BigBlueButton Requirements

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Schlüsselwörter

BigBlueButton Firewall

Lösung (öffentlich)

Computer
- Processor: AMD APU from Ryzen, Intel Core i from 6th Generation (Skylake)
- Memory: 8 GB
- Operating system: Linux, macOS or Windows
- Browser: Chrome/Chromium, Firefox or Edge*

With older (mobile) processors from Intel's Atom series or AMD's E series, there might not be enough computing power available. The processors recommended above have integrated graphics units that ensure smooth video transmission.

Check unnecessary background activities on your computer that can negatively affect processor performance and Internet connection. To reduce load, viewers should leave the default setting for viewing webcams page by page enabled in the [1]room settings under the "Application" item.

Safari on macOS can also be used, but unlike Chrome and Firefox, it delivers lower audio quality with low Internet bandwidth. Most users and the BBB developers recommend the Chrome browser.

Virtual backgrounds are supported by Chromium-based browsers as well as Firefox, but not by Safari, so the feature is not available on iPhones and iPads.

* Edge based on Chromium, recognizable by the green-blue logo

Smartphones & Tablets
- Android 6 or later with Chrome
- iOS 12.2 or later with Safari

Note that you cannot share your screen on Android. In iOS and iPadOS, the screen can only be shared via the [2]BigBlueButton Tablet app.

Headset

A headset ensures clear transmission of speech and serves to avoid background noise so that others understand you better. It also prevents echoes.
In quiet areas, the built-in microphones of notebooks should usually also work without interference.

Internet connection
- Download: minimum 1 MBit/s
- Upload: minimum 0,5 MBit/s

A wired network connection is recommended for a stable session. If not possible otherwise, preferably use a W-LAN in the 5 GHz band.

The minimum requirements mentioned above increase with every activity (screen sharing, webcams, etc.) of the users.

You can test your current bandwidth using the [3]speedtest.net website, for example. Note that background activities on your device or on other devices in your network can negatively affect the bandwidth.

When you share your own camera, you can set the quality to "low quality" to save upload bandwidth. Also, you can use the [4]data savings to disable all webcams and screen sharing across the board. Viewers should also leave the default setting for video pagination enabled in the [5]room settings under the "Application" item.

Network configuration

The following ports must be enabled for outgoing connections so that you can use BigBlueButton on your device:

- TCP: 80, 443, 3478, 5349
- UDP: 443, 3478, 5349, 16384-32767, 49152-65535

Also make sure that the following servers with their IP addresses for the BigBlueButton instance at TU Dresden are reachable from your device:

- BBB server of the TU Dresden:
- serv[001-016].bbb.zih.tu-dresden.de / 141.30.62.[74-89]

- BBB server for the virtual classroom in OPAL:
- opal-bbb-serv[001-002].bbb.zih.tu-dresden.de / 141.30.62.[90-91]

Explanation

For video conferencing services based on WebRTC, the ports marked in bold
below must generally be enabled for outgoing connections. The other ports are
required for the so-called TURN servers. These are used if a direct connection
to the video conferencing services cannot be established.

- TCP
- **80 (HTTP, forwarding to HTTPS)**
- **443 (HTTPS)**
- 3478 (TURN requests, unencrypted)
- 5349 (TURN requests, TLS encrypted)

- UDP
- 3478 (TURN requests, unencrypted)
- 5349 (TURN requests, DTLS encrypted)
- 16384-32767 (WebRTC based audio and video connections)
- 49152-65535 (WebRTC based audio and video connections)

[1] https://faq.tickets.tu-dresden.de/otrs/public.pl?Action=PublicFAQZoom;ItemID=406
[2] https://apps.apple.com/de/app/bigbluebutton-tablet/id1641156756
[3] https://speedtest.net
[4] https://faq.tickets.tu-dresden.de/otrs/public.pl?Action=PublicFAQZoom;ItemID=406
[5] https://faq.tickets.tu-dresden.de/otrs/public.pl?Action=PublicFAQZoom;ItemID=406