Wi-Fi setup at BME OMIKK (EDUROAM)

translated at 2018/06/17 from the Hungarian version 2017/04/28 by eknagy@omikk.bme.hu

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1 Username, password, general information

Username: `<barcode>@omikk.bme.hu`, where `<barcode>` is your barcode.

Password: the password for the valid reader’s ticket (WebOPAC), all lowercase. It should contain only latin letters and digits.

**NOTICE:** the `<barcode>@omikk.bme.hu` login method will only work at access points of BME OMIKK, it will fail at other access points of the University, despite having the same SSID (eduroam).

University staff might use the `<username>@eik.bme.hu` login.

University students might use the `<username>@hszk.bme.hu` login.

Eduroam members might use their eduroam account.

Table 1 sums up the necessary settings. Further chapters give detailed instructions to connect with the username `<barcode>@omikk.bme.hu`.

<table>
<thead>
<tr>
<th>Network (SSID)</th>
<th>enrolled users (BME OMIKK)</th>
<th>university staff, students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Username / login</td>
<td><code>&lt;barcode&gt;@omikk.bme.hu</code></td>
<td><code>&lt;username&gt;@eik.bme.hu</code> (staff) <code>&lt;username&gt;@hszk.bme.hu</code> (students)</td>
</tr>
<tr>
<td>Password</td>
<td>WebOPAC password, lowercase</td>
<td>the password for the above account</td>
</tr>
<tr>
<td>Security protocol</td>
<td>WPA2 Enterprise</td>
<td></td>
</tr>
<tr>
<td>Authentication</td>
<td>Protected EAP (PEAP)</td>
<td>tunneled TLS, EAP-TTLS</td>
</tr>
<tr>
<td>CA certificate</td>
<td>none</td>
<td></td>
</tr>
<tr>
<td>Authentication II</td>
<td>MSCHAP v2</td>
<td>PAP (Password Authentication Protocol)</td>
</tr>
<tr>
<td>The authentication server might accept other settings, but it is not supported.</td>
<td>These methods only have built-in support from Windows 8 / Windows Phone 8.1.</td>
<td></td>
</tr>
</tbody>
</table>

**Table 1: Wi-Fi settings for the eduroam network**

- The barcode in the username is the barcode on the reader’s ticket!
- When the first connection attempt is unsuccessful, please try to find stronger signal in the building and try to enter your login and password again!
- Some clients will save your credentials and automatically authenticate you. This can be changed in most clients.
- If your device supports it, we advise you to use the 5 GHz band.

2 Wi-Fi coverage at BME OMIKK

**NOTICE:** the `<barcode>@omikk.bme.hu` login method will only work at access points of BME OMIKK, it will fail at other access points of the University, despite having the same SSID (eduroam).

BME OMIKK has strong Wi-Fi signal in:

1. Library building: main reading room, MSZO, aula, ground floor room #2, basement catalog rooms
2. Building ‘K’: bridge, TTO, GTO, TKO
3 Windows 10 Wi-Fi setup

1. To use eduroam, switch off paid Wi-Fi service in Settings > Network & Internet > Wi-Fi.
2. Right click on
3. Open the "Network and Sharing center" - either by right clicking on the Network in the right side of the taskbar or by from the Control Center (run "control.exe" with "Windows+R").
4. "Set up a new connection or network" > "Manually connect to a wireless network"
5. In the window "Manually connect to a wireless network", set up:
   - Network name: eduroam
   - Security type: WPA2-Enterprise
   - Encryption type: AES or TKIP
   - Click "Next"
6. Click "Change connection settings"
7. In the window "Wireless network properties" select the "Security" tab.
   - Select "Microsoft: Protected EAP (PEAP)" option for the authentication method.
   - Click "Settings".
8. In the window "Protected EAP properties" uncheck "Validate server certificate".
   - Check "Enable Fast Reconnect" - or, if you have connection problems, uncheck it.
   - Find "Select Authentication Method" on the lower part. Choose "Secured password (EAP-MSCHAP v2)", then click "Configure...".
9. In the window "EAP MSCHAPv2 properties" uncheck "Automatically use my Windows ...".
10. In the window "Wireless network properties" choose "Advanced settings".
11. In the window "Advanced settings" check "Specify authentication mode" and choose "User authentication", the click "Save credentials".
12. In the window "Windows Security" enter your username and password.
13. Click "OK" on every open window.
14. Connect to "eduroam" ;)


4 Illustrated Windows 10 Wi-Fi setup

View your basic network information and set up connections

View your active networks

<table>
<thead>
<tr>
<th>Public network</th>
<th>Access types</th>
<th>Internet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connections:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helpi kapcsolat</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Change your networking settings

- Set up a new connection or network:
  - Set up a broadband, dial-up, or VPN connection, or set up a router or access point.

- Troubleshoot problems:
  - Diagnose and repair network problems, or get troubleshooting information.
When connecting:

- Automatically use my Windows logon name and password (and domain if any).

OK  Cancel
5 Windows 8/8.1 Wi-Fi setup

Default setting usually work with Windows 8 and 8.1.
You might also want to try the Windows 7 driver for your Wi-Fi card.
You might also try manual setup:

5.1 Right click on Network in the right side of the taskbar.
5.2 "Network and Sharing center" > "Set up a new connection or network" > "Manually connect to a wireless network"
5.3 In the window "Manually connect to a wireless network", set up:
5.3.1 Network name: eduroam
5.3.2 Security type: WPA2-Enterprise
5.3.3 Encryption type: AES or TKIP
5.3.4 Click "Next"
5.4 Click "Change connection settings"
5.5 In the window "Wireless network properties" select the "Security" tab.
5.5.1 Select "Microsoft: Protected EAP (PEAP)" option for the authentication method.
5.5.2 Click "Settings".
5.6 In the window "Protected EAP properties" uncheck "Validate server certificate".
5.6.1 Find "Select Authentication Method" on the lower part. Choose "Secured password (EAP-MSCHAP v2)", then click "Configure...".
5.7 In the window "EAP MSCHAPv2 properties" uncheck "Automatically use my Windows ...".
5.8 In the window "Wireless network properties" choose "Advanced settings".
5.9 In the window "Advanced settings" check "Specify authentication mode" and choose "User authentication", the click "Save credentials".
5.10 In the window "Windows Security" enter your username and password.
5.11 Click "OK" on every open window.
5.12 Connect to "eduroam" ;)


6 Illustrated Windows 8 and 8.1 Wi-Fi setup

View your basic network information and set up connections

View your active networks

Public network

Access type: Internet
Connections: Ethernet 3

Change your networking settings

Set up a new connection or network
Set up a broadband, dial-up, or VPN connection, or set up a router or access point.

Troubleshoot problems
Diagnose and repair network problems, or get troubleshooting information.

Troubleshoot problems
Open Network and Sharing Center

Choose a connection option

Connect to the Internet
Set up a broadband or dial-up connection to the Internet.

Set up a new network
Set up a new router or access point.

Set up a wireless network
Connect to a hidden network or create a new wireless profile.

Connect to a workplace
Set up a dial-up or VPN connection to your workplace.

Next Cancel

Manually connect to a wireless network

Enter information for the wireless network you want to add

Network name: eduroam
Security type: WPA2-Enterprise
Encryption type: AES

Password: [enter password]

Check this connection automatically
Connect even if the network is not broadcasting

Warning: If you select this option, your computer's privacy might be at risk.

Next Cancel

eduroam Wireless Network Properties

Connection Security

Security type: WPA2-Enterprise
Encryption type: AES

Choose a network authentication method:
Microsoft Protected EAP (PEAP) [Settings]

Remember my credentials for this connection each time I’m logged on

Advanced settings

Close

OK Cancel

Successfully added eduroam

Change connection settings
Open the connection properties so that I can change the settings.
7 Windows 7 Wi-Fi setup

7.1 Automatic setup (might not work on some computers)
1. Left click on "Network" on the right side of the taskbar.
2. Choose "eduroam" and click "Connect".
3. Enter your username and password. Click OK.

7.2 Manual setup (recommended)
1. Right click on Network in the right side of the taskbar.
2. "Network and Sharing center" > "Set up a new connection or network".
3. Choose "Manually create a network profile".
   1. Network name: eduroam
   2. Security type: WPA2-Enterprise
   3. Encryption type: AES or TKIP
   4. Security key: leave it blank
   5. Check "Start this connection automatically"
   6. Click "Next"
4. Click "Change connection settings"
5. Check "Connect automatically when this network is in range".
6. In the window "eduroam Wireless network properties" select the "Security" tab.
   1. Security type: WPA2-Enterprise
   2. Encryption type: AES or TKIP
   3. Authentication method: "Microsoft: Protected EAP (PEAP)"
   4. Check "Remember my credentials ..."
   5. Click "Settings".
7. In the window "Protected EAP properties" uncheck "Validate server certificate".
   1. Find "Select Authentication Method" on the lower part. Choose "Secured password (EAP-MSCHAP v2)".
   2. Uncheck "Enable Fast Reconnect" (on some hardware, it works better if checked)
   3. Click "Configure...".
8. In the window "EAP MSCHAPv2 properties" uncheck "Automatically use my Windows ...".
9. In the window "eduroam Wireless network properties" choose "Advanced settings".
10. In the window "Advanced settings" check "Specify authentication mode" and choose "User authentication", the click "Save credentials".
11. In the window "Windows Security" enter your Wi-Fi username and password.
12. Click "OK" on every open window.
13. Check if you are connected to "eduroam" ;)

Illustrated manual Windows 7 Wi-Fi setup

Choose a connection option:
- Connect to the Internet
- Connect to an ad-hoc network
- Connect to an infrastructure network
- Connect to a workplace
- Connect to a dial-up network
- Connect to the Internet using a dial-up connection

Network name: educom
Security type: WPA2-Enterprise
Encryption type: AES

Choose a network authentication method:
- Microsoft: Protected EAP (PEAP)

Remember my credentials for this connection each time I'm logged on.

OK Cancel
9 Ubuntu 18.04 LTS Wi-Fi setup

9.1 Click on the menu in the upper right corner.

9.2 Open "Wi-Fi not connected" and click "Select Network".

9.3 Select "eduroam".

9.3.1 Set Wi-Fi security to "WPA & WPA2 Enterprise".

9.3.2 Set authentication to "Protected EAP (PEAP)"

9.3.3 Check "no CA certificate is required"

9.3.4 Set PEAP version to "Automatic"

9.3.5 Set inner authentication to "MSCHAPv2"

9.3.6 Enter username

9.3.7 Enter password in lowercase

9.3.8 Click "Connect"

9.4 Check if Wi-Fi is connecting to "eduroam".
10 Illustrated Ubuntu 18.04 LTS Wi-Fi setup

Authentication required by Wi-Fi network

- Passwords or encryption keys are required to access the Wi-Fi network "eduroam".
- Wi-Fi security: WPA & WPA2 Enterprise
- Authentication: Protected EAP (PEAP)
- Anonymous identity: 
- Domain: 
- CA certificate: (None)
- CA certificate password: 
- PEAP version: Automatic
- Inner authentication: MSCHAPv2
- Username: barcode@omikk.bme.hu
- Password: password_in_lowercase

Wi-Fi Network Authentication Required Required

- Show passwords
- No CA certificate is required

Visible Networks

- eduroam
- BME
- bmeomikk-skt
- T-Home_C70B84
- UPC Wi-Free
- Bartok Radio

Airplane Mode

Disables Wi-Fi, Bluetooth and mobile broadband
11 Linux Wi-Fi setup with NetworkManager

1. Click on the NetworkManager icon on the taskbar.

2. Choose "Edit Connections...".

3. Click on the "Wireless" tab, then click "Add" (on the right).
   - Connection name: eduroam
   - SSID: eduroam
   - Mode: Infrastructure
   - BSSID: leave it blank
   - MAC: leave it blank
   - MTU: do not touch

4. Click "Wireless Security" and set:
   - Security: WPA & WPA2 Enterprise
   - Authentication: Protected EAP (PEAP)
   - CA certificate: (None)
   - PEAP version: Automatic
   - Inner authentication: MSCHAPv2
   - Username, password: enter you credentials

5. A warning message "No Certificate Authority certificate chosen" might appear when connecting, check "Don't warn me again", click "Ignore".
Illustrated Linux Wi-Fi setup with NetworkManager
13 Android 7.0 Wi-Fi setup

13.1 Settings > Wi-Fi > on
13.2 Select "eduroam"
13.2.1 Set security to "802.1x EAP"
13.2.2 Set EAP method: "PEAP" or "PEAPv0"
13.2.3 Set phase 2 authentication to "None" or "MSCHAPV2"
13.2.4 Set CA certificate to "Please select" or "(unspecified)" or "Do not validate"
13.2.5 If there isn option for user certificate, set it to "Please select" or "(unspecified)" or "Do not validate"
13.2.6 Set identity to your username
13.2.7 Leave anonymous identity blank
13.2.8 Set password to your password, all lowercase
13.3 Tap "Connect"
13.4 Check if "eduroam" is "Connected"
14 iPhone/iPad setup
Please contribute screenshots to Elmar <eknagy@omikk.bme.hu>.

14.1.1 Automatic setup
1. Settings > Wi-Fi > eduroam > right arrow
2. Enter your login name and password
3. If a certificate/validation message appears, accept it.

14.1.2 Manual setup
1. Settings > Wi-Fi > other
   ○ Name: eduroam
   ○ Security: WPA2 Enterprise
   ○ login name, password: your login name and password
15 macOS Wi-Fi setup
Please contribute screenshots to Elmar <eknagy@omikk.bme.hu>.

15.1 Automatic macOS Wi-Fi setup

![Automatic macOS Wi-Fi setup](image1.png)

15.2 Manual macOS Wi-Fi setup

1. **System Preferences > Internet & Wireless > Airport > Advanced**
2. 801.1X tab: new profile (press the "+" symbol under the list)
   1. Username and Password: your username and password
   2. Authentication: **PEAP**
   3. **MSCHAPv2**
3. **Advanced window / Airport** tab, add network:
   1. Network Name: **eduroam**
   2. Security: **WPA2 Enterprise**
   3. Username and Password: your username and password
   4. 802.1X: **Eduroam**
Illustrated macOS Wi-Fi setup

1. Navigate to the Wi-Fi settings on your Mac.
2. Select the network you want to connect to, which in this case is "eduroam".
3. Ensure that the authentication method is set to "WPA/WPA2 Enterprise".
4. Choose the "Automatic" mode for the connection.
5. Enter the network's password when prompted.
6. Click "OK" to connect.
17 Sources