

Minimalne wymagania sprzętowe i parametry techniczne, którymi powinien dysponować uczestnik szkolenia dla kandydatów na Maklerów TGE realizowanego w formie spotkania on-line

Szkolenia w formie spotkań on-line prowadzone są poprzez ogólnodostępną aplikację Microsoft Teams lub Zoom. Zapewnienie urządzeń oraz dostępu do aplikacji Microsoft Teams lub Zoom należy do Uczestnika spotkania. Warunkiem udziału w szkoleniu organizowanym w formie spotkania on-line jest spełnienie następujących, minimalnych wymagań sprzętowych oraz technicznych:

- Posiadanie sprzętu komputerowego z dostępem do sieci Internet o przepustowości wystarczającej do obsługi treści multimedialnych.
- Posiadanie głośnika i mikrofonu połączonego z ww. sprzętem komputerowym.
- Opcjonalnie, posiadanie kamery internetowej połączonej z ww. sprzętem komputerowym.
- Aplikacja Microsoft Teams lub Zoom
- Dla wygody użytkowników zalecamy korzystanie z urządzeń z ekranami o przekątnej min 14 cali.

Poniżej przedstawiamy szczegółowe wymagania.

Wymagania sprzętowe dla MS Teams:

Hardware requirements for Teams on a Windows PC

Component	Requirement
Computer and processor	Minimum 1.6 GHz (or higher) (32-bit or 64-bit).
Memory	2.0 GB RAM
Hard disk	3.0 GB of available disk space
Display	1024 x 768 screen resolution
Graphics hardware	Minimum of 128 MB graphics memory
Operating system	Windows Server 2012 R2+, Windows 10, or Windows 8.1 in 32 bit and 64-bit. For the best experience, use the latest version of your operating system.
.NET version	Requires .NET 4.5 CLR or later
Video	USB 2.0 video camera
Devices	Standard laptop camera, microphone, and speakers
Video calls and meetings	• For a better experience with 1:1 video calls, we recommend using a computer that has a dual-core processor and 4.0 GB RAM (or higher). • For a better experience with online meetings, we recommend using a computer that has a dual-core processor and 8.0 GB RAM (or higher). • The optional Background video effects are not supported on processors without an AVX2 instruction set running on Windows 8.1 or below.



- See Hardware decoder and encoder driver recommendations for a list of unsupported decoders and encoders.
- Joining a meeting using proximity detection in a Microsoft Teams Room requires Bluetooth LE, which requires Bluetooth to be enabled on the client device, and for Windows clients requires the 64-bit Teams client. It's not available on 32-bit Teams clients.

Hardware requirements for Teams on a Mac

Component	Requirement
Processor	Minimum Intel processor, Core 2 Duo or higher
Memory	2.0 GB RAM
Hard disk	1.5 GB of available disk space
Display	1280 x 800 or higher resolution
Operating system	Mac OS X 10.11 El Capitan or later
Video	Compatible webcam
Voice	Compatible microphone and speakers, headset with microphone, or equivalent device

Video calls and meetings

- For a better experience with 1:1 video calls, we recommend using a computer that has a dual-core processor and 4.0 GB RAM (or higher).
- For a better experience with online meetings, we recommend using a computer that has a dual-core processor and 8.0 GB RAM (or higher).
- See Hardware decoder and encoder driver recommendations for a list of unsupported decoders and encoders.
- Joining a meeting using proximity detection in a Microsoft Teams Room is not available on Mac OS.

Hardware requirements for Teams on Linux

Component	Requirement
Computer and processor	Minimum 1.6 GHz (or higher) (32-bit or 64-bit).
Memory	2.0 GB RAM
Hard disk	3.0 GB of available disk space
Display	1024 x 768 screen resolution
Graphics hardware	Minimum of 128 MB graphics memory
Operating system	Linux distribution capable of installing DEB or RPM.
Video	USB 2.0 video camera
Devices Standard laptop	camera, microphone, and speakers
Voice	Compatible microphone and speakers, headset with microphone, or equivalent device

Video calls and meetings

- For a better experience with 1:1 video calls, we recommend using a computer that has a dual-core processor and 4.0 GB RAM (or higher).
- For a better experience with online meetings, we recommend using a computer that has a dual-core processor and 8.0 GB RAM (or higher).



- See Hardware decoder and encoder driver recommendations for a list of unsupported decoders and encoders.
- Joining a meeting using proximity detection in a Microsoft Teams Room is not available on Linux.

System requirements for MS Teams:

Minimum System Requirements:

iOS 11

Windows: Windows 10 build 14393

Android: Android 5.0 operating system

Web Features:

The latest version of Safari, Internet Explorer 11, Chrome, Edge, or Firefox

MacMacOS 10.13 computers

System requirements for Teams on mobile devices:

Microsoft Teams personal

You can use Teams for your personal life on your iOS or Android device.

Android phones and tablets:

Teams works with Android devices using the last four major versions of the operating system. As new versions of Android OS are released, the oldest version will no longer be supported.

IPhones, iPads and iPods:

Teams work on devices running iOS 11-13.

For the best experience, please use the latest version of iOS and Android.

Wymagania sprzętowe dla Zoom:

System requirements

- An internet connection – broadband wired or wireless (3G or 4G/LTE)
- Speakers and a microphone – built-in, USB plug-in, or wireless Bluetooth
- A webcam or HD webcam - built-in, USB plug-in, or:
 - An HD cam or HD camcorder with a video-capture card
Note: See the list of supported devices.
 - Virtual camera software for use with broadcasting software like OBS or IP camera.
Note: For macOS, Zoom client 5.1.1 or higher is required.

Supported operating systems

- macOS X with macOS 10.9 or later
- Windows 10*
- Note: Devices running Windows 10 must run Windows 10 Home, Pro, or Enterprise. S Mode is not supported.



- Windows 8 or 8.1
- Windows 7
- Ubuntu 12.04 or higher
- Mint 17.1 or higher
- Red Hat Enterprise Linux 6.4 or higher
- Oracle Linux 6.4 or higher
- CentOS 6.4 or higher
- Fedora 21 or higher
- OpenSUSE 13.2 or higher
- ArchLinux (64-bit only)

Supported tablet and mobile devices

- iOS and Android devices
- Blackberry devices
- Surface PRO 2 or higher, running Windows 8.1 or higher
- Tablet PCs running Windows 10 must run Windows 10 Home, Pro, or Enterprise. S Mode is not supported.
- Tablet PCs only support the desktop client.

Supported browsers

- Windows: Internet Explorer 11+, Edge 12+, Firefox 27+, Chrome 30+
- macOS: Safari 7+, Firefox 27+, Chrome 30+
- Linux: Firefox 27+, Chrome 30+

Note: Some features in the web client are not supported on Internet Explorer.

Processor and RAM requirements

	Minimum	Recommended
Processor	Single-core 1Ghz or higher	Dual-core 2Ghz or higher (Intel i3/i5/i7 or AMD equivalent)
RAM	N/A	4 Gb

Notes:

- Dual and single-core laptops have a reduced frame rate when screen sharing (around 5 frames per second). For optimum screen-sharing performance on laptops, we recommend a quad-core processor or higher.
- Linux requires a processor or graphics card that can support OpenGL 2.0 or higher.

High-DPI support

- High-DPI displays are supported in Zoom version 3.5 or higher

Bandwidth requirements

The bandwidth used by Zoom will be optimized for the best experience based on the participant's network. It will automatically adjust for 3G, WiFi, or wired environments.

Recommended bandwidth for meetings and webinar panelists:

- For 1:1 video calling:
 - For high-quality video: 600kbps (up/down)
 - For 720p HD video: 1.2Mbps (up/down)
 - For 1080p HD video: 3.8Mbps/3.0Mbps (up/down)
- For group video calling:
 - For high-quality video: 1.0 Mbps/600kbps (up/down)
 - For 720p HD video: 2.6Mbps/1.8Mbps (up/down)
 - For 1080p HD video: 3.8Mbps/3.0Mbps (up/down)
- For gallery view receiving: 2.0Mbps (25 views), 4.0Mbps (49 views)
- For screen sharing only (no video thumbnail): 50-75kbps
- For screen sharing with video thumbnail: 50-150kbps
- For audio VoIP: 60-80kbps
- For Zoom Phone: 60-100kbps



Recommended bandwidth for webinar attendees:

- For panelists video on:
 - ~600kbps (down) for high-quality video
 - ~1.2-1.8Mbps (down) for 720p HD video
 - ~2-3Mbps (down) for 1080p HD video
- For screen sharing only (no video thumbnail): 50-75kbps (down)
- For screen sharing with video thumbnail: 50-150kbps (down)
- For audio VoIP: 60-80kbps (down)

W przypadku pytań dotyczących kwestii technicznych uprzejmie prosimy o kontakt na adres:

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