SmartTAP™ 360° Enterprise Recording Solution

Hardware and Software Requirements Version 5.2

This document describes the hardware and software requirements for installing SmartTAP 360° Enterprise Recording Solution.

⚠️ **Note:** Microsoft rebranded *Lync* as *Skype for Business*, therefore when the term *Skype for Business* appears in this document, it also applies to Microsoft Lync. References to Microsoft Teams are explicitly indicated.

1 SmartTAP 360° for Microsoft Teams Requirements

This chapter describes the recommended specifications for SmartTAP 360° Recording solution for Microsoft Teams.

1.1 SmartTAP 360° Server

- Operating System: Microsoft Windows Server 2016 or Microsoft Windows Server 2019
- SmartTAP 360 server with the specifications below can handle up to 3000 targeted users and 500 audio call recordings:
  - Virtual Machine: Tier=Standard, Instance=DS2 v2 (2 vCPUs, 7 GB RAM, 14 GB Temporary storage)
- SmartTAP 360° server with the specifications below can handle up to 3000 targeted users and a combination of 500 audio/Desktop Application Sharing (DAS) call recordings.
  - Virtual Machine: Tier=Standard, Instance=F8s v2 (8 vCPUs, 16 GB RAM, 64 GB Temporary storage)

■ An additional managed disk is required for database storage. The estimated size of the required disk can be calculated using the SmartTAP storage calculator. The additional managed disk is not required for POC if the SmartTAP Server's OS disk has sufficient space to hold the database. The disk should be a premium SSD managed disk.

> ⚠ **Note:** When the SmartTAP 360° server is deployed On-premises in the "Hybrid" model, see Section Server Requirements below.

1.2   Microsoft Teams BOT Cluster

■ Service Fabric Cluster with Silver Durability with a minimum of 5 nodes (for testing or POCs, Bronze Durability with 1 or 3 nodes can be used). For more information, refer to Microsoft Service Fabric Cluster.

■ Single BOT node with the specifications below can handle up to 40 concurrent DAS calls or up to 50 concurrent audio calls. For example, the recording of 150 DAS and 150 audio calls requires 7 nodes:

- Virtual Machine: Tier=Standard, Instance=DS2 V2 (2 vCPUs, 7 GB RAM, 100 GB Temporary storage)
- Windows Server 2019 Datacenter - with Containers

■ **Additional mandatory Azure resources:**

- Load Balancer for BOT Service Fabric Cluster
- Public IP address for the Load Balancer
- Virtual Machine ScaleSet – VMs for BOT Service Fabric Cluster
- Key Vault to store BOT Service Fabric Cluster certificates
- Microsoft Azure Blob Storage

■   **Optional Azure resources:**

- Application Insights to store BOT logs
- App Configuration to store BOT configuration

■ **SmartTAP 360° for Microsoft Teams availability:** SmartTAP 360° for Microsoft Teams availability is based on Azure Virtual Machines (VM) Service Level Agreement (SLA):

- SmartTAP 360° Server on Azure VM - SLA is 99.9% for one instance and 99.99% can be achieved by deploying the two servers in different Availability Zones (optionally available at extra cost). Refer to Azure VM SLA.

- SmartTAP 360° Teams BOT on Azure VM - SLA 99.9%. Refer to [Azure VM SLA](url).
- SmartTAP 360° Media on Azure BLOB – SLA is 99.9% for Hot tier, and 99% for Cool Tier. Refer to [Azure Blob Storage SLA](url)
- The durability of Azure BLOB using Locally Redundant Storage (LRS) is 11 nines. Refer to [Azure Blob Storage Durability](url)

- **SmartTAP 360° for Microsoft Teams Backup/Restore:** Azure Virtual Machines (VM) backup/restore procedures are highly recommended.

> **Note:**
> - For integrations with third-party applications, a custom specification is required.
> - DAS call recordings are limited to up to two concurrent DAS recording playbacks or downloads.

2 Requirements for other Integrations

2.1 Server Requirements

The following table lists the maximum available resources for three different SmartTAP server profiles and for the Media Proxy and Announcement servers.

Table 1-1: SmartTAP Server

Server	Specification	Available Resources
SmartTAP server (Low Profile)	▪ 2 Core 2.5 GHz ▪ 6 GB Memory ▪ 2 SATA 7200 RPM HDD* ▪ PCIe slots FL / FH2**	50 resources (audio only)
		25 resources when Media Proxy Service is installed on the same server (audio only)
SmartTAP server	▪ 6 Cores 2 GHz****	150 resources

Server	Specification	Available Resources
(Medium Profile)	▪ 8 GB Memory ▪ 2 SATA 7200 RPM HDD* ▪ PCIe slots FL / FH2**	50 resources when Media Proxy Service is installed on the same server (audio only)
SmartTAP server*** (High Profile)	▪ 12 Core 2 GHz**** ▪ 14 GB Memory ▪ 2 SATA 7200 RPM HDD* ▪ PCIe slots FL / FH2**	▪ 300 resources ▪ 500 audio resources

Media Proxy server***	▪ Processor:
	  ✔ Quad Core 2 GHz (300 resources)
	  ✔ 8 Core 2 GHz (500 audio resources)
	▪ 8 GB Memory
	▪ SATA 7200 RPM HDD
		▪ 300 resources
		▪ 500 audio resources

Announcement server***	▪ Quad Core 2 GHz ▪ 8 GB Memory ▪ SATA 7200 RPM HDD ~~Dual Gb NIC~~	300 resources (assuming the announcement length does not exceed 20% of an average call length)

* SmartTAP server requires two dedicated HDDs - one for the Windows OS, SmartTAP software and DB and another for the recorded media. The media HDD is required for both local or remote media storage (in the case of remote storage it is used for intermediate storage of the media). When running the SmartTAP Server in a virtual environment, the HDDs has to be dedicated and mapped to SmartTAP server VM.
** PCIe Full Length / Full Height slots. The number of slots required is determined by the number of Analog Stations required to record. Each card can record 24 channels (i.e., 56 Phones will require three PCIe card slots).
*** A group of these servers can be deployed when more than the supported recording

![audiocodes logo]

capacity in one server is required. An additional high-end server is required to be deployed for the Application Server and Database.

**** Higher CPU speed (higher than 2.0 GHz) is recommended to accelerate download and playback for Video and DAS recorded calls.

> **Note:**
> - When running in a virtual environment, all specification resources listed in Table 1-1 must be reserved for all SmartTAP servers.
> - Dual GB NIC interfaces are required for VoIP Port Mirroring Integration Configuration (this is not relevant for Skype for Business and SIP Recording)

To determine the server specification, calculate the required available resources. The calculation of the required resources is based on the number of licenses multiplied by one of the factors specified in the table below.

Table 1-2: License Factors

License Type	Factor
Audio Recorder License	1
Video Recorder License	10
Announcement License	1
DAS	5

- Calculate the required number of resources on the SmartTAP server and the Media Proxy server according to the following formula:

  Required Number of Resources = (Number of Audio Recorder Licenses)*(Audio Recorder License Factor) + (Number of Video Recorder Licenses)*(Video Recorder License Factor) + (Number of DAS Recorder Licenses)*(DAS Factor)

  Choose the SmartTAP server and Media Proxy server with the number of available resources equal or higher than the required recording resources.

- Calculate the required number of resources on the Announcement server according to the following formula:

  Required Number of Resources = (Number of Announcement Licenses)*(Announcement License Factor)

- **Example 1:** 100 Audio Recorder Licenses:

- Required Number of Resources = (100 Audio Recorder Licenses)*(1 Audio Recorder License Factor) = 100
- Choose Medium Profile SmartTAP server and one Media Proxy server

- **Example 2:** 30 Video Recorder Licenses:
  - Required Number of Resources = (30 Video Recorder Licenses)*(10 Video Recorder License Factor) = 300
  - Choose High Profile SmartTAP server and one Media Proxy server

- **Example 3:** 50 Audio Recorder Licenses and 20 Video Recorder Licenses:
  - Required Number of Resources = (50 Audio Recorder Licenses)*(1 Audio Recorder License Factor) + (20 Video Recorder Licenses)*(10 Video Recorder License Factor)= 50 + 200 = 250
  - Choose High Profile SmartTAP server and one Media Proxy server

- **Example 4:** 40 Audio Recorder Licenses:
  - Required Number of Resources = (40 Audio Recorder Licenses)*(1 Audio Recorder License Factor) = 40
  - Choose either of the following:
    - Medium Profile SmartTAP server with Media Proxy service installed on the SmartTAP server
    - Low Profile SmartTAP server and separate Media Proxy server

- **Example 5:** 200 Audio Recorder Licenses with Announcement:
  - For SmartTAP server and Media Proxy servers:
    - Required Number of Resources = (200 Audio Recorder Licenses)*(1 Audio Recorder License Factor) =200
    - Choose High Profile SmartTAP server and one Media Proxy server
  - For Announcement server:
    - Required Number of Resources = (200 Announcement Licenses)*(1 Announcement License Factor) =200
    - Choose one Announcement server

- **Example 6:** 50 Audio Recorder Licenses and 50 DAS Recorder Licenses:
  - For SmartTAP server and Media Proxy servers:
    - Required Number of Resources = (50 Audio Recorder Licenses)*(1 Audio Recorder License Factor) + (50 DAS Licenses)*(5 DAS License Factor) =300
    - Choose High Profile SmartTAP server and one Media Proxy server

2.2   Supported Operating Systems

- Microsoft Windows Server 2019
- Microsoft Windows Server 2016
- Microsoft Windows Server 2012 R2

2.3   Supported VM Environments

2.3.1   VMware ESXi

- Version 4.1 and later (IP-based integrations only)
- See the *SmartTAP Installation Guide* for instructions on how to enable promiscuous mode required for a SmartTAP system that is monitoring (tapping) the network.

2.3.2   Microsoft Hyper-V

- Microsoft Windows Server 2019
- Microsoft Windows Server 2016
- Microsoft Windows Server 2012 R2
- Microsoft Windows Server 2012 64-bit

> **Note:** Hyper-V does not support promiscuous mode. Do not use in Passive integration environments.

2.4   Active / Standby Resiliency Configuration (Optional)

AudioCodes supports Microsoft™ Windows Clustering in the failover configuration, which provides high available service to the SmartTAP application. To support this type of install, the following is required:

- Two identical Windows servers, which meet the minimum specifications mentioned above

■ A SAN (Storage Area Network) with iSCSI support. The SmartTAP cluster requires at least two Internet Small Computer System Interface (iSCSI) targets - one for the disk witness/quorum, and another for the database and shared application data. A 3rd iSCSI target "Optional" is required for the media storage. SmartTAP should not be configured to write the media directly to the 3rd media target; instead, it should be set as Media Transfer Service destination.

3 Windows Updates

■ Recommended to disable Automatic Windows updates to prevent unknown side effects.

■ Recommended to perform system backup before applying updates.

■ AudioCodes only certifies major Service Pack updates.

3.1 Installing Windows Updates

■ Schedule a maintenance window. SmartTAP will not be recording during this timeframe.

■ Download and install Windows updates.

■ Reboot the server even if Windows does not ask you to reboot to finish installing updates.

■ Windows may continue installing updates after the system restarts, which may cause instability within SmartTAP.

■ Once Windows updates are complete, reboot the server again.