, so the cloud data is the same as the local storage space.
 - You have to set the local storage space larger than the cloud LUN.
- Provide data protection when the cloud service is disconnected or when the connection is unstable.
- Services will not stop due to cloud service disconnection.
- User access is not interrupted.



VJBOD Cloud provides snapshot recovery point to ensure data security

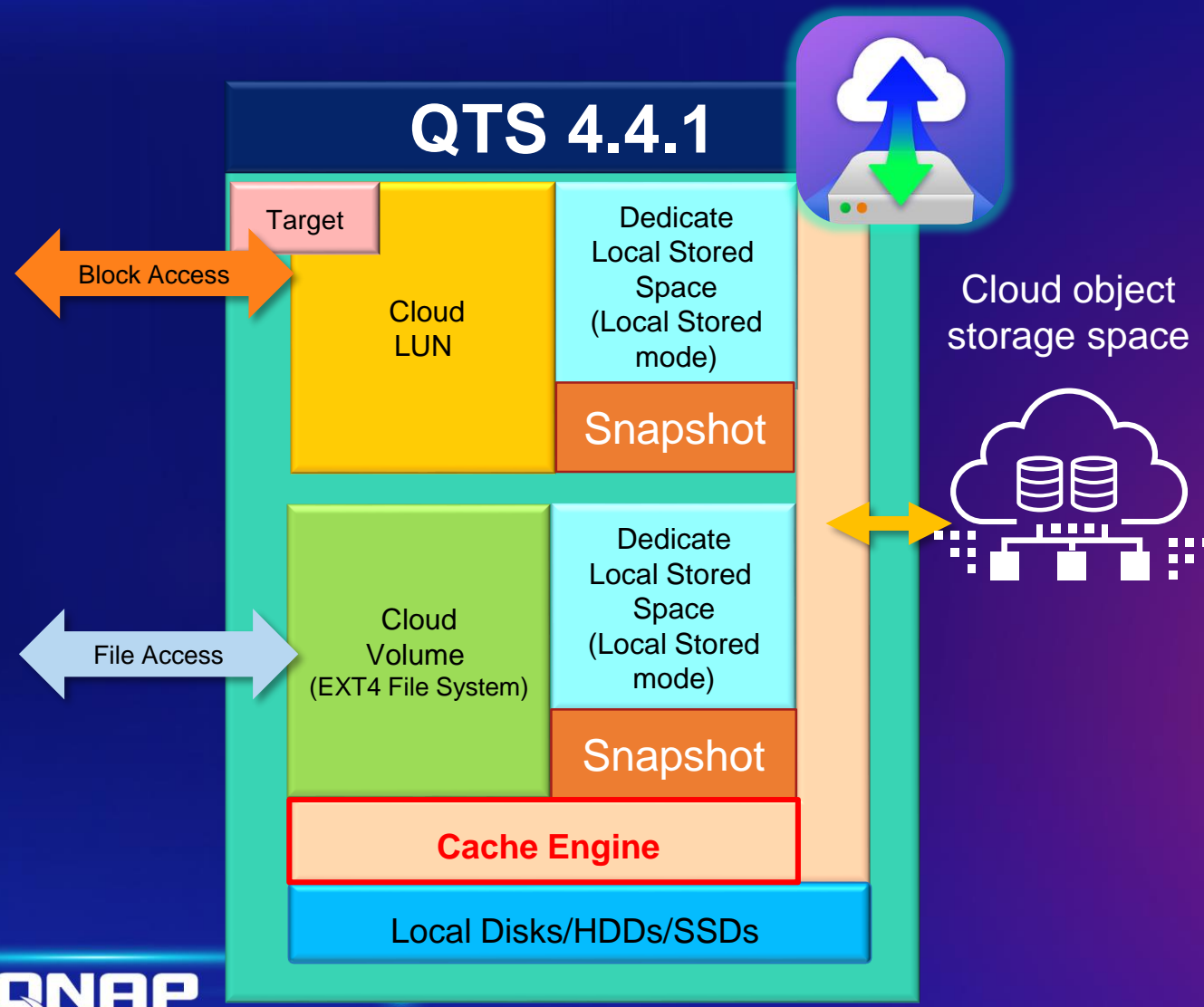
- The local stored space will be preset to be larger than the Cloud Volume/LUN space, and the extra space will store a snapshot of the automatic snapshot restore mechanism.



VJBOD Cloud utilizes the system cache engine for better performance

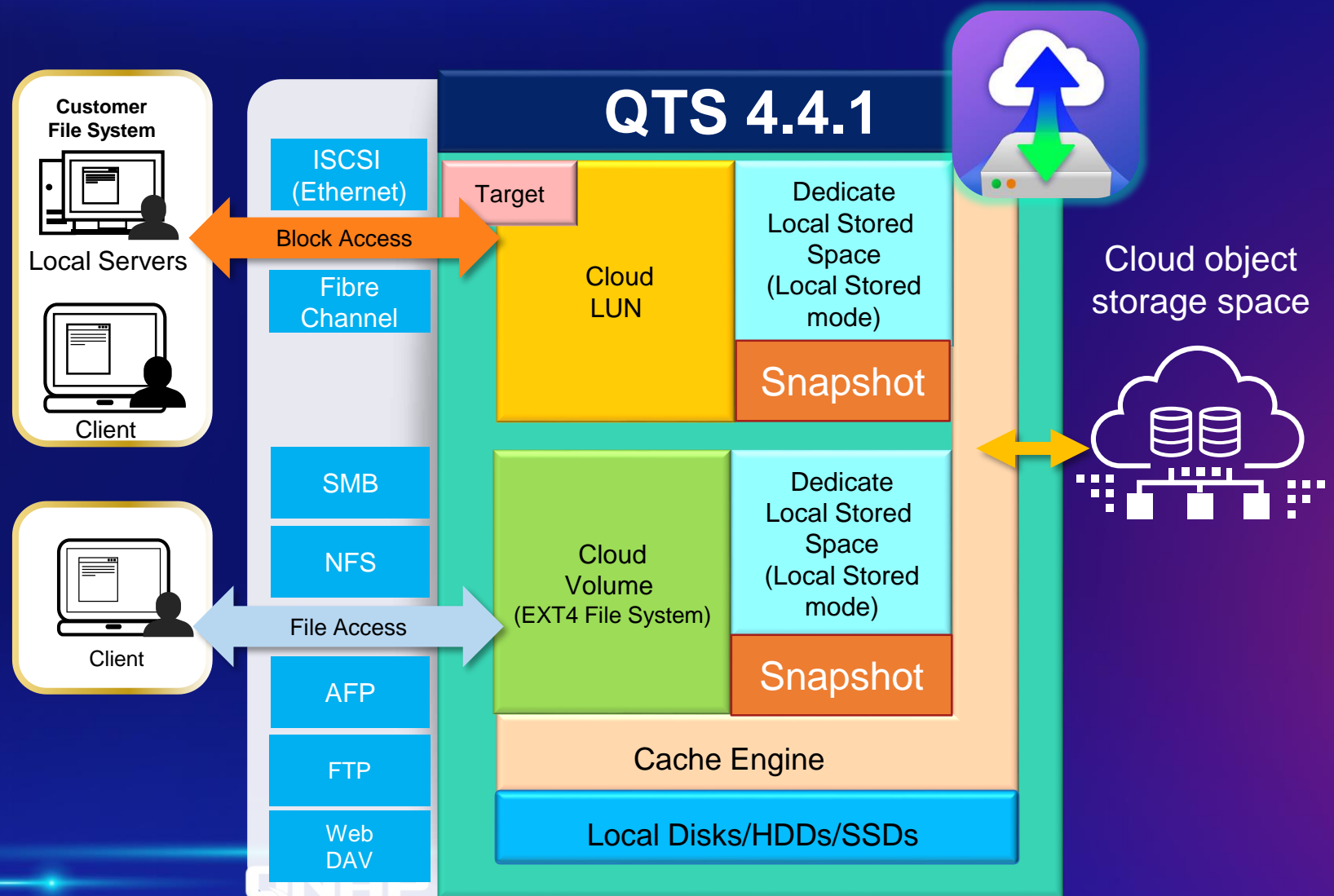
Any cloud access will go through the local stored space in NAS.

- The local storage space is matched with the cache engine, enabling the write performance as if on a local storage.
- Local storage space can be full SSD, HDD + SSD Cache, or Qtier Tiered Storage.



Users can access cloud services and VJBOD Cloud via any protocol

- VJBOD Cloud block cloud gateway, like a translator, can convert the different CSP's storage to the Cloud Volume/LUN.
- The IT guys or general users can access Cloud Volume through more familiar file access protocols (such as NFS, SMB, AFP FTP, WebDAV).
- Accessing Cloud LUNs using block-type access protocols (iSCSI, Fibre channel).
- Users can easily access data without changing the access protocol or the service application.



Object cloud storage ranking

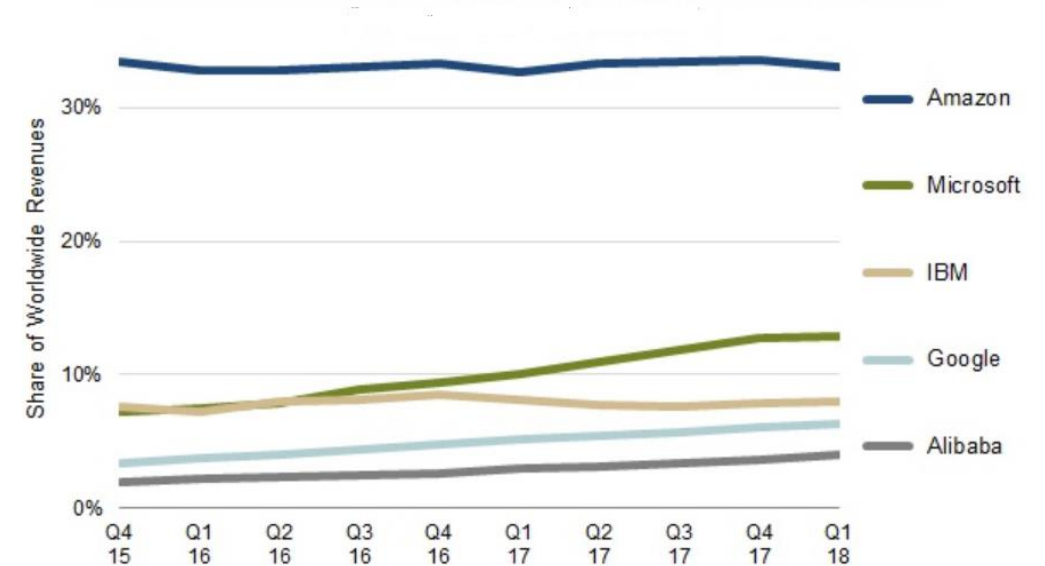
- Full support for mainstream cloud service providers.
- The support for regional cloud service providers is increasing.

Worldwide IaaS Public Cloud Services Market Share, 2017-2018 (Millions of U.S. Dollars)

Company	2018 Revenue	2018 Market Share (%)	2017 Revenue	2017 Market Share (%)	2018-2017 Growth (%)
Amazon	15,495	47.8	12,221	49.4	26.8
Microsoft	5,038	15.5	3,130	12.7	60.9
Alibaba	2,499	7.7	1,298	5.3	92.6
Google	1,314	4.0	820	3.3	60.2
IBM	577	1.8	463	1.9	24.7
Others	7,519	23.2	6,768	27.4	11.1
Total	32,441	100.0	24,699	100.0	31.3

Source: Gartner (July 2019)

Cloud Infrastructure Services - Market Share Trend



Source: Synergy Research Group

Support up to 13 object cloud storage spaces



Cloud Service Provider



Amazon S3



Azure



Digital Ocean



HiCloud



Huawei Cloud



RackSpace



Wasabi Cloud Storage



Alibaba Cloud



BackBlaze



Google Cloud Storage



HKT



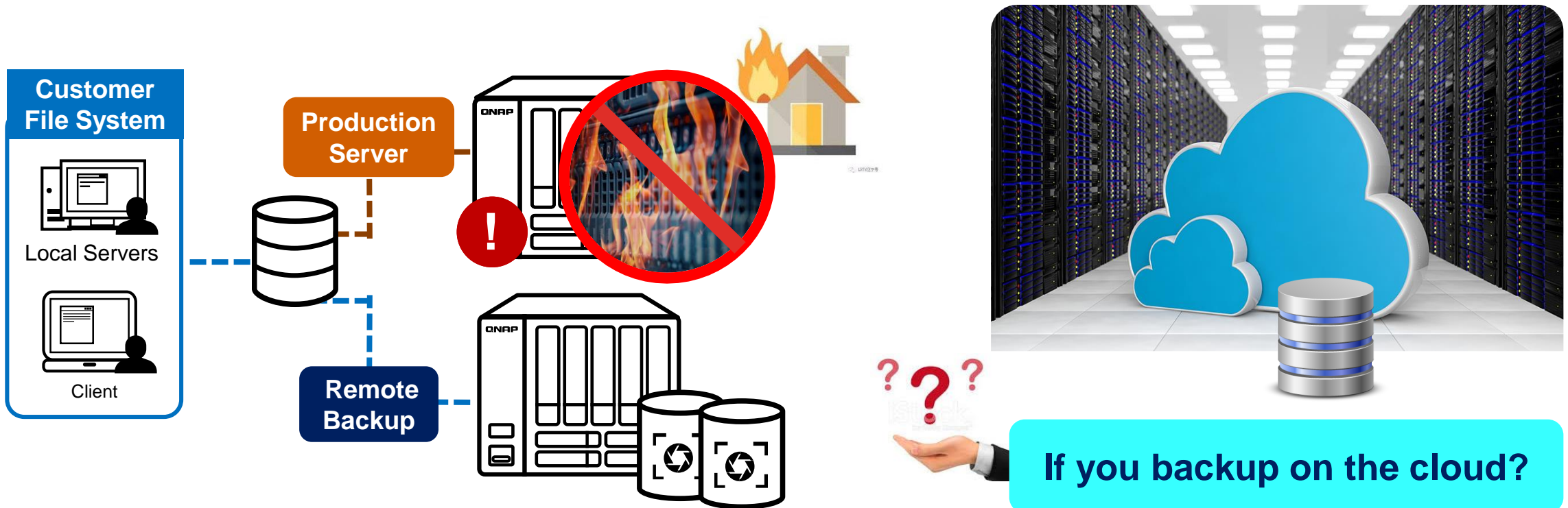
IBM Cloud Object Storage



OpenStack Swift

More

Remote backup can prevent data loss from a disaster, and you can restore all data from a remote NAS



How to restore data from cloud storage to another NAS

Step 1.

At the time of the disaster.



Step 2.

Prepare another NAS for service rescue.

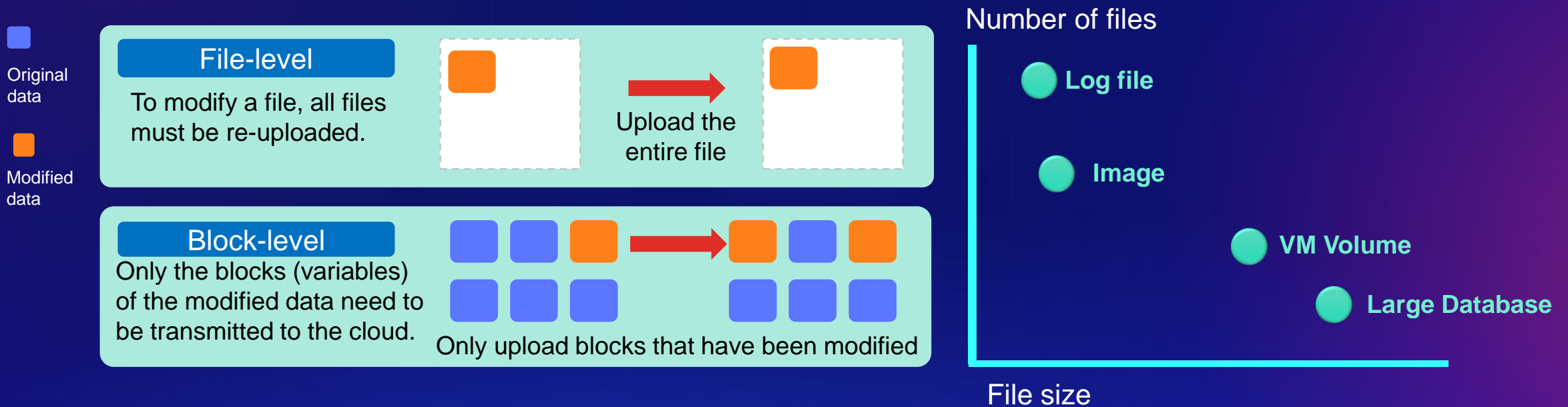


Step 3.

In the new NAS, the cloud space will be connected back to the Cloud volume/LUN by using the snapshot recovery point. And restore to all the cloud space data in the local storage space, you can continue the service.

The advantage of VJBOD Cloud Block-based Cloud Gateway

- VJBOD Cloud uploads file by blocks, which cannot be identified on the cloud.
- If enterprises backup their databases daily, then only the modified blocks (variables) will be backed up. It will reduce the backup time drastically.



VJBOD Cloud

Block-based Cloud Gateway Benefits

VJBOD
Cloud

- 1) Data unrecognizable, provide excellent data security.
- 2) The data could be accessed continuously when the cloud service is disconnected, and the service is not stopped.
- 3) Provide snapshot recovery point, data protection is guaranteed.
- 4) With the system cache engine, provide the better performance.
- 5) Reduce enterprise cloud space costs.
 - Reduce cloud traffic.
 - Low latency and reduce backup time.
- 6) IT staff can easily install and set up.

Reduce enterprise cloud space
expenditure costs





VJBOD Cloud

Application Scenarios



Back up data from local application services to the cloud

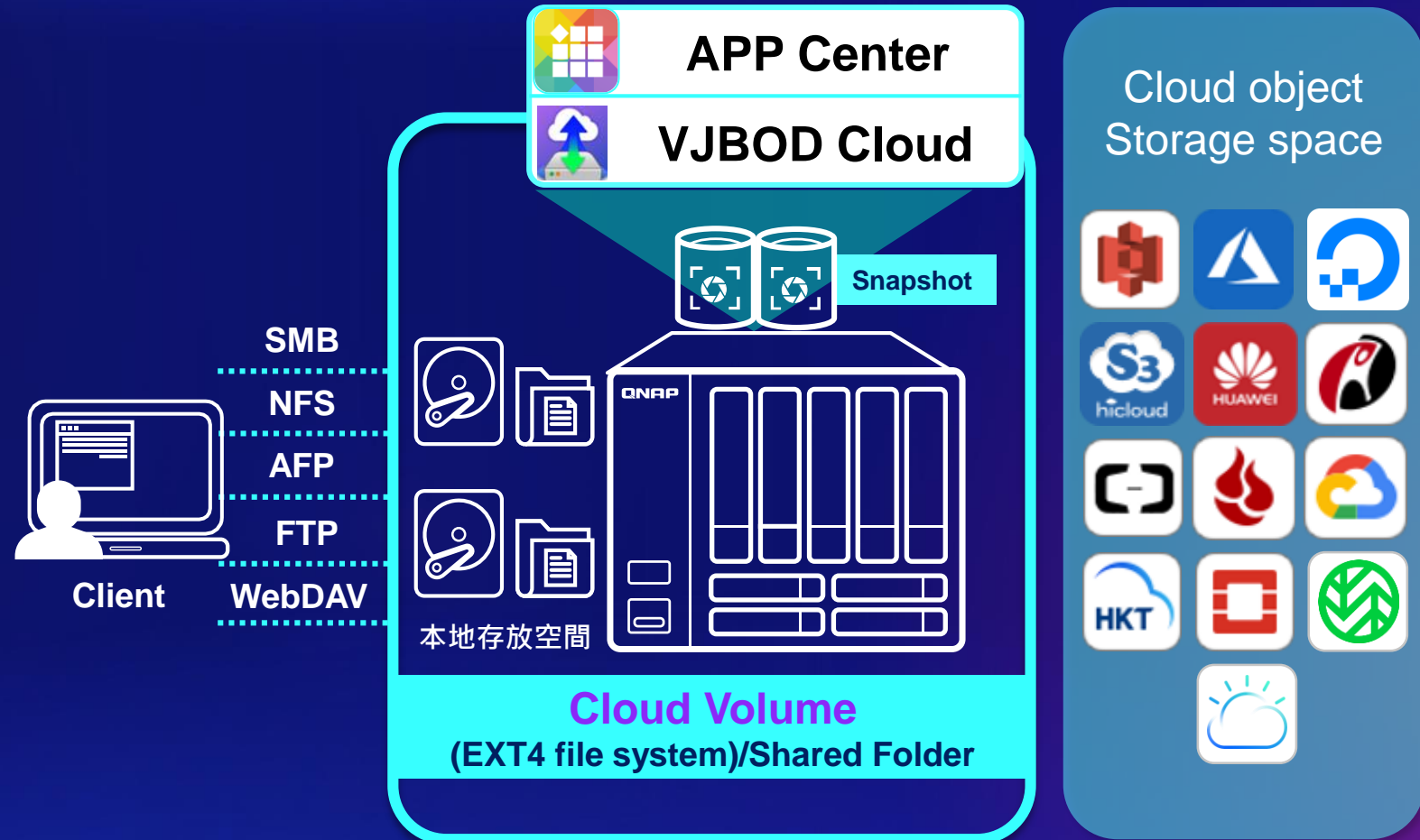
Application Case

SMEs have many important log files or sensitive data generated by local applications. For example, customer order data, financial information, or the system login data, and it is hoped that the process of backing up to the cloud can be fast. And it can't be recognized in the cloud space, it can keep the security and privacy of enterprise data.



VJBOD Cloud – Cloud Volume

- VJBOD Cloud – Cloud Volume allows users to easily connect to the cloud storage space and convert it to volume disk at the local end.
- Enterprise IT guys or general users can use the more familiar file access protocol (NFS, SMB, AFP, FTP, WebDAV) for access.
- After the files in these application services are backed up to the cloud through the block cloud gateway, the block space data is unrecognizable in the cloud space.



2 Local database backup

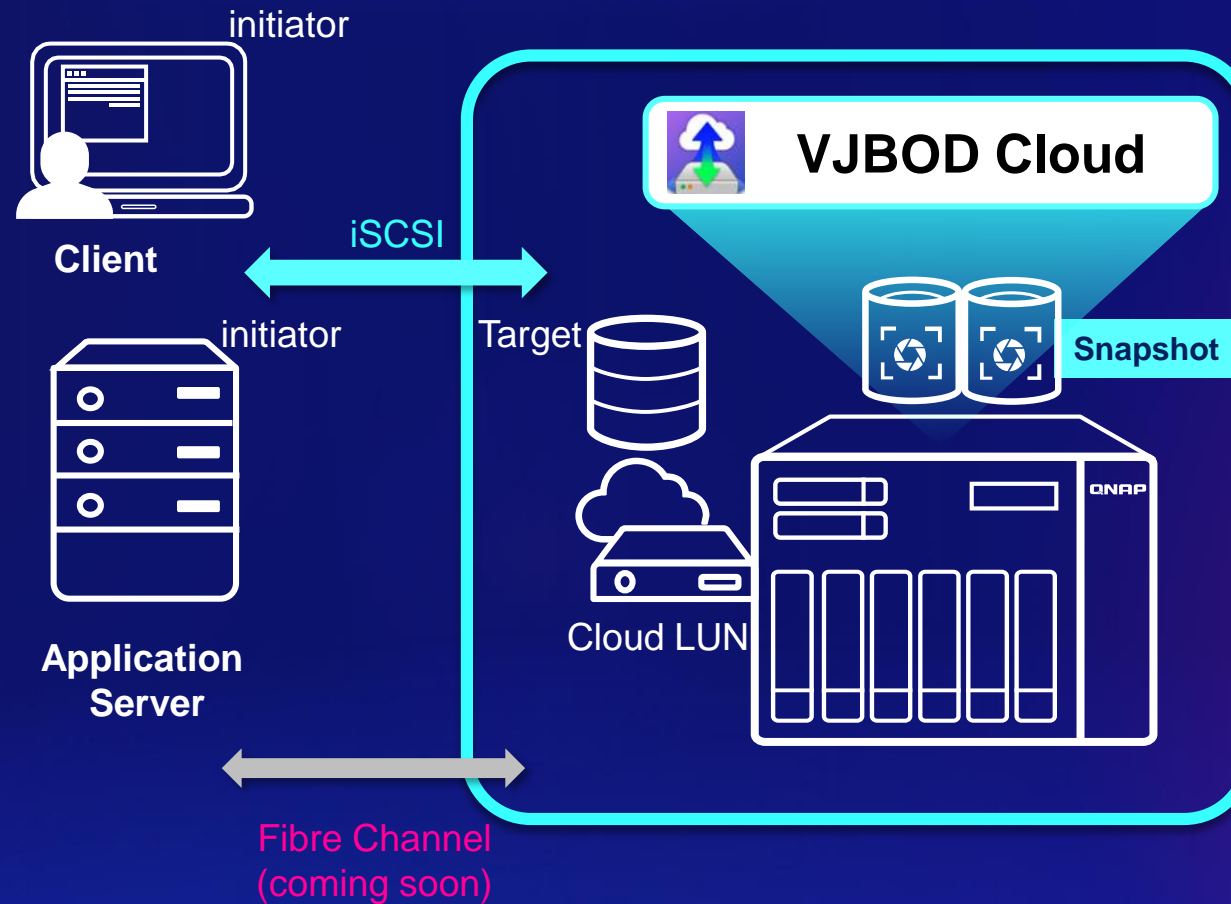
Application Case

In addition to the backup of the local storage device, the SME database hopes to back up the database to the cloud every day, and hopes to quickly and reduce the network transmission during the backup process.

* A cloud volume or LUN can only be connected to a NAS at a time.

Block-based Database Cloud Backup Solution

- QNAP NAS's VJBOD Cloud also provides block-type logical unit LUNs.
- Enterprise users can access through block-type access protocols (iSCSI, Fibre Channel).
- When enterprises want to back up the database to the cloud, they can also use the block-based gateway to achieve the backup difference variation, thereby reducing the overall cloud transmission volume and backup time and cloud usage.



Cloud object Storage space



QNAP

VJBOD Cloud

Function Introduction



3 steps to create a Cloud Volume / LUN

- Download the VJBOD Cloud program from the App Center.
- Follow VJBOD Cloud Wizard to build a cloud volume/LUN.

1

Choose the cloud service provider and cloud space bucket.

2

Set cloud volume/LUN and storage space.

3

Create the shared folder for Cloud volume or map the LUN to iSCSI target.

Overview & storage list

User will be able to view the cloud-volume / LUN created by VJBOD Cloud, and manage storage spaces at once.

The screenshot displays the VJBOD Cloud management interface. The top navigation bar includes the VJBOD Cloud logo, a 'Create VJBOD Cloud Volume/LUN' button, and a menu icon. The left sidebar contains navigation options: Overview, Transfer Resources, Event Logs, and Licenses. The main content area is divided into several sections:

- Licensed Connections:** Shows a gold medal icon and statistics: Used: 1, Total: 1, Valid: 1, Expired: 0. A 'Purchase License' button is located below.
- Transfer Resources:** Features a circular progress indicator showing 100%. It includes a 'Manage' button and a legend: Total resources: 100, Reserved (60 / 100), and Shared (40 / 100).
- Cloud Storage:** Summary: Total: 3 (Ready: 3, Warning: 0, Disconnected: 0, Unused: 13). It includes a 'Cloud Storage Status' table and a 'Cloud Storage List' table.

Cloud Storage Status

	Ready	Warning	Error	Disconnected
Cloud volumes	1	0	0	0
Cloud LUNs	2	0	0	0

Cloud Storage List

Service Provider/Alias	Cloud Storage Name	Status	Type	Capacity	Percent Used
Amazon S3 & Compatible					
Sam472XT_CloudLUN1	aws3transacceler	Ready Last sync:2019/12/20 20:1	Cloud LUN	200.00 GB	100%
Sam472XT_CloudLUN-4KB(Mappe	aws3transacceler	Ready Last sync:2019/12/20 20:2	Cloud LUN	200.00 GB	100%
Sam472XT_CloudVol1	aws3transacceler	Ready Last sync:2019/12/20 20:2	Cloud Volume	187.41 GB	0.03%

Cloud connection speed measurement and CSP transfer acceleration support

- VJBOD Cloud supports cloud connection speed measurement.
- IT staff can confirm the transmission speed of the cloud connection to know whether there is enough to cope to adjust the network disk area or the connection resources of the LUN.
- Support AWS transfer acceleration.

Create VJBOD Cloud LUN

Select Connection | Configure | Summary

With VJBOD Cloud, you can create VJBOD Cloud volumes/LUNs from cloud storage space that behave like local volumes/LUNs. VJBOD Cloud combines the fast performance of local NAS storage with the unlimited space, computing power, and reliability of cloud storage.

Cloud Services: Amazon S3 & Compatible

Cloud service: AWS Global

Access key:

Secret key:

Enable secure connection (SSL) Validate SSL certificate

Cloud space: aws3transacceler Search Note: Transfer acceleration is currently enabled.

Performance test

● Read - Cloud: 10.67 MB/s ● Write - Cloud: 10.01 MB/s

Stored Space and cloud space are both suitable for creating a VJBOD Cloud connection.

Cancel Next

VJBOD Cloud Local Storage Mode for continuous data access

- VJBOD Cloud Local Storage Mode allows users to store main data on the NAS and back up to the cloud. A Cloud Volume allows on-premise applications to access data with low latency.
- The local storage space will be preset to be larger than the VJBOD Cloud Volume space, and the extra space will store a snapshot of the automatic snapshot restoration mechanism.

The screenshot shows the 'Create VJBOD Cloud LUN' configuration window with the following settings:

- Select source:** Create a new cloud LUN Attach an existing cloud LUN
- Configure:**
 - LUN Name:** Sam472XT_CloudLUN3
 - Capacity:** 200 GB (with 'Set to Max' button and '(Maximum: 32 TB)' note)
 - Warning:** Selecting the maximum capacity available may increase cloud storage costs.
- Advanced Settings:**
 - Sector Size:** 512 bytes (Default)
- Create Stored Space:**
 - Location:** Storage Pool 2
 - Stored space capacity:** 250 GB (with 'Set to Max' button and '(Maximum: 400 GB, Minimum: 250 GB)' note)
 - Storage Usage:** A progress bar shows 'Allocated: 1.18 TB', 'Subscription: 0 MB', and 'Free: 643.42 GB'.

Buttons at the bottom: Cancel, Back, Next.

Snapshot Restore Mechanism protects users' data

- Snapshots will be automatically enabled when the block change is greater than 10%.
- Snapshots will be automatically enabled every 30 minutes when any block changed.

The screenshot shows the VJBOD Cloud management interface. A dialog box titled 'Sam472XT_CloudLUN1 Management' is open, displaying details for a Cloud LUN. The 'Recovery' tab is selected and highlighted with a red box. A blue arrow points from this tab to the 'VJBOD Cloud Volume/LUN Recovery' dialog on the right.

VJBOD Cloud Volume/LUN Recovery

You can use a recovery point to recover a VJBOD Cloud volume/LUN in the following situations:

1. The volume/LUN is in an error state because it was disconnected while containing data that has not been fully synced with the cloud.
2. You want to revert a working volume/LUN to a previous state.

Note:

- Some recent data might not be recoverable.
- During recovery all data must be redownloaded from the cloud, which might take a long time.

Name/Alias	Capacity	Status
Sam472XT_CloudLUN-4KB	200.00 GB	✓ Ready

Select a recovery point:

- 2019-12-22 11:54:23 AM
- 2019-12-21 03:54:18 PM
- 2019-12-21 03:24:17 PM
- 2019-12-21 11:54:17 AM

VJBOD Cloud Licenses



- VJBOD Cloud supports max 9 Cloud Bucket (include one free license).
- Free to connect to the first Cloud Bucket.
- VJBOD Cloud could create at least 16 Cloud Volume or LUN.

The screenshot displays the VJBOD Cloud management dashboard. The left sidebar contains navigation options: Overview, Transfer Resources, Event Logs, and Licenses. The main content area is divided into several sections:

- Licensed Connections:** Shows 1 Used and 1 Total license, with 1 Valid and 0 Expired licenses. A [Purchase License](#) button is available.
- Transfer Resources:** A circular progress indicator shows 100% utilization. Total resources are 100, with 20 Reserved and 80 Shared.
- Cloud Storage:** Summary: Total: 2 (Ready: 2, Warning: 0, Disconnected: 0, Unused: 14).
 - Cloud Storage Status:**

	Ready	Warning	Error	Disconnected
Cloud volumes	0	0	0	0
Cloud LUNs	2	0	0	0
 - Cloud Storage List:**

Service Provider/Alias	Cloud Storage Name	Status	Type	Capacity	Percent Used
Amazon S3 & Compatible					
Sam472XT_CloudLUN1 (Mapped t...	adwardtest	Ready Last sync:2019/12/16 18:3	Cloud LUN	200.00 GB	100%
Sam472XT_CloudLUN2	adwardtest	Ready Last sync:2019/12/20 17:5	Cloud LUN	300.00 GB	100%



Subscription packages



BASIC

1 Space For Block-Based Cloud Gateway

USD \$19.99 / Year

STANDARD

4 Space For Block-Based Cloud Gateway

USD \$59.99 / Year

PROFESSIONAL

8 Space For Block-Based Cloud Gateway

USD \$99.99 / Year



Subscribe a license from QNAP Software Store



- When customers have multiple different bucket connection requirements.
- Customers want to use multiple cloud services at the same time because they are considering using their different promotional plans to save costs.
- Purchase a license from QNAP Software Store.

<https://software.qnap.com>

The screenshot shows the QNAP Software Store website for the VJBOD Cloud product. The page features a search bar, navigation menu, and a main product section with a description and pricing table. A 'GUESS YOU MIGHT LIKE' section is also visible on the right side of the page.

QNAP Software Store

Search...

NAS Surveillance QIoT License Management Extended Warranty QTS 4.3.4 or older

Home > VJBOD Cloud

VJBOD Cloud

Expand your NAS storage with VJBOD Cloud by creating multiple connections to different cloud services.

QTS
Hybrid Cloud
Subscription

Availability: In stock
SKU#: VSKU-LIC-SW-VJBODCLOUD

GUESS YOU MIGHT LIKE

- HybridMount
- QVR Pro
- exFAT Driver
- McAfee Antivirus
- VJBOD Cloud

BASIC	STANDARD	PROFESSIONAL
1 Space For Block-Based Cloud Gateway	4 Spaces For Block-Based Cloud Gateway	8 Spaces For Block-Based Cloud Gateway
USD \$19.99 /Year	USD \$59.99 /Year	USD \$99.99 /Year
<ul style="list-style-type: none">• Offer 1 Space.• On-demand, instant storage capacity.	<ul style="list-style-type: none">• Offer 4 Spaces.• On-demand, instant storage capacity.	<ul style="list-style-type: none">• Offer 8 Spaces.• On-demand, instant storage capacity.

How to process the forced transfer and keep services ongoing?

Step.1

The user chooses which cloud service provider to connect to and enters the Access key and test connection.

The screenshot shows a configuration window titled "Create VJBOD Cloud LUN" with three tabs: "Select Connection", "Configure", and "Summary". The "Configure" tab is active. The window contains the following fields and options:

- Cloud Services:** A dropdown menu set to "Amazon S3 & Compatible".
- Cloud service:** A dropdown menu set to "AWS Global".
- Access key:** An empty text input field.
- Secret key:** An empty text input field.
- Enable secure connection (SSL) Validate SSL certificate
- Cloud space:** A dropdown menu set to "aws3transacceler", a "Search" button, and a red note: "Note: Transfer acceleration is currently enabled."
- Performance test:** A button that has been clicked, showing results: "Read - Cloud: 10.67 MB/s" and "Write - Cloud: 10.01 MB/s".
- A blue message: "Stored Space and cloud space are both suitable for creating a VJBOD Cloud connection."
- Buttons:** "Cancel" and "Next" buttons at the bottom.

Forced Transfer and Secure Transfer steps

Step.2

1. User selects [Attached an existing cloud LUN].
2. Status: Divided into three states, occupied (using), occupied (abnormal), idle (secure transfer).
3. Show last heartbeat time and NAS IP being occupied.
4. After the user selects the cloud Volume/LUN of the two states of occupied (using) and occupied (unused), pressing "Next" will pop up the window to warn the user and inform that the most recent snapshot will be restored.

Create VJBOD Cloud LUN

Select Connection | Configure | Summary

Select source:
 Create a new cloud LUN Attach an existing cloud LUN ?

Select volume/LUN:

	Name/Alias	Status	Last Heartbeat	Capacity	Current NAS
<input checked="" type="checkbox"/>	Jess882TCloudLU...	Occupied (abnorm...	2019/12/19 19:59	5.00 GB	172.17.24.95
<input type="checkbox"/>	v-server_CloudLUN1	Occupied (in use)	2019/12/20 20:08	10.00 GB	172.17.38.18

Cloud space is the storage space provided by a cloud service. It can be called a bucket, container, or another name depending on the cloud service provider. There must be sufficient available cloud space to create a VJBOD Cloud volume or LUN.

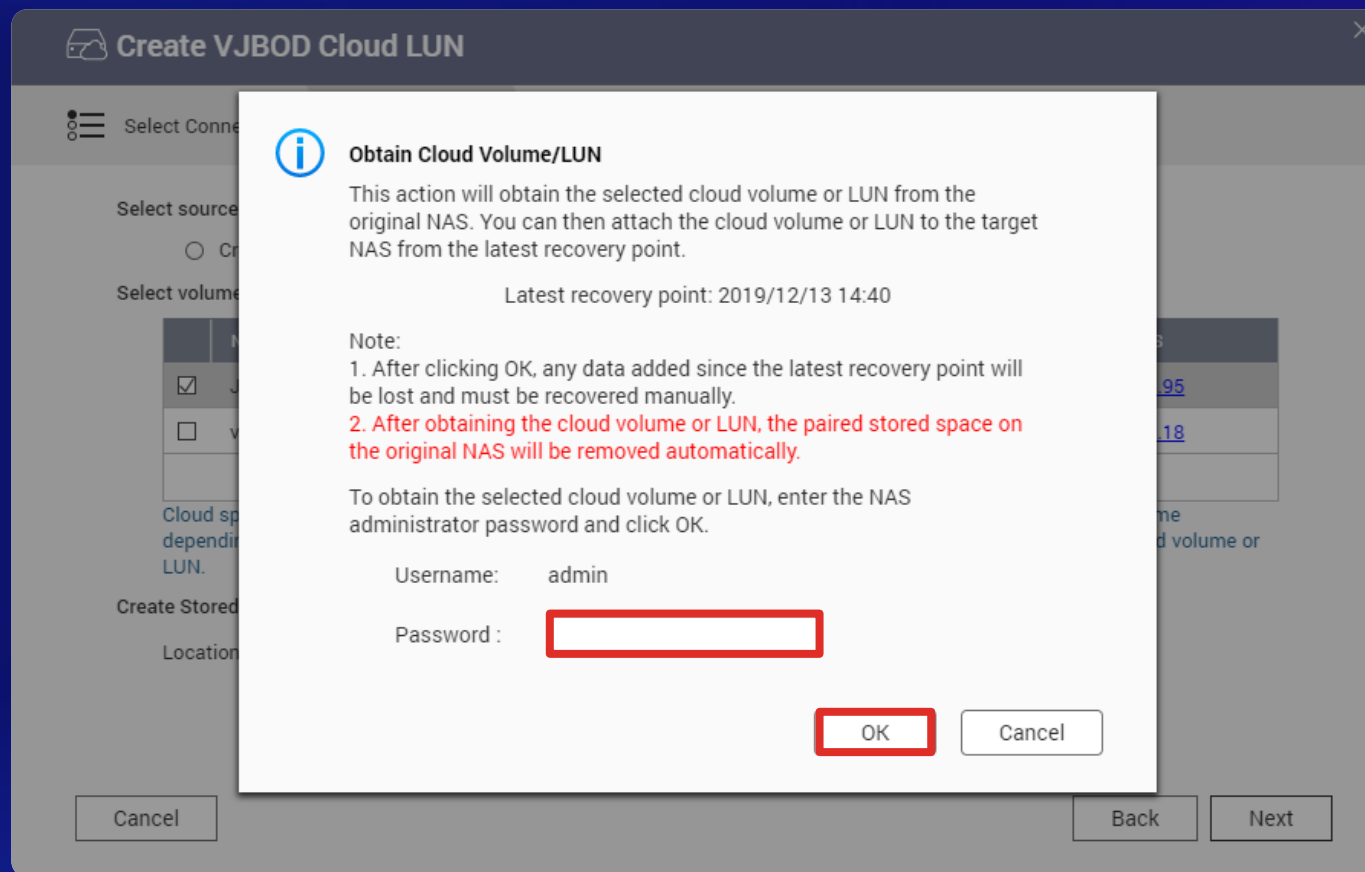
Create Stored Space: ?
Location: +

Cancel Back Next

Forced Transfer and Secure Transfer steps

Step.3

1. Press "Next" will pop up the confirm window to warn the user. And told that it will be restored by a recent snapshot.
2. And show the time point of this snapshot restore.
3. Please enter the admin password of this NAS, press "OK" to continue.



Forced Transfer and Secure Transfer steps

Step.4

The user presses "Finish" to start execution.

Create VJBOD Cloud LUN

Select Connection | Configure | **Summary**

Summary:

LUN Name: Jess882TCloudLUN1

Cloud space: Amazon S3 & Compatible, aws3transacceler

Create Stored Space:

Volume Alias: Jess882TCloudLUN1_Stored

Storage pool name: Storage Pool 2

Stored space capacity: 6.25 GB

Note: Actual usable capacity might be smaller due to metadata storage.

Do not map it to a target for now.

Cancel | Back | **Finish**

How to safely uninstall a cloud volume / LUN?

- With the application of VJBOD Cloud, select a cloud volume or LUN and press "manage" on the top right.
- Go to the management page and select [Connection] > [Safely Detach].

The screenshot displays the VJBOD Cloud web interface. On the left, a navigation menu includes Overview, Transfer Resources, Event Logs, and Licenses. The main content area is divided into several sections: Licensed Connections (Used: 1, Total: 1, Valid: 1, Expired: 0), Transfer Resources (Total resources: 100, Reserved: 30/100, Shared: 70/100), and Cloud Storage (Total: 3, Ready: 3, Warning: 0, Disconnected: 0, Unused: 13). A table titled 'Cloud Storage List' shows three items: Sam472XT_CloudLUN1, Sam472XT_CloudLUN-4KB, and Sam472XT_CloudVol1. The 'Manage' button for the selected 'Sam472XT_CloudLUN-4KB' is highlighted with a red box. A blue arrow points from this button to a 'Sam472XT_CloudLUN-4KB Management' dialog box. In this dialog, the 'Safely Detach' option in the 'Actions' dropdown menu is also highlighted with a red box. The dialog provides details for the selected LUN, including its name, type, cloud service (amazons3), cloud space (aws3transacceler), capacity (200.00 GB), and status (Ready). It also shows a 'Stored Space Utilization' table.

Capacity	Status	Stored Space Utilization	Write Cache Utilization
246.51 GB	Ready	69.98 MB	0 Byte

Transfer Resource Management



IT staff can assign connectivity resources of cloud volumes or LUNs for different applications or temporary tasks.

The screenshot shows the VJBOD Cloud interface for managing transfer resources. The left sidebar contains navigation options: Overview, Transfer Resources (selected), Event Logs, and Licenses. The main content area is titled 'Total Transfer Resources' and includes a descriptive paragraph, a donut chart showing 100 total resources (75 reserved, 25 shared), and a table of resource allocations. A red box highlights the row for 'Sam472XT_CloudLUN-4KB', which has 25 reserved resources, 0 limits, and 'No limit' rule. A blue callout box points to this row with the text 'Settings like this set the highest priority:'. The top right of the interface has a 'Create VJBOD Cloud Volume/LUN' button and a menu icon.

Total Transfer Resources

The capability of your NAS determines the maximum number of transfer resources that VJBOD Cloud can use. To conserve transfer resources on the NAS, reduce the maximum number of transfer resources allocated to VJBOD Cloud. Allocating more transfer resources will improve processing efficiency but consume more CPU and memory resources. Allocating fewer transfer resources will increase the time it takes to transfer data.

Total resources: (Maximum: 100, Minimum: 1)

- Reserved (75 / 100)
- Shared (25 / 100)

Cloud Volume/LUN Resources

Type	Alias	Reserved	Limit	Limitation Rule
Cloud LUN	Sam472XT_CloudLUN1	<input type="text" value="25"/>	<input type="text" value="30"/>	Limit
Cloud LUN	Sam472XT_CloudLUN-4KB	<input type="text" value="25"/>	<input type="text" value="0"/>	No limit
Cloud Volume	Sam472XT_CloudVol1	<input type="text" value="25"/>	<input type="text" value="30"/>	Limit

Settings like this set the highest priority:

Event Log Management



Through Notification Center, IT managers can send the warning to users.

The screenshot shows the VJBOD Cloud Event Logs management interface. The page title is "Event Logs" and it includes a sub-header "View a log of past events, error messages, and warning messages." There is a "Severity level" dropdown menu set to "All severity levels" and a "Content Search" input field. The main content is a table of event logs with columns for Severity Level, Time, Category, and Content. The table shows a list of events, including successful operations and two failed operations. At the bottom, there is a pagination control showing "Page 1 / 1" and a "Display item: 1-24, Total: 24 | Show 50 Item(s)" option.

Severity Level	Time	Category	Content
	2019/08/21 18:58:38	VJBOD Cloud	[Storage & Snapshots] Detached VJBOD Cloud volume "Sam472XT_CloudVol2".
	2019/07/24 14:36:28	VJBOD Cloud	[Storage & Snapshots] Failed to remove VJBOD Cloud volume "Sam472XT_CloudVol2".
	2019/07/24 14:36:28	VJBOD Cloud	[Storage & Snapshots] Started removing VJBOD Cloud volume "Sam472XT_CloudVol2".
	2019/07/24 14:36:10	VJBOD Cloud	[Storage & Snapshots] Failed to remove VJBOD Cloud volume "Sam472XT_CloudVol2".
	2019/07/24 14:36:10	VJBOD Cloud	[Storage & Snapshots] Started removing VJBOD Cloud volume "Sam472XT_CloudVol2".
	2019/07/19 02:00:09	VJBOD Cloud	[Storage & Snapshots] Finished reclaiming space on volume "Sam472XT_CloudVol2".
	2019/07/19 02:00:05	VJBOD Cloud	[Storage & Snapshots] Started reclaiming space on volume "Sam472XT_CloudVol2".
	2019/07/18 02:00:08	VJBOD Cloud	[Storage & Snapshots] Finished reclaiming space on volume "Sam472XT_CloudVol2".
	2019/07/18 02:00:04	VJBOD Cloud	[Storage & Snapshots] Started reclaiming space on volume "Sam472XT_CloudVol2".
	2019/07/17 02:00:18	VJBOD Cloud	[Storage & Snapshots] Finished reclaiming space on volume "Sam472XT_CloudVol2".
	2019/07/17 02:00:05	VJBOD Cloud	[Storage & Snapshots] Started reclaiming space on volume "Sam472XT_CloudVol2".
	2019/07/16 21:02:39	VJBOD Cloud	[Storage & Snapshots] Finished creating VJBOD Cloud volume "Sam472XT_CloudVol2".
	2019/07/16 21:01:17	VJBOD Cloud	[Storage & Snapshots] Started creating VJBOD Cloud volume "Sam472XT_CloudVol2".
	2019/07/16 20:59:03	VJBOD Cloud	[Storage & Snapshots] Finished removing VJBOD Cloud volume "Sam472XT_CloudVol2".
	2019/07/16 20:56:38	VJBOD Cloud	[Storage & Snapshots] Started removing VJBOD Cloud volume "Sam472XT_CloudVol2".
	2019/07/16 20:49:09	VJBOD Cloud	[Storage & Snapshots] Finished creating VJBOD Cloud volume "Sam472XT_CloudVol2".
	2019/07/16 20:47:46	VJBOD Cloud	[Storage & Snapshots] Started creating VJBOD Cloud volume "Sam472XT_CloudVol2".
	2019/07/16 20:45:46	VJBOD Cloud	[Storage & Snapshots] Finished removing VJBOD Cloud volume "Sam472XT_CloudVol2".

Cloud Volume supports encryption

- Cloud Volume supports encryption with AES-256bit.
- Even if a NAS is stolen, the encryption mechanism can protect confidential data and information.

Create VJBOD Cloud Volume

Select source:
 Create a new cloud volume Attach an existing cloud volume *i*

Configure:
Volume Alias:
Volume capacity: GB (Maximum: 32 TB)
Warning: Selecting the maximum capacity available may increase cloud storage costs.

Advanced Settings: ▾

Alert threshold: %

Encryption *i*

Input Password:

Verify Password:

Create a shared folder on the volume *i*

File system option: ▲

Create Stored Space: *i*

Location:

Stored space capacity: GB *i* (Maximum: 400 GB, Minimum: 250 GB)

Allocated: 785.10 GB Subscription: 0 MB Free: 1.04 TB

QNAP

Live Demo



Recommended Models

SMB Entry-level

TS-873

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



SMB Intermediate

TVS-882

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



SMB Advanced

TS-1683XU-RP

- **Suggested Cloud Volume/LUN: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

- **Suggested Cloud Volume/LUN: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 maximum support cloud volume / LUN number limit.

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VJBOD Cloud

Your Best Choice

