



## Installation and Operating Guide

# Milesight Storage Plugin for Nx Witness

Version: V2.0

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# Chapter 1. Introduction

The latest version of the Milesight plugin now supports integration with **Wasabi Hot Cloud Storage**. By connecting to a designated Wasabi storage pool (Bucket), the plugin utilizes the Nx Storage SDK to store recorded video data in Wasabi Hot Cloud Storage via the S3 protocol. This enables users to benefit from scalable, secure, and cost-effective cloud storage for their video recordings, ensuring data is safely archived and easily accessible.

This User Guide focuses on installing the Milesight storage plugin and configuring Wasabi Hot Cloud Storage integration with Nx Witness for efficient cloud storage for your video recordings.

If you have any questions, please do not hesitate to contact our Milesight Support Team at [support@milesight.com](mailto:support@milesight.com).

## *1.1 System Requirement*

### **[Supported Nx Witness Version]**

Network Optix Witness VMS v 5.1 or above.

### **[Supported Operating Systems]**

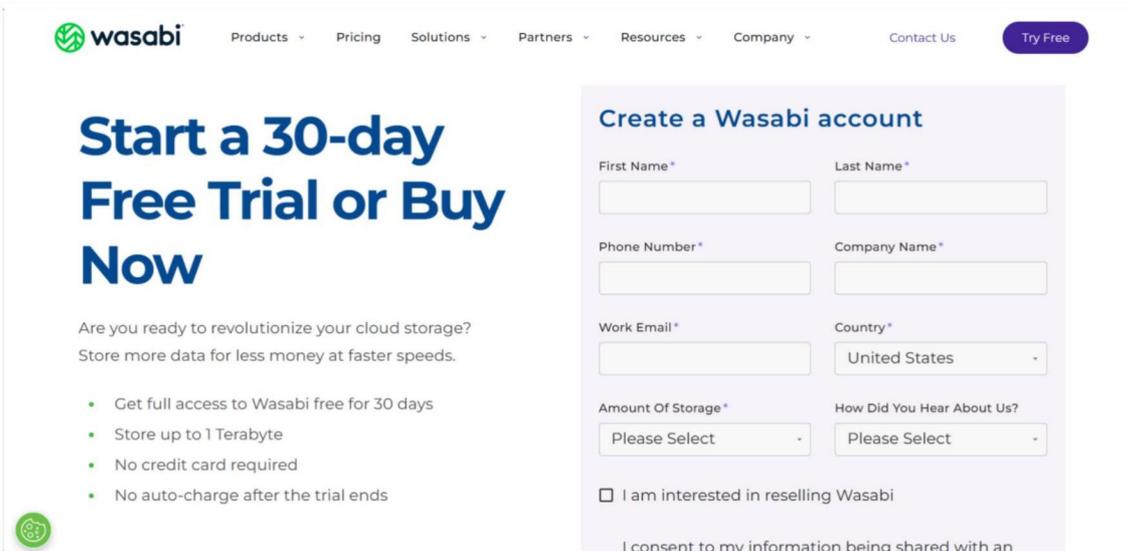
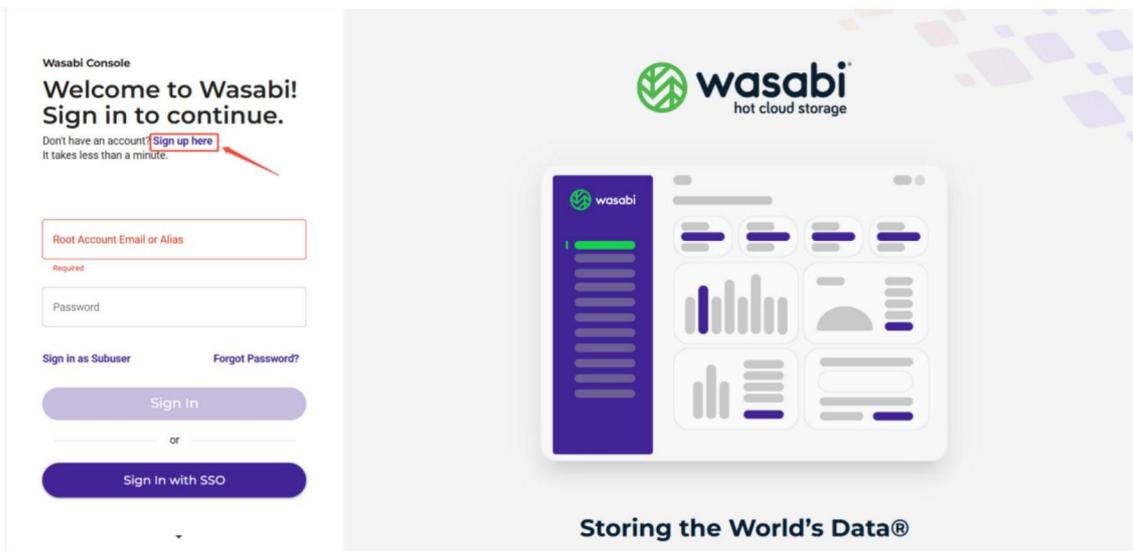
**Linux:** Ubuntu 20.04, 22.04 **Windows:** 10, 11

# Chapter 2. Installations

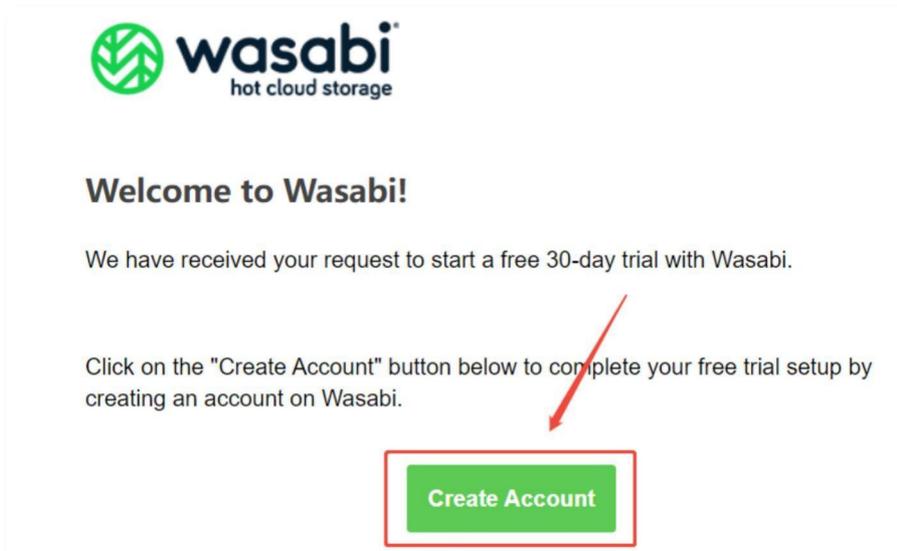
## 2.1 Pre-installation Configuration

**Step 1:** Create your Wasabi account.

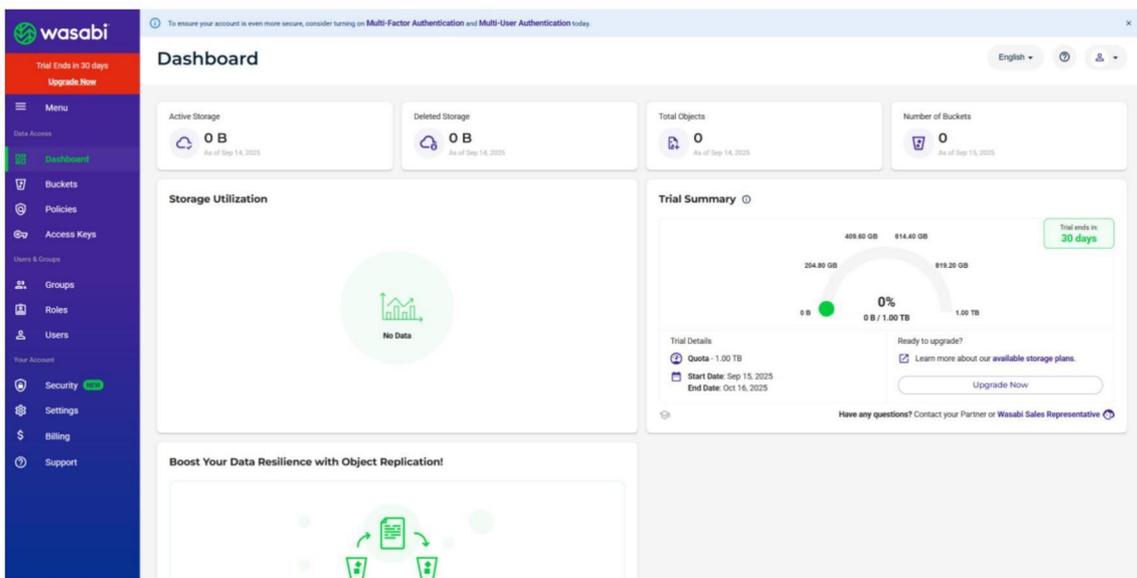
Go to the [Wasabi website](#) and click on "Sign up here." Fill out the application form for the 30-day free trial, and you will receive an email.



In the email, click "Create Account" to complete your registration.

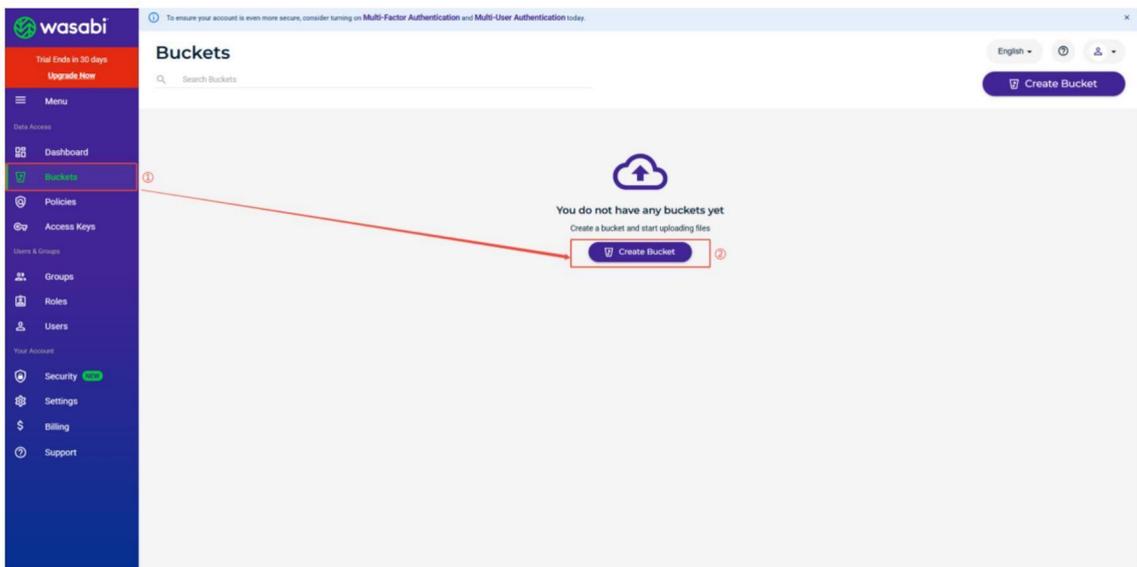


After creating your account, log in to the website to start your 30-day free trial.

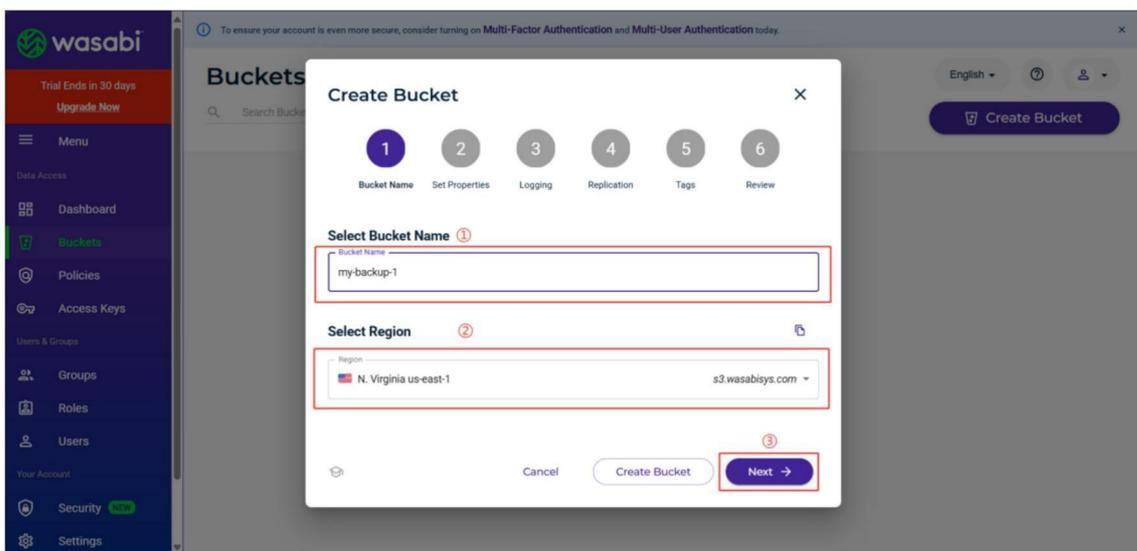


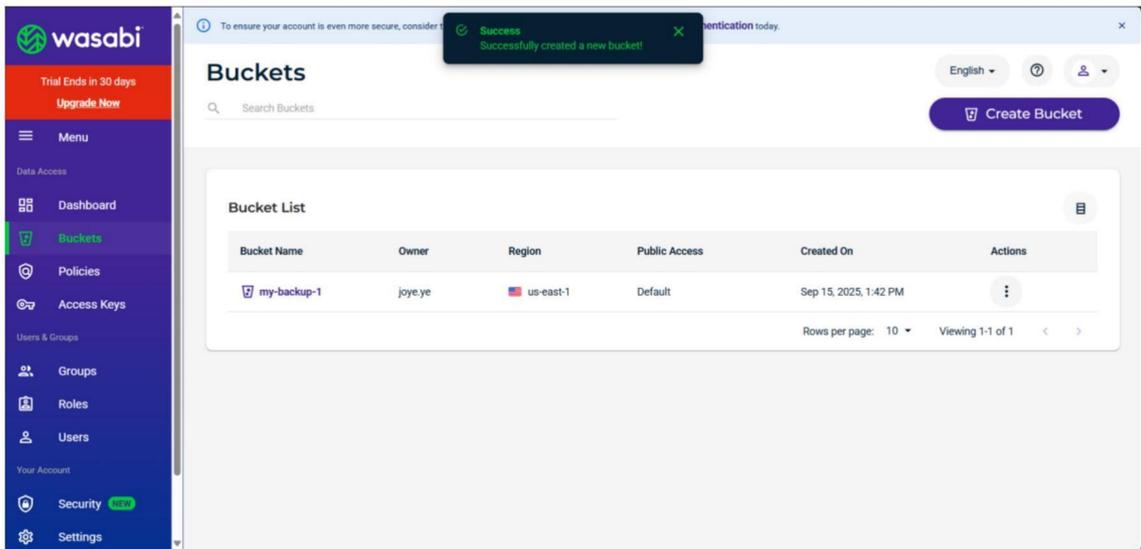
## Step 2: Create Your Bucket.

Navigate to the "Bucket" section, and click on "Create Bucket".

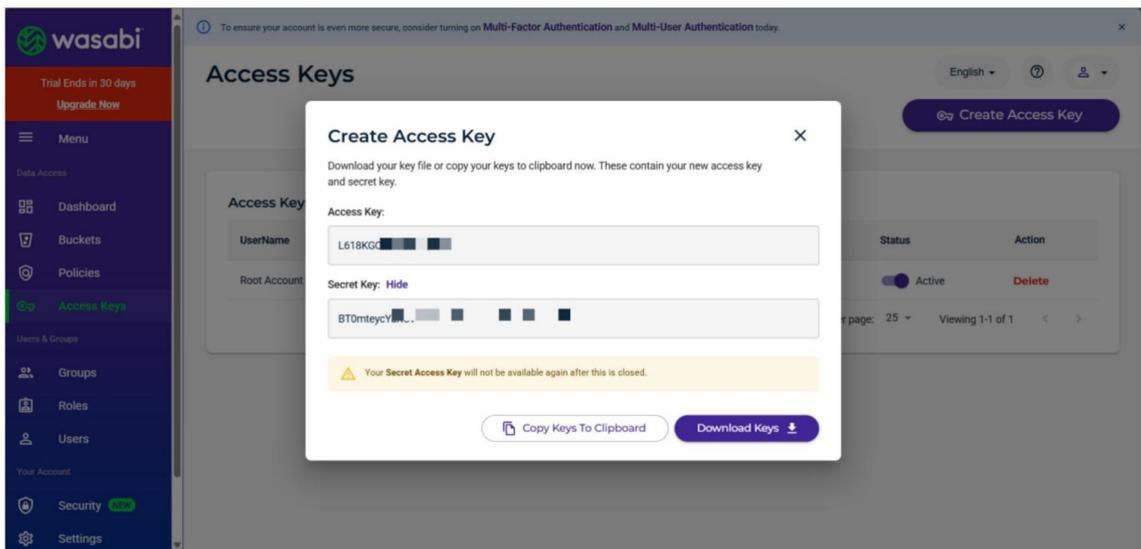
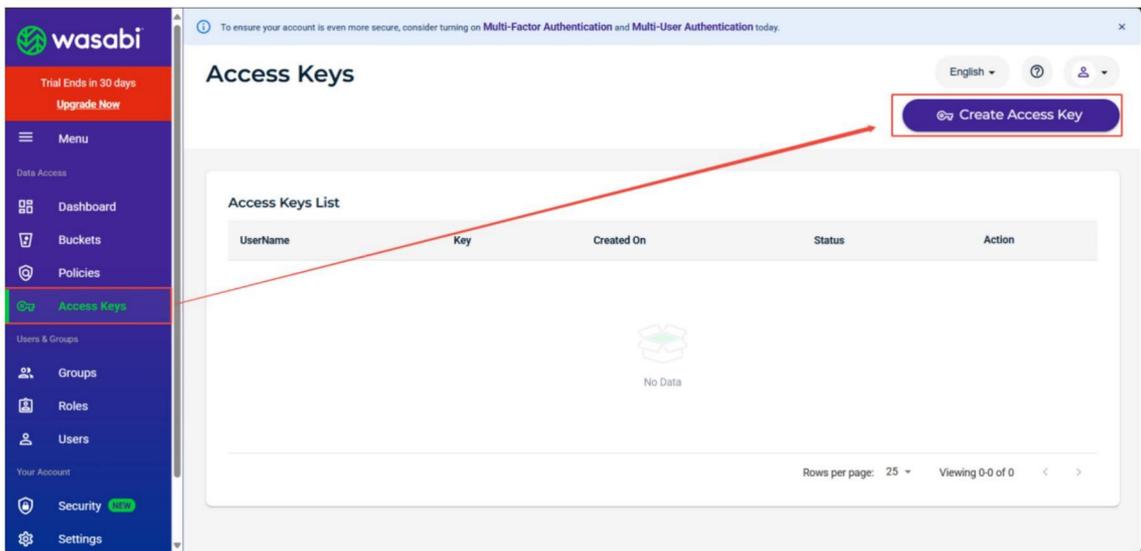


Create a unique bucket name and select the region, then click "Next". You can simply click "Next" to complete the remaining steps.





### Step 3: Create Access Key.



Save the file by clicking "Download Keys".

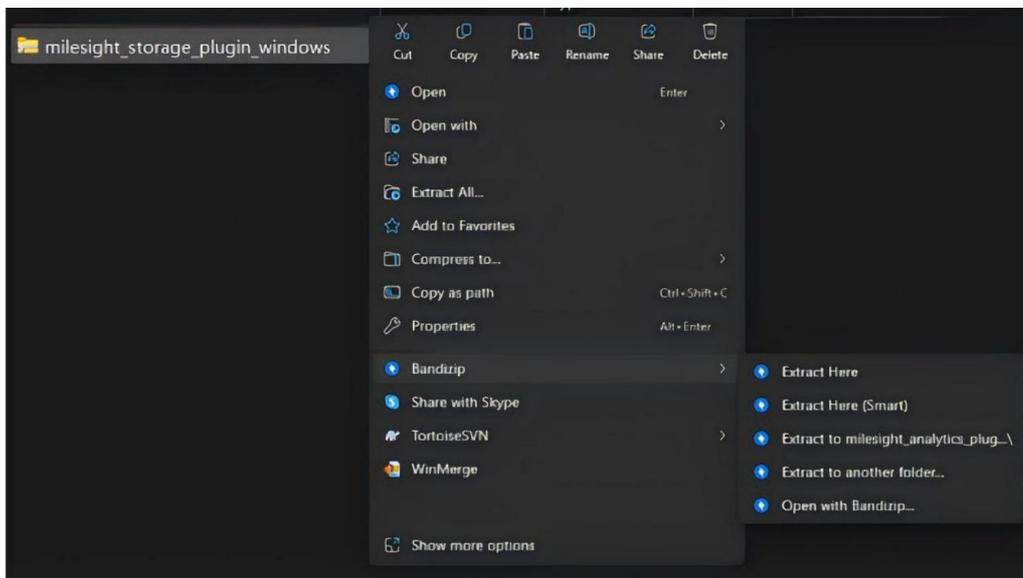
## 2.2 Plugin Installation

If you need, you can contact our Support Team to get the installation package of the Milesight Storage Plugin or download the version from this link.

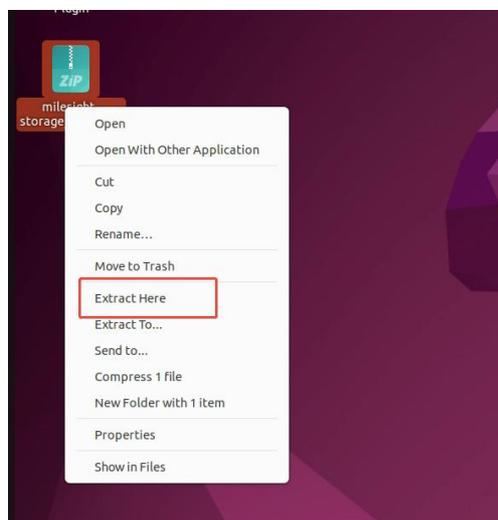
1. [Standard Windows Version](#)
2. [Standard Linux Version](#)

**Step 1:** Extract `milesight_storage_plugin.zip` into a folder.

- **Windows Installation:**



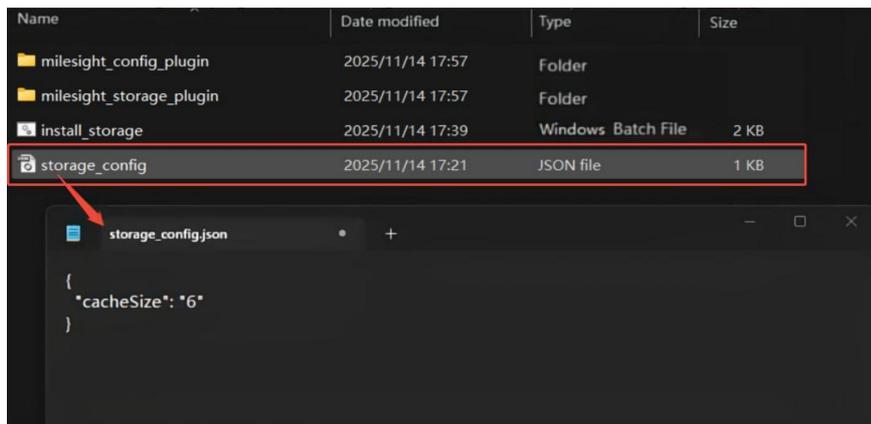
- **Linux Installation:**



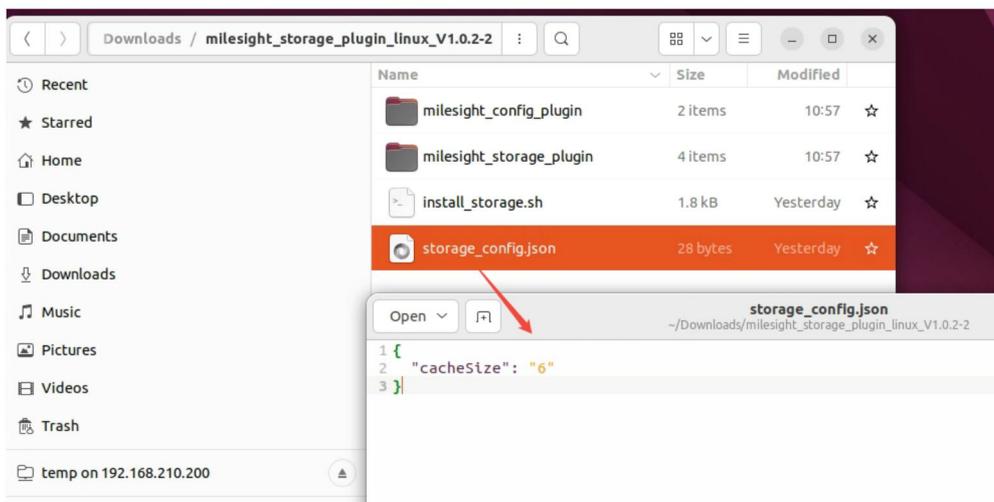
## Step 2: Configure Local Buffer.

Before installing the plugin, please configure the local buffer in the *storage.config* file provided in the installation package.

- **Windows Installation:**



- **Linux Installation:**



Local buffering is used to temporarily store video data on the device and then upload it asynchronously when network or bandwidth issues occur. This helps prevent data loss and enhances users' data security. The default value is 6GB, but users can adjust it according to their actual needs.

The plugin first writes the recording file in “.mkv” format to the local cache, and then uploads the file from the cache. Files waiting to be uploaded are managed in an upload queue. After a file is uploaded, it is deleted from the local cache.

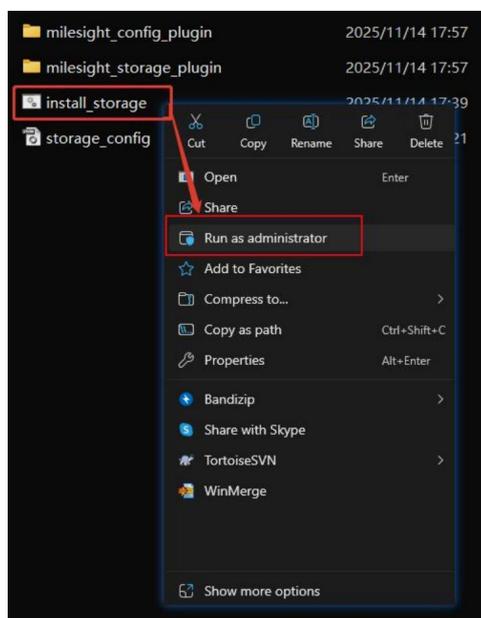
The plugin calculates the cache size every 20 seconds. If the used cache size reaches the preset value, the oldest file will be deleted, with the following exceptions:

- 1) Non “.mkv” files;
- 2) Files that are currently open;
- 3) Files that are currently being uploaded.

**Step 3:** Run the *“install\_storage.sh”* file and follow the prompt to finish the installation of the plugin.

- **Windows Installation:**

Right-click on “install\_storage” and select “Run as administrator” to finish the installation of the plugin.



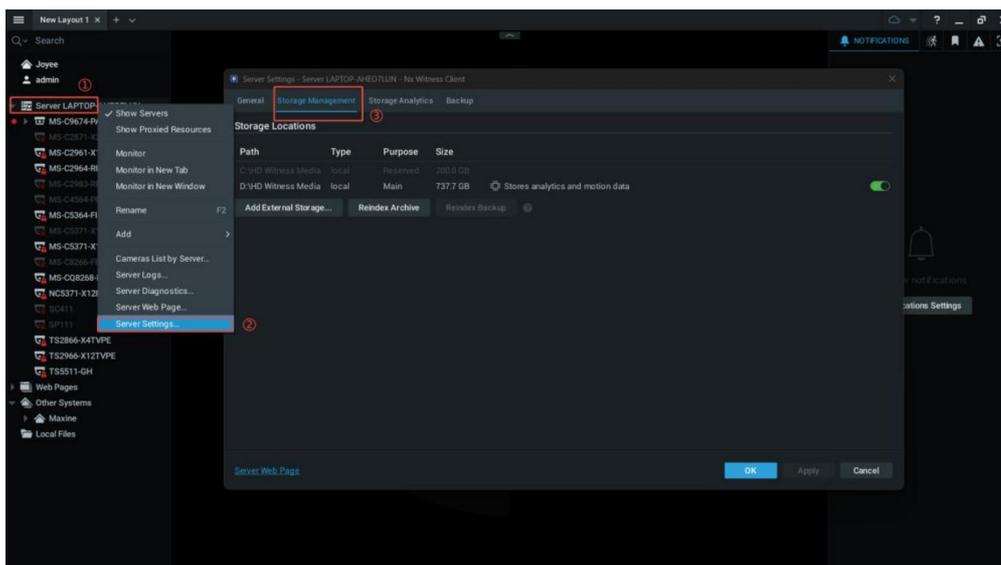
- **Linux Installation:**

```

mscd@mscd: ~/Desktop/milesight_storage_plugin_linux_V1.0.2-2
mscd@mscd:~/Desktop/milesight_storage_plugin_linux_V1.0.2-2$ bash install_storage.sh
network Optix Media Server will stop, do you need to continue? [Continue by pressing Y key, stop install by pressing other keys.]Y
sudo] password for mscd:
chmod: changing permissions of '/opt/networkoptix/mediaserver/bin/msplugin_config': Operation not permitted
chmod: changing permissions of '/opt/networkoptix/mediaserver/bin/msplugin_config/storage_config.json': Operat

```

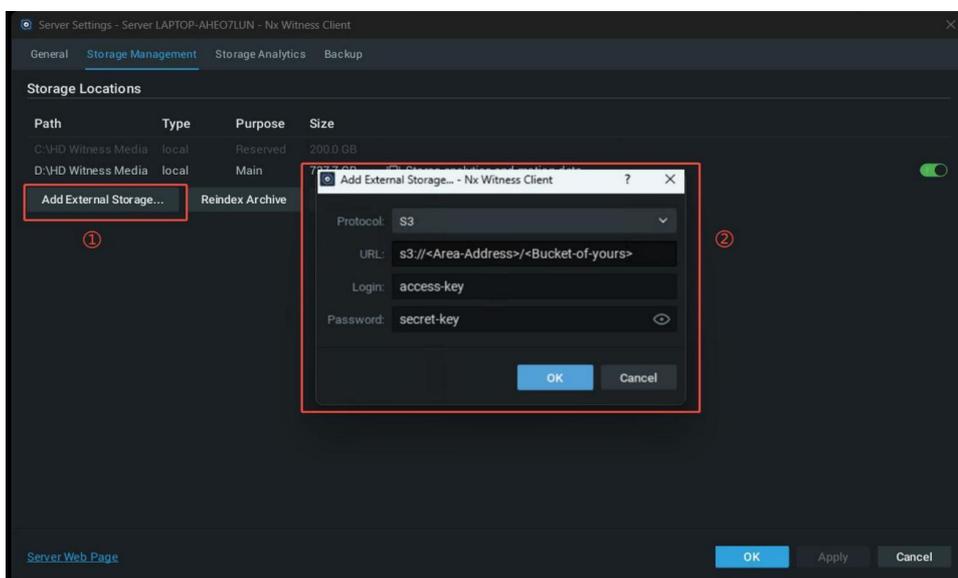
**Step 4:** Launch the Nx Witness and configure Server Storage. Right Click on the Server, and choose “Server Settings”.



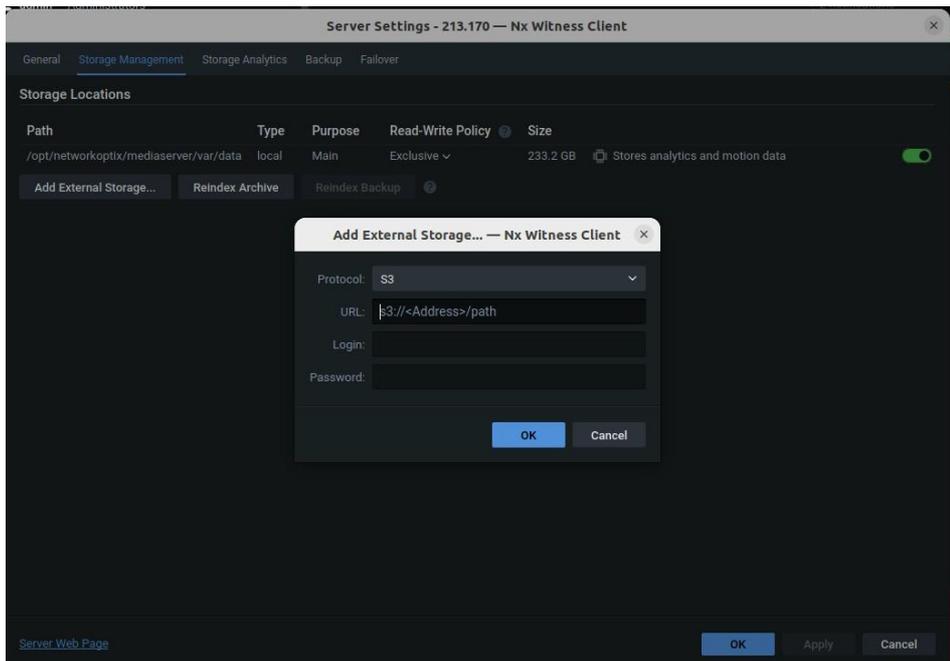
In the **Storage Manage** page, click on “Add External Storage”.

In the pop-up creation window, select “S3” as the default protocol from the dropdown menu. Enter the “Access Key” and “Secret Key” in the Login and Password fields. In the URL field, provide the region and endpoint information of your bucket.

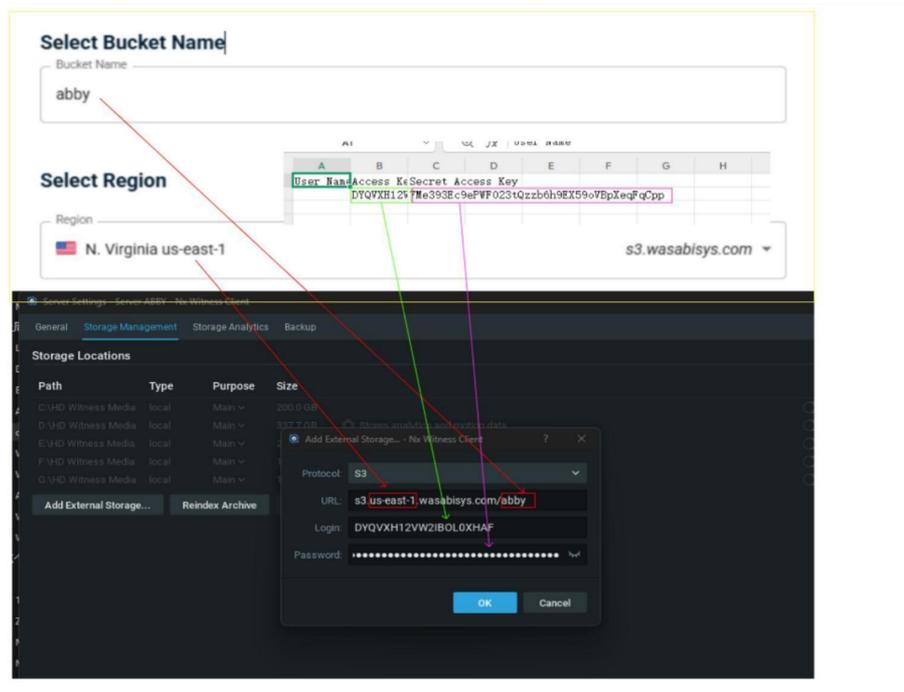
- **Windows Installation:**

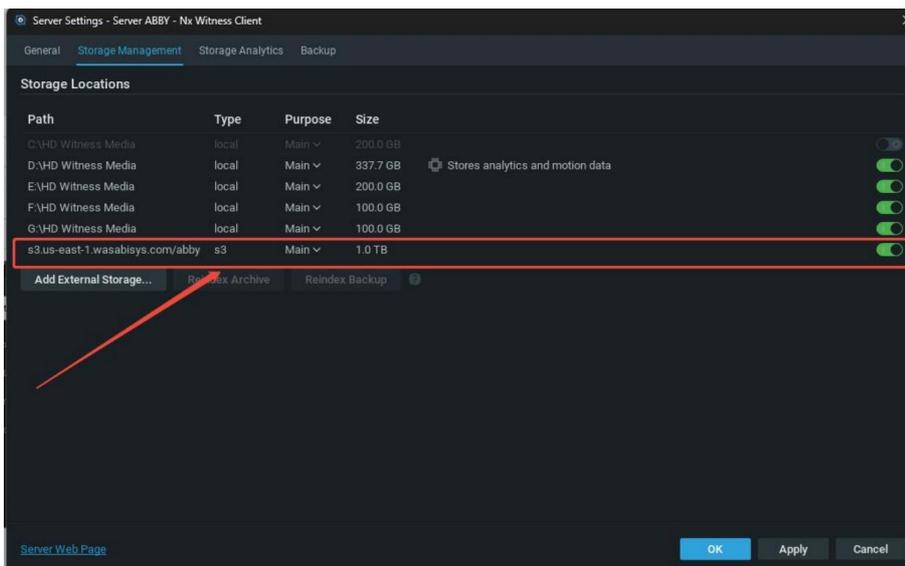


- Linux Installation:



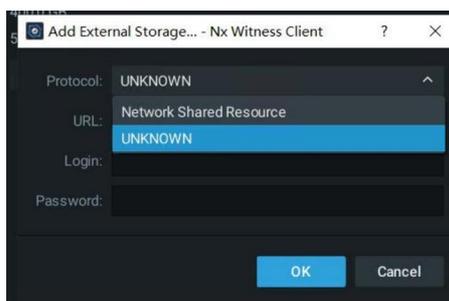
The completed information should match as shown below:





**Note:**

- If the Nx license is invalid, the Protocol field will display as UNKNOWN.

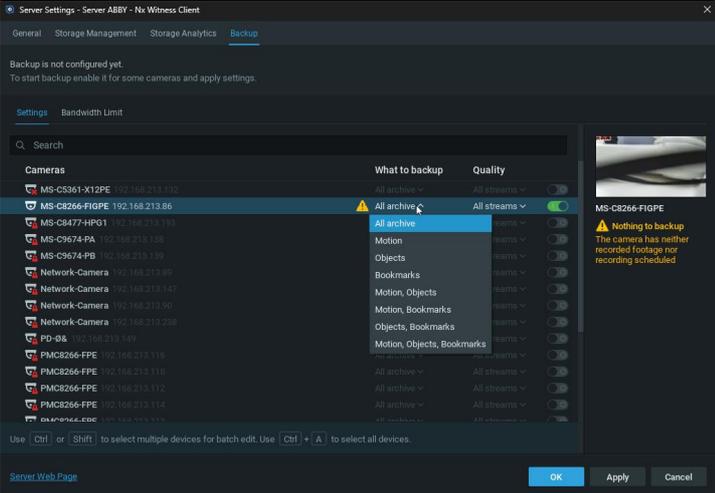


- Bucket Name should be unique for each server to avoid potential overlap.

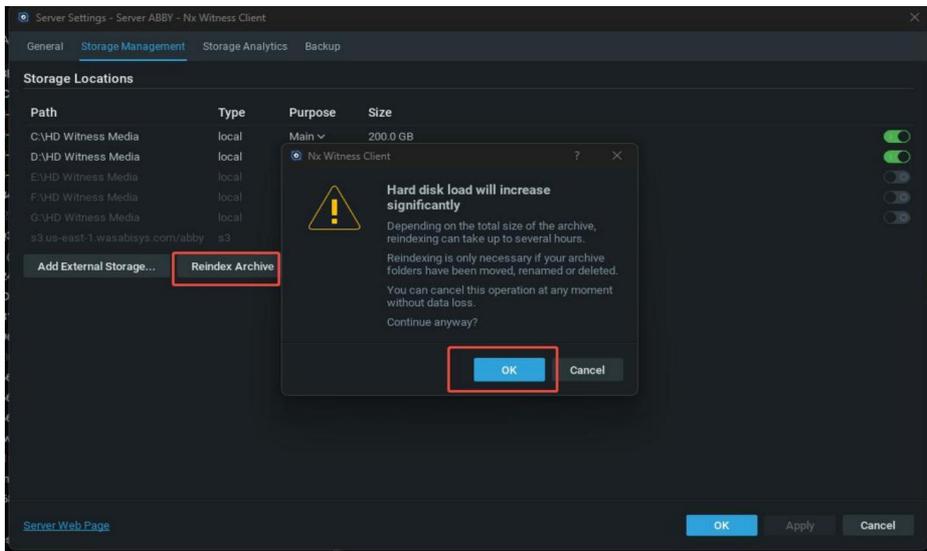
The table below describes the fields in the **Storage Management** interface.

**Table 1. Description of the Fields**

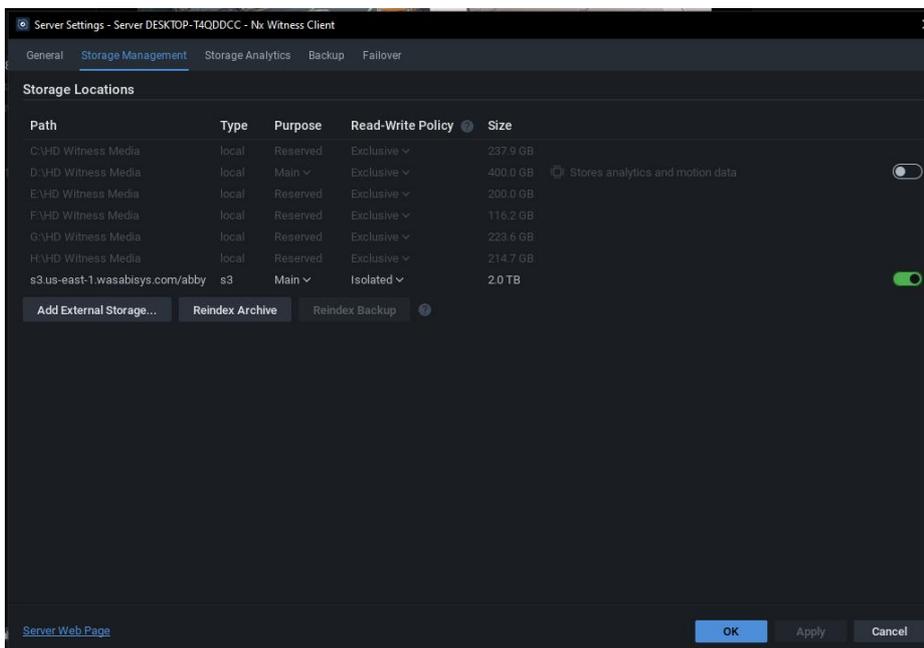
Parameter	Description
Purpose	<p>This can be set to either <b>Main</b> or <b>Backup</b>.</p> <ul style="list-style-type: none"> <li>○ When configured as <b>Main</b>, the plugin uploads recordings directly from the cache to the cloud.</li> <li>○ When set to <b>Backup</b>, recordings are first stored on the local disk, and then the plugin uploads the data from the local disk to the cloud as a backup.</li> </ul> <p><b>Note:</b></p>

<p>Purpose</p>	<ul style="list-style-type: none"> <li>To use the <b>Backup</b> option, you must first ensure that at least one storage location is set as <b>Main</b>.</li> <li>Additionally, you need to specify the backup data in <b>Server Settings</b> -&gt; <b>Backup</b>. In the dropdown menu, select the type of recording data you want to back up.</li> </ul> 
<p>Read-Write Policy</p>	<ol style="list-style-type: none"> <li><b>Exclusive:</b> The server can read all folders, erase old data from all folders, and write only to its own folder. <ul style="list-style-type: none"> <li>- This is default setting for all local storage.</li> </ul> </li> <li><b>Shared:</b> The server can read all folders, but can only write or erase old data within it's own folder. <ul style="list-style-type: none"> <li>- This setting can not be applied to local storage.</li> </ul> </li> <li><b>Isolated:</b> The server can only read, write, or erase data in its own folder. <ul style="list-style-type: none"> <li>- This is the default option for all non-local storage locations.</li> </ul> </li> </ol>
<p>Size</p>	<p>Displays the configured value of the Bucket Storage Quota described above.</p>

**Step 5:** After configuring the cloud storage, click on “Reindex Archive” . Then, check in Wasabi to confirm the video file has been uploaded.

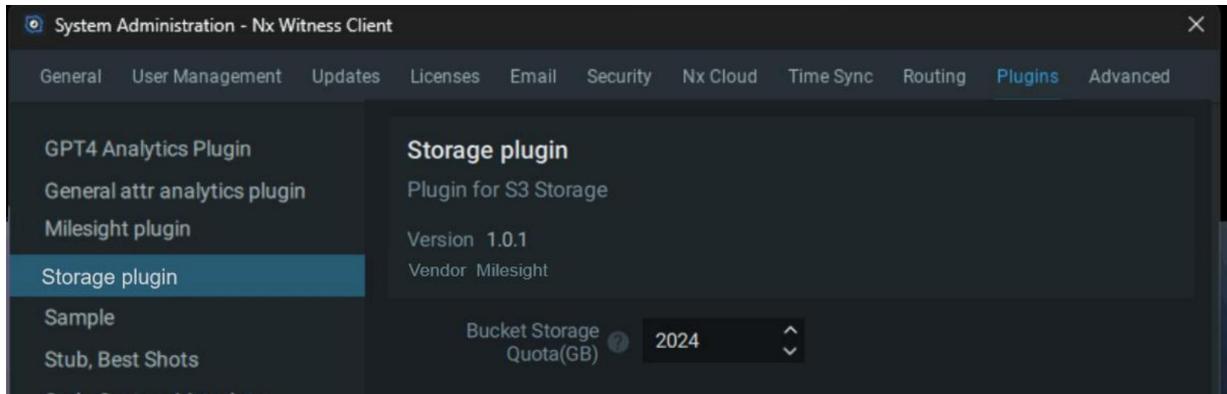


Once the cloud drive is successfully mounted, the status shown below will appear in Nx Witness Client.



## 2.3 Set Bucket Storage Quota

Users can configure cloud account quotas on the Storage Plugin page.



The Bucket Storage Quota (GB) specifies the total storage capacity available for the cloud account in Nx. When the uploaded recording data reaches the configured quota, the plugin will begin overwriting older recordings. The default value is 1024 GB.

If the amount of uploaded recording data has reached the account quota limit, but it is not yet time to recycle the recordings, new recordings will not be uploaded. A notification icon indicating that recording has stopped will be visible on the device tree in the Nx preview interface.



Example:

If the account quota is set to 1TB and the retention period is 7 days, but the uploaded data reaches 1TB on the 5th day, no new recordings will be uploaded and old recordings won't be deleted until the retention period is up. On the 8th day, recordings from the 1st day will be deleted.

# Chapter 3. FAQ

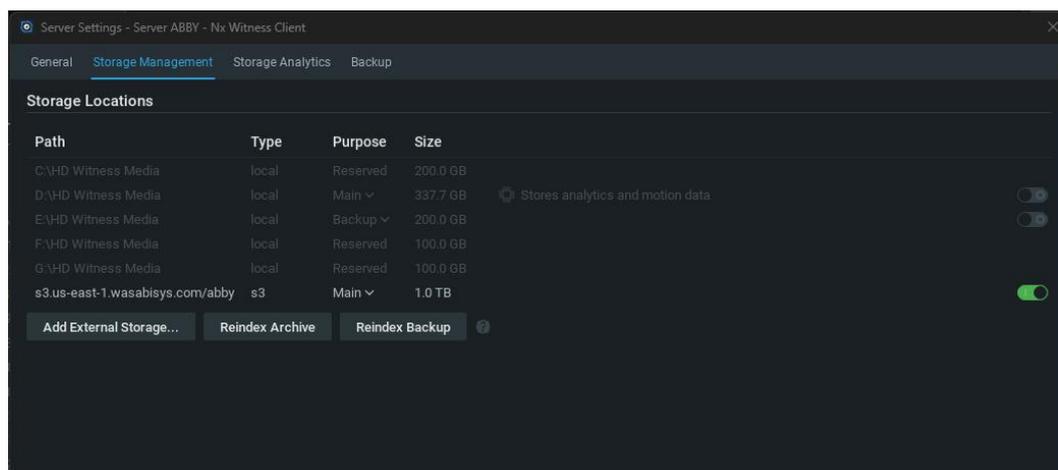
## 1. Fault Recovery

When the following situations occur, the Server will download the Archive Index Database from the cloud via the plugin and perform a reindex to ensure the plugin resumes normal operation:

- When the S3 mount point is accidentally deleted and re-added;
- When a device is deleted and then re-added;
- When the archive is deleted or moved to another disk (for example, when using the cloud as a backup disk and the local disk recordings are deleted);
- When the recording database index is deleted or corrupted;
- During the reindex process, the server will scan all recordings on all storage drives and update the archive index database with the current information.

## 2. Local Disk Grayed Out After Cloud Mounting

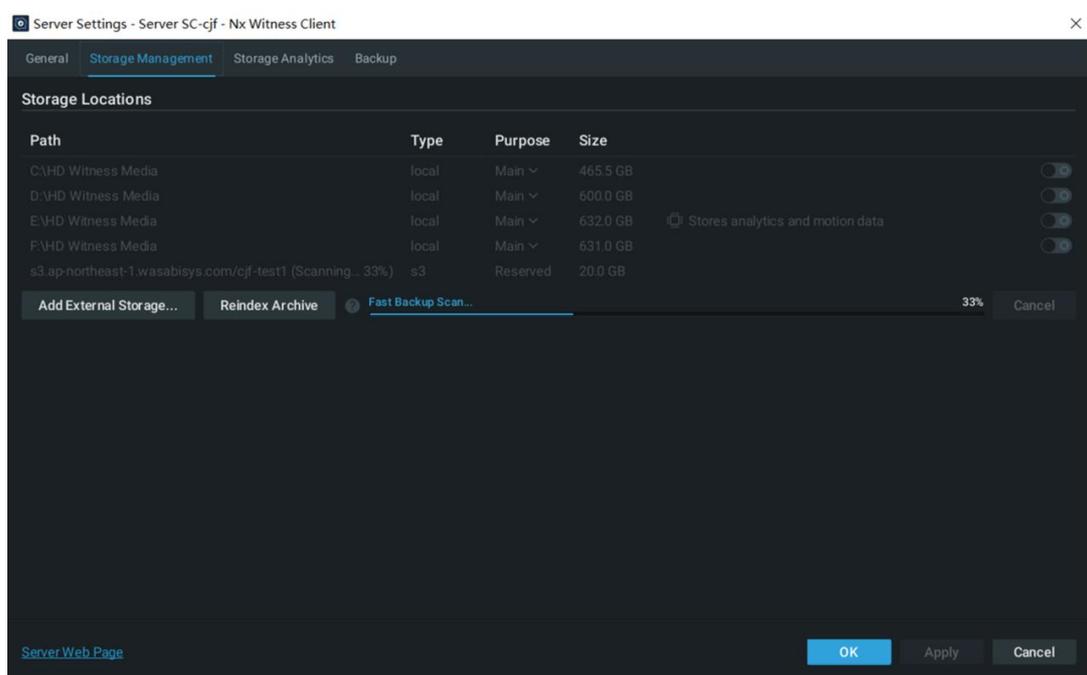
When the storage capacity of the newly created extended partition is five times larger than the local disk storage, the original partition will be disabled, and Nx Witness will write data to the extended partition instead.



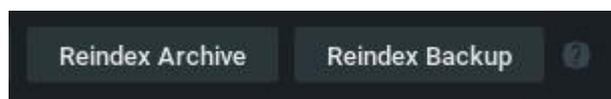
## 3. After mounting the cloud drive, the page continuously displays "Fast Backup Scan." What impact does this have on recordings?

A fast archive scan checks to see that the database is intact and matches the archive. This process usually only takes a few seconds and occurs automatically when the Server is initially started or restarted at any point afterward, an archive file closed improperly, or the index files cannot be read. During a fast archive scan, recording will be put on hold and resume after the process is complete.

There are a few situations where a fast archive scan may take much longer than anticipated, such as when there is an extremely large archive, the Server database was moved while the Server was offline, or an archive from another Server was transferred over to this Server prior to its initial launch.



- Difference between **Fast Backup Scan** and **manual Reindex Archive** operation:



Situations where manual Reindex is recommended:

- A camera is deleted.
- A storage device is moved, renamed, or deleted.
- An archive file is removed, renamed, has an incorrect timestamp, or is otherwise corrupted.

The re-index procedure restores the relationship between the database and archive files. This process can take up to several hours, depending on the size of the archive. The Site can still be used during this process and will continue recording while the archive is running the re-index process, as long as the storage drive has enough capacity to do both simultaneously (performance may be affected).

#### **4. Installation Instructions for arm64**

Openvision cameras with storage plugins must undergo performance testing before leaving the factory to determine the appropriate usage scenario. The storage plugin is then packaged into the firmware. User self-installation is not recommended.

## Chapter 4. Services

Milesight provides customers with timely and comprehensive technical support services. End-users can contact your local dealer to obtain technical support. Distributors and resellers can contact directly with Milesight for technical support.

Technical Support Mailbox: [support@milesight.com](mailto:support@milesight.com)

Web: <https://www.milesight.com>

Online Problem Submission System:

<https://www.milesight.com/service/feedback.asp>

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