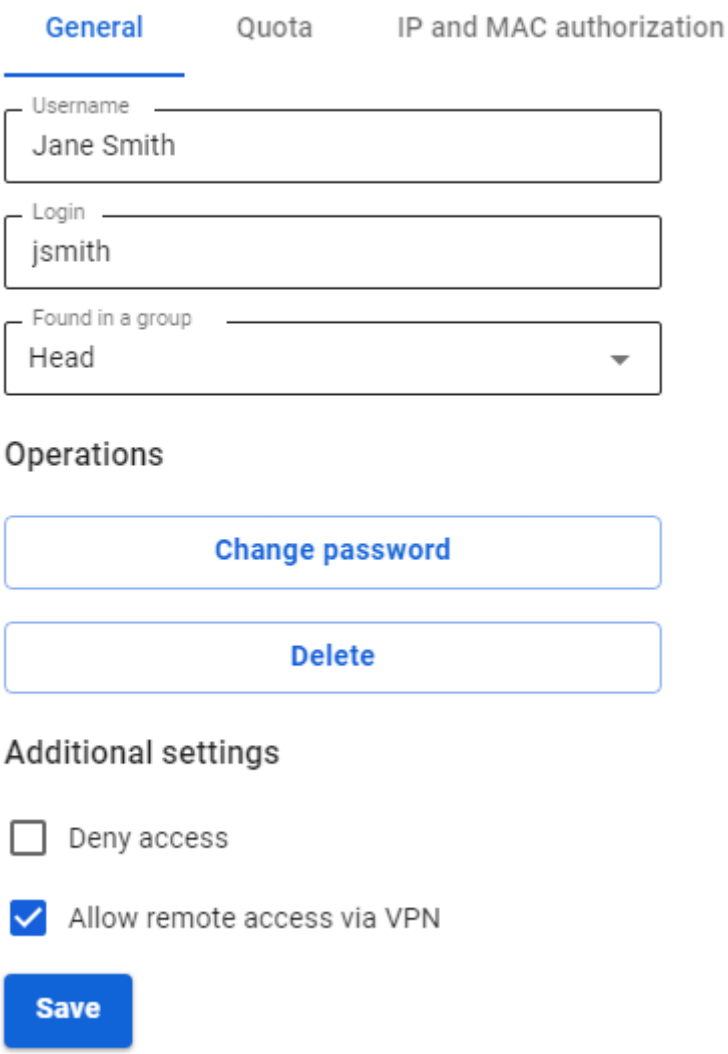
Creating a VPN connection in Windows 7

> Before configuring a VPN connection, in the user tree, open the card of the required user and set the **Allow remote access via VPN** flag. To do this, go to the **Users -> User & Group** section.

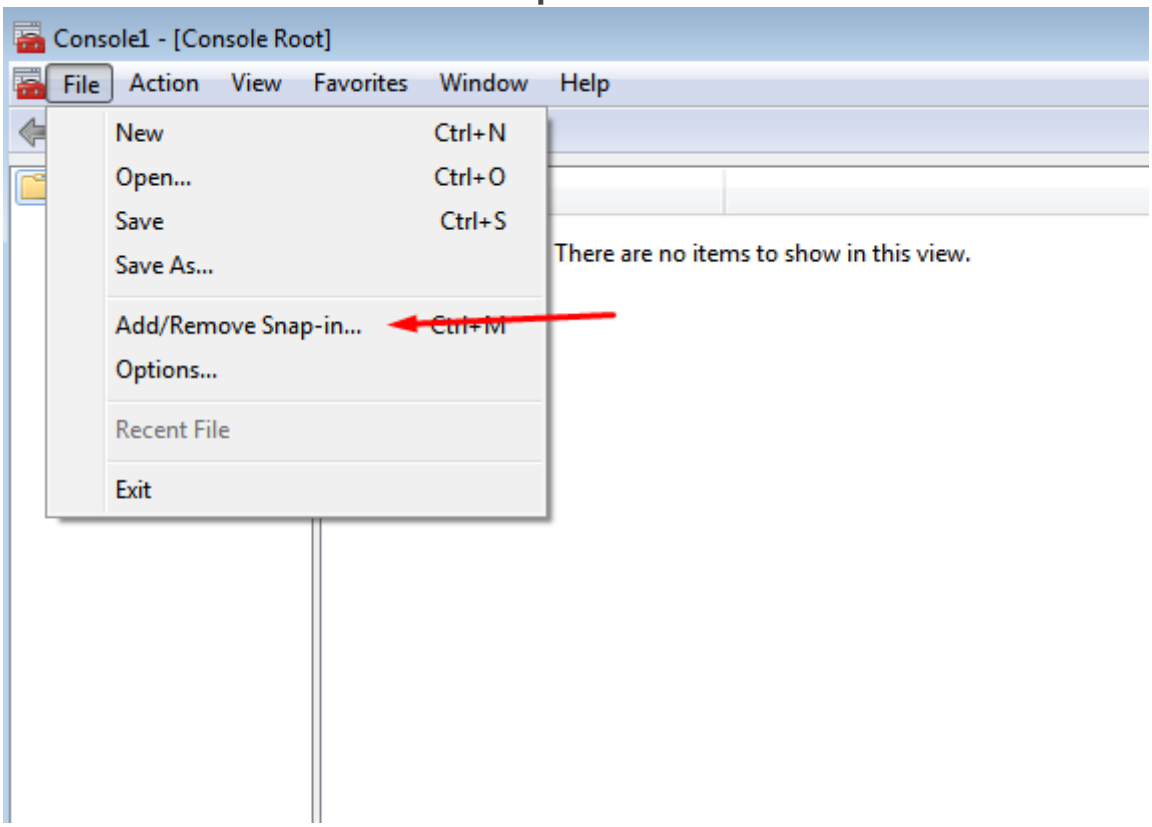


Creating a VPN connection in Windows 7

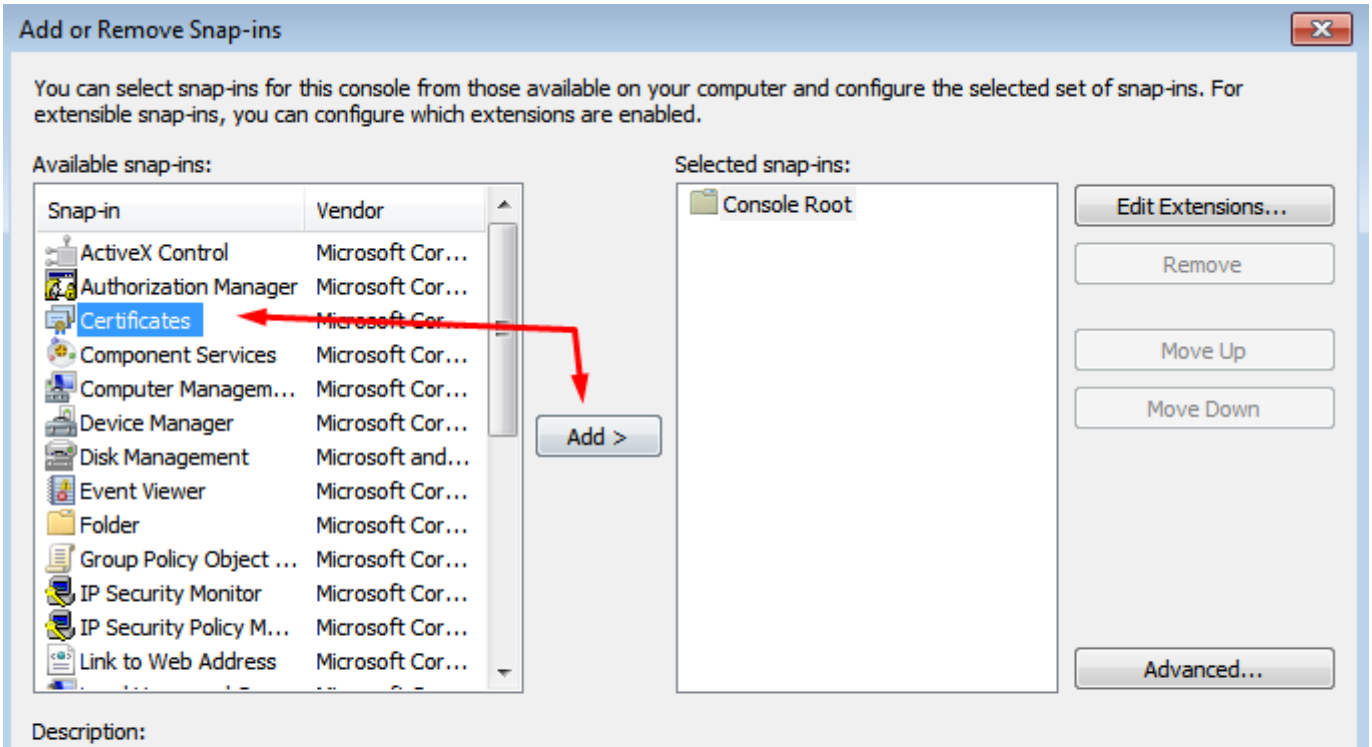
> L2TP IPsec clients behind the same NAT may experience connectivity issues if there is more than one.**Instructions** can help solve the problem. We recommend using IKEv2 IPSec instead of L2TP IPsec.

Before creating a VPN connection for SSTP, L2TP, and IKEv2 protocols, you must install the root certificate locally on the computer:

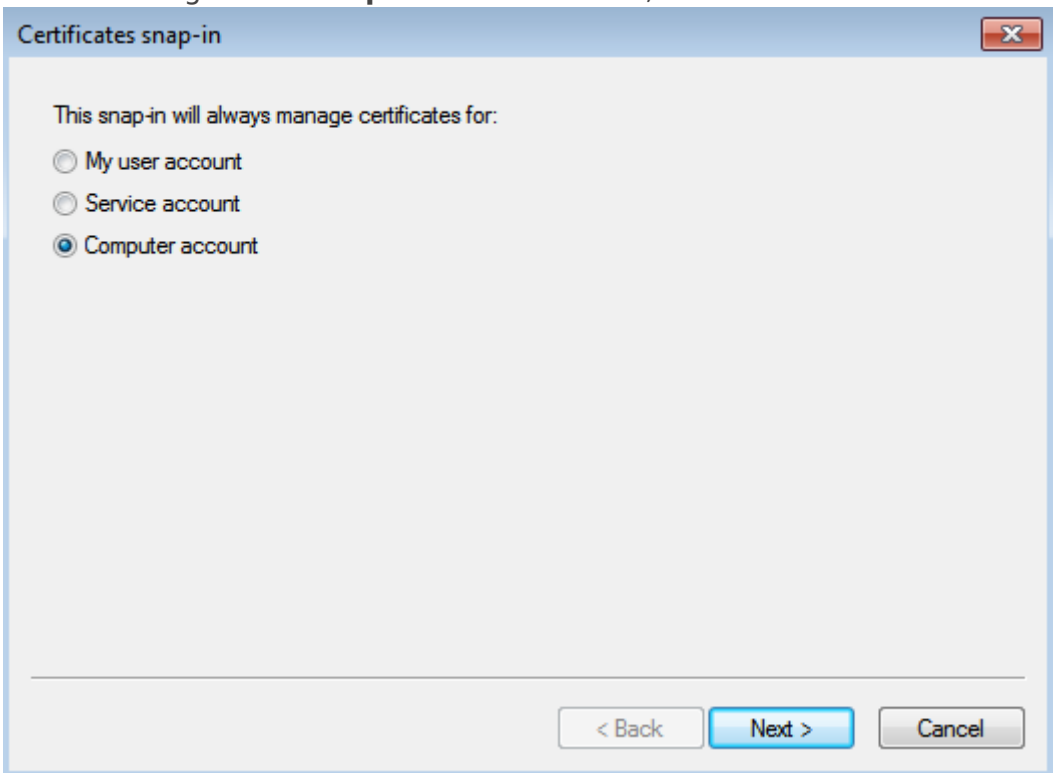
1. Download the Let's Encrypt root certificate from
https://letsencrypt.org/certs/isrgrootx1.pem;
2. Click **Start**, find and run mmc.exe;
3. Click **File -> Add or Remove Snap-in**:



4. Select **Certificates** and click **Add**:



5. Set the flag in the **computer account** line, click **Next -> Finish -> OK**:



6. The **Certificates (local computer)** item will appear in the Console window:

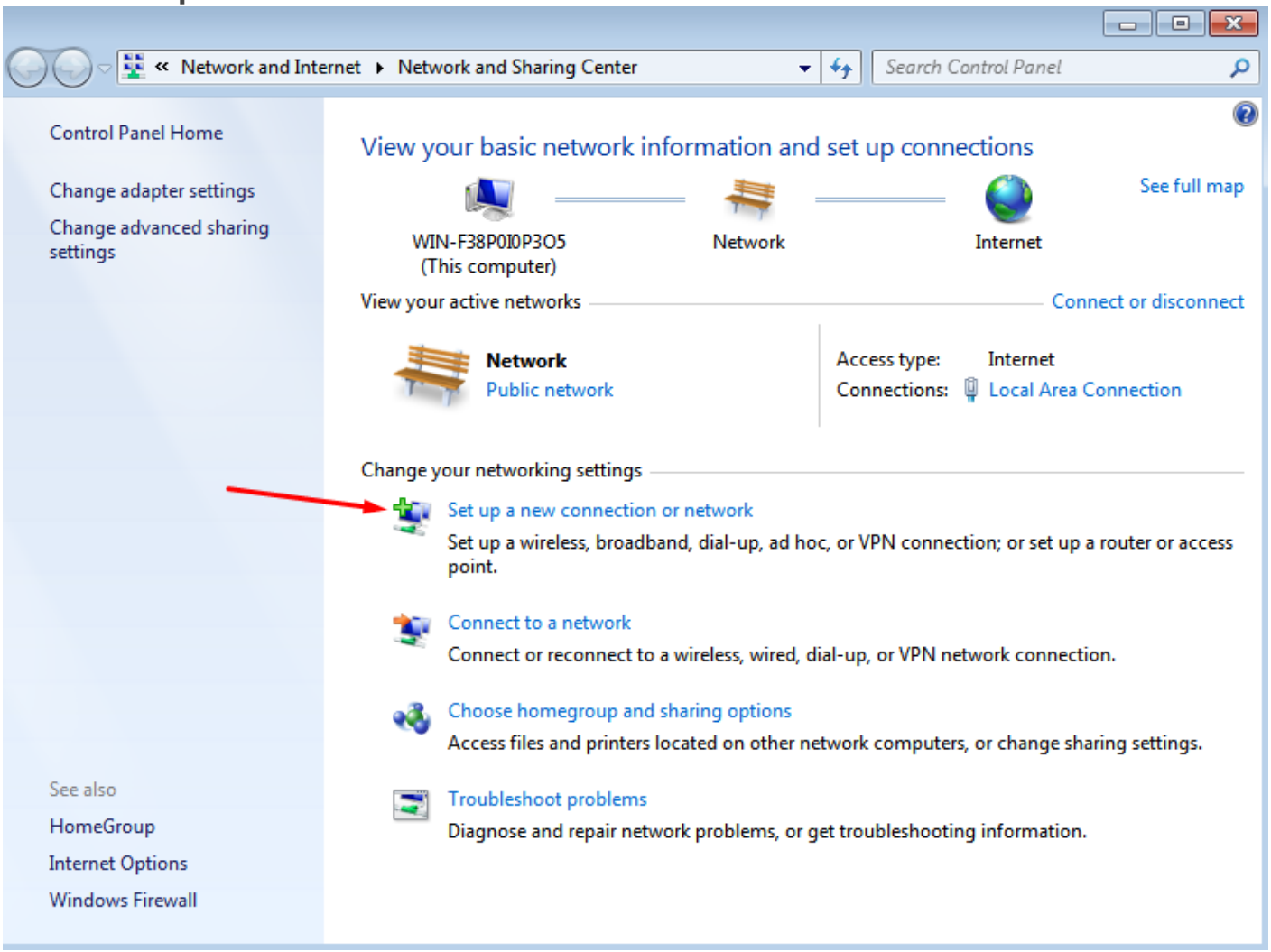
- Select it and right-click on **Trusted Root Certification Authorities**;
- Next **All tasks -> Import**
- In the **Certificate Import Wizard** window, click **Next -> Browse -> Select the one you downloaded in step 1 -> Next -> Next -> Finish**.

Create a VPN connection

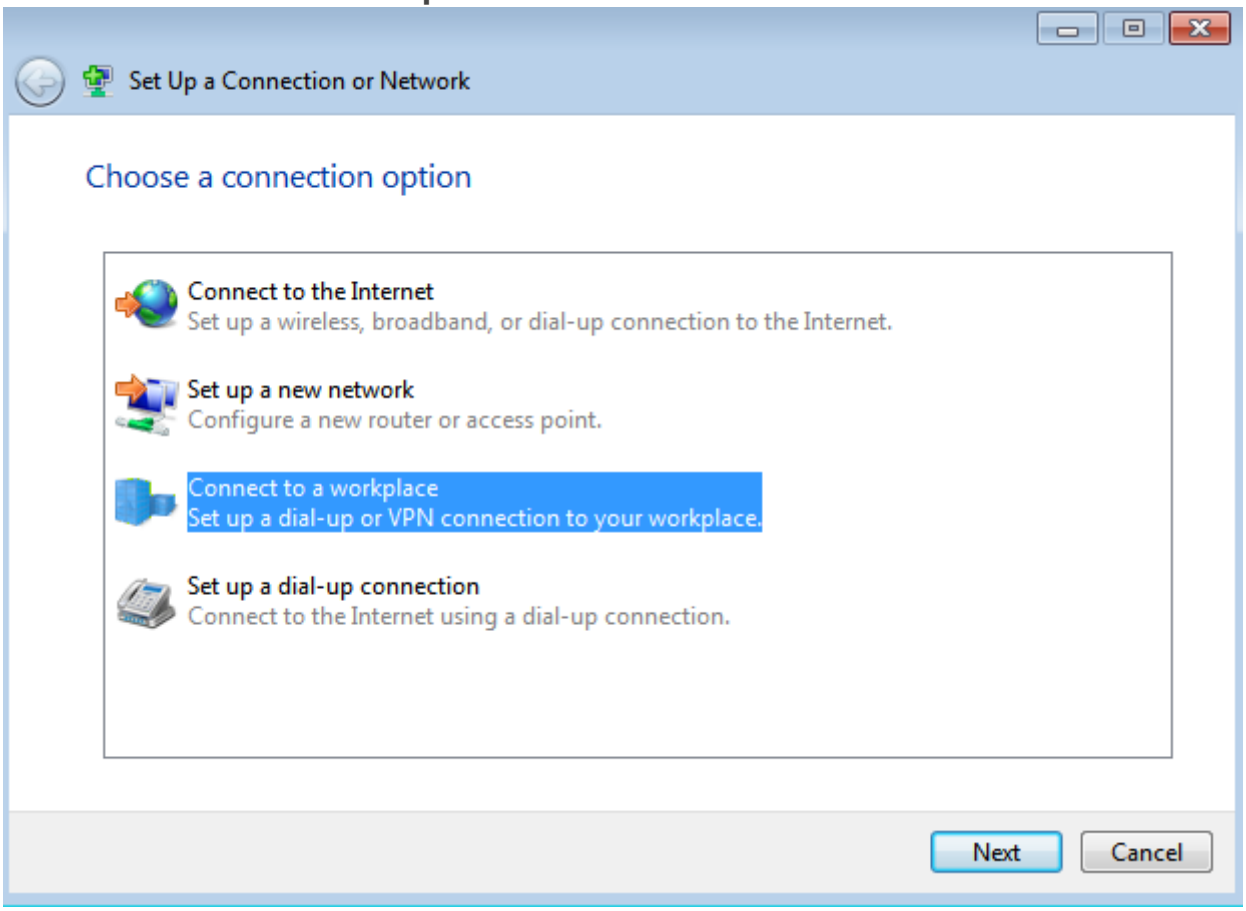
1. Select **Network -> Network and Sharing Center**:



2. Click **Set up a new connection or network**:



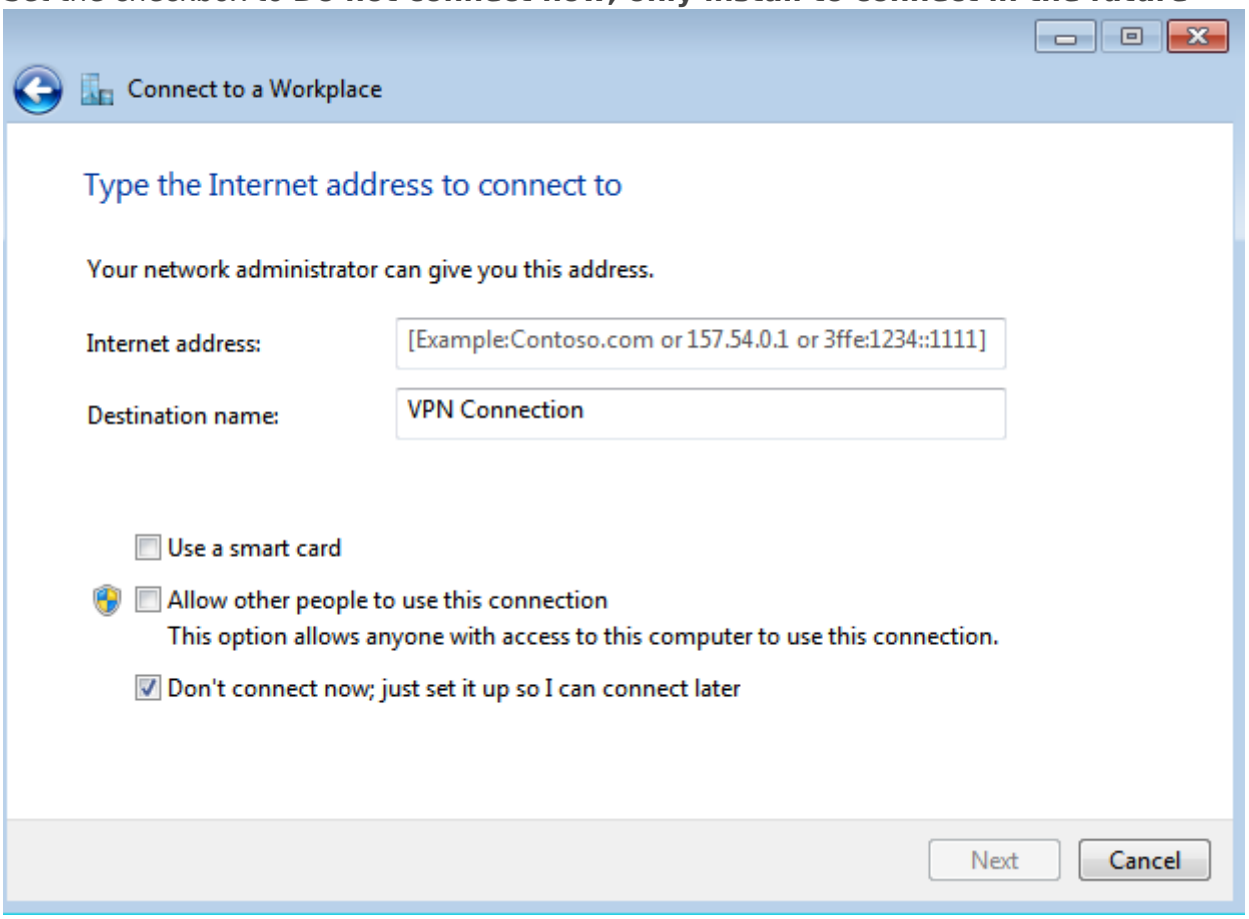
3. Select **Connect to a workplace** and **Next**:



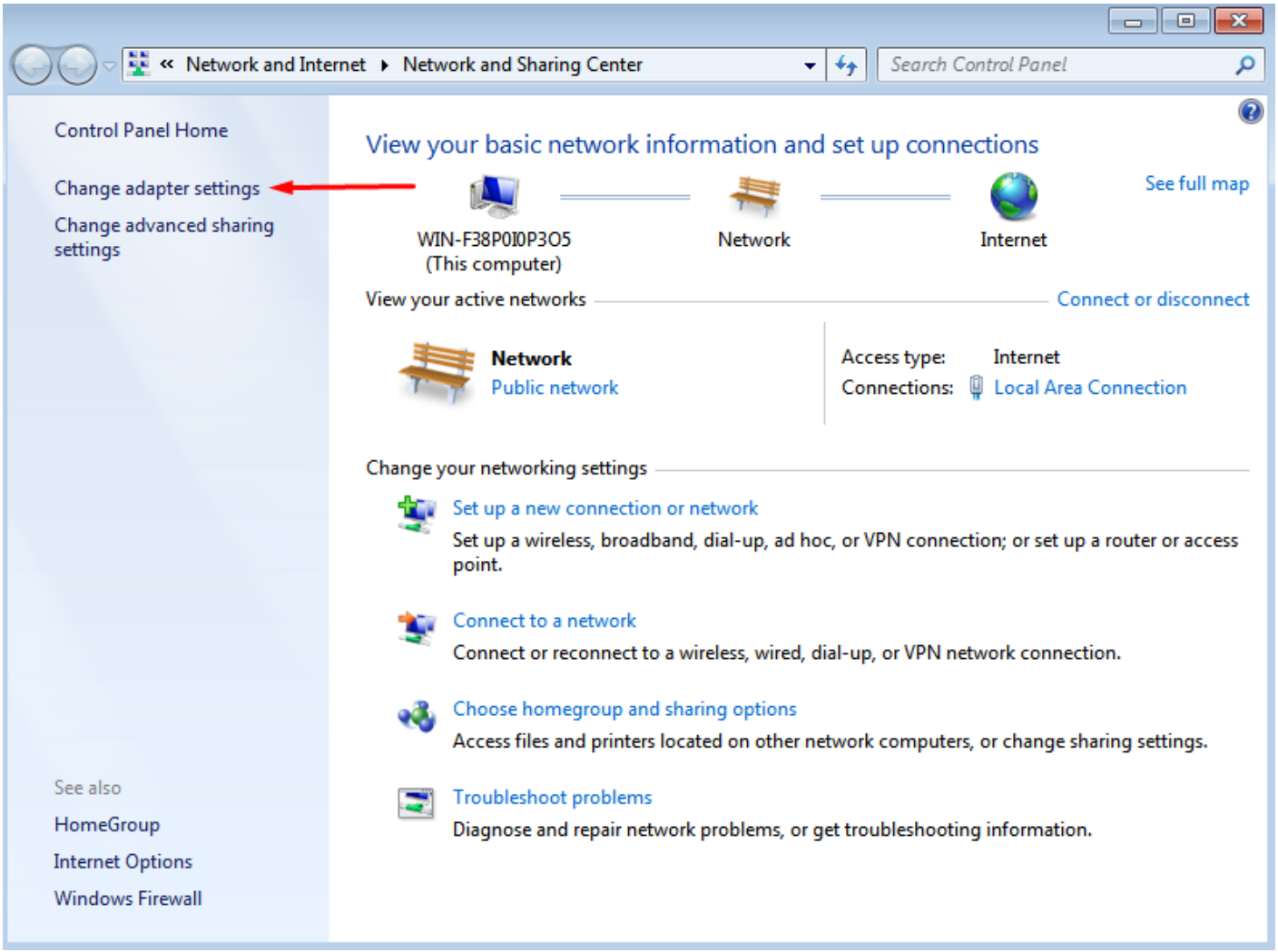
4. Click **Use my internet connection (VPN)** and fill in the following fields:

- **Internet address** - enter the name of the VPN server, for example, vpn.test.com
- **Destination name** - write an arbitrary name for the connection

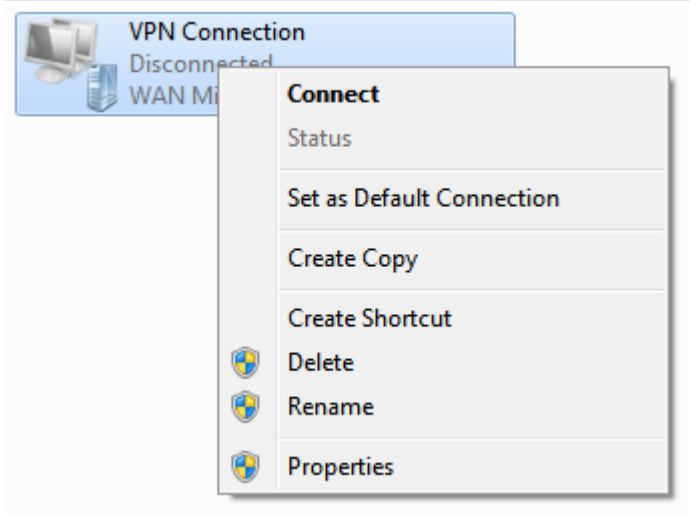
Set the checkbox to **Do not connect now, only install to connect in the future**



5. In the **Enter username and password** window, fill in the appropriate fields;
6. Click **Create**, then **Close**;
7. In the **Network and Sharing Center** window, select **Change adapter settings** in the upper left corner:



8. Right-click on the created connection, and select **Properties**:



9. In the window that opens, do the following:

- On the Network tab, uncheck all items except Internet Protocol Version 4

- On the Security tab:
  - in the VPN type line, select the desired connection type
  - in the Data encryption line, select mandatory (turn off if there is no encryption)
  - in the Authentication line, select Allow the following protocols
  - leave the flag only in the Microsoft CHAP protocol version 2 (MS-CHAP v2)

If necessary, fill in **Additional properties**

10. Click **OK** and close the **Network and Sharing Center**;
11. In the tray, click **Network**. A window will open with the created VPN connection;
12. Right-click on the connection and select **Connect**.

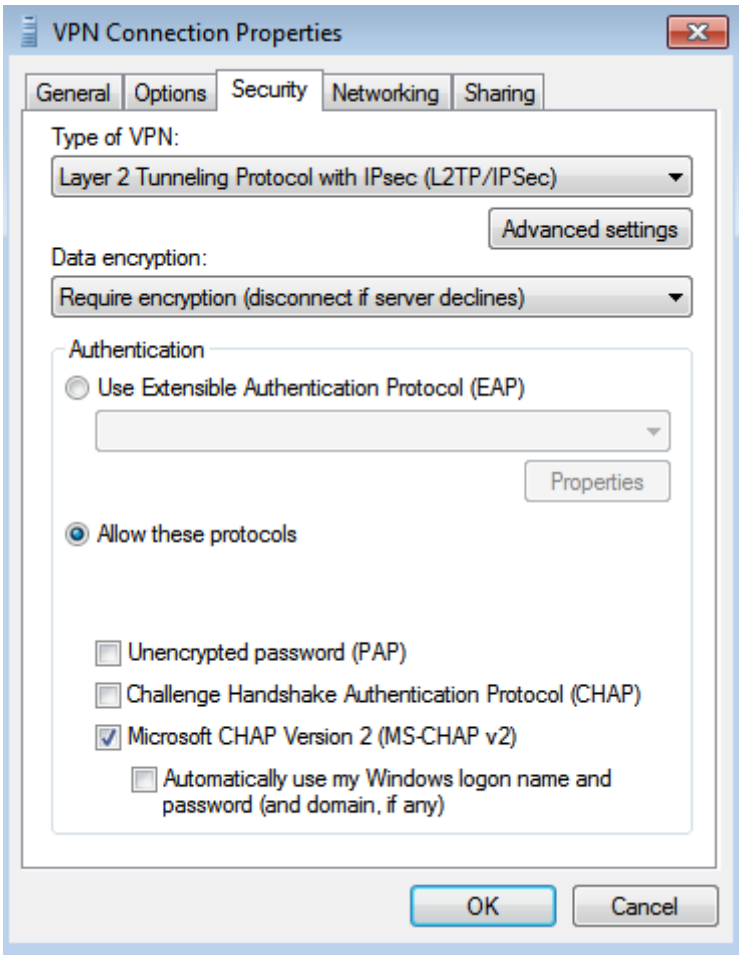
VPN connection errors

If a VPN connection using IPsec protocols in Windows is automatically terminated after 7 hours and a "Group policy mapping" error or error 13868 occurs when connecting via IKEv2.

To restore the connection, the following actions are suitable:

1. Reconnect. In this case, the connection will be restored, but after 7 hours and 45 minutes, it will be automatically disconnected again. If you do not want the connection to be terminated automatically, follow the steps from the following paragraph.
2. Make changes to the registry:

- Open the **Registry editor**.
- Follow the path `HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\RasMan\Parameters`
- Right-click on the parameter **NegotiateDH2048_AES256** and click **Change**.
- In the **Value** line, specify value 1:



- Click **OK**.
- Restart Windows.

If there is no parameter named **NegotiateDH2048_AES256**, then create it. To do this:

- Right-click on the free registry space in **Parameters** and select **Create -> DWORD**
- Set the name **NegotiateDH2048_AES256.**
- Right-click on the created file and select **Change**
- In the **Value** line, specify value 1
- Click **OK**.

3. Restart Windows.

3. Restart Windows.

> If you do not want Internet traffic to go to external resources through SafeUTM after connecting via VPN, then in the properties of the VPN connection **Network / Internet Protocol TCP / IP version 4 / Advanced**, uncheck **Use the default gateway on the remote network**. Next, to access computers behind SafeUTM, manually enter routes.

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