

# Machine Learning Applications (MLA)

## Instruction for Infrastructure

## Overview of Accessing Computation Power



## What are these computers?

- 2 desktop computers with more computational power (GPU, CPU) are available for complex calculations each having
  - AMD Ryzen 7 2700X (8 Cores, 16 Threads) @3,7GHz
  - NVIDIA GeForce RTX 2080 TI
  - 32GB RAM
- MATLAB and Python are preinstalled

## How do I access these computers?

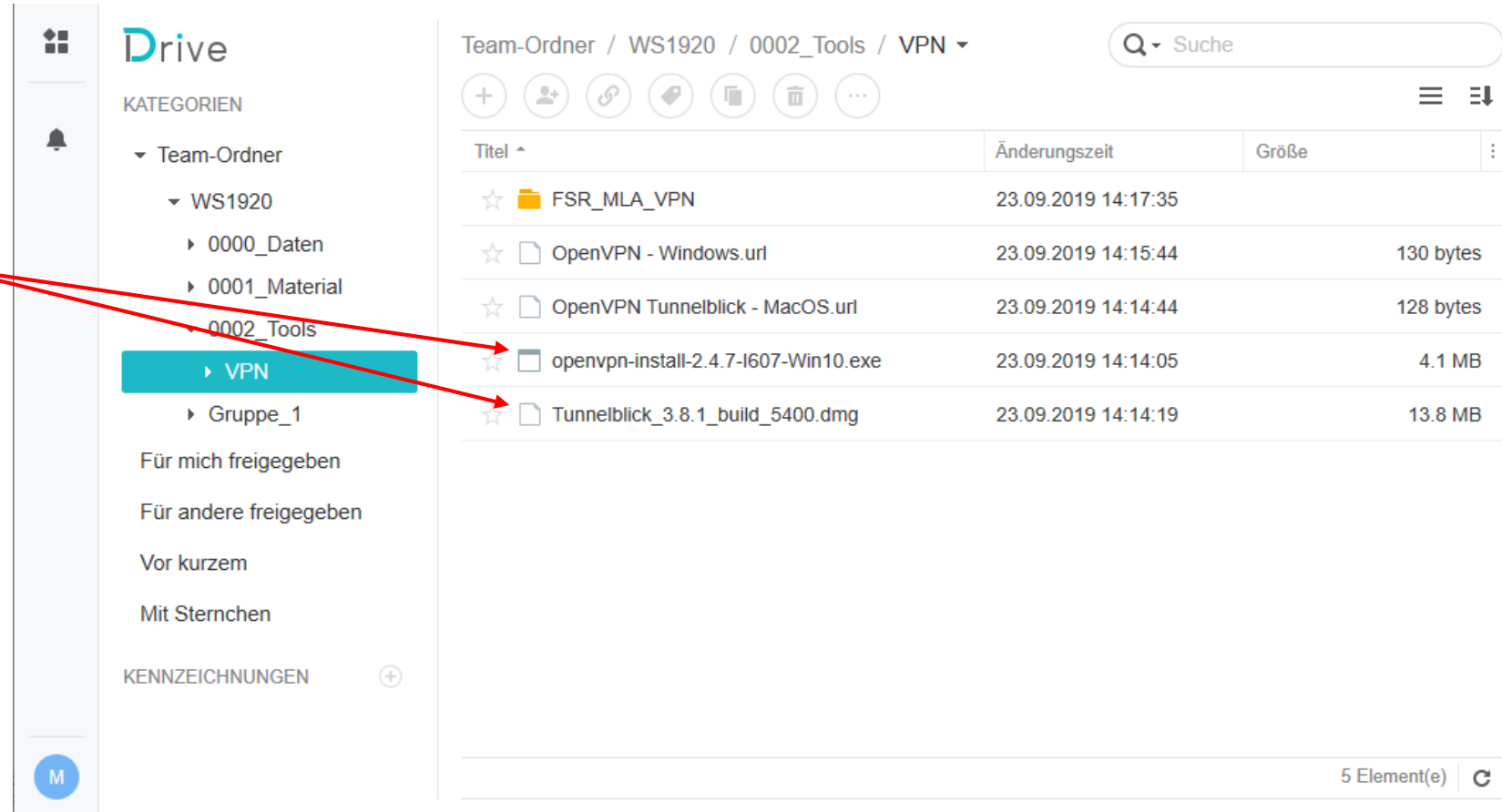
1. Reserve a time slot
2. Login to network (OpenVPN) and access computer via Microsoft Windows remote desktop

# How to Reserve the Computers?

- Reservation is done via Doodle
  - Reservation MLA PC 1: <https://doodle.com/poll/qm2f269xpui4eypf>
  - Reservation MLA PC 2: <https://doodle.com/poll/w64snsgwgvhageqn>
- Reservation can be done for 3 hour intervals
- You can reserve more than one interval – chaining the intervals is allowed
- The concept relies on **fair use**:
  - **Only reserve** the time intervals you really need
  - **Do not overrun** the time interval (e.g. finish 5 mins before end of your time slot)
  - **Free up** the resources at the end of your interval
  - **Do not login** to the computer, when you do not have a reservation (e.g. login 5 minutes after start of your time slot)
  - **Remove your reservation**, if you see that you do not need it  
(if you can't remove the reservation by yourself contact [mla@fsr.tu-darmstadt.de](mailto:mla@fsr.tu-darmstadt.de))

# How to Login to the Computers' Network? (1)

- You must install and use an OpenVPN client
- You can get the OpenVPN client from the *Tools* that are delivered in your Drive (Windows & Mac)
- Download and install the OpenVPN client
- Alternatively
  - Windows: <https://openvpn.net/community-downloads/>
  - Mac: <https://tunnelblick.net/downloads.html>



Drive

KATEGORIEN

- Team-Ordner
  - WS1920
    - 0000\_Daten
    - 0001\_Material
    - 0002\_Tools
      - VPN**
      - Gruppe\_1

Für mich freigegeben

Für andere freigegeben

Vor kurzem

Mit Sternchen

KENNZEICHNUNGEN

Team-Ordner / WS1920 / 0002\_Tools / VPN

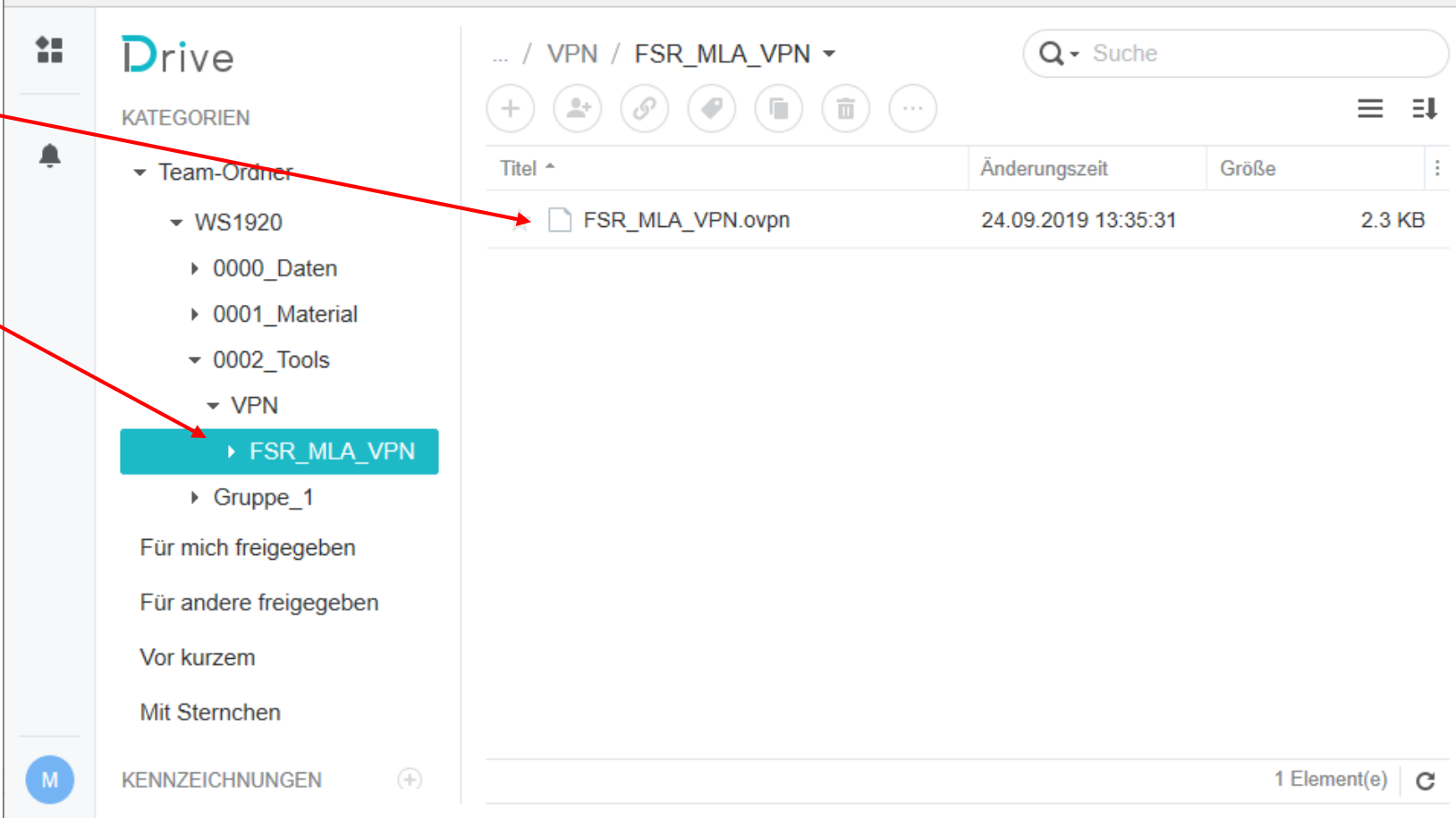
Suche

Titel	Änderungszeit	Größe
FSR_MLA_VPN	23.09.2019 14:17:35	
OpenVPN - Windows.url	23.09.2019 14:15:44	130 bytes
OpenVPN Tunnelblick - MacOS.url	23.09.2019 14:14:44	128 bytes
openvpn-install-2.4.7-l607-Win10.exe	23.09.2019 14:14:05	4.1 MB
Tunnelblick_3.8.1_build_5400.dmg	23.09.2019 14:14:19	13.8 MB

5 Element(e)

# How to Login to the Computers' Network? (2)


- Download the *FSR\_MLA\_VPN.ovpn* file from the *Tools* in Drive

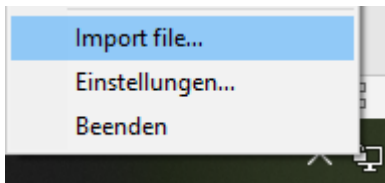


The screenshot shows the Google Drive interface. On the left, the 'KATEGORIEN' sidebar is expanded, showing a tree structure: Team-Ordner > WS1920 > 0000\_Daten, 0001\_Material, 0002\_Tools, and VPN. The 'FSR\_MLA\_VPN' folder under VPN is highlighted with a red arrow. Another red arrow points from the text 'Download the FSR\_MLA\_VPN.ovpn file from the Tools in Drive' to the file 'FSR\_MLA\_VPN.ovpn' in the main content area. The file is shown in a table with columns 'Titel', 'Änderungszeit', and 'Größe'. The file size is 2.3 KB and the modification time is 24.09.2019 13:35:31. The bottom right corner shows '1 Element(e)'.

Titel	Änderungszeit	Größe
FSR_MLA_VPN.ovpn	24.09.2019 13:35:31	2.3 KB



# How to Login to the Computers' Network? (3)

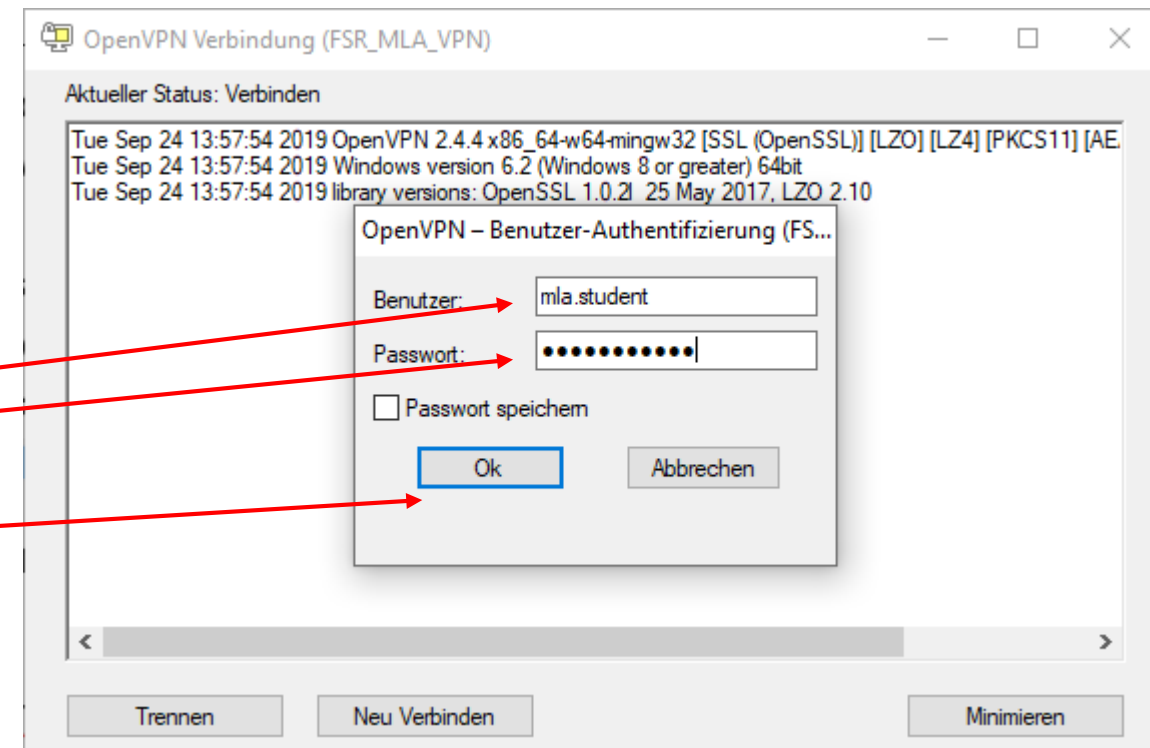
- Open the OpenVPN GUI on your Windows Computer
- This icon will appear in your task bar 
- Do a right mouse click on this icon and click on *Import file...*




- On MAC start the Tunnelblick VPN application
- Have a look into these instructions of the official webpage:  
<https://tunnelblick.net/cConfigT.html#setting-up-and-installing-configurations>
- Select the downloaded *FSR\_MLA\_VPN.ovpn* file

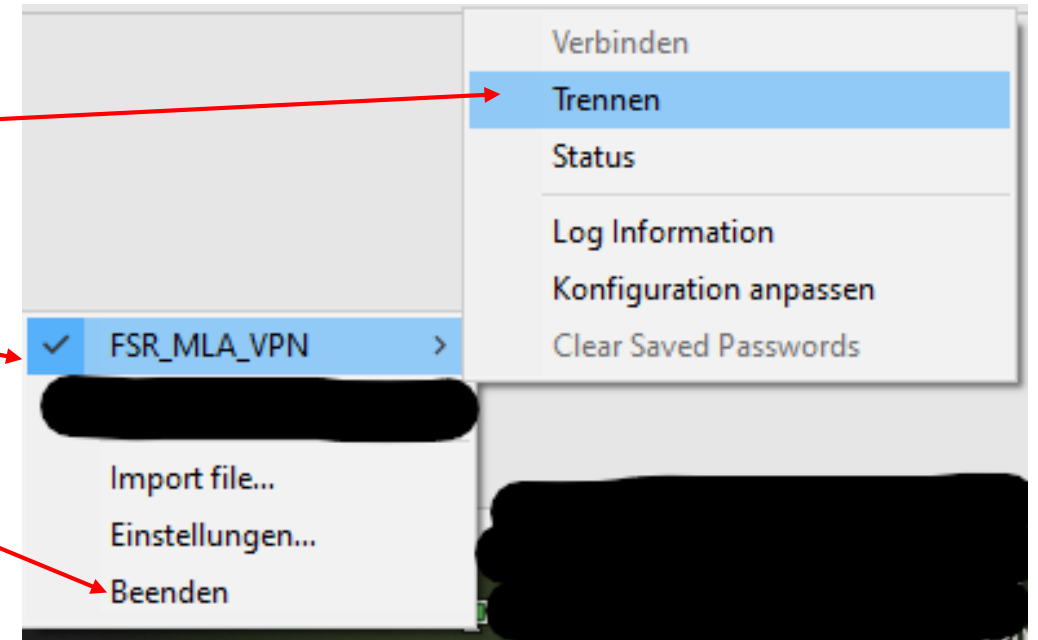
# How to Login to the Computers' Network? (4)

- Open the OpenVPN GUI on your Windows Computer
- This icon will appear in your task bar 
- Do a right mouse click on this icon select FSR\_MLA\_VPN and click *Verbinden*
- A window opens in which the connection starts to establish
- Enter your username and password when asked for
- Click *OK* and wait until the main window closes
- The icon in the taskbar should have a green screen 




# How to Login to the Computers' Network? (5)

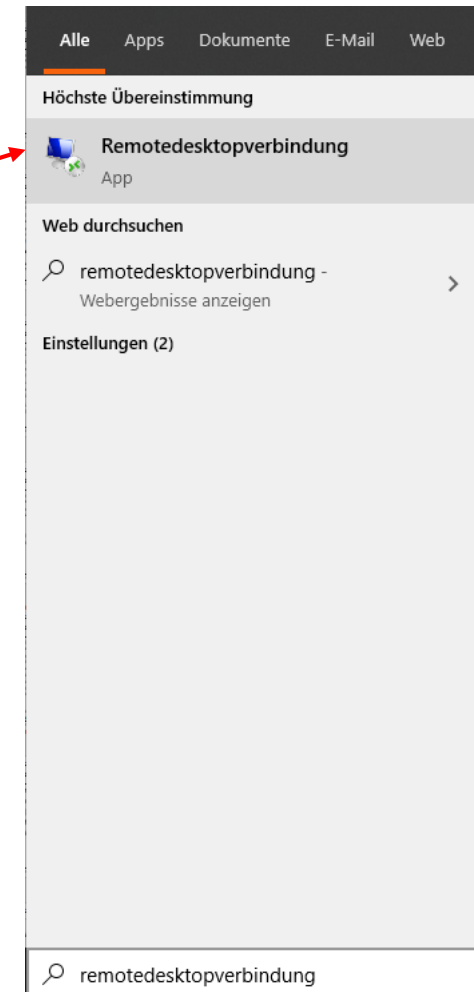
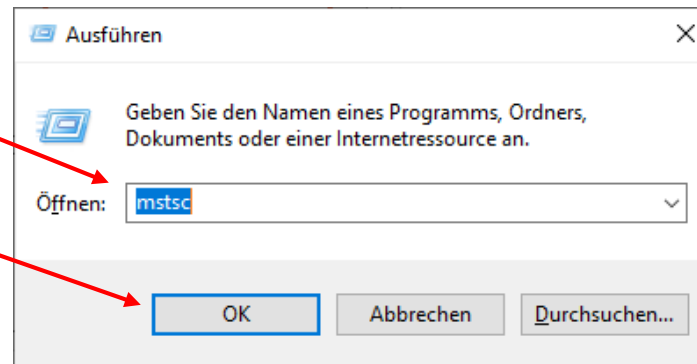
- When you are done using the computer **always disconnect** from the VPN connection
- Do a right mouse click on the icon  select FSR\_MLA\_VPN and click *Trennen*
- The connection is now closed and you can exit OpenVPN





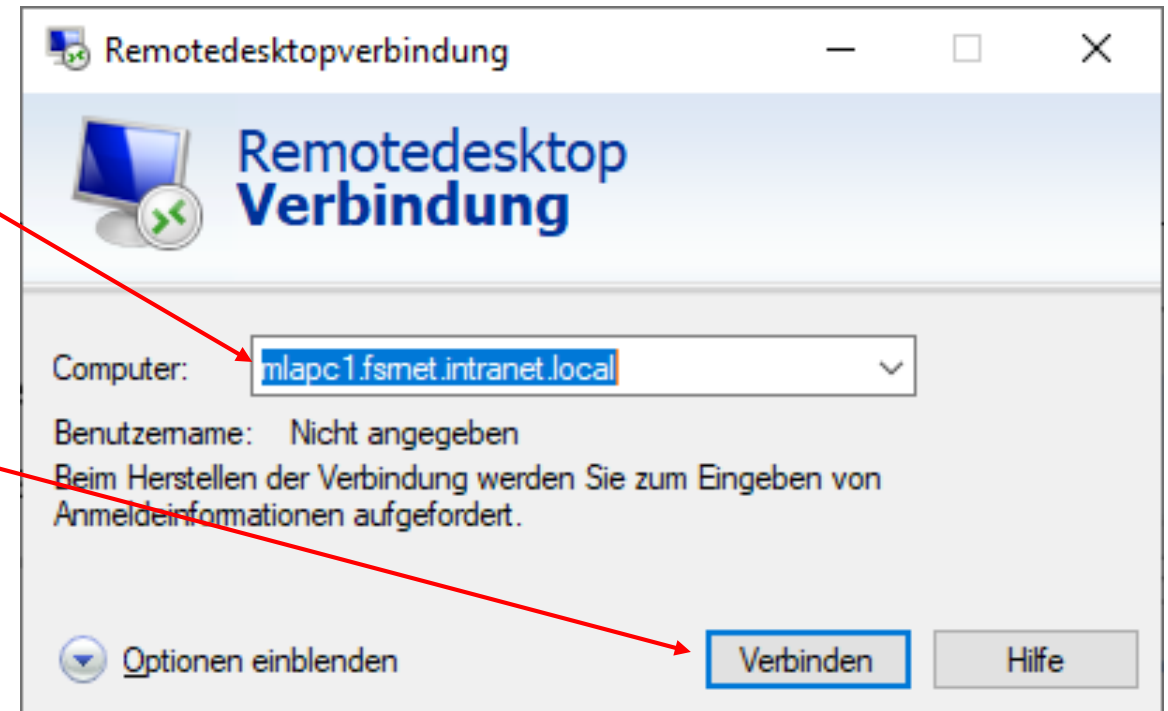
# How to Login to the Reserved Computer? (1)

- The login is only possible when connected to the VPN network! 
- You need to be able to use Microsoft Windows Remote Desktop connection
- Use the windows search and search for *Remotedesktop* or press Windows + R, type *mstsc* and press enter (click OK)
- MAC: <https://apps.apple.com/app/microsoft-remote-desktop/id1295203466?mt=12>



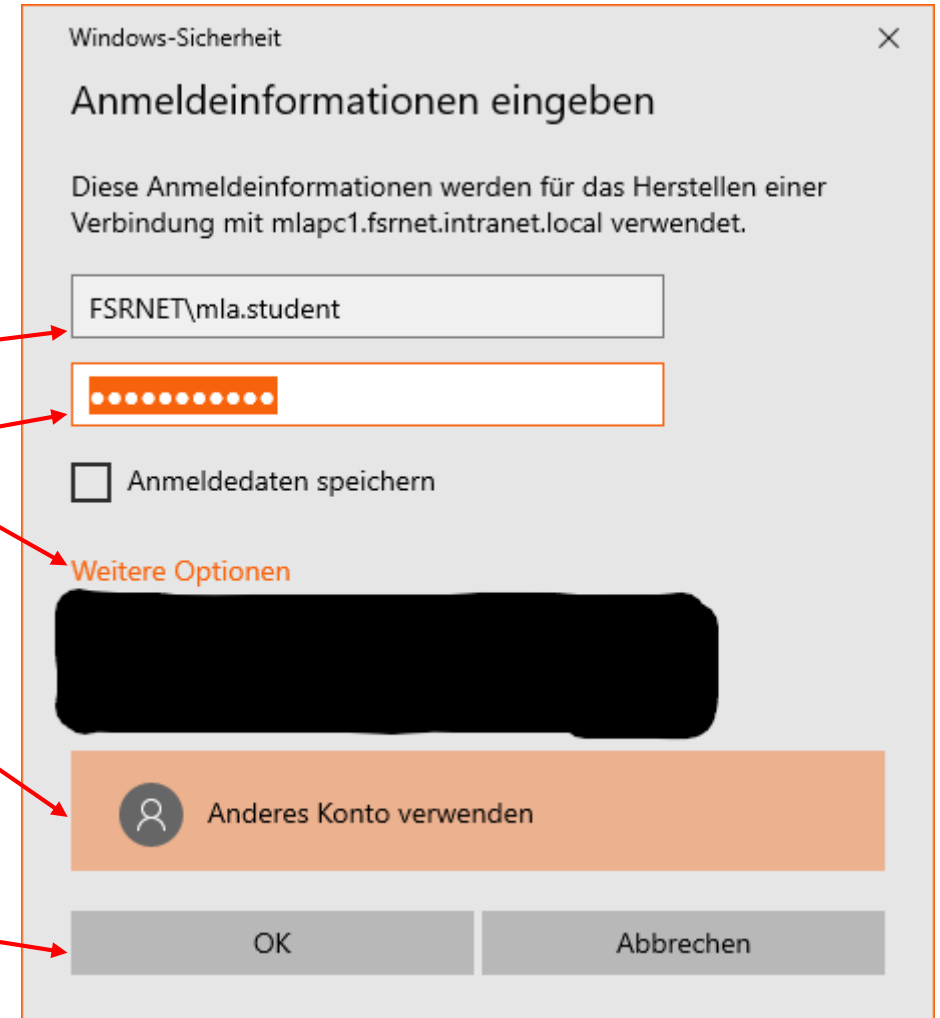
# How to Login to the Reserved Computer? (2)

- Enter the computer address for the computer that you've reserved
  - **MLA PC 1:** `mlapc1.fsrnet.intranet.local` **or** `130.83.71.31`
  - **MLA PC 2:** `mlapc2.fsrnet.intranet.local` **or** `130.83.71.32`
- Click on *Verbinden*



# How to Login to the Reserved Computer? (3)

- Click on *Weitere Optionen*
- Click on *Anderes Konto verwenden*
- Enter FSRNET\username
- Enter your password
- Click *OK*



Windows-Sicherheit

Anmeldeinformationen eingeben

Diese Anmeldeinformationen werden für das Herstellen einer Verbindung mit mlapc1.fsrnet.intranet.local verwendet.


FSRNET\mla.student

.....

☐ Anmeldedaten speichern

Weitere Optionen

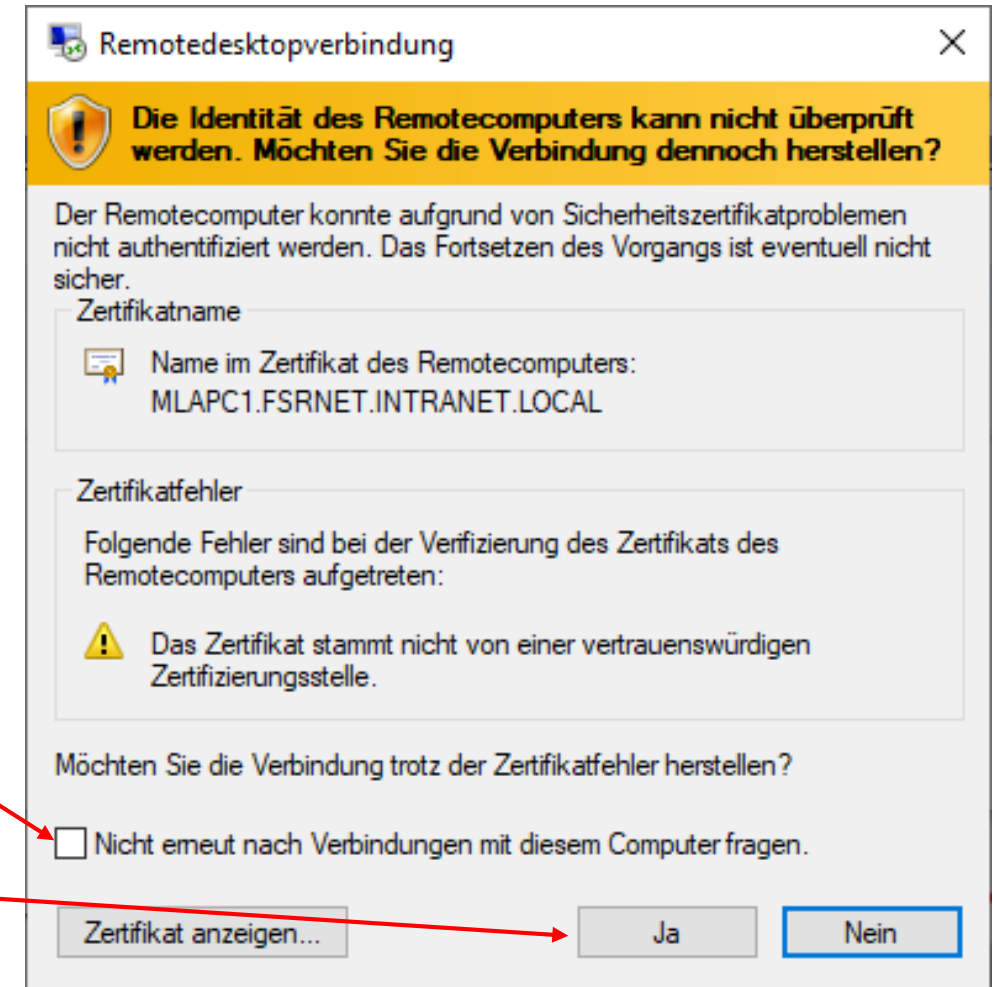
[Redacted area]

 Anderes Konto verwenden

OK Abbrechen

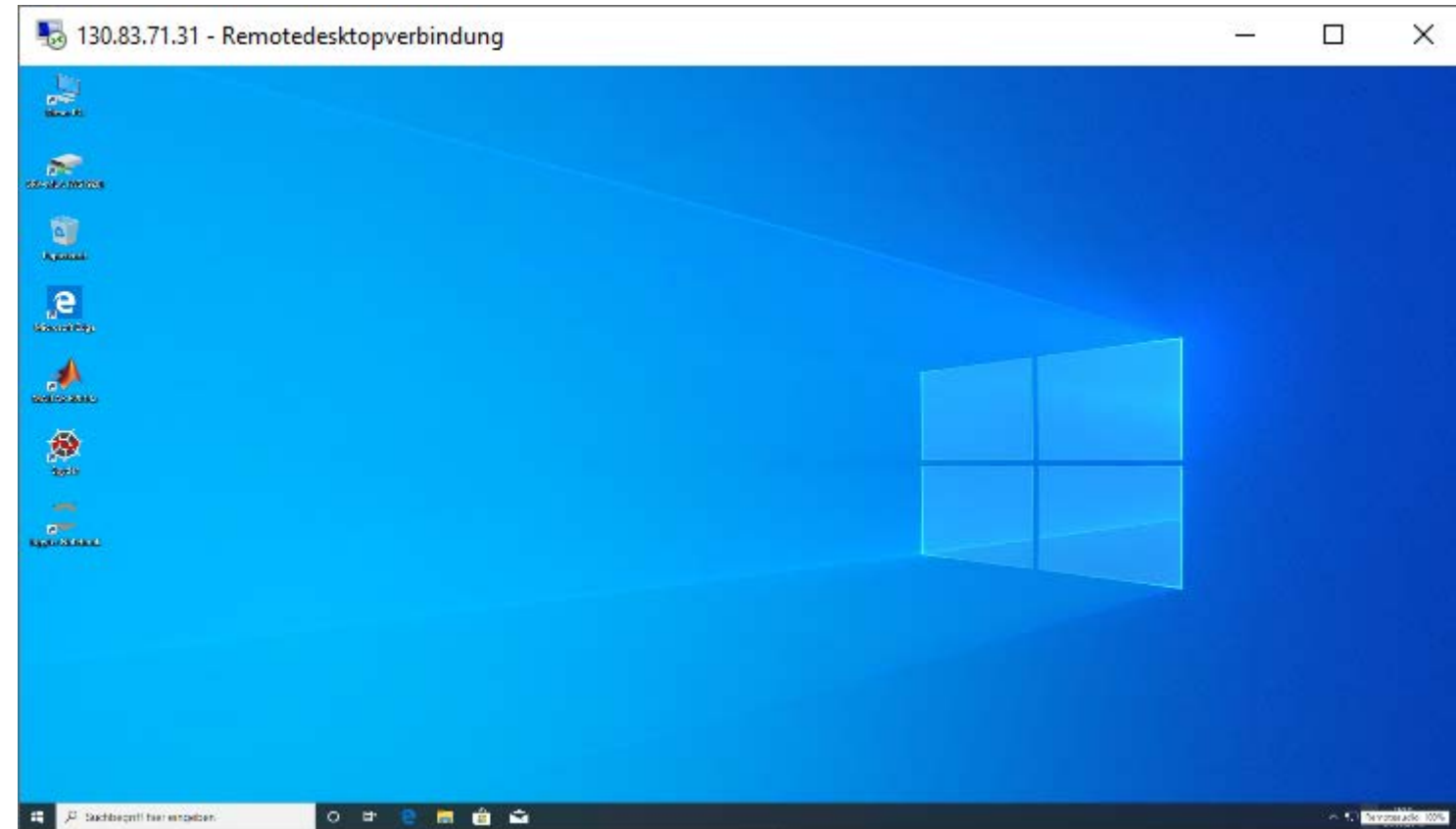
# How to Login to the Reserved Computer? (4)

- You might receive an message regarding the certificate for the computer
- Check the checkbox here
- Click on *Ja*



# How to Login to the Reserved Computer? (5)

- You will see the remote desktop and you can use it like a windows computer
- The access to the MLA data server is possible via the shared drive Z:\
- **Do not store data locally (except for short period)! It will be deleted!**



# Contact / Questions / Problems

---

**Simon Mehringskötter, M. Sc.**

Institute of Flight Systems and Automatic Control

L1|01 – 573

E-Mail: [mehringkoetter@fsr.tu-darmstadt.de](mailto:mehringkoetter@fsr.tu-darmstadt.de)

Tel: +49 6151 16-21067

