

Welcome to the PRACE 2021 Winter School hosted by IUCC



מכון ויצמן למדע

WEIZMANN INSTITUTE OF SCIENCE

The following instructions will enable you to connect to the HPC resources we will be using on December 7 of the program.

**If you encounter any problems or have questions,
please contact the team at:**

hpc@weizmann.ac.il

Connection to the Weizmann Institute HPC cluster via VPN

Each registered user will receive e-mail with subject: "PRACE 2021 Winter School in Israel - VPN ACCESS". This contains the link, username and Initial password of the VPN.

Remote Connection via F5 Client VPN on Windows 10

To connect remotely to PRACE HPC system via F5 Client VPN in Windows, perform the following:

1. Use your browser (preferably CHROME) to access this link <https://pracevpn.weizmann.ac.il> .



מכון ויצמן למדע
WEIZMANN INSTITUTE OF SCIENCE

Secure Logon

Username

Password

OTP
EMAIL ▾

Logon

2. Enter your VPN User ID and password you received by email.



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Secure Logon

Username

Password

OTP
EMAIL ▾

Logon

3. Select EMAIL as the method to receive an OTP (One Time Password) and click **Logon**.



The image shows the Weizmann Institute of Science login page. At the top left is the logo of a tree. To its right is the Hebrew text 'מכון ויצמן למדע' and below it 'WEIZMANN INSTITUTE OF SCIENCE'. Below the header is a 'Secure Logon' section. It contains a 'Username' input field, a 'Password' input field, an 'OTP' dropdown menu with 'EMAIL' selected, and a 'Logon' button. A yellow box highlights the 'OTP' dropdown and the 'Logon' button.

4. Enter the One Time Password received via **EMAIL** and click **Logon**.

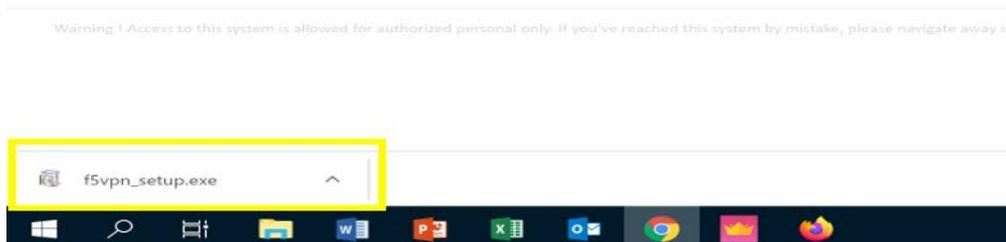


The image shows the Weizmann Institute of Science login page, similar to the previous one. The 'OTP' dropdown menu is now empty, and a 'One time password' input field has appeared below it. A yellow box highlights the 'One time password' input field and the 'Logon' button.

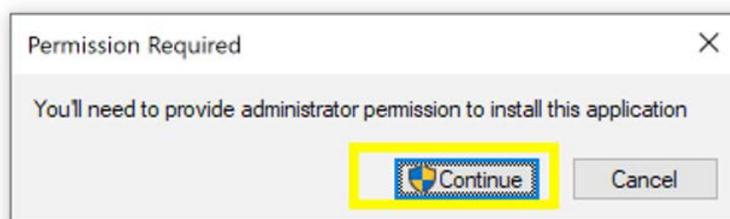
5. Click **Download** in the window that appears.



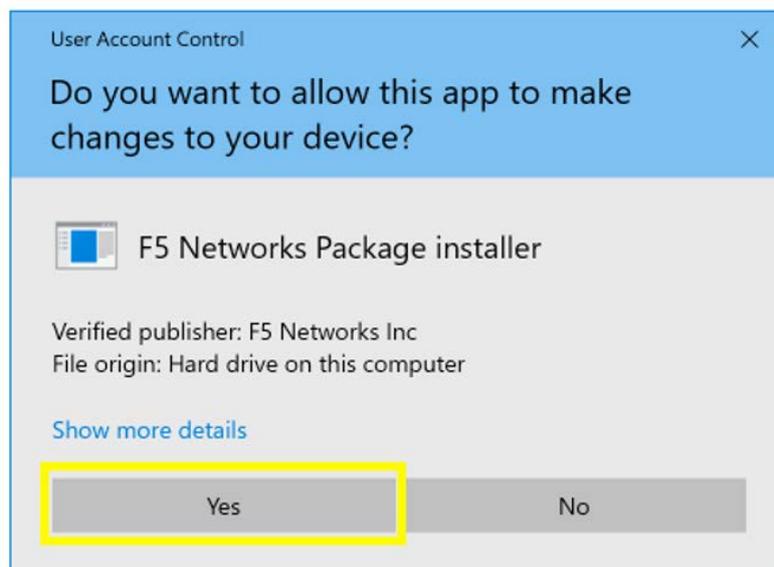
- When the download finishes, double-click to run the downloaded **f5vpn_setup.exe** file with your mouse.



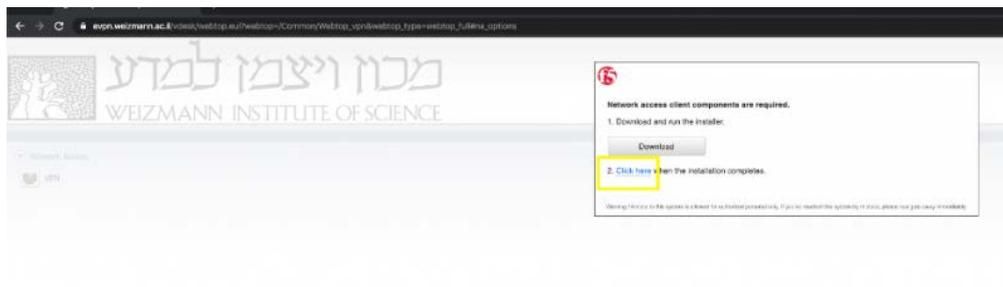
- When requested to provide administrator permission for the installation, click **Continue**.



- Click **Yes** in the next window that appears to continue the installation.



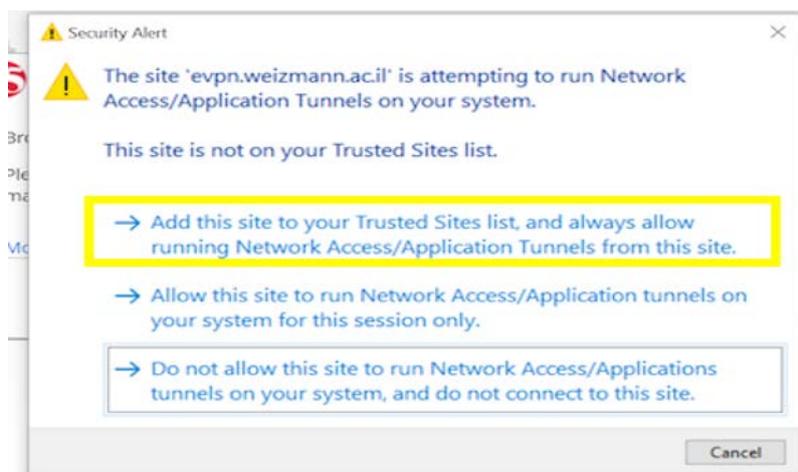
9. On completion and termination of the installation application, click **Click here** to connect.



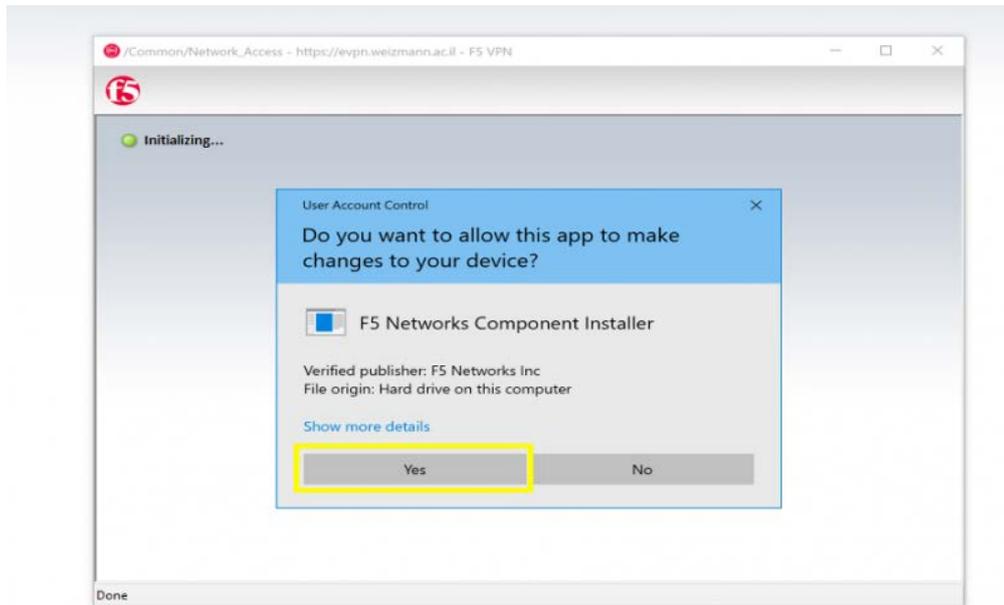
10. In the pop up window (with **Open F5 Networks VPN** in the title bar), click **Open F5 Networks VPN**.



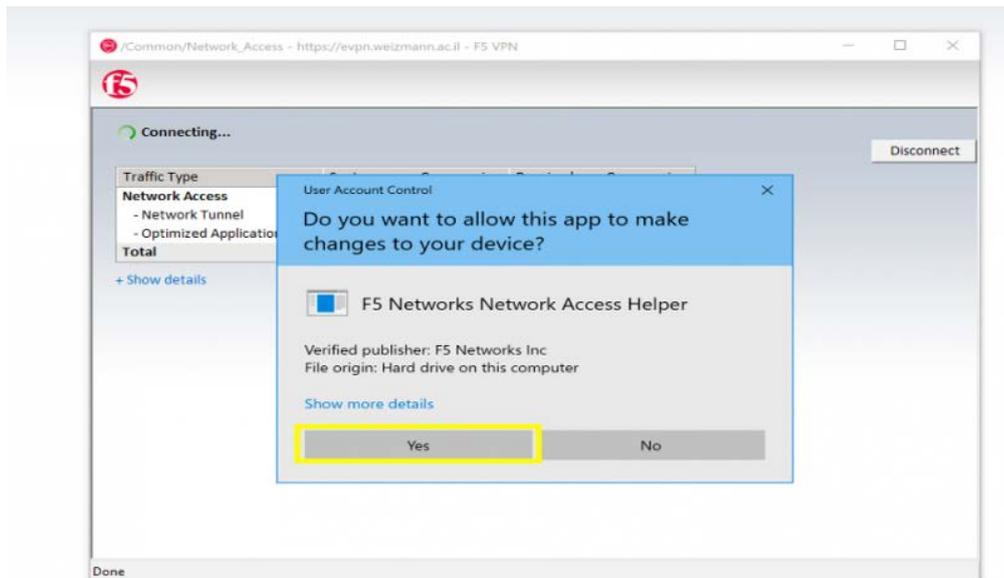
11. Select the **Add this site to your Trusted Sites list** option to confirm that you trust the target site.



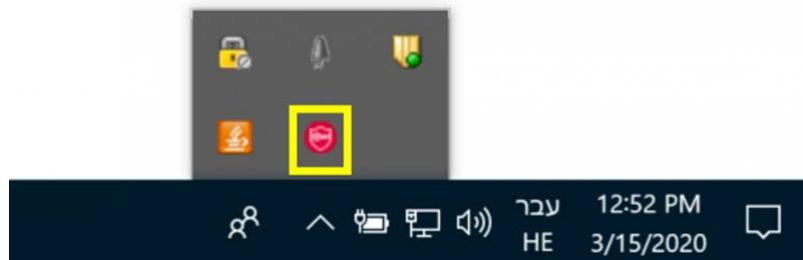
12. Click **Yes** in the next window.



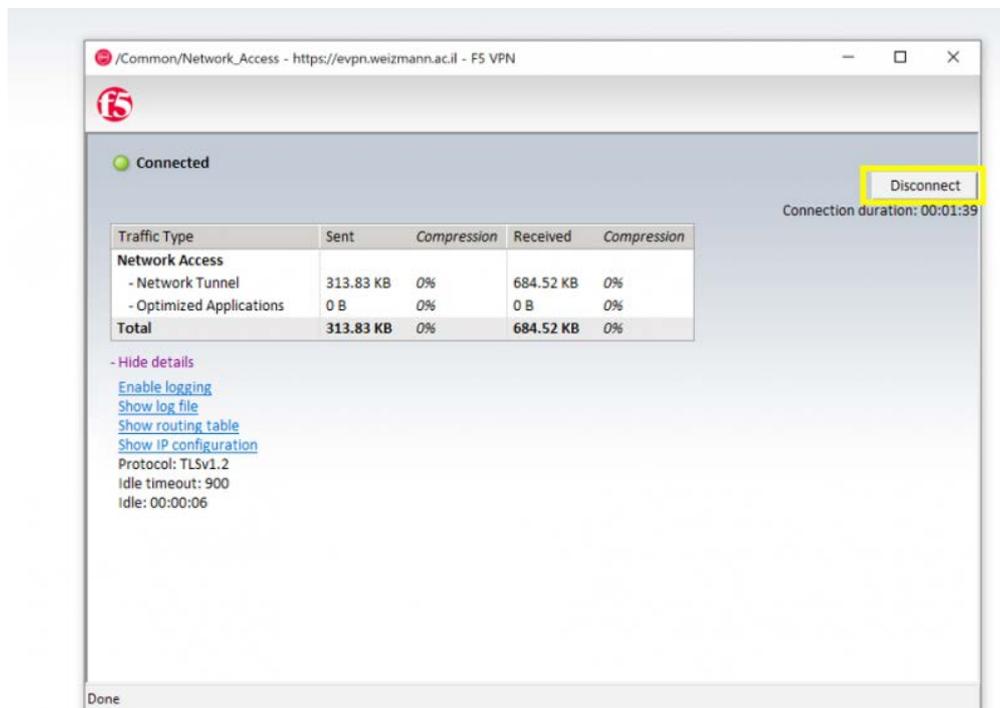
13. When the installation completes, click **Yes** again in the next window to initiate the connection.



14. When your work is complete, double-click the **VPN F5 icon** in the Windows task bar notification area.



15. To disconnect from the network, click **Disconnect** in the window that appears.



Remote Connection via F5 Client VPN on Macintosh Computers

To connect from via F5 Client VPN perform the following:

1. Use your browser to access this link <https://pracevpn.weizmann.ac.il>



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Username

Password

OTP
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2. Enter your VPN User ID and password you received by email.



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WEIZMANN INSTITUTE OF SCIENCE

Secure Logon

Username

Password

OTP
EMAIL ▾

Logon

3. Select EMAIL as the method to receive an OTP (One Time Password) and click **Logon**.



The image shows the 'Secure Logon' form on the Weizmann Institute of Science website. At the top, there is a logo of a tree and the text 'מכון ויצמן למדע' and 'WEIZMANN INSTITUTE OF SCIENCE'. Below the logo, the form is titled 'Secure Logon'. It contains three input fields: 'Username', 'Password', and 'OTP'. The 'OTP' dropdown menu is set to 'EMAIL'. A 'Logon' button is located at the bottom of the form. A yellow box highlights the 'OTP' dropdown and the 'Logon' button.

4. Enter the One Time Password received via **EMAIL** and click **Logon**.

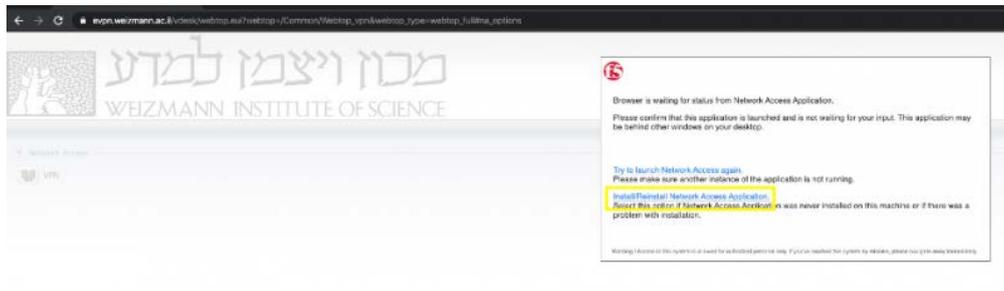


The image shows the 'Secure Logon' form on the Weizmann Institute of Science website. At the top, there is a logo of a tree and the text 'מכון ויצמן למדע' and 'WEIZMANN INSTITUTE OF SCIENCE'. Below the logo, the form is titled 'Secure Logon'. It contains three input fields: 'Username', 'Password', and 'OTP'. The 'OTP' dropdown menu is set to 'EMAIL'. A 'Logon' button is located at the bottom of the form. A yellow box highlights the 'OTP' dropdown and the 'Logon' button.

5. Click **More options** in the pop up window



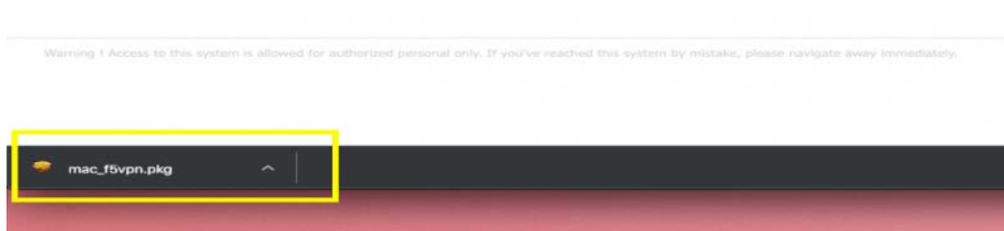
6. Click **Install/Reinstall Network Access Application** in the next window.



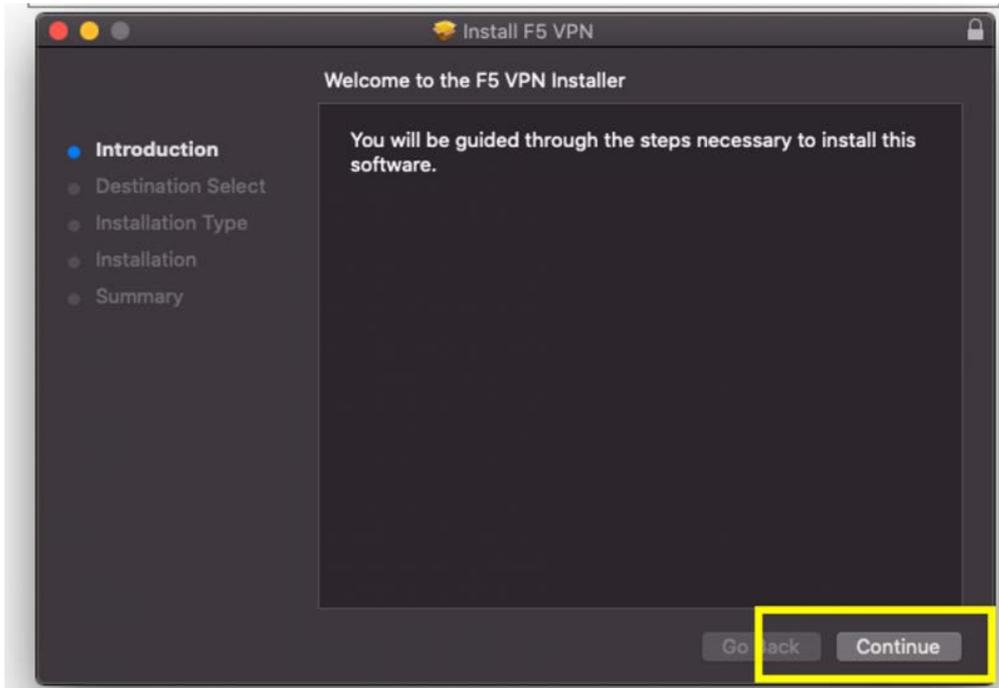
7. Click **Download** in the next window.



8. When the download finishes, double-click the **mac_f5vpn.pkg** file with your mouse.



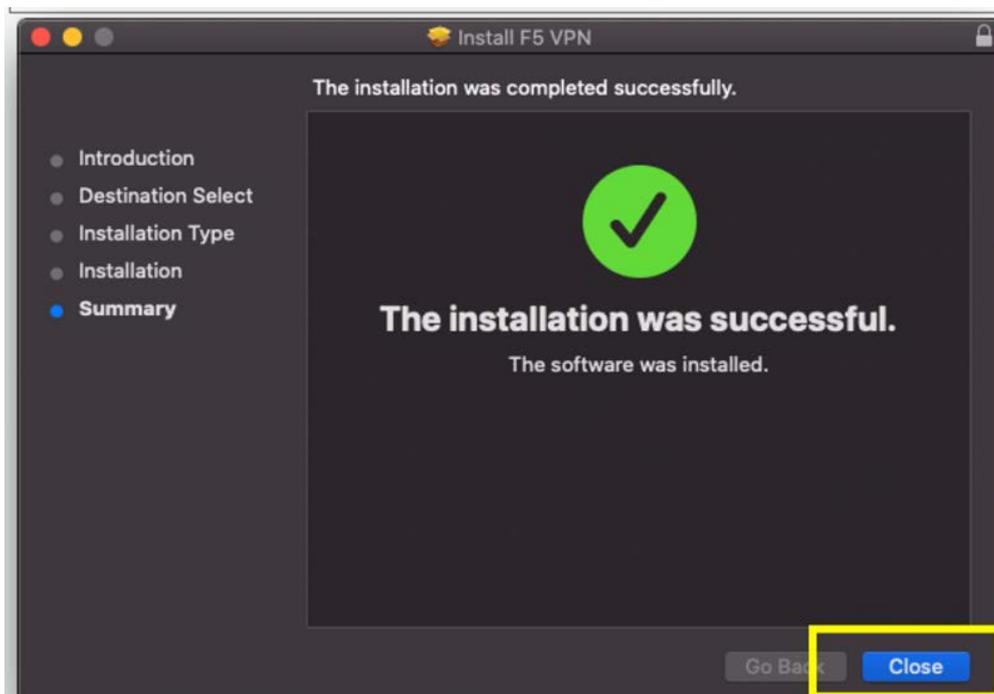
9. In the installation application window that appears, click **Continue**.



10. Enter your computer's authorization password to approve the installation and click **Install Software**.



11. When the installation completes click **Close**.



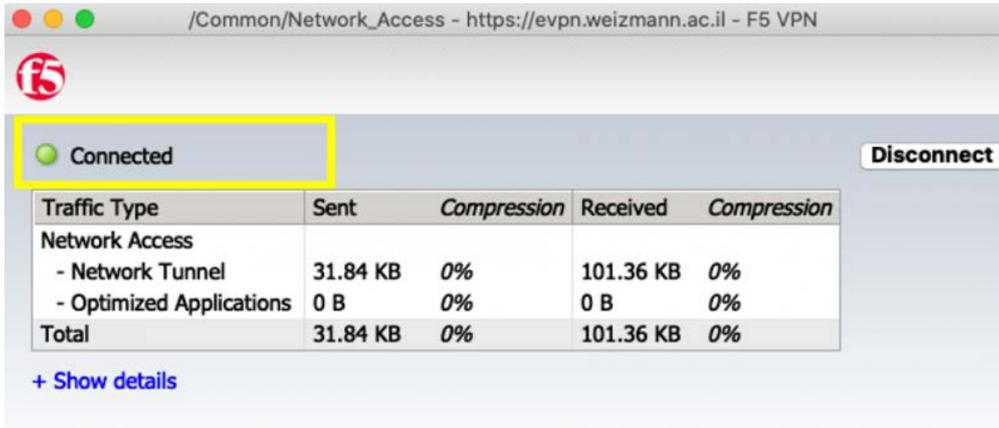
12. Once the installation application window is closed click **Click here** to connect.



13. In the pop up window (with **Open F5 VPN** in the title bar), click **Open F5 VPN**.



14. When the process is completed, a window will appear with **Connected** status indication.

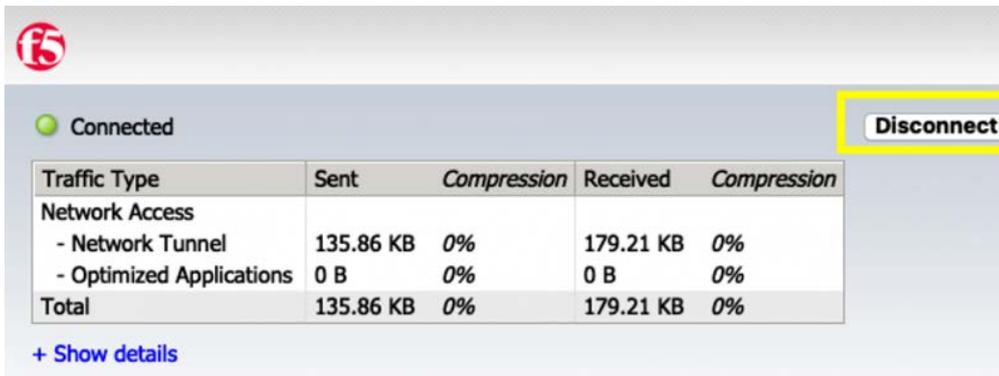


The screenshot shows a web-based VPN client interface. At the top, the browser address bar displays "/Common/Network_Access - https://evpn.weizmann.ac.il - F5 VPN". Below the address bar is a red circular logo with a white 'F5' inside. The main content area features a green circle with a white dot next to the word "Connected", which is highlighted by a yellow rectangular box. To the right of this status indicator is a "Disconnect" button. Below the status bar is a table with the following data:

| Traffic Type | Sent | Compression | Received | Compression |
|--------------------------|----------|-------------|-----------|-------------|
| Network Access | | | | |
| - Network Tunnel | 31.84 KB | 0% | 101.36 KB | 0% |
| - Optimized Applications | 0 B | 0% | 0 B | 0% |
| Total | 31.84 KB | 0% | 101.36 KB | 0% |

Below the table, there is a blue link that says "+ Show details".

15. When your work is finished, be sure to disconnect from the network by clicking **Disconnect** in this window.



This screenshot shows the same VPN client interface as in the previous image. The status remains "Connected". The traffic summary table now shows updated data:

| Traffic Type | Sent | Compression | Received | Compression |
|--------------------------|-----------|-------------|-----------|-------------|
| Network Access | | | | |
| - Network Tunnel | 135.86 KB | 0% | 179.21 KB | 0% |
| - Optimized Applications | 0 B | 0% | 0 B | 0% |
| Total | 135.86 KB | 0% | 179.21 KB | 0% |

The "Disconnect" button is now highlighted with a yellow rectangular box. The "+ Show details" link remains visible below the table.

Connecting to the PRACE HPC Cluster

You will receive an email with subject “**PRACE 2021 Winter School in Israel - HPC ACCESS**” containing PRACE HPC credentials (username and password) and details regarding the servers.

Connection to the server is via standard SSH protocol.

Part of the event workshops will work with graphical interface programs and we encourage all participants to set-up their X11 connections (For windows users MobaXterm is the recommended program for SSH and X11 connections).

PRACE HPC SERVER NAMES:

There are two login servers for users to access and work from:

access1.ehpc.weizmann.ac.il

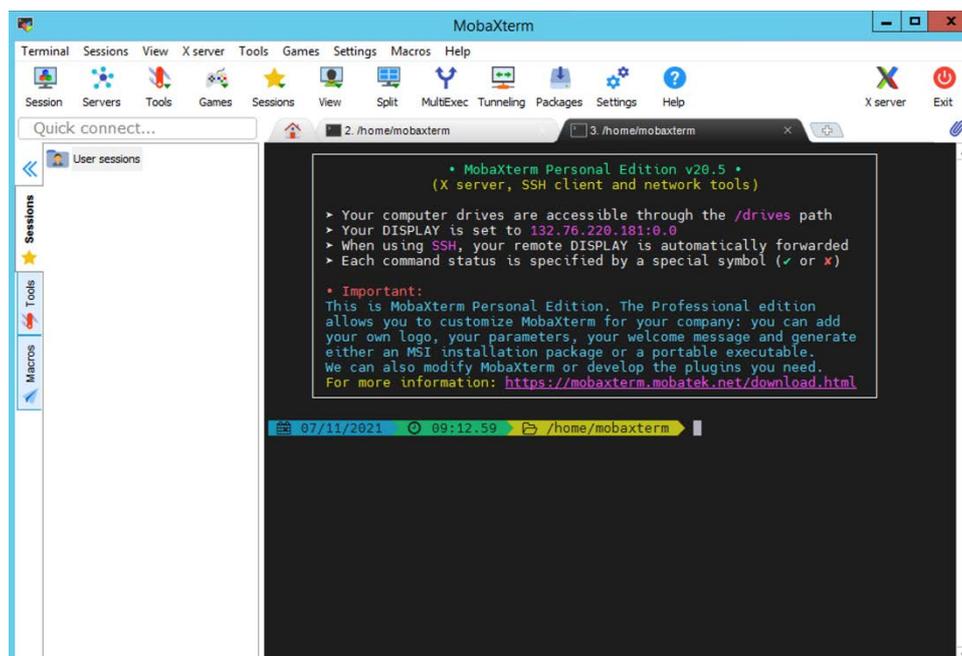
access2.ehpc.weizmann.ac.il

*Note that access to the servers will be available only with an active VPN connection.

Connection to PRACE HPC from Windows (MobaXterm):

1. Download and install MobaXterm to your PC. Navigate to the next link: <https://mobaxterm.mobatek.net/download.html> --> click “Download Now” and Choose Portable edition.

After the download is complete, unpack the package and run the MobaXterm executable file.

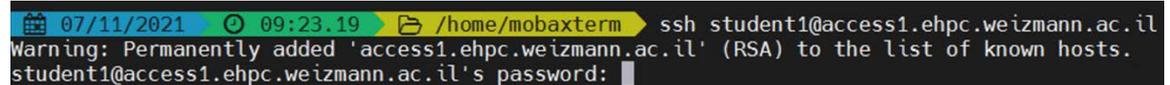


- Using “ ssh ” command, login to the PRACE HPC with **your username** and password in the terminal window and enter the next command:

```
ssh username@access1.ehpc.weizmann.ac.il
```

or

```
ssh username@access2.ehpc.weizmann.ac.il
```



```
07/11/2021 09:23.19 /home/mobaxterm ssh student1@access1.ehpc.weizmann.ac.il
Warning: Permanently added 'access1.ehpc.weizmann.ac.il' (RSA) to the list of known hosts.
student1@access1.ehpc.weizmann.ac.il's password: █
```

- Enter the password you received and you should be able to connect to the server.

Connection to PRACE HPC from Mac/Linux:

Mac and Linux operating systems natively support SSH connection via terminal application.

In order to connect to PRACE HPC with X11 support on Mac - XQuartz program should be installed:

- Download the program from here: <https://www.xquartz.org/>
- Click on the file - XQuartz-2.8.1.dmg and then open XQuartz.pkg.
- Press continue until the installation begin. After the installation is completed – you are ready to go!

Connect to PRACE HPC from terminal

- Open terminal program and using “ ssh ” command, login to the PRACE HPC with **your username** and password in the terminal window and enter the next command:

```
ssh -Y username@access1.ehpc.weizmann.ac.il
```

or

```
ssh -Y username@access2.ehpc.weizmann.ac.il
```

Using software on the PRACE HPC infrastructure:

The software environment is configured via LMOD modules. Below are some examples of how to use the software:

- Example: Overview of available programs(modules), command: module avail

```
[root@access1 ~]# module avail

----- /etc/modulefiles -----
mpi/openmpi-x86_64
|
----- /usr/share/modulefiles -----
pmi/pmix-x86_64

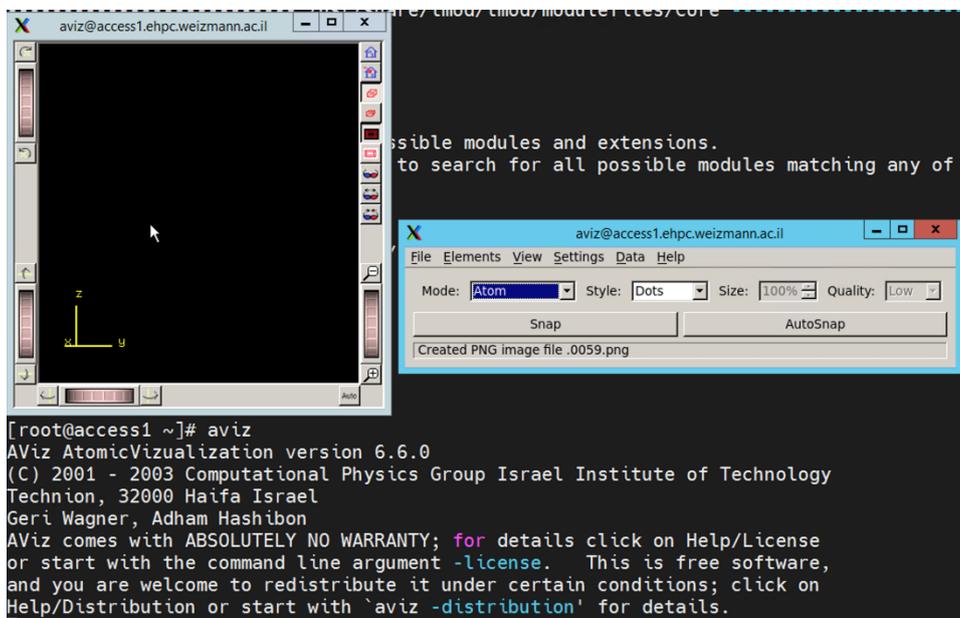
----- /apps/Modules -----
AViz/6.0.0          cubelib/4.6          scalasca/2.6          tau/2.30.2 (D)
LAMMPS/29.09.2021  icompiler/2021.3     scorep/7.1            tau2/2.30.1
VSCode-linux-x64/1.58.2  pdtoolkit/3.25.1    tau/2.30.1            tau3/2.30.1
cubegui/4.6         q-e-qe/6.8           tau/2.30.2-gcc
```

- Example: Load on of the programs(AViz): module load AViz/6.0.0
Example: See the loaded modules(software environment)

```
[root@access1 ~]# module load AViz/6.0.0
[root@access1 ~]# module list

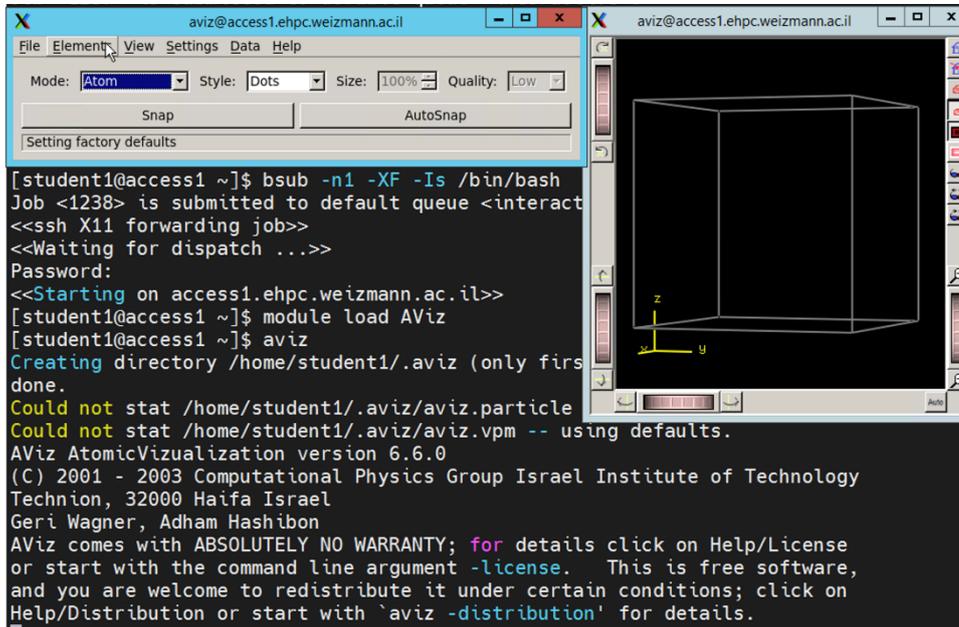
Currently Loaded Modules:
 1) AViz/6.0.0
```

- Example: Confirm that program is accessible, run command: aviz



*This example program opens a GUI window which confirms that X11 is working too.

- Example: execute the program as JOB on compute nodes:
 *Scheduler that is being used for job execution is IBM LSF, below is a simple interactive job execution example:



*-n1 stands for 1 cpu , -XF stands for X11 forwarding, -Is stands for interactive session.