

# ODU Computer Science VPN Documentation

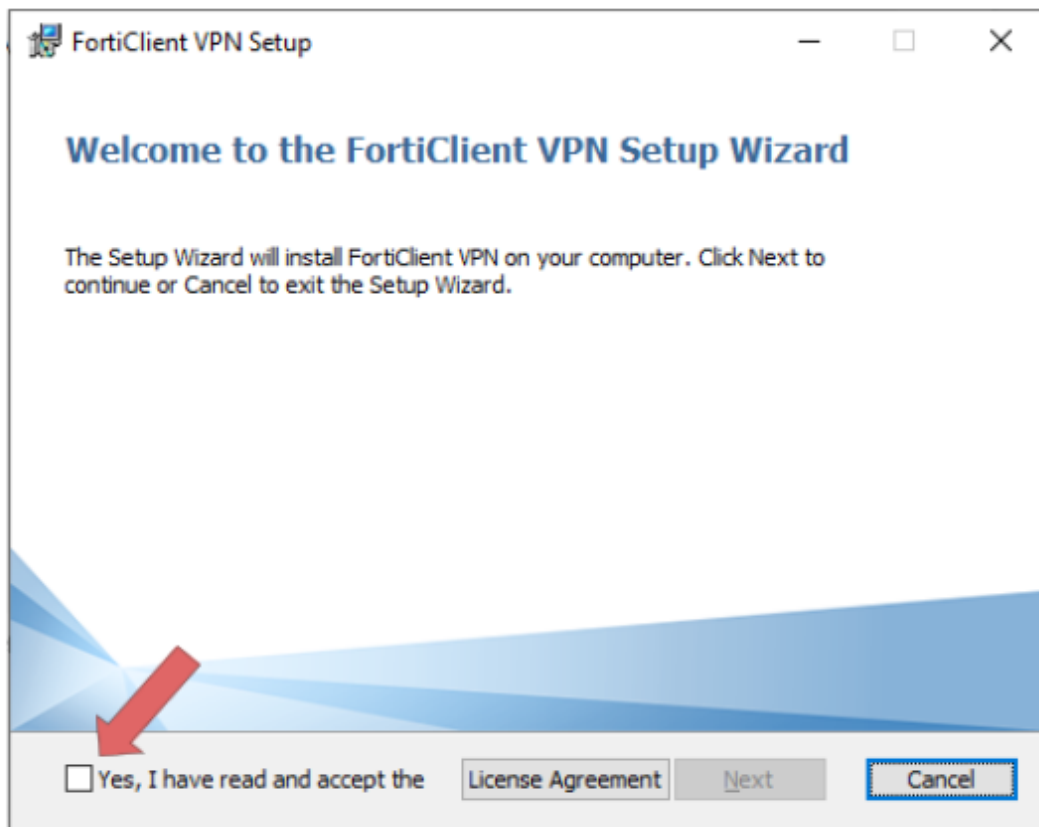
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## Using Windows:

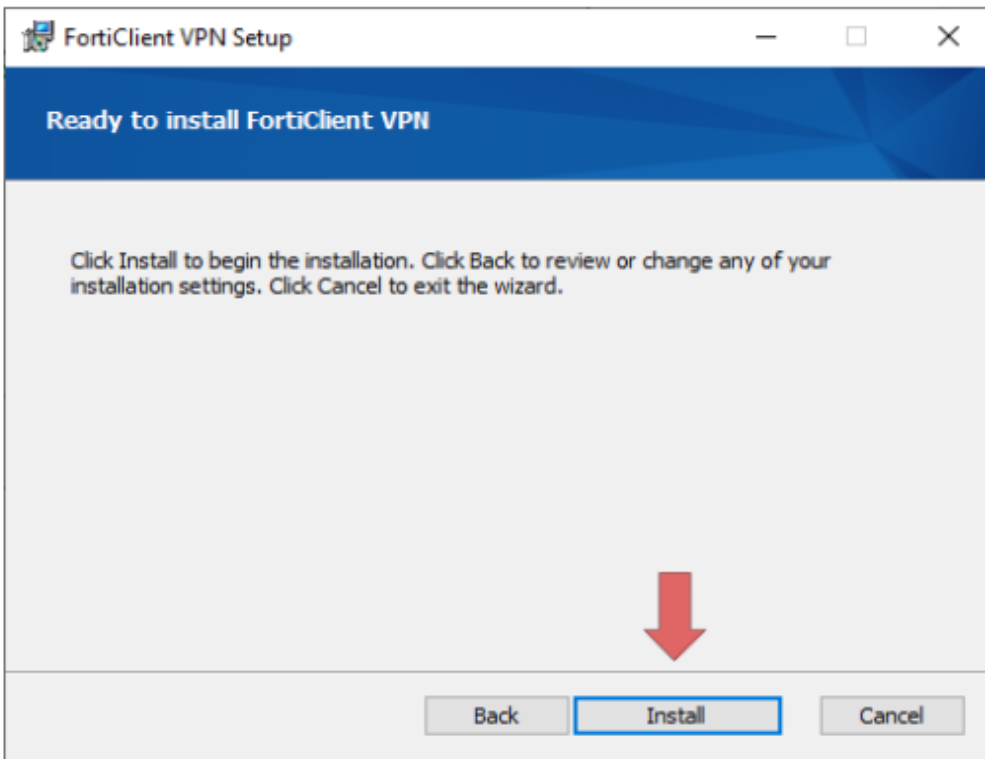
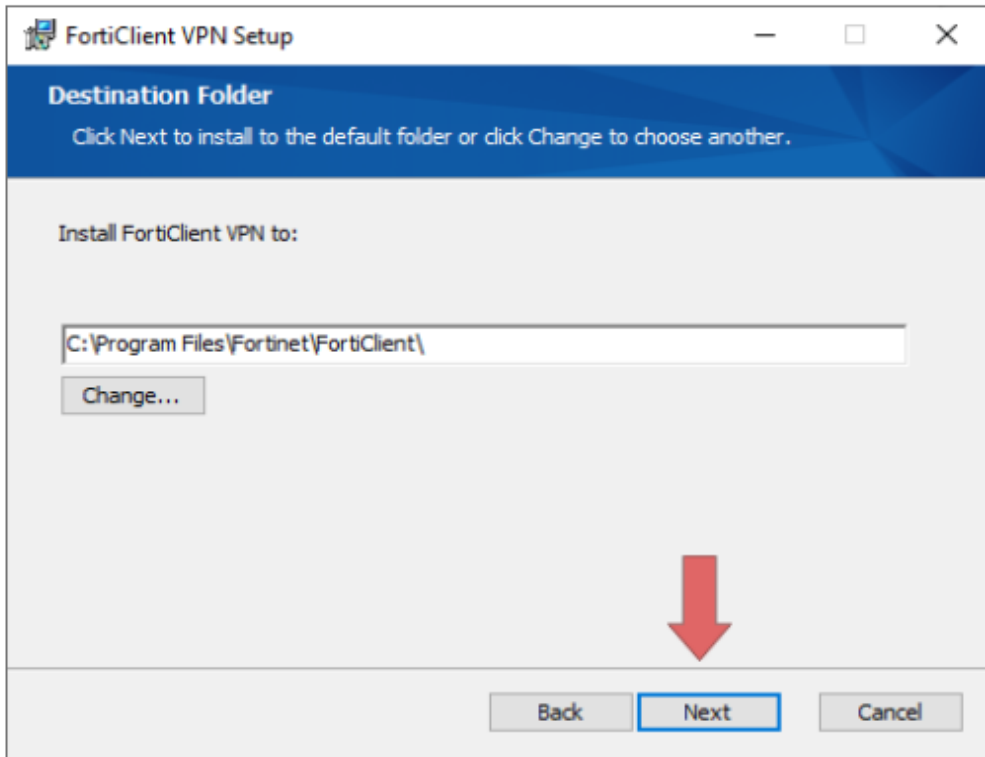
1. Visit <https://links.fortinet.com/forticlient/win/vpnagent> to download the Forticlient VPN (Windows).
  - a. This is a direct installation link, it will lead you to a blank page and prompt you to install.

 FortiClientVPNOnlineInstaller      7/22/2022 12:45 PM      Application      3,142 KB

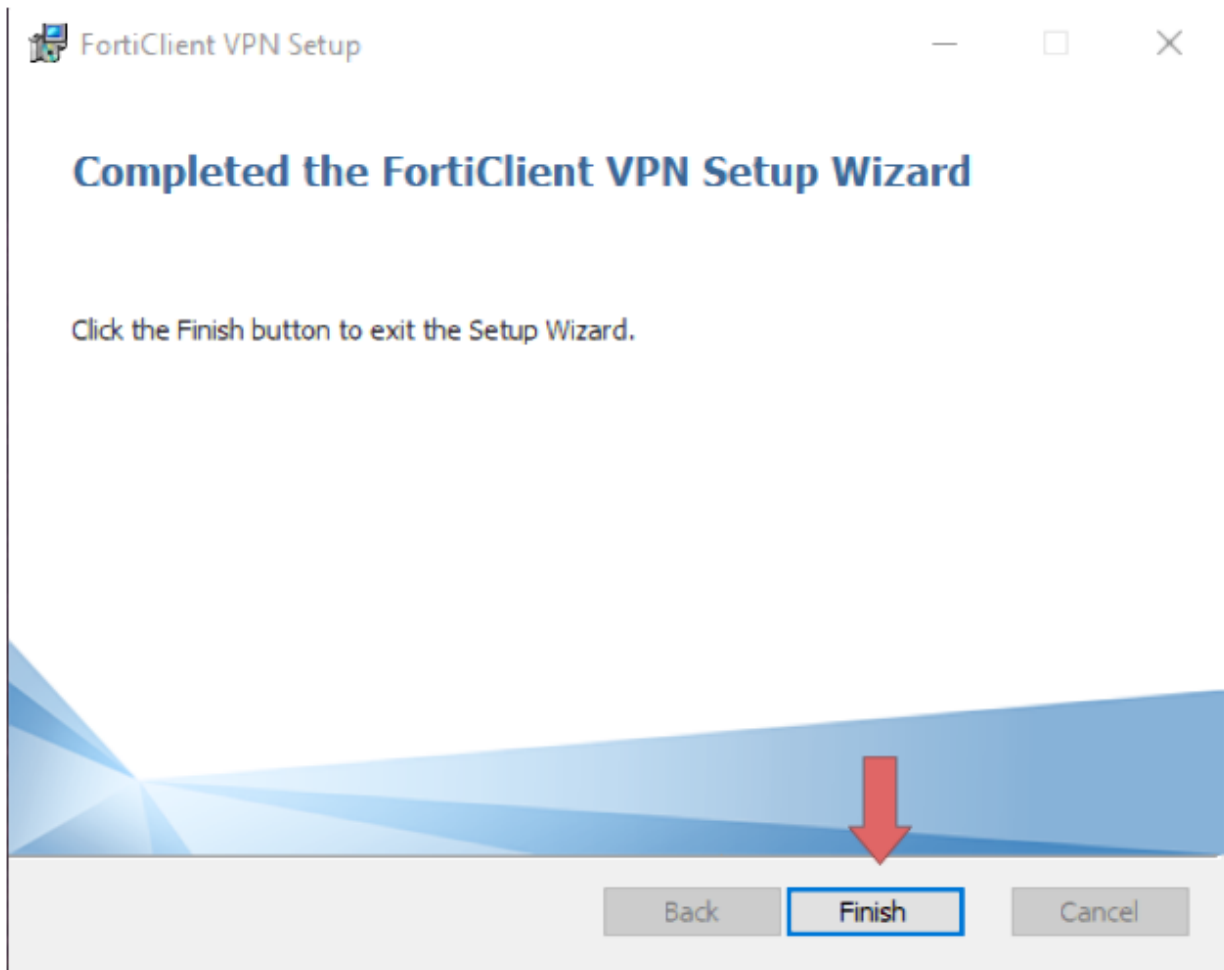
2. Run the downloaded installer and proceed through the setup wizard.



3. Read and accept the license agreement, select the folder location then click, **Next**, and **Install**.



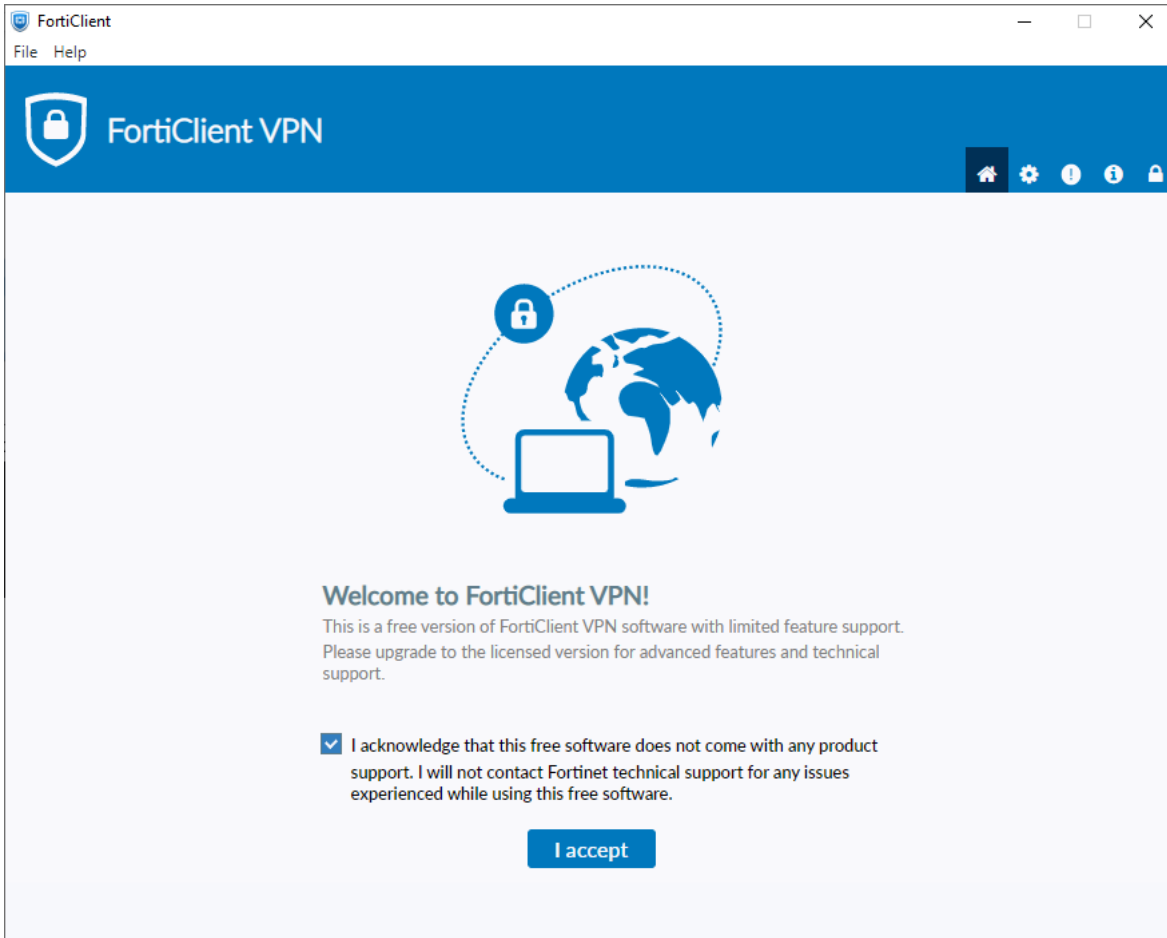
4. Once the Installation is finished click **Finish**.



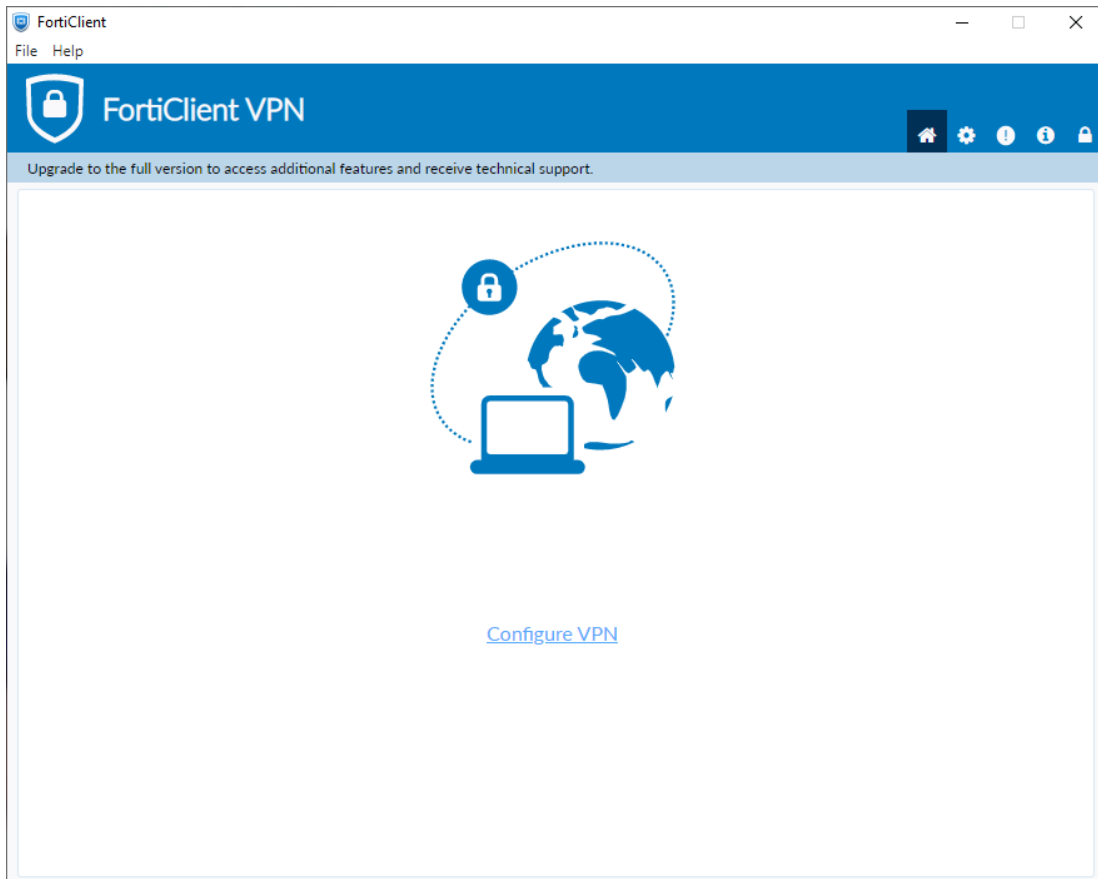
5. Locate and double-click the "**Forticlient VPN**" shortcut on your desktop.



6. Once the client is open click the box located next to the acknowledged agreement and click **“I accept”**.



## 7. Click “Configure VPN”



8. Enter the configurations for the VPN as follows:
  - a. VPN: Select **IPsec VPN**.
  - b. Connection Name: Name of your choosing (e.g., ODU CS VPN)
  - c. Description: **Any**
  - d. Remote Gateway: **128.82.11.12**
  - e. Authentication Method **Pre-shared key**
    - i. Pre-shared key: **1HtXv1^^27**

**Edit VPN Connection**

VPN: SSL-VPN **IPsec VPN** XML

Connection Name:

Description:

Remote Gateway:  ✕  
[+Add Remote Gateway](#)

Authentication Method:  ▼

Authentication (EAP):  Prompt on login  Save login  Disable

Fallover SSL VPN:  ▼

[+ Advanced Settings](#)

9. Click the + next to **Advanced Settings**, configure as follows:
  - a. Click the + next to **VPN Settings**:

**Edit VPN Connection**

VPN:  SSL-VPN  IPsec VPN  XML

Connection Name:


Description:

Remote Gateway:  ✕  
[+Add Remote Gateway](#)

Authentication Method:  ▼

Authentication (EAP):  Prompt on login  Save login  Disable

Fallback SSL VPN:  ▼

 [+ Advanced Settings](#)

- i. IKE: **Version 2**
- ii. Options: **Mode Config**

**VPN Settings**

IKE:  Version 1  Version 2

Options:  Mode Config  Manually Set  DHCP over IPsec

- b. Click the + next to **Phase 1**:
  - i. Algorithms: **AES128, AES256**
  - ii. Authentication: **SHA256, SHA512**
  - iii. Diffie-Hellman Groups: **5**



Phase 1

IKE Proposal

Encryption AES128 Authentication SHA256

Encryption AES256 Authentication SHA512

DH Group  1  2  5  14  15

16  17  18  19  20

Key Life  sec

Local ID

Dead Peer Detection

NAT Traversal

Enable Local LAN

- c. Click the + next to **Phase 2**:
- i. Algorithms: **AES128, AES256**
  - ii. Authentication: **SHA1, SHA1**
  - iii. Diffie-Hellman Group: **5**

Phase 2

IKE Proposal

Encryption AES128 Authentication SHA1

Encryption AES256 Authentication SHA1

Key Life   Seconds

KBytes

Enable Replay Detection

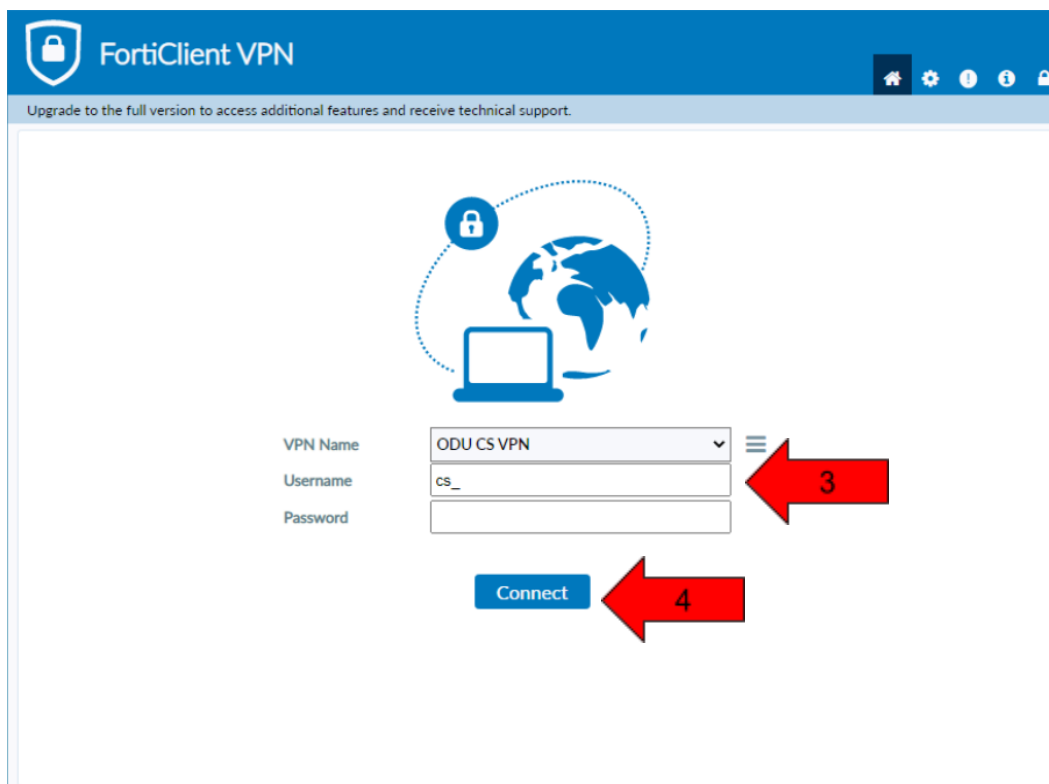
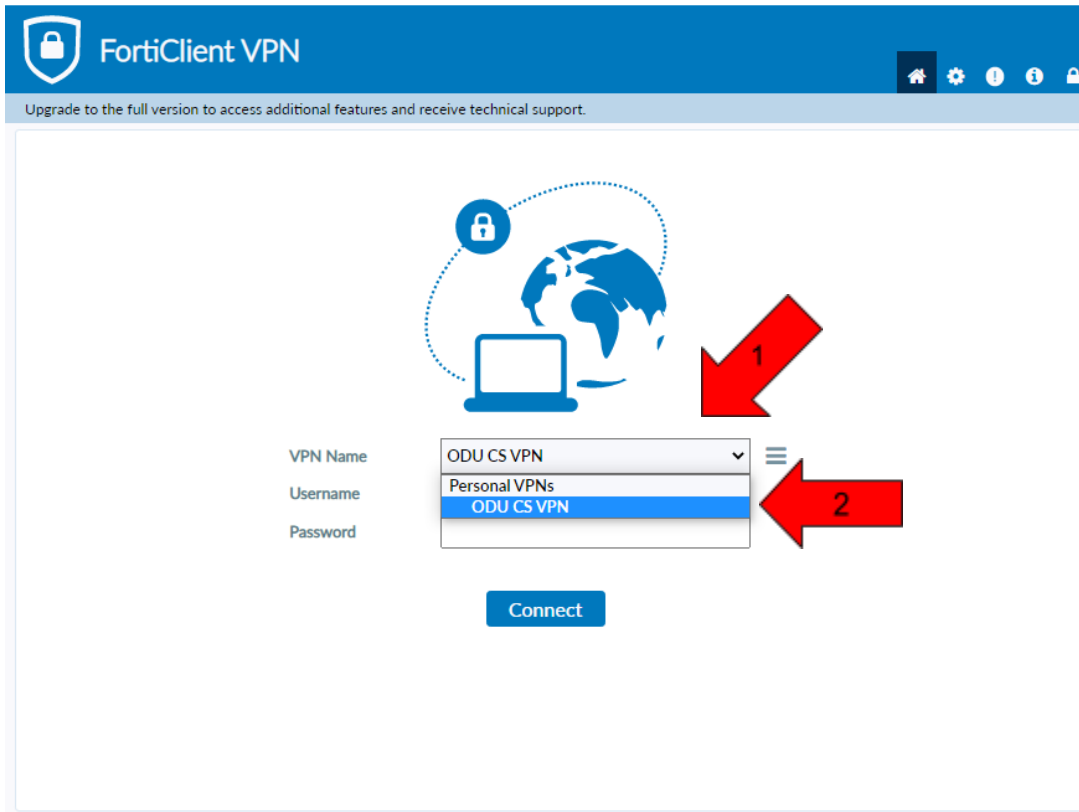
Enable Perfect Forward Secrecy (PFS)

DH Group

10. Finally, click **Save**.

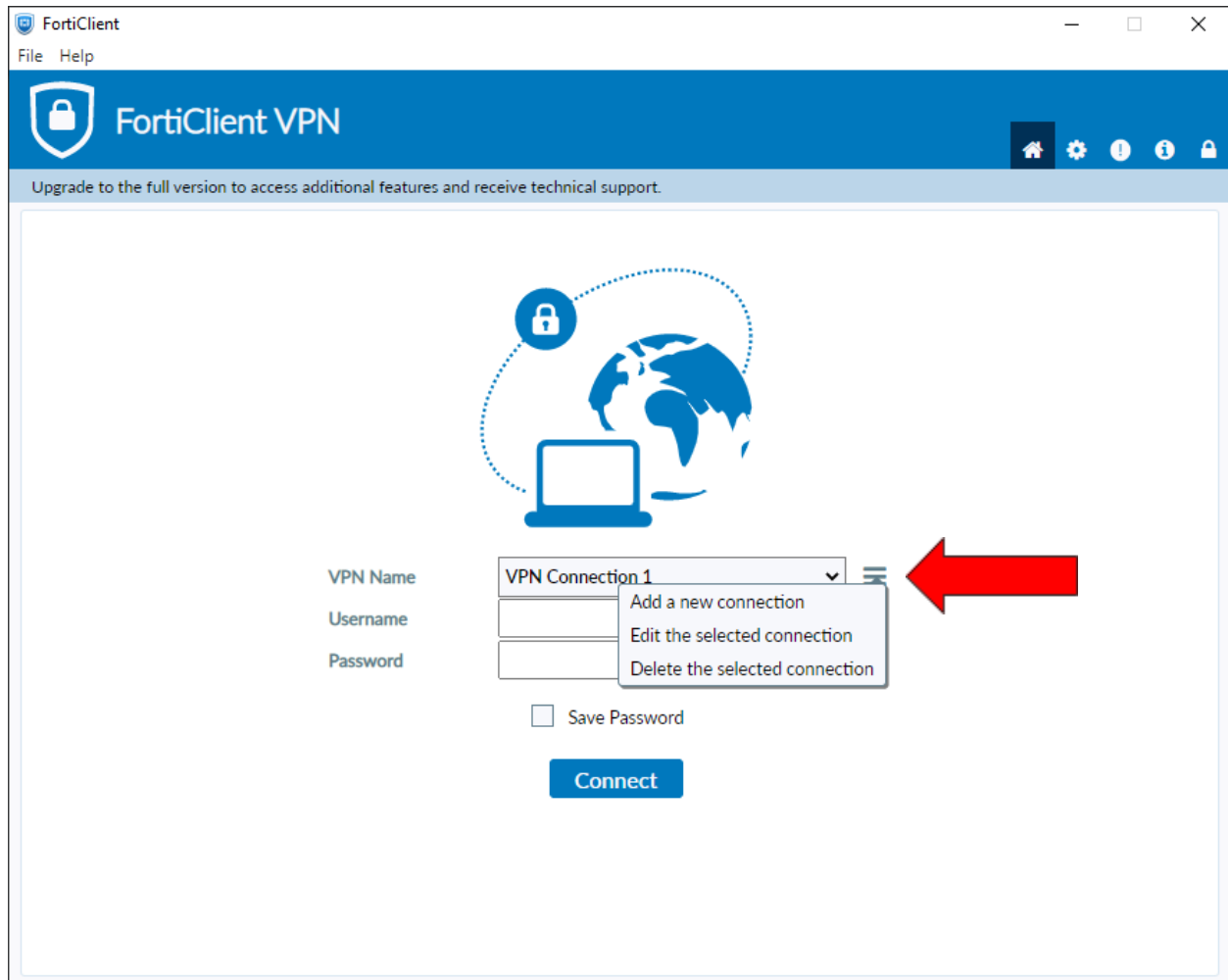


11. Select your created VPN Connection from the **drop down menu**. Enter your **ODU CS Credentials** and click **Connect**.



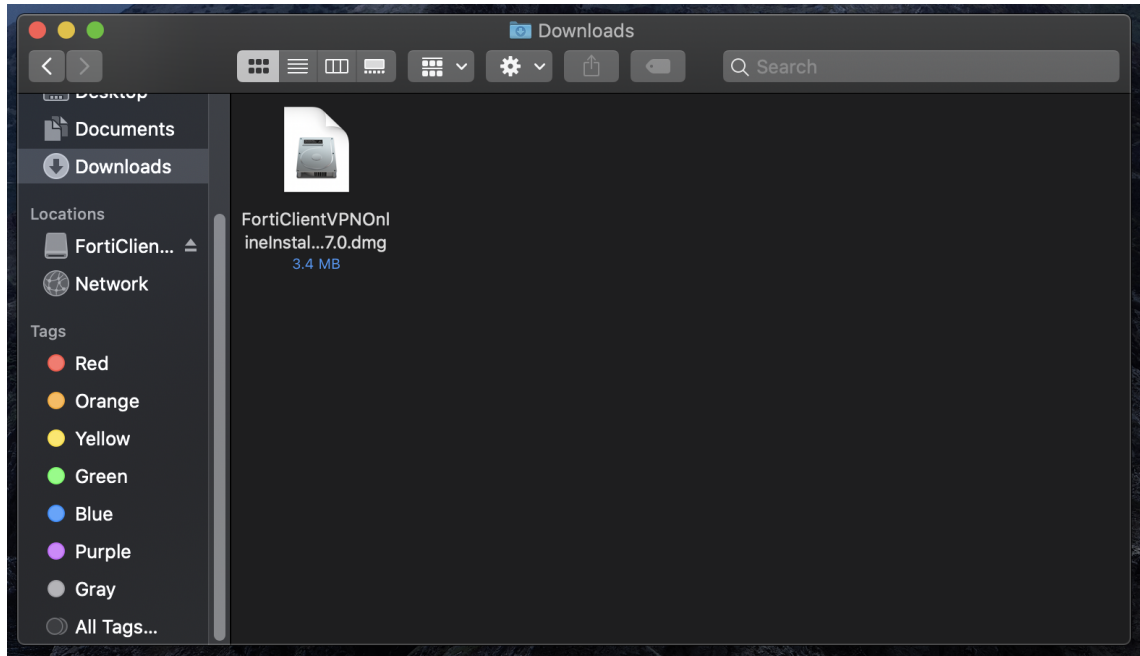
12. After clicking **connect**, you will receive a **DUO push** notification to your mobile device to confirm the Authentication process.

- a. **Check the DUO mobile app if you do not receive a notification.**
- b. To edit or add a connection click the **three lines** on the **right side of the VPN Name box**:

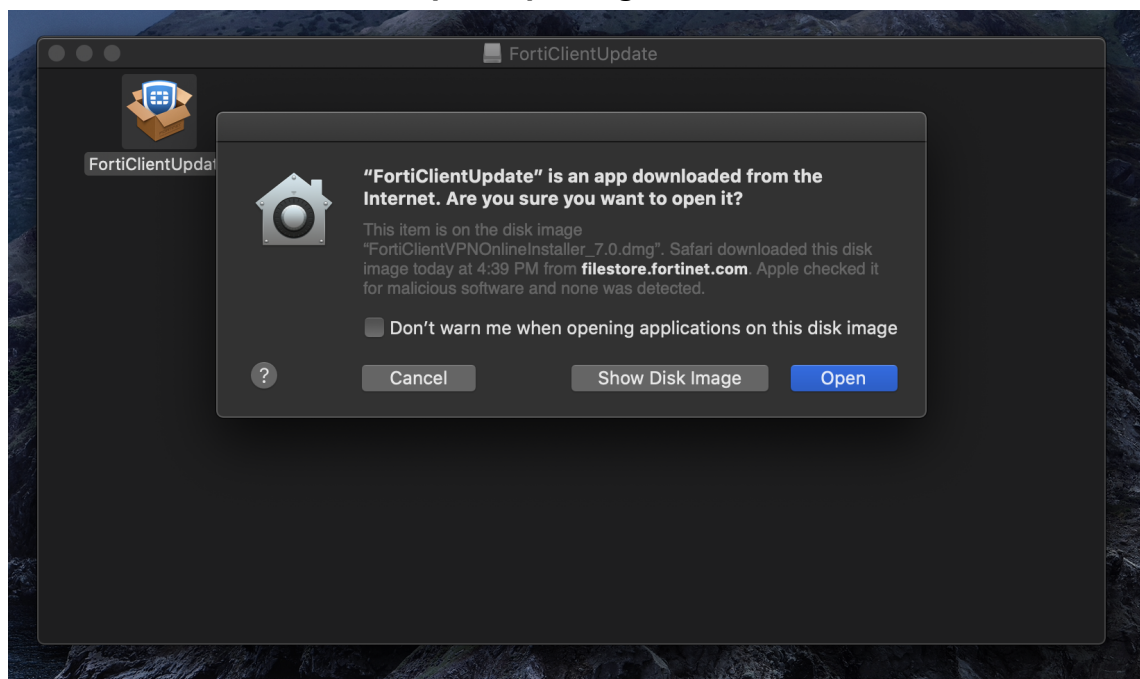


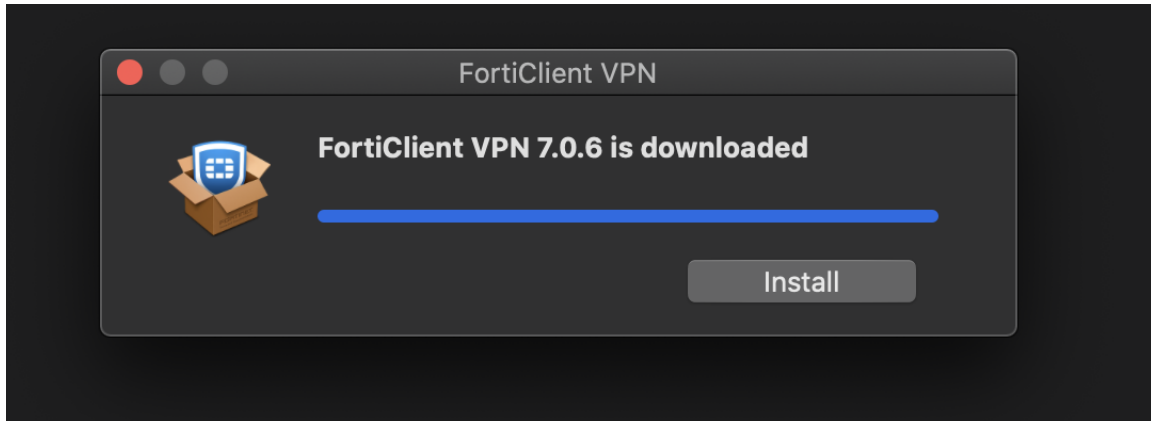
## Using Mac:

1. Visit <https://links.fortinet.com/forticlient/mac/vpnagent> to download the Forticlient VPN (Mac).
  - a. **This is a direct installation link**, it will lead you to a blank page and prompt you to install.

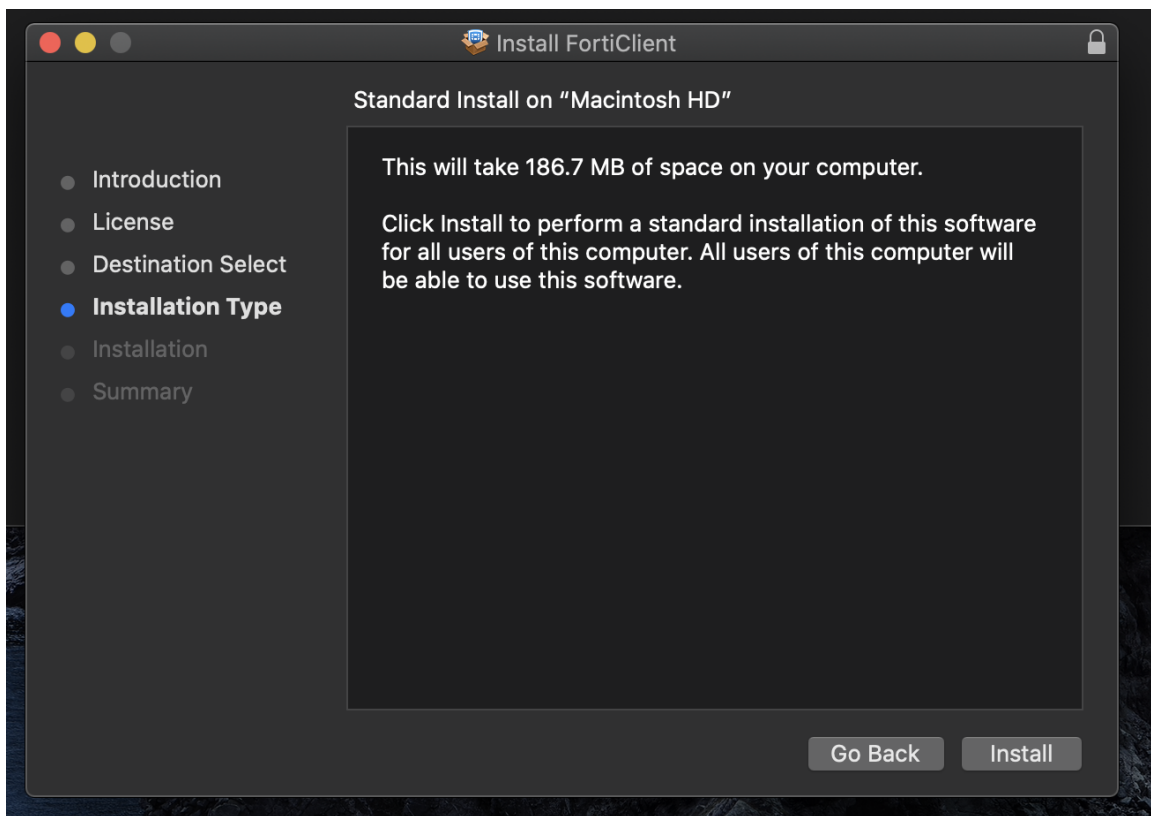


2. Open and run the downloaded **FortiClient.dmg** file which will proceed to download the **FortiClientUpdate** package.

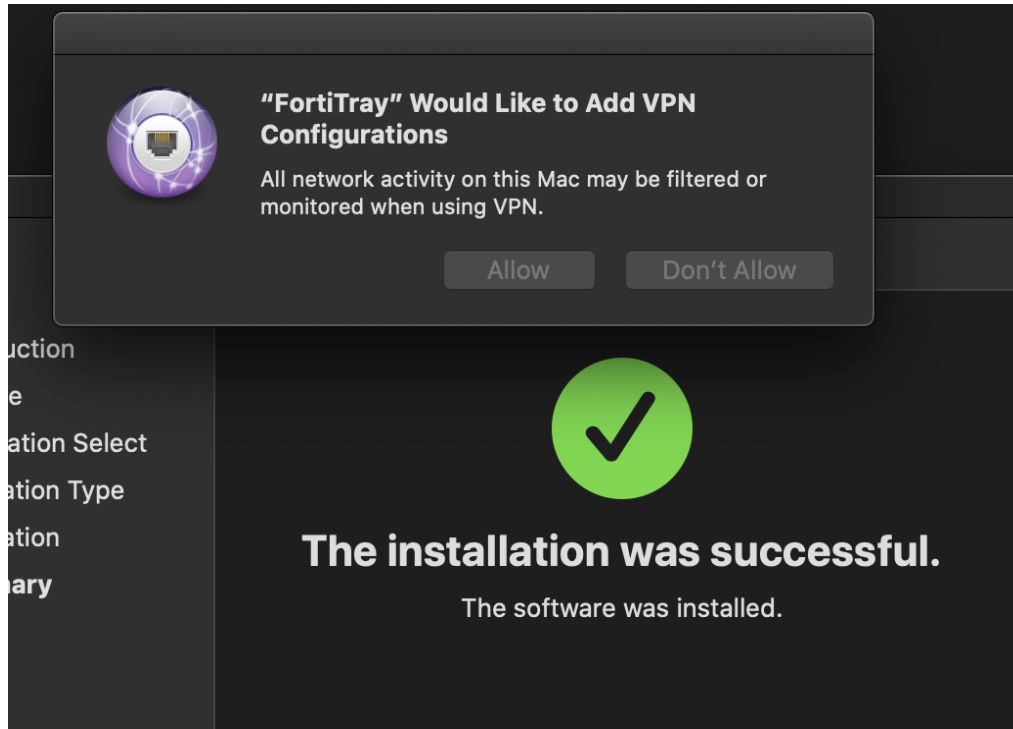




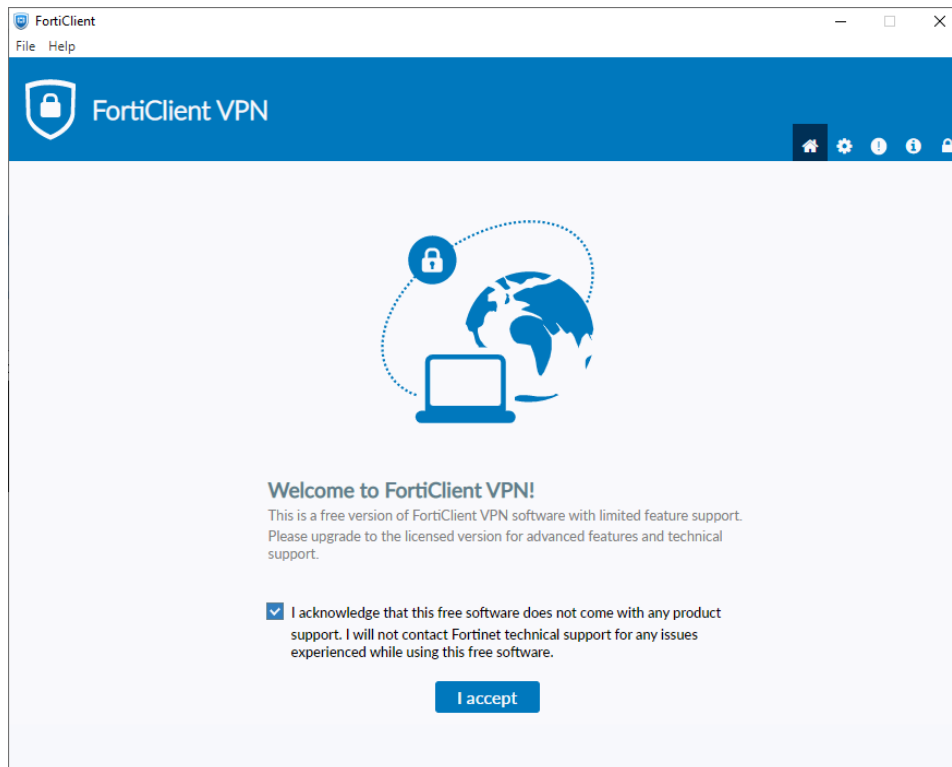
3. Run the **FortiClientUpdate** package and select **Open** to download and **install FortiClient VPN**.



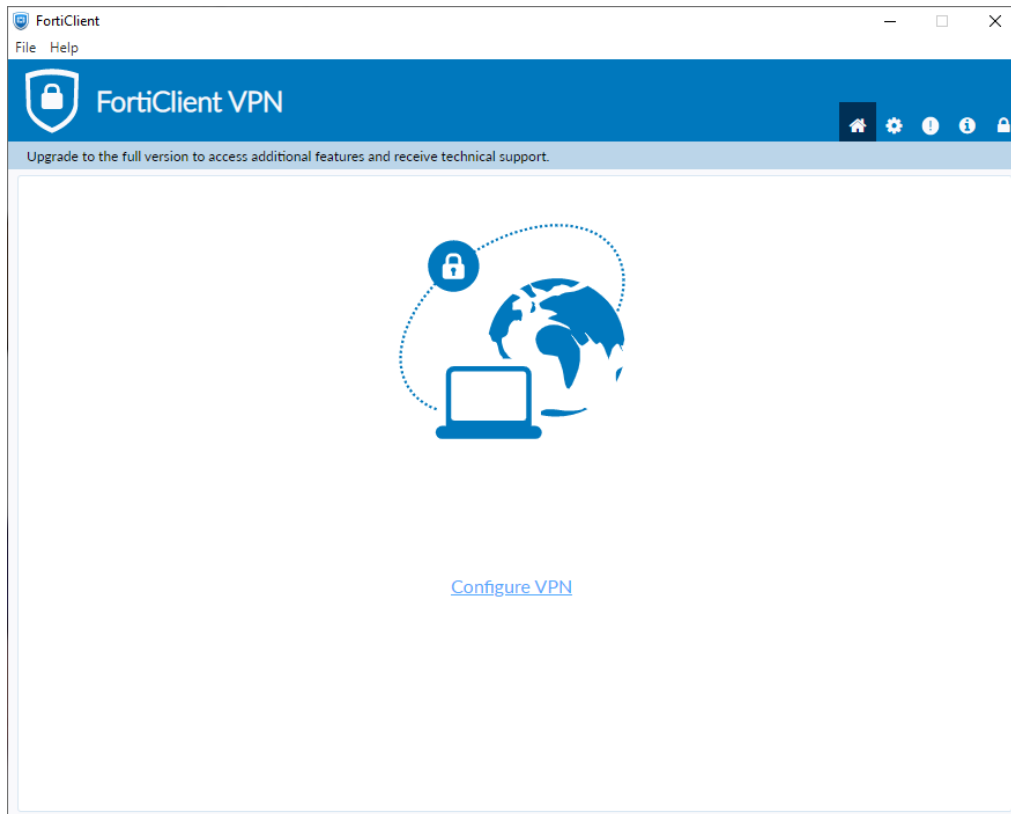
- After a successful installation, it will ask for permission to add FortiTray VPN Configurations to your device, click **Allow** to continue.



- After it has been installed, search Finder for the newly installed FortiClient. Then click the box next to the acknowledgment agreement and click "I accept".



6. Click **"Configure VPN"**



7. Enter the configurations for the VPN as follows:
  - a. VPN: Select **IPsec VPN**
  - b. Connection Name: Name of your choosing (e.g. CS VPN)
  - c. Description: Any
  - d. Remote Gateway: **128.82.11.12**
  - e. Authentication Method: **Pre-shared key**
    - i. Pre-shared key: **1HtXv1^^27**

**Edit VPN Connection**

VPN: SSL-VPN **IPsec VPN** XML

Connection Name:

Description:

Remote Gateway:  ✕  
[+Add Remote Gateway](#)

Authentication Method: Pre-shared key ▼

Authentication (EAP):  Prompt on login  Save login  Disable

Fallover SSL VPN: [None] ▼

[+ Advanced Settings](#)



8. Click the + next to **Advanced Settings**, configure as follows

**Edit VPN Connection**

VPN:  SSL-VPN  IPsec VPN  XML

Connection Name:

Description:

Remote Gateway:  ✕  
+ Add Remote Gateway

Authentication Method:  ▼

Authentication (EAP):  Prompt on login  Save login  Disable

Failover SSL VPN:  ▼

 [+ Advanced Settings](#)

- a. Click the + next to **VPN Settings**:
- KE: **Version 2**
  - Options: **Mode Config**

— VPN Settings

IKE:  Version 1  Version 2

Options:  Mode Config  Manually Set  DHCP over IPsec

- b. Click the + next to **Phase 1**:
- Algorithms: **AES128, AES256**
  - Authentication: **SHA256, SHA512**
  - Diffie-hellman Groups: **5, 14**

Phase 1

IKE Proposal

Encryption: AES128

Authentication: SHA256

Encryption: AES256

Authentication: SHA512

DH Group:  1  2  5  14  15  
 16  17  18  19  20

Key Life: 86400 sec

Local ID: Optional

Dead Peer Detection

NAT Traversal

Enable Local LAN

- c. Click the + next to **Phase 2**:
- Algorithms: **AES128, AES256**
  - Authentication: **SHA1, SHA1**
  - Diffie-hellman Group: **5**

Phase 2

IKE Proposal

Encryption: AES128

Authentication: SHA1

Encryption: AES256

Authentication: SHA1

Key Life:  43200 Seconds  
 5120 KBytes

Enable Replay Detection

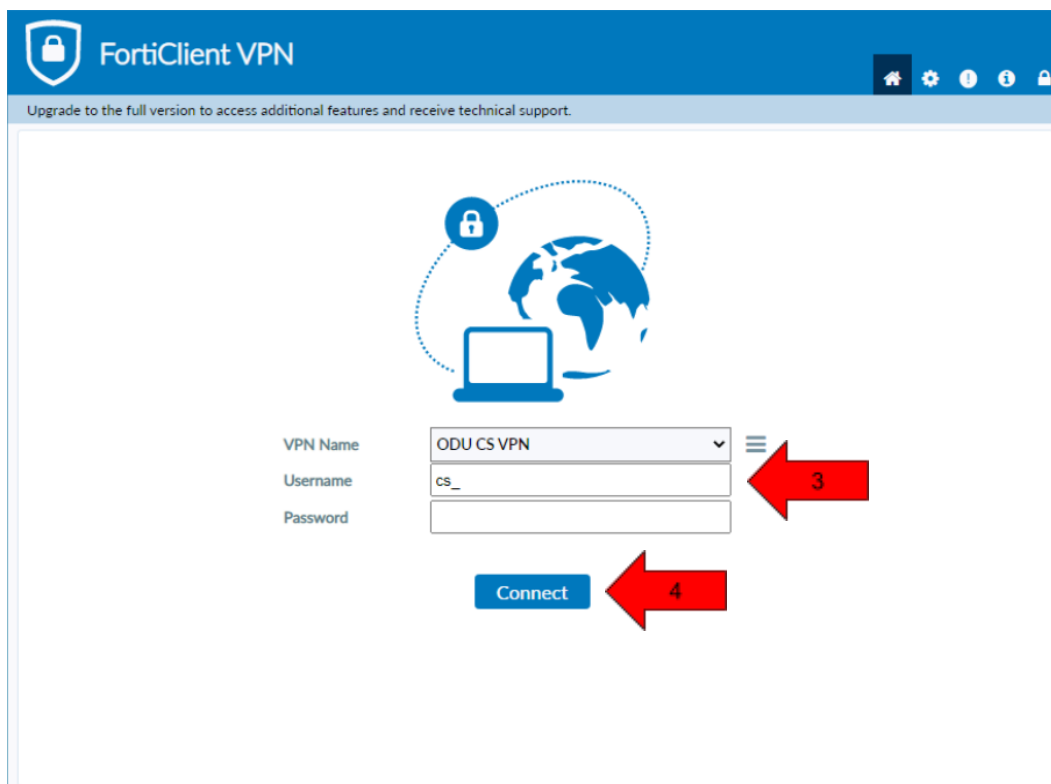
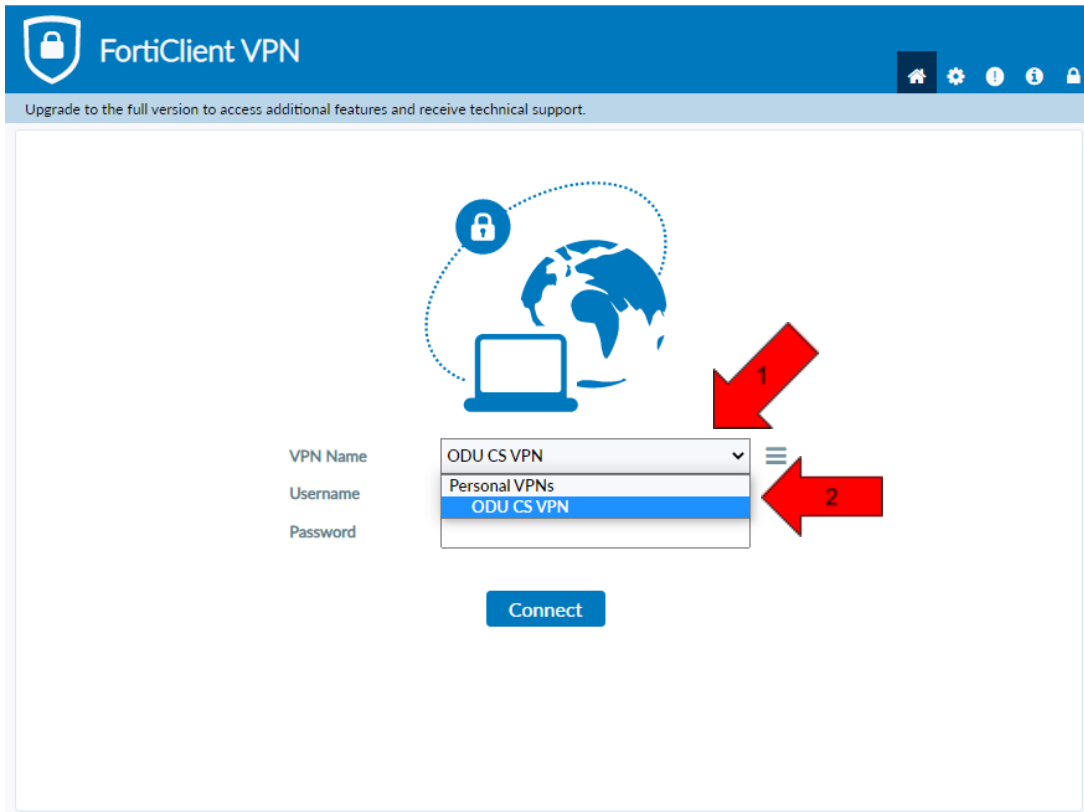
Enable Perfect Forward Secrecy (PFS)

DH Group: 5

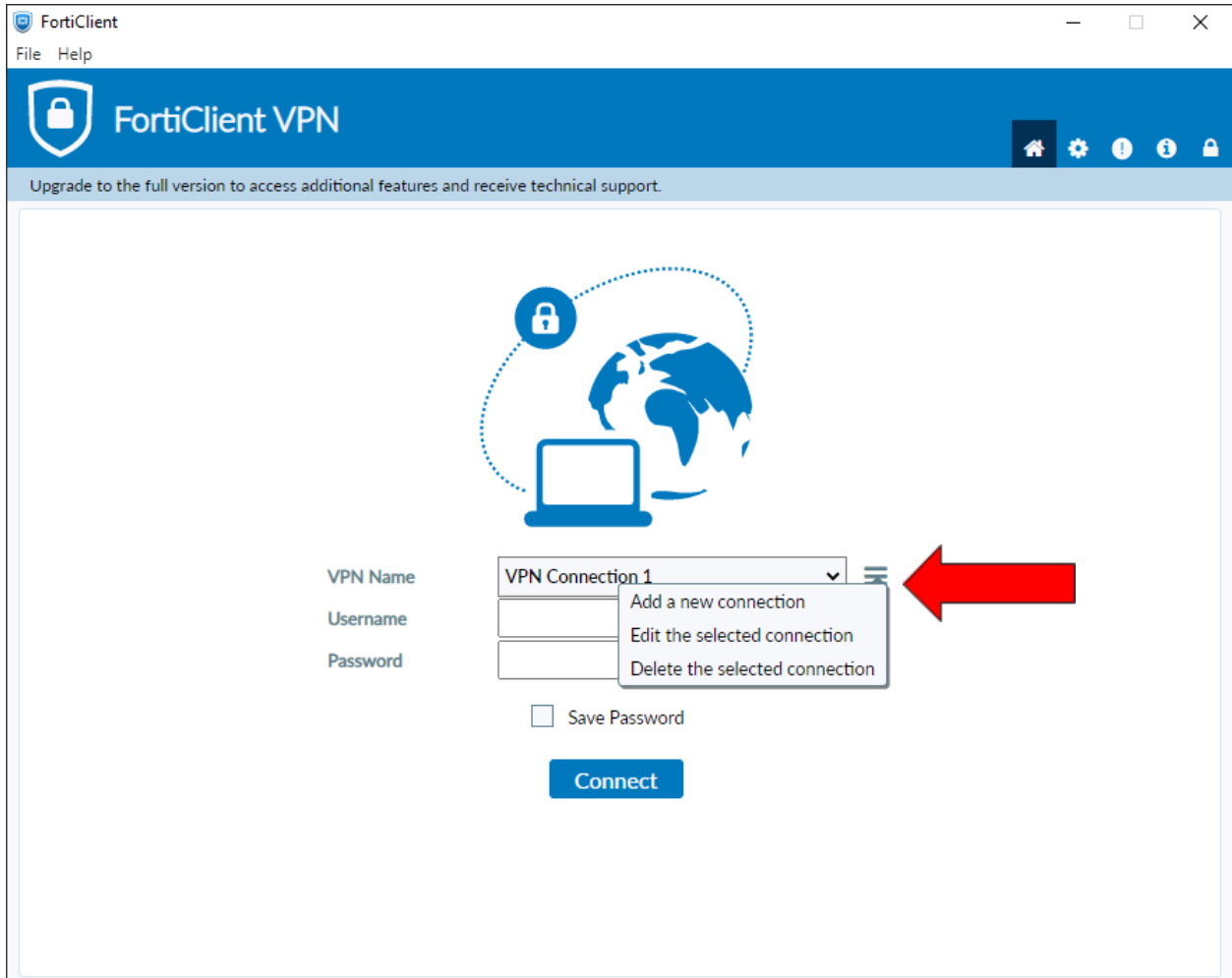
9. Finally, click **Save**.

Cancel Save 

10. Select your created VPN Connection from the **drop down** menu. Enter your **ODU CS Credentials** and click **Connect**.



11. After clicking **connect**, you will receive a **DUO push** notification to your mobile device to confirm the Authentication process
- Check the Duo Mobile app if you do not receive a notification.**
  - To edit or add a connection click the **three lines** on the **right side of the VPN Name box**:



## Using Linux:

1. Open the **terminal** to prepare for installation
  - a. Run this command to find out what Linux distribution you are using:
    - i. `cat /etc/os-release`
2. Install **Openconnect** using the correct command for your linux distribution:
  - a. Ubuntu / Debian
    - i. `sudo apt install openconnect`
  - b. Fedora
    - i. `sudo dnf install openconnect`
  - c. CentOS / RHEL
    - i. `sudo yum install openconnect`
  - d. Arch Linux
    - i. `sudo pacman -S openconnect`
3. Type in the **sudo** password, press **enter**, then press **y** to begin the installation
4. After installation run this **command**:
  - a. `sudo openconnect --protocol=gp gp.cs.odu.edu -u [cs_username]`

```
user@example.com:/$ sudo openconnect --protocol=gp gp.cs.odu.edu -u [cs_username]
```

5. Type in **sudo** password if prompted
6. Type in **cs account** password
7. You will receive a **DUO push notification** to your mobile device to confirm the Authentication process
  - a. **Check the Duo Mobile app if you do not receive a notification**

## FAQ/Trouble-shooting:

- Issues connecting to the Forticlient VPN
  - Check that the correct version of Forticlient is installed
    - The version installed should be “**Forticlient VPN**” as listed on the **bottom of the download page**.
    - **DO NOT install Forticlient 7.0, ZTNA Edition, EPPI/APT Edition or Forticlient Endpoint Management Server (EMS)**
    - A **direct install link** is included in the [Windows](#) and [Mac](#) section of this document.
  - Check that you are connected to the internet
    - **You need a internet connection to use Forticlient VPN**
  - Check that you used the correct VPN settings
    - Instructions for **VPN setup** are available in the [Windows](#) and [Mac](#) section of this document
    - Common misconfigurations are the Pre-shared key, and advanced settings.
  - Check that you entered the right username and password
    - **You must enter your CS account username and password, DO NOT use your MIDAS credentials**
      - Make a **CS account** here at: <https://accounts.cs.odu.edu>
        - You can also use this link to reset your CS Account **password**.
        - If you see “Permission denied, please try again” **After** changing your **CS account password**, please contact [root@cs.odu.edu](mailto:root@cs.odu.edu)
      - To reset a **faculty password**, see instructions in this link [https://systems.cs.odu.edu/Account\\_Password](https://systems.cs.odu.edu/Account_Password)
  - Connection problem not solved after following the previous troubleshooting step
    - On Windows 11: **Update network drivers**
      - You can find information on updating the driver here: <https://www.thewindowsclub.com/how-to-update-network-drivers-windows-11>.
    - Authentication **without** using DUO
      - It is **highly recommended** that you install the DUO app for authentication. The app can **downloaded for free** from your device’s **application store**

- For information about setting up Two-factor visit:  
<https://ww1.odu.edu/ts/access/two-factor-authentication/get-started>
  - To login using **SMS authentication** on **Forticlient VPN** add “,sms” (without quotations) to the **end of your password**.
    - Example: cspassword,sms
  - You will see “wrong credentials” above the login boxes and you will receive a **list of codes** to your **phone**.
  - Type in the your password **again**, this time using one of the **codes** you received at the **end of your password**.
    - Example: cspassword,123456
- Issues with SSh and Linux project submission
  - Some CS classes have **VPN setup and SSH setup as an assignment**, please attempt to complete this task on your own if it is required for your course.
    - Contact your **instructor** or **TA** for assistance **before** reaching out to [root@cs.odu.edu](mailto:root@cs.odu.edu) for assistance.
    - **We are unable to help with any homework questions or assignments.**