

LUWARE STRATUS RECORDING - AZURE STORAGE

Version 1.00
24.02.2020



TABLE OF CONTENTS

1	About this document	3
1.1	Revision History	3
1.2	About this Document	3
1.3	Target Audience	3
1.4	Terms and Abbreviations	3
1.5	Luware Support contact details	4
2	Supported Azure Storage Settings	5
2.1	Azure Storage Networking (Public Endpoints)	5
2.2	Azure Storage Account	5
2.3	Access Tier options of Azure Storage Account	6
2.4	Performance Settings of Azure Storage Account	6
2.5	Advanced Settings of Azure Storage Account	6
2.5.1	Security	6
2.5.2	Azure Files	6
2.5.3	Data Protection	6
2.5.4	Data Lake Storage Gen2	7
3	Storage Capacity Calculations	8
4	Encryption and Signing of Data at Rest	9
5	Customer Azure Storage Details	10
5.1	Pre-Reqs	10
5.2	Customer Information	10

1 ABOUT THIS DOCUMENT

1.1 REVISION HISTORY

TABLE 1: VERSION HISTORY

VERSION	STATUS	DATE	AUTHOR	CHANGE REASON
1.0	First Release	24.02.2020	Mehmet Kocak	Template update
1.1	Amendment	17.03.2020	Mehmet Kocak	Encrypt and Sign Section

1.2 ABOUT THIS DOCUMENT

This document provides the required information to help facilitate the provisioning of a customers' Azure Storage Services ready for consumption by Luware Stratus Recording for Microsoft Teams and Stratus Agent/Team.

Please note this is an evolving service, with specifications subject to change in future. This document will be maintained based on any future specification changes that pertain to the sections in this document, (i.e. Microsoft Azure Storage Services Specification Changes by Microsoft).

1.3 TARGET AUDIENCE

This is mainly targeted at a Technical Audience, and should be familiar with the concepts Azure Resources and Storage Services.

1.4 TERMS AND ABBREVIATIONS

TABLE 2: DEFINITIONS AND TERMS

TERM / ABBREVIATION	DEFINITION
RG	(Azure) Resource Group – A logical collection of Resources like Virtual Machines, Storage Accounts, Domain Services etc...
REST API	Representational state Transfer – Industry wide technology used for the programmatic interface to an application over Web Based communications.
SMB	Server Message Block – Client / Server communication protocol used for sharing access to files, printers etc...

1.5 LUWARE SUPPORT CONTACT DETAILS

TABLE 3: LUWARE SUPPORT CONTACT DETAILS

E-MAIL:	SUPPORT@LUWARE.COM	
Skype:	sip:support@luware.com	
Support Hotline CH	+41 58 404 28 07	
Support Hotline DE	+49 711 8998 9621	
Support Hotline UK	+44 20 3300 2751	

2 SUPPORTED AZURE STORAGE SETTINGS

This section details the types of Storage and Storage Settings supported by Luware Stratus Recording.

This section assumes the audience is familiar with the concepts of Azure Storage Account Services.

2.1 AZURE STORAGE NETWORKING (PUBLIC ENDPOINTS)

In both cases below Luware Stratus Recording requires a Public Endpoint for all networks to be allowed.

Luware Stratus Recording only supports REST API Access and only supports Azure File Share services.

Blob, Queue and Table Azure storage services is not supported at the time of writing.

Luware Stratus Recording – Microsoft Teams Recording; will communicate with customers Azure Storage Public Endpoint Services over the internet, using the secure REST API access. Secured REST API Web based Traffic will derive from the following Azure Public IP Adresse(s):

- 51.107.87.18
- 51.107.91.113

Luware Stratus Recording – Stratus Agent and Stratus Team Recording; will communicate with customers Azure Storage Public Endpoint Services over the internet, using the secure REST API access.

Secured REST API Web based Traffic will derive from the following Luware Datacentre Public IP Adresse(s):

- 31.132.8.8

2.2 AZURE STORAGE ACCOUNT

Please note the choice of v1 vs v2 is the choice of the customer – both are supported by Luware Stratus Recording:

- **General-purpose v2 accounts:** Basic storage account type for blobs, files, queues, and tables. Recommended for most scenarios using Azure Storage.
- **General-purpose v1 accounts:** Legacy account type for blobs, files, queues, and tables. **Use general-purpose v2 accounts instead when possible.**

<https://docs.microsoft.com/en-us/azure/storage/common/storage-introduction#types-of-storage-accounts>

2.3 ACCESS TIER OPTIONS OF AZURE STORAGE ACCOUNT

The access tier settings is the customers' choice, however the information below may assist in the customer's decision making process on this element of storage settings.

- **Hot** = Data is kept on performance disks and is not subject to any conditions, this data meant for being constantly accessed frequently once written to disk.
- **Cold** = Data that is kept for a minimum of 30 days on Cold Storage will benefit from lower cost overheads, however the tradeoff is that this data is classified as "infrequently access data" and moved to lower tier of storage performance in Azure – if the expectation is that the call recordings will be accessed infrequently for the duration of the recording service then this can be an option to consider.

In most cases COLD Tier storage will suffice as playback, export etc...of recorded conversations at rest in Azure Storage, is usually only performed during legal discovery cases, and/or periodic checks.

<https://docs.microsoft.com/en-us/azure/storage/blobs/storage-blob-storage-tiers?tabs=azure-portal>

2.4 PERFORMANCE SETTINGS OF AZURE STORAGE ACCOUNT

Standard Performance or Premium performance is supported by Luware Recording.

- Premium Performance / Account Kind = **File Storage**
- Standard Performance / Account Kind = General Purpose V2 or General Purpose V1

2.5 ADVANCED SETTINGS OF AZURE STORAGE ACCOUNT

Advanced settings for Luware Stratus Recording has one mandatory setting whilst the other settings is optional based on the requirements of the customer, these are listed below:

2.5.1 SECURITY

- Secure Transfer Required = Yes (Mandatory)

2.5.2 AZURE FILES

- Large file shares = Optional

Provides file share support up to a maximum of 100 TiB. Large file share storage accounts do not have the ability to convert to Geo-redundant storage offerings and upgrade is permanent.

2.5.3 DATA PROTECTION

- Blob soft delete = Not applicable to Azure File Services

2.5.4 DATA LAKE STORAGE GEN2

- Hierarchical namespace = file level ACL Access not supported by Luware Stratus Recording service at the time of writing.

3 STORAGE CAPACITY CALCULATIONS

Depending on the number of recorded users, the number of recorded conversations per average working day, and the retention settings of data at rest (i.e. delete after 30 days), will directly affect the sizing considerations that needs to be made for the Azure Storage Account created for this service.

The information below is intended to aid the customer in storage sizing estimations and cost estimations of per GB consumed in Azure.

Luware Stratus Recording stores all recorded Audio Conversations as GSM-FullRate Codec
Luware Stratus Recording stores all recorded Video / Screen Share conversations as a proprietary Verba codec (VMF)

- A single Audio Call lasting one hour will equate to around 5.5Mbytes of storage space
- A single Video / Screen Sharing call lasting one hour will equate to 1.05 Gbytes

Based on the data at rest storage figures above, this can then be used to calculate the needed overall storage space requirements.

4 ENCRYPTION AND SIGNING OF DATA AT REST

Luware Stratus recording natively encrypts and signs all recorded conversations files stored on the customers Azure Storage.

The Private Key used for the encryption and signing process is secured within internal Luware systems.

The playback and read of the encrypted conversations is performed via the Luware Stratus Recording Web Portal (sign in as a named user).

However at request Luware can decrypt the files stored on a customer's storage in the event they need to be played back/read using a 3rd party tool.

Luware also allows customers' the ability for a customer to provide their own encryption and signing certificate with Root and intermediate CA's included. (Bring your own Key)

This certificate will then be used to encrypt and sign, files as they are uploaded to the customers Azure Storage, as well as decrypt and verify the files during playback.

The certificate requirements are as follows:

- Certificates must have RSA keys (512, 1025, 2048, 4096)
- Supports sha512
- Certificates used for encryption and signing must be valid, not expired or revoked
- All certificates used at any time (even if expired) must be available to provide decryption and validation for any recording
- Certificates for encryption must have a private and a public key
- The Private Key MUST be marked as Exportable

Please note: sha512 is used for the digest for encryption and RSA is used for the signing of the files (please note RSA Key length is governed by the issuing certificate authority).

If data at rest sign and encrypt is required please inform your technical point of contact and the certificate bundle transfer can be securely sent.

5 CUSTOMER AZURE STORAGE DETAILS

This section requests the connectivity details of the customers Azure Storage Account, in order to complete the setup.

5.1 PRE-REQS

The customer must create an “Azure File Service” within the Azure Storage Account discussed in previous sections, at the time of writing this is the only supported Azure Storage Service supported by Luware Stratus Recording service.

5.2 CUSTOMER INFORMATION

In order to complete the Storage setup between Luware Stratus Recording services and the customers Azure Storage File Services the following information is required:

Azure Storage Account Name	Azure Storage File Service Name	Azure Storage Account Access Key #1 or #2 (#1 is preferred)

Please securely return this information to your point of contact within Luware.