

Storage Bridge Quick Start Guide

Thank you for your choosing Storage Bridge. This document provides step-by-step instructions for configuring and using Storage Bridge. Please refer to the Storage Bridge Administration Guide (https://www.tiger-technology.com/software/storage-bridge-milestone/docs/) for additional information.

Got questions? Feel free to contact our Technical Support at support@tiger-technology.com

LICENSES
SYSTEM REQUIREMENTS
PREPARATION
SETUP THE CLOUD BUCKET(S)
INSTALL THE STORAGE BRIDGE PLUG-INS AND ACTIVATE YOUR LICENSE
CONFIGURE THE DISASTER RECOVERY5
CONFIGURE THE STORAGE EXTENSION6
USING THE XPROTECT SMART CLIENT PLUG-IN
CREATING RESTORE JOBS USING THE XPROTECT MANAGEMENT CLIENT
RECOVERING A FAILED STORAGE AFTER A DISASTER
RECOVERING A FAILED RECORDING SERVER AFTER A DISASTER
CONFIGURING FIREWALLS AND PROXY SERVERS



SAAS-CHECK UTILITY	

Licenses

Download the **Storage Bridge** executable and manuals from the Tiger Technology licensing server

- a. Visit: <u>https://license.tiger-technology.com/</u> and enter your credentials
- b. Once you have logged in, you will be prompted to register.
- c. If you logged in using a **Client Account**, click on "**Home**" to you see the list of product licenses available. Click on the product license you wish to use.
- d. To download the manuals, click on "Documentation" (bottom left)
- e. To download the executable, click on "**Current Version**" (bottom left)

System Requirements

Plan for a min 3-4 days of local storage retention. This will be used for caching most recent camera data, as well as to act as buffer should you ever run into a problem with the internet upload speed. This buffer will dictate the amount of time you have to identify and solve potential internet connectivity issues. In addition, and while stub files are zero byte in size, they do require an entry in the file system. When looking at long retention periods, keep in mind that every 1 million files will consume 100MB of local disk space.

Storage Bridge will consume ~20% of the CPU during the initial indexing of the file system (each time the drivers are started), then drops to ~5% during normal operations. Memory footprint is typically not an issue.

- 1) Recording Servers should have:
 - a) Internet upload speed at least 25% more than total camera ingests to disk
 - b) Access to https://saas.tiger-technology.com
 - c) Access to the cloud bucket endpoint
 - d) Ports 443 outbound
 - e) Ports 8536 and 8537 inbound/outbound with the Management Client
 - f) Contact Tiger for additional instructions if using a proxy server
- 2) Cloud requirements
 - a) One cloud bucket/container has been created for <u>each</u> of your recording locations.
 - b) Recording Servers should have FULL Read/Write AND Delete capabilities on the objects in the cloud.



Preparation

1) Connect and configure your Recording storage and Archive (optional) according to Milestone's guidelines.

NOTE: Storage Bridge operates directly on your Recording storage (the cloud becomes your archive). When using DR, this gives you the best possible recovery. If you require that your Milestone Recording Server be configured with an Archive, you can use Storage Bridge for either the Recording storage or the Archive, or for both of them.

- 2) IMPORTANT: Under "Storage and Recording Settings" in the Management Client, set the "Retention time" according to how much TOTAL camera data you want to keep on your volume(s). This setting is global and determines when data will be deleted locally and in the cloud:
 - a. The retention time should cover local AND cloud data
 - b. The size should cover local **AND** cloud data (don't worry if your volume is much smaller as it will extend into the cloud)

EXAMPLE: If you set a 90-day retention time, regardless of where the data actually is, XProtect will delete it. As XProtect deletes the local files, Storage Bridge will then delete the associated data in the cloud tiers (note that there may be a delay with some cloud providers). You choose how much data stays on the local drive vs. nearline (hot) cloud storage vs. archive (cold or frozen) cloud storage using Storage Bridge.

- c. If you need to decommission an Archive volume without losing data, you will need to proceed in two steps:
 - i. First make sure the retention time on the Recording storage is at least as long as the current Archive volume
 - ii. Until a full Archive period has been met, some of the archive data will continue to come from the current Archive.
 - iii. Once passed a full archive period, the Archive volume can be decommissioned as all latest "archive" data is now coming from the cloud.

Setup the Cloud Bucket(s)

- 1) To quickly estimate your required internet speed, you can use the "1/5 rule of thumb":
 - a. If you know the average bitrate of all your cameras:
 - i. Multiply total <u>recording bitrate x 1.5</u> (allows for readback and fluctuations)



EXAMPLE: 173 Mbps x 1.5 = ~250 Mbps

b. If you know the current storage requirements for a given retention period:
 i. Multiply #GB / #days x .15

EXAMPLE: 350 GB per day = 350 x.15 = ~50Mbps 100TB per month = 100 x1024 x.15 ÷ 30 = ~500 Mbps

2) Log into your Cloud account and create separate buckets/containers to be associated with each recording server and volumes.

NOTE: If you have a recording server with only a Recording volume (no Archive volume) the same bucket/container is used for storing a single copy of all data and is used for both Disaster Recovery (DR) and Extension. DR contains all camera data, plus XML and index files needed to recreate the XProtect database. Extension only requires a subset, that is, the camera data. If you have more than one volume configured on your recording server, each volume will require its own bucket.

3) Have your Cloud account details ready for the install (Access Key, Secret Key, etc.)

Install the Storage Bridge plug-ins and Activate your License

1) Make sure your recording server is fully configured and able to record prior to installing Storage Bridge.

NOTE: Your recording server can be recording live camera data while installing Storage Bridge (it won't affect operations)

- 2) Close the XProtect Management Client app
- 3) Install Storage Bridge (follow on-screen instructions)
 - a. The installer contains three software components
 - Management Client (for configuration must be installed)
 - Recording Server (all the cool technology must be installed)
 - Smart Client (for data visualization and movement optional)
 - b. It is possible to install these components on **ONE** or **SEPARATE** machines
 - Just select/deselect the appropriate option(s)
- Activate your license by opening the XProtect Management Client

 a. Click on the Storage Bridge "Administration" tab

Storage Bridge – Quick Start Guide – Last Updated – 12/06/2022 – v3.01



- b. Select the recording server to activate
- c. Enter your Username and Password, and click "Apply" to activate
 - NOTE: If you were provided a **Client Account** in addition to **Product Licenses**, you must use the later credentials for activating your license. In this case, the Product License will typically be identical to your login, but will have the **_SBX** suffix added to it and the password will be empty (you add your own).
- d. Once activated, your screen should look like this:

License info:		Change license:	
Type: SaaS license Usemame: Bernard9Nov19 Serial key: N7WIR-LTKYE-S99AK-ZZWZY-YDSR9	Version: 4.0.9.271 Used footage: 2 cameras/weeks Disaster Recovery: ✓ Extension: ✓	Username: Password: Apply	Cancel
Smart Client settings:			
✓ Manual Restore Panel	V Automatic Timeline Restore	✓ Timeline Color Monitoring	Apply

- e. If you have any issue activating, please Troubleshooting section below
- f. You can choose which options will be available to operators using the XProtect Smart Client (see details below)

Configure the Disaster Recovery

Activating the Disaster Recovery (DR) functionality using Storage Bridge is easy. This functionality can be activated on your Recording storage(s), your Archive(s), or both.

- 1) Select the Storage Bridge "Disaster Recovery" tab
 - a. For each volume where you desire DR, click "Enable"
 - b. Configure your cloud target
 - i. Make sure to select a **DIFFERENT** bucket/container for **EACH** volume
 - ii. If **Storage Extension** has already been configured, you will NOT be prompted for cloud details as your data will NOT be replicated twice. The same dataset is used.
 - c. To start the replication process, switch the "Inactive" to "Active" (top right)
 - d. Within a few minutes (depending how many cameras and files are managed), Storage Bridge will start replicating and display the % of local data that has been replicated to the cloud.

NOTE: After all existing files have been replicated, this number will typically be just shy of 100%, unless you stop the camera streams or the recording server in order for the most current data to reach your cloud target.



Storage configurations:					
Local default					
Recording Total camera data: 0.000 GB					
Location: D:\MediaDatabase All camera data is replicated Disaster Recovery available	Disable	Container: milestone Azure Camera data: 0.000 GB			
	100 %				
Archive 1					
Location: C.1 Disaster Recovery not enabled	() Enable	Disaster Recovery not enabled			

Verify that your internet is keeping up

Open Task Manager on the Recording Server to see how fast Storage Bridge can upload to the cloud. Click on the "Performance" tab, and then select "Ethernet". Unless other processes are running in the background, the "Receive" will show the incoming camera data while the "Send" shows the rate at which Storage Bridge is uploading to the cloud. On average, the Send should no less than the Receive:



The screen grab on the left shows a problematic situation where **Send** bandwidth is less than **Receive**. This means Storage Bridge is currently not able to keep up with the incoming data flow. Storage Bridge is barely keeping up on the right and 25% headroom would be desirable (showing about 12%). The % of uploaded camera data should continue to increase and eventually stabilize around 99%.

Configure the Storage Extension



Use the Extension option to make your local volume appear bigger and infinitely scalable. This functionality can be activated on your Recording storage(s), your Archive(s), or both. It can be activated with or without Disaster Recovery. When activated with Disaster Recovery, Extension uses a subset of the data already replicated on the DR target.

Configuration steps:

- 1) Select the Storage Bridge "Extension" tab
 - a. For each volume where Extension is desired, click "Enable nearline extension"
 - b. Configure your cloud target
 - i. If **DR** has already been configured for this volume, you will NOT be prompted for cloud details as your data does NOT get replicated twice. The same bucket will be used.
 - c. Make sure to select a **DIFFERENT** bucket for **EACH** volume.
- 2) Click on "Configure nearline extension"
 - a. Choose "**By Age**" to keep camera data locally for a specific amount of time or choose "**By Size**" to keep it until your local drive reaches a specified capacity threshold. When either condition is met, content is removed and replaced by zero-byte stub files. Data is safely kept in the cloud until the retention time set on your storage volume is met. Make sure to maintain enough "free" space on your recording drive to ensure Milestone has enough room to continue recording during an internet outage.



- b. To start the replication process, switch from "Inactive" to "Active" (top right)
- c. Within a minute, Storage Bridge will display the % of local data that has been replicated to the cloud.



cal de	fault		
Recordin	g	Camera data on targ	et: 0.000 GB Active
	Location: D/MediaDatabase Camera data: 0.000 GB Percentage: 100 %	Container: milestone Azure Azure Camera data: 0.000 GB Percentage: 0 % Move recordings not accessed for more than 1 hourls Move nearline extension Configure nearline extension	Container: milestone Camera data: 0.000 GB Archive Percentage: 0 % Move recordings not accessed for more than 30 day/s
	Online (local)	Manufina	000
	Offinite (local)	iveanine	Omine
Archive 1	l	regnine	Umine
Archive 1	Location: CA Camera data: 0.000 GB Percentage: 100 %	Nearline extension not enabled	Offline extension not enabled
Archive 1	I Location: CA Camera data: 0.000 GB Percentage: 100 %	Nearline extension not enabled	Offline extension not enabled

d. If your cloud provider supports an archive tier, Storage Bridge allows you to leverage it. Note that in this case, any archived video will need to be manually recalled BEFORE it can be viewed on the timeline.

Using the XProtect Smart Client plug-in

There are a few options available to the XProtect Smart Client. They are all enabled by default but can be disabled through the Management Client (see Installation and Activation steps above).

Timeline Color Monitoring – Visual indication of where the data is currently stored:

1) Go to Settings, select Timeline, and set "Additional data" to "Show" (vs. "Hide")

Settings			-	
Application	Option	Setting		Follow Server
Panes	Incoming audio	Hide		
Functions	Outgoing audio	Hide	-	V
	Additional data	Show	-	
Timeline	Additional markers	Hide		
Export	Motion indication	Show		
Search	All cameras timeline	Show	-	
	Playback	Skip gaps		
Joystick				
Keyboard				
Access Control				
Advanced				
Language				



2) When activated, Storage Bridge will display additional colors on the timeline:



Clicking on the XProtect bottom right "?" brings up the timeline legend:



Storage Bridge displays the following storage locations:

- Online (Green): Camera data is on the local drive AND replicated to the cloud
- Nearline (Orange): Camera data is in the cloud and seamlessly accessible
- Offline (Blue): Camera data is in the cloud, but in an archived tier (if applicable)

Automatic Timeline Restore:

- 1) Online (Green) camera data is ALWAYS available for playback.
- 2) **Nearline** (Orange) camera data will be automatically retrieved when selected or played on the timeline, unless **Automatic Timeline Restore** is disabled. In this case, camera

data will NOT automatically be restored from the cloud (potentially saving cloud egress fees) and Storage Bridge will display a "Recording Nearline" frame:



3) **Archived** (Blue) sections must be manually retrieved through the Restore Panel or through the Management Panel (see below). By definition, camera data in a cloud

archive tier will typically take hours to restore (thus the significantly lower cost). Storage Bridge has the unique ability to display a "Recording Offline" frame:





Manual Restore Panel:

Storage Bridge will display an "Recording Offline" notice when playing or selecting areas of the timeline that are Archived (frozen) until the archived video has been restored to the nearline (hot) cloud tier.

- 1) When the **Manual Restore Panel** is activated, XProtect Smart Client operators can restore data for specific **Cameras**.
 - a. The speed at which data is retrieved depends on the cloud provider and the options chosen when configuring the cloud target above.



TIP: Use the **Time Selection Mode** or **Set Start/End Time** buttons to automatically set the date and time interval to be restored:





Creating Restore Jobs using the XProtect Management Client

When the Storage Bridge Automatic Timeline Restore option is disabled, restore jobs can be created from within the **XProtect Management Client** plug-in.

1) Open Management Client and go to the Administration tab:

obs:					lers:		
Operation	Submitted	Status	Source			_	
K Move data to be available locally		New	Management Client	Operation:	Move data to be available locally ~		
K Move data to be available locally New Management Client		All cameras	Move data to be available locally Bring back offline data Make data narine to free local storage space Make data offline				
				From: V	/ed, 27 May 2020 09:21:42	\$	6
				To: V	/ed, 27 May 2020 10:21:42	\$	6
			Create new		Submit job Ca	ancel	

- 2) Click on "Create new"
- 3) In the dropdown, select the type of job you want to perform
- 4) Use From: and To: to set the date and time interval to be restored
- 5) Click "Submit job"
- 6) Storage Bridge initiates the restore operation. Note that it may take some time for the operation to complete. A status bar will show the progress.



Recovering a Failed Storage After a Disaster

When the **Disaster Recovery** option is enabled, Storage Bridge can recover from a Recording storage or Archive failure. As soon as XProtect detects the failure, Storage Bridge will display a warning message. It is critical to follow the step-by-step instructions of the Wizard.

File Edit View Action Tools He	lp				
8 🤊 🕜 🗢 🕅					
Site Navigation 👻 🔍 🗙	Configuration				– 4
🖽 🚺 10X1M - (13.3a)	Recording servers:	Storage configurations:			
E (Basics		1. 1.1.2 m			
Site Information	MILESTONET	Local default			
🕀 🐻 Remote Connect Services	RecServ	Recording			
Axis Une-click Camera	TL13	Location: D/Default Storana			
Recording Servers	-	Disaster Recovery not enabled	(Fnable	Disaster Recovery not enabled	
Failover Servers					
Pevices	In this example				
- A Microphones	in uns example,				
- 🔮 Speakers	we can see that				
Wetadata	1. 45. 22 1	Default Archive	1	Total camera data: 0.879 GB	
- Output	drive "E:" needs				
🛛 🗐 Client	to be recovered	Locable: E:Cam as Archive	N	Container: 10-200-9-14-archive	
- Smart Wall	to be recovered.	No camera data is replicated 🛄	 Disable 	Azure Camera data:	
View Groups		Disaster Recovery available			
Management Client Pr			0.%		
Matrix			0.4		
Rules and Events					
- Hules					
Notification Profiles					
- 💎 User-defined Events					
Analytics Events	A				
Generic Events					
Roles					
a Basic Users					
System Dashboard					
- System Monitor	WARNING				
	TO PROTECT YOUR DATA				
- & Evidence Lock	READ THIS FIRST!				
- Configuration Reports					
Access Control	DETECTED WHAT				
🕀 🖳 Transact	APPEARS TO BE A				
Transaction sources	RECORDING FAILURE.				
Storage Bridge	REPAIR OR MOUNT A				
- Carlo Administration	REPLACEMENT DRIVE AT				
Disaster Recovery	THIS TIME.				
Extension					
				Activate Windows	
< >>	Disaster Recovery Wizard			Go to Settings to activate Win	idows.
Reducted City 10a	_				

1) Identify the failed drive letter:

 Connect a replacement drive to the Recording server, but do NOT mount it. To be safe, the replacement drive should NOT be formatted (or you should FIRST STOP the Recording server PRIOR to connecting a formatted drive.

📅 Disk Management				_		×	
File Action View Help							
🗢 🄿 📰 👔 🗖	🗩 🗹 📧]					
Volume	Layout	Туре	File System	Status		Capacity	
💳 (C:)	Simple	Basic	NTFS	Healthy (B	59.68 GB	
🚍 (Disk 0 partition 1)	Simple	Basic		Healthy (E	200 MB	
<						>	
					-	~	
Disk 1	777777777777			///////////////////////////////////////			
14.41 GB	l.41 GB						
Online U	nallocated						
CD-ROM 0						×	
📕 Unallocated 📕 Prin	mary partition						



3) Click on "Disaster Recovery Wizard" to begin the recovery process.



4) The Wizard will first stop the Recording server (if it isn't already):





5) It is now time to format and assign the original drive letter to the replacement drive (in this example, the failed drive letter was E:).

	🖆 Disaster Recovery Wizard					×]	
	Required Steps: Stop Server 🗸	Storage Bridge will attempt to	recover data on the folic	owing volume(s):	0		
	Mount Volumes Recover Storage Finish							
	(D)	1. Attach the replacement disk(s) to t 2. Use \v indows Disk Management te 3. Mount he volume(s) using the mai NOTE: The associated ♥ will turn into ♥ volumes this time. The Disaster Re Click Next to continue.	he Recording Server (if needed) o format the volume(a) NTFS (if Iching drive letter from the above when a valid matching volume is scovery Wizard can be run multip), needed). e list. detected, It is not m ple times.	nandatory to recov	er ALL failed		
📑 Disk Mar	agement	Back Next	💼 Disk Manageme	ent		Cancel		×
File Action	n View Help		File Action View	w Help	7	-		
Volume	hange Drive Letter and Paths for F: (New Volum	ne) × Capacity	Volume	Layout	🖌 📑 🚺 Type	File System	Status	Capacity
(C:) A (Disk 0 New V C	Now access to this volume by using the following driv F: hange Drive Letter or Path	ve letter and pa hs: 59.68 GB 200 MB 14.41 GB X	 (C:) (Disk 0 partition 1 New Volume (E:) 	Simple) Simple Simple	Basic Basic Basic	NTFS NTFS	Healthy (B Healthy (E Healthy (P	59.68 GB 200 MB 14.41 GB
C E E	Enter a new drive letter or path for F: (New Volume). Assign the following drive letter: Mount in the following empty NTFS folder:		<	New Volume (E)			>
Online CD-R Unallocat	OK ed Primary partition	Cancel	Online CD-ROM 0 Unallocated P	Healthy (Primar	y Partition)			*



6) When the replacement volume is detected with the proper drive letter, Storage Bridge displays a green checkmark:



7) Storage Bridge will then ask for confirmation:





8) Congratulations! The Wizard has now completed.



9) You can monitor the recovery progress on the Administration tab. It should only take a few minutes to restore the database. Note that video content will only be restored on demand (by accessing the timeline or by creating a restore job).

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Site Navigation 👻 7 🗙	Configuration							₩ 5
10X1M - (13.3a) Basics	Recording servers:	Server status: At least one of the storage volumes is not responding - Recovery Available						
Site Information	License info:				Chang	: license:		
Remote Connect Services	RecServ	Type: SaaS license		Version: 4.0.100.336		User	name:	
B Servers	TL13	Usemame: milestone-10.200.9.14		Used footage: 0 cameras/weel	ks 🕕			
Pailover Servers		Serial key: QRQ8F-G6FD5-PYRHH-5QJZ2-E	awra 🖓	Disaster Recovery: 🗸 Extens	sion: 🗸	Pass	vord:	
Revices							Δ.	nely Cancel
- A Microphones							~	(p) Conton
- Ø Speakers - 💱 Metadata		Smart Client settings:						
- do Input - 💡 Output		Manual Restore Panel		Automatic Timeline Restore	5	V Tim	aline Color Monitoring	Apply
Client		Jobs:				Job pa	ameters:	
View Groups		Operation	Submitted	Status	Source			
Management Client Profiles		Storage Disaster Recovery	Mon, 03 Aug 2020 15:59:23	22 %	Management Client	Opera	tion: Storage Disaster Recovery	(i)
Matrix		(a) Storage Disaster Recovery	Fri, 31 Jul 2020 19:22:40	Completed	Management Client	Source	er Mananement Client	
E 🕀 Rules and Events						Stora	na hana Storana	
Rules						Store	e type. Aronive Storage	
Notification Profiles						Silvia	e name. Delauk Archive	
- 💎 User-defined Events						Storag	a path: E:/Cameras Archive	
Analytics Events						Subm	ded: Mon. 03 Aug 2020 15:59:23	
Generic Events						Starte	#: Mon, 03 Aug 2020 15:59:24	
Roles						Comp	cted:	
- 🐰 Basic Users						Status	c Running	
System Dashboard								
Sustem Mositor								
System Monitor Three								
2 Evidence Lock								
Configuration Reports								
Server Logs								
P E Transact								
[] Transaction sources								
Transaction definitions								
🕀 📫 Storage Bridge								
Administration								
- Extension								
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C Sedented C'r 10						Create new	Go to Settings to activ	
Site Navigation Federated Site Hie								



Recovering a Failed Recording Server After a Disaster

When the **Disaster Recovery** option is enabled, Storage Bridge can recover from a Recording server failure. As soon as XProtect detects the failure, Storage Bridge will display a warning message. It is critical to follow the step-by-step instructions of the Wizard.

1) Click on "Disaster Recovery Wizard" to engage the recovery procedure.



2) First make sure the replacement Recording server is ready and available:



🖆 Disaster Recovery Wizard		\times
Required Steps:	Welcome to the Disaster Recovery Wizard - Recording Server Failure	
Select Server	This process will recover a failed Recording Server. Once recovered, data will be available to XProtect.	
License Server	A Before proceeding, the following conditions for a replacement Recording Server must be met:	
Stop Server	 Milestone XProtect Recording Server is running (needs to be licensed). Storace Bridge software is running (does NOT need to be licensed). 	
Mount Volumes	 Has empty volume(s) to match any failed recording/archive volume(s). Has NO devices (e.g. cameras, etc) attached to it (they will be automatically transferred). 	
Recover Storage	5. Is currently online and visible from the Management Client.	
Finish	Searching for suitable replacement servers	
Í	Click Next to begin the recovery procedure.	
Help	Back Next Cancel	

3) Storage Bridge automatically lists the available replacement servers. Select one.

🖆 Disaster Recovery Wizard	>	C
Required Steps: Select Server License Server Stop Server Mount Volumes Recover Storage Finish	Select the Replacement Recording Server:	
Í	Select the replacement Recording Server from the list above. Click Next to continue.	
🕜 Help	Back Next Cancel	

4) Active the Storage Bridge license on the replacement server (your credentials are listed above):



🖆 Disaster Recovery Wizard		×						
Required Steps:	Activate Storage Bridge							
Select Server 🗸	Username:							
▶ License Server	milestone-10.200.4.80							
01	Password:							
Stop Server								
Mount Volumes	Enter the Username and Password for your Storane Bridge software subscription							
Recover Storage								
Finish								
Í	Click Next to continue.							
 Help 	Back Next Can	cel						



5) The Wizard will now stop the replacement Recording server

🖆 Disaster Recovery Wizard		×
Required Steps:	Stop the XProtect Recording Server Service	
▶ Stop Server	Storage Bridge must now stop the Recording Server service. Recording will resume when the service gets restarted.	
Mount Volumes	IMPORTANT:	
Recover Storage	Do NOT restart the Recording Server service before the recovery procedure completes,	
Finish		
	Stopping XProtect Recording Server Service	
()	Click Next to stop the Recording Server.	
🕜 Help	Back Next Cancel	

6) It is now necessary to format assign the same drive letter to the replacement drive (in this example, the original drive letter was E:).





Disk Management		\times	📅 Disk Management — 🗆 🗙
File Action View Help			File Action View Help
			🗢 🔿 🖬 🔢 🗩 🗙 🖸 🔒 📴
Volume	×	Capacity	Volume Layout Type File System Status Capacity
(C:) Allow access to this volume by using the following drive letter and participation of the following drive drite drive drive drive drive drite drite d	ths:	59.68 GB	(C:) Simple Basic NTFS Healthy (B 59.68 GB (C:) Simple Basic NTFS Healthy (B 59.68 GB
New V F:		14.41 GB	
Change Drive Letter or Path	×		
Enter a new drive letter or path for F: (New Volume).	Ł	>	<>
Assign the following drive letter:		^	
Removal OMount in the following empty NTFS folder:			Removable New Volume (E:)
Online Brow	se		14.41 GB 14.41 GB NTFS Online Healthy (Primary Partition)
CD-R	cei	~	₽CD-ROM 0
Unallocated Primary partition			Unallocated Primary partition

7) When the replacement volume is detected with the proper drive letter, Storage Bridge displays a green checkmark:





8) Storage Bridge will then ask for confirmation:



9) Congratulations! The Wizard has now completed.





10) You can monitor the recovery progress on the Administration tab. It should only take a few minutes to restore the database. Note that video content will only be restored on demand (by accessing the timeline or by creating a restore job).

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Site Navigation 🚽 🖗 🗙	Configuration						- 4					
🕀 🚺 10X1M - (13.3a)	Recording servers:											
🕀 🛄 Basics	-	Server status: Server, target, and storage volume	Jana analaha jana ka na ka n Na na ka n									
Site Information	MILESTONE1	License info;		Change license:								
Remote Connect Services	TL13	Torrest Contractions		lloomame								
Axis One-click Camera		Type: Saas license		Version: 4.0.10.200								
Oservers		Usemame: milestone-10.200.4.80		Used footage: 5 cameras/w	eeks 👥	Password:						
10 Recording Servers		Serial key: GMGPN-JKKXE-S99E9-ZNF2X-TV	rrs 🖓	Disaster Recovery: ✔ Exte	ension: 🗸							
B Devices												
Cameras							Apply Cancel					
- A Microphones												
- Ø Speakers		Smart Client settings:										
of Input		CR Manual Davidan David		Contractor Tractor Data								
- 💡 Output		Manual Restore Panel		Automatic Timeline Nest	ore .	Imenne Color Monitoring	Арру					
🕀 🕎 Client												
Smart Wall		Jobs:				Job parameters:						
Smart Client Profiles		Operation	Submitted	Status	Source		5					
Management Client Pr		Storage Disaster Recovery	Tue, 04 Aug 2020 11:19:06	9%	> Management Client	Operation: Storage Disaster Recov	57 (E)					
Matrix						Source: Management Client						
Rules and Events						Storage base: Recording Storage						
Time Profiles						Sharana mamori i assi dafa di						
Notification Profiles						Storage haine. Local delatik						
- 💎 User-defined Events						Storage path: E:\						
Analytics Events						Submitted: Tue, 04 Aug 2020 11:19	r:06					
Generic Events						Started: Tue, 04 Aug 2020 11:15	3:07					
Roles						Completed:						
- 🔒 Basic Users						Status: Running						
System Dashboard												
Current Tasks												
System Monitor Three												
2 Evidence Lock												
Configuration Reports												
Server Logs												
Transact												
-[] Transaction sources												
Transaction definitions												
🗄 🚰 Storage Bridge												
Disaster Becovery												
Extension												
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Configuring Firewalls and Proxy Servers

Storage Bridge must communicate with the cloud target as well as with the Tiger Technology licensing server for activating your license and for keeping them activated.

- 1) Make sure that the following requirements are met:
 - a. Can reach the Azure service running at <u>https://saas.tiger-technology.com</u>.
 - i. When typing the URL, you should in your browser, you should obtain the following response:



- ii. If you get an error, you will need to whitelist the domain name
- b. Check your firewall. The following ports must be open:
 - (for object storage target over http connection) **80** outbound rule only
 - (for SaaS activation and/or communication with object storage target over https) 443 outbound rule only
 - (for a network target) **445** outbound rule only
 - (for remote connection) 8536 inbound and outbound rules
 - (for remote connection) 8537 inbound and outbound rules
 - You can test this connection AFTER you have installed the Storage Bridge plugin by entering the following URL in a web browser on the Management Server: <u>https://xxx.xxx.xxx.8537/version</u> (where xxx.xxx.xxx is the IP address of the Recording Server you are testing)
- 2) If you are using a proxy server, Bridge uses different mechanisms for accessing the cloud and for communicating with the licensing server.
 - a. To configure proxy for the cloud target:
 - i. Open a Command prompt in elevated mode and type:

C:\Windows\system32\tiercli config global proxy <proxyserver:port> [username] [password]

- b. To configure proxy for the licensing server:
 - i. Set your System Environment Variables:





Variable name	Variable value (try the following formats)					
http_proxy	proxyserver:port					
	or					



	http://user:password@your-proxy-ip-address:port/
	proxyserver:port
https_proxy	or
	https://user:password@your-proxy-ip-address:port/

IMPORTANT: It is required to reboot your computer after changing system variables.

ii. If you are still experiencing issues activating the Bridge software, please use the SaaS-Check utility to troubleshoot your issue, as described below.

Saas-Check Utility

Tiger Technology has developed a troubleshooting application that can help identify the source of the problem.

NOTE: Troubleshooting firewalls and proxy issues will likely require the assistance of your System Administrator.

If you are experiencing issues activating your Bridge software, download the <u>saas-check.exe</u> utility (<u>https://tinyurl.com/8fjjaby4</u>).

- 1. On the Bridge machine (i.e. Recording Server), open a Command prompt in Elevated mode
- 2. Run saas-check with the following parameters

Usage: saas-check.exe <server_host> <cabundle_path> <username> <password> <serial>

Where:

<server_host> is saas.tiger-technology.com <cabundle_path> is "C:\ProgramData\Tiger Technology\backup\cert\cacert.pem" <username> is your activation Username <password> is your activation Password <serial> is the ?????- ?????- ?????- ????? serial key found in the Bridge interface

The command above assumes C: is where the utility was copied. Successful output of this tool should look like this:

<pre>message: "Successfully updated/activated license"; update-url: "https://license.tiger-technology.com";</pre>									
220321 14:57:10.424.001;	saas:	:00006C8C; F(01); message: "Successfully updated/activated license"; main()							
220321 14:57:10.424.002;	saas:	:00006C8C; F(01); update-url: "https://license.tiger-technology.com"; main()							
220321 14:57:10.424.003;	saas:	:00006C8C; F(01); next-fetch: 3600 (seconds); main()							
220321 14:57:10.435.001;	saas:	:00006C8C; F(01); ????? - ????? - ????? - ????? -?????; main()							



If you do not receive a successful activation message, please check if the error falls in one of the following categories:

Failed SSL Connect Error

A "Failed SSL Connect Error" will likely occur due to improper firewall configuration. SaaS-Check.exe will report something like this:

```
curl_easy_perform() failed: SSL connect error;
SaaS HTTP POST request failed Result is 0x82100
```

For a quick test, you can try disabling Windows Defender on Management Server and Recording Server. If you are using advanced firewalls, such as Palo Alto Networks, make sure you are not blocking access to encrypted websites (https://saas.tiger-technology.com). Also make sure you are disabling control of decrypted SSL. These settings can be used to limit or block SSL sessions based on criteria including the use of unsupported cipher suites or protocol versions, or the availability of system resources to process decryption.

Peer Certificate Authentication Error

A "Peer Certificate Authentication Error" will likely occur due to missing security certificate. SaaS-Check.exe will report something like this:

curl_easy_perform() failed: Peer certificate cannot be authenticated with given CA certificates; SaaS HTTP POST request failed Result is 0x82100000 (error "Generic" from "SANDS tool (sntool)");

Bridge uses cURL to communicate with its licensing server. However, cURL may not automatically integrate your domain security certificates. If your organization uses domain security certificates, you will need to follow these steps:

- 3. In Windows, search for "Manage computer certificates" and open
- 4. Locate your domain security certificate (most likely stored under Trusted Root Certification Authorities/Certificates)
 - a. Look for a certificate that contains the name of your organization (typical)
 - b. Double click on the certificate
 - c. Select the "Details" tab
 - d. Click on "Copy to files ... "
 - e. Select "Base-64 encoded X.509 (.CER)





- f. Specify file name to export
- g. Locate the exported file
- h. Open the exported file with Notepad

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MSØ	vKwYD	VQQDEy	RNaWN	yb3NvZnQgl	Jm9∨dC	BDZXJØ	aWZpY2F0	ZSBBdX	Rob3Jp	odHkw	
Hhcl	MDEw	NTA5MjI	Mx0TI	yWhcNMjEwl	VTA5Mj	MyODEz	WjBfMRMw	EQYKCZ	ImiZPy	/LGQB	
GRYI	0Y29t	:MRkwFw`	YKCZI	miZPyLGQB0	GRYJbW	ljcm9z	b2Z0MS0w	KwYDVQ(QDEyRN	laWNy	
b3N	/ZnQg	Um9vdCl	BDZXJ	0aWZpY2F02	ZSBBdX	Rob3Jp	dHkwggIi	MAØGCSo	qGSIb3	BDQEB	
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- i. Copy the ENTIRE content of the file
- 5. Locate the security certificate used by Bridge, and open it in Notepad:



C:\ProgramData\Tiger Technology\backup\cert\cacert.pem

6. Append the copied certificate to the existing list of certificates by pasting it at the end of the file. Save the file.



7. Try activating the software again. If none of the above works, send us the output you are getting when running the **saas-check.exe** command.