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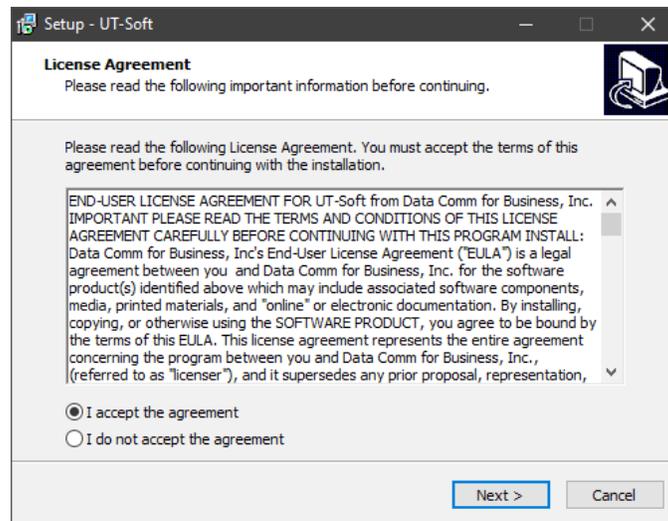
UT-Soft Quick Start Guide

10/31/2019

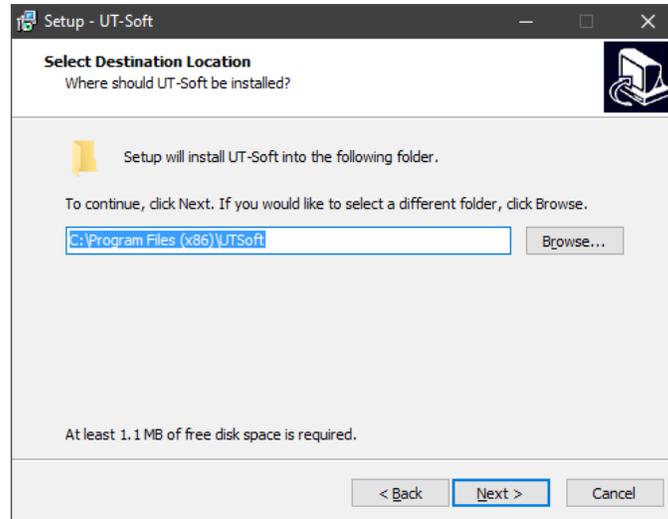
Installing UT-Soft

Only an administrative user may install UT-Soft.

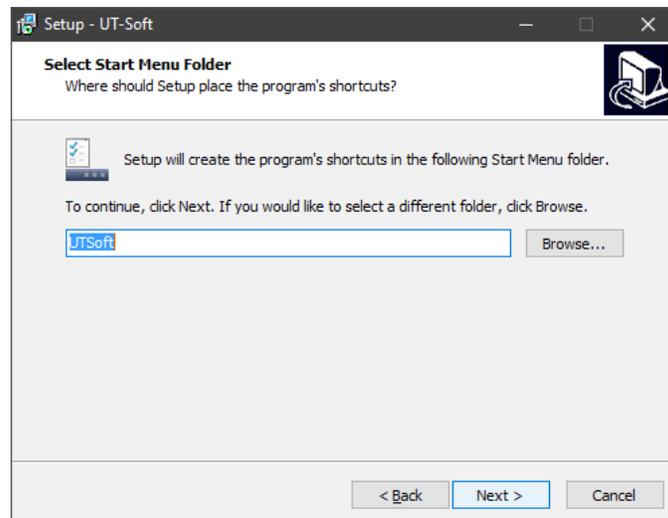
1. Insert the CDROM and locate the installation program named **UTSoftSetup_?_??.exe** (where ?_?? is the version number).
2. Double click on the installation program to start the automated installation process.
3. The license agreement will be displayed. If the terms are acceptable, click on “**Next**”.



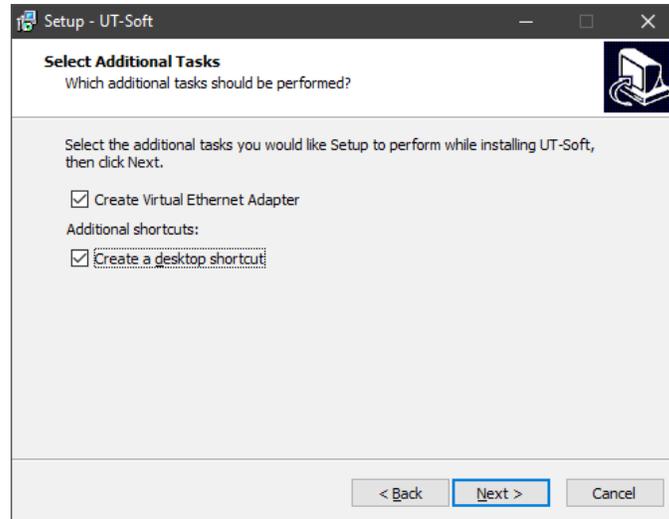
4. The “Select Destination Location” window will be displayed. This is the folder that will contain the UT-Soft program. Select a destination folder if the default isn't appropriate, and press “**Next**”.



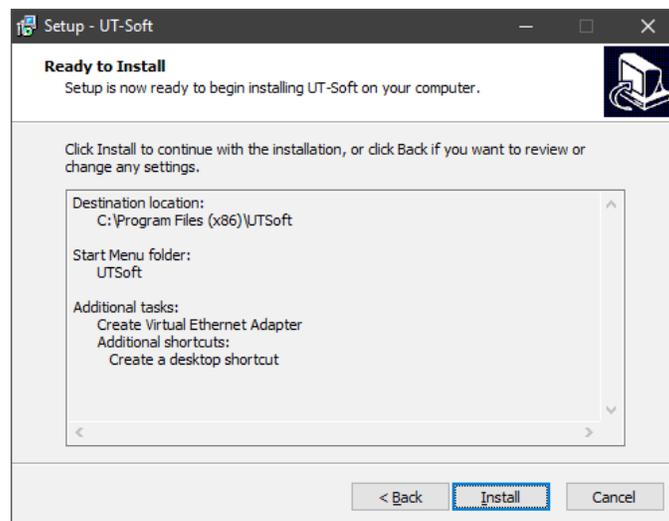
5. The “Select Start Menu Folder” window will be displayed. This is the folder that will contain the program shortcut. Select a destination folder if the default isn't appropriate, and press “Next”.



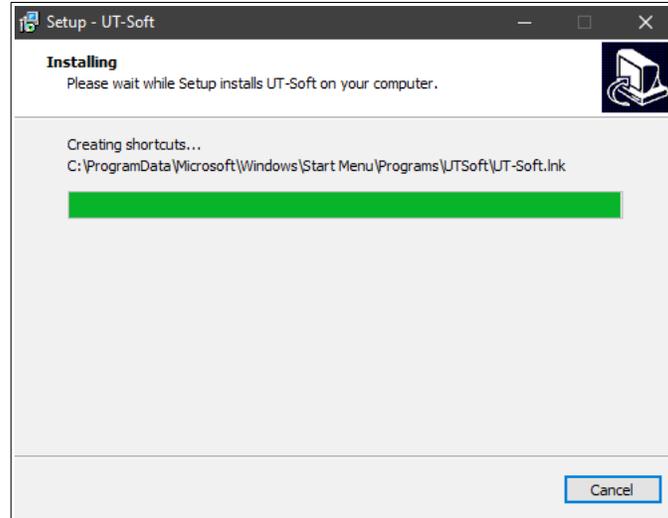
6. The “Select Additional Tasks” window will be displayed. Be sure “Create Virtual Ethernet Adapter” is selected if this is the first time you are installing the software or if you purchased a second key and wish to create a second virtual adapter. **Note: If this is a re-install or update, do NOT check this box.** If a desktop icon is desired, also select that check box. Then press “Next”.



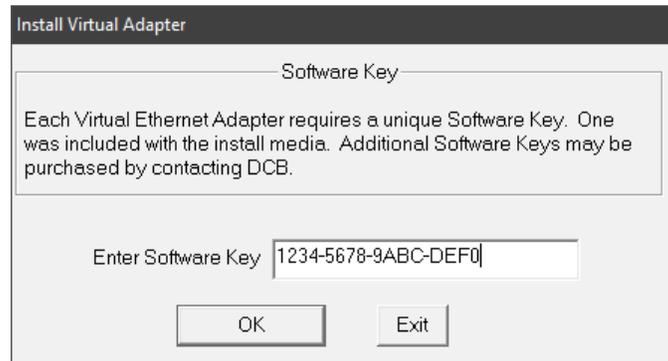
7. The “Ready to Install” window is displayed. If all locations are correct, click on the “Install” button. If changes are required, click on the “Back” button and make appropriate changes before proceeding.



8. The “Installing” informational window will be displayed while the program is automatically installed.

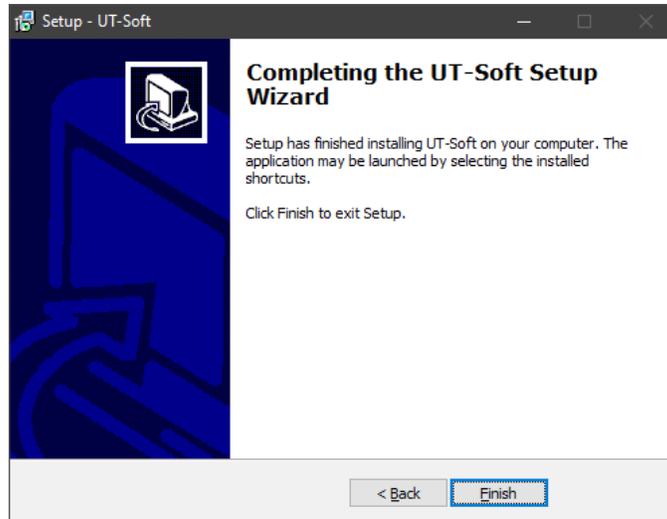


9. If you selected the “Create Virtual Ethernet Adapter” box, you will be asked to enter the **Software Key**. Enter the 16 alpha numeric key that came with the UT-Soft program. Then press “**OK**” to continue. Please note that each copy of UT-Soft must have a unique software key per the license agreement. Attempting to use the same key on multiple PCs will confuse the server device, resulting in frequent communication failures.



10. You may see a screen that tells you that the software “has not passed the Windows Logo testing”. Press “**Continue Anyway**”.

11. After installation, the “Completing the UT-Soft Setup Wizard” screen will be displayed. Click on the “**Finish**” action button.

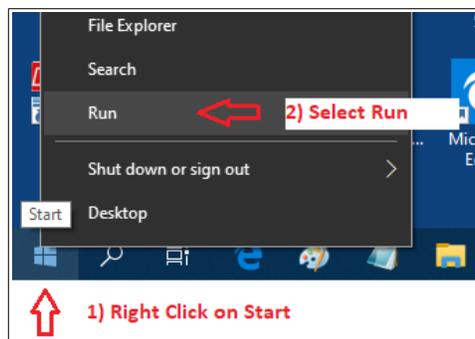


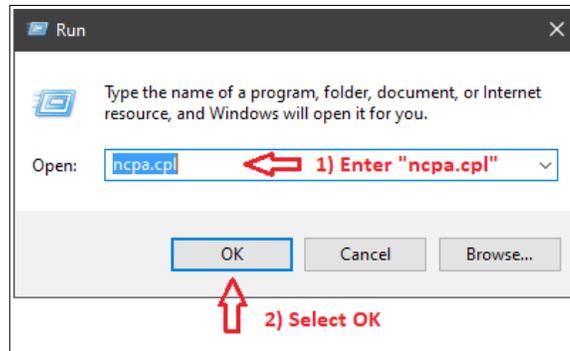
Installation is now complete. Before running UT-Soft, configure the DCB Virtual Ethernet Adapter with an IP address and subnet mask.

Configuring the DCB Virtual Ethernet Adapter

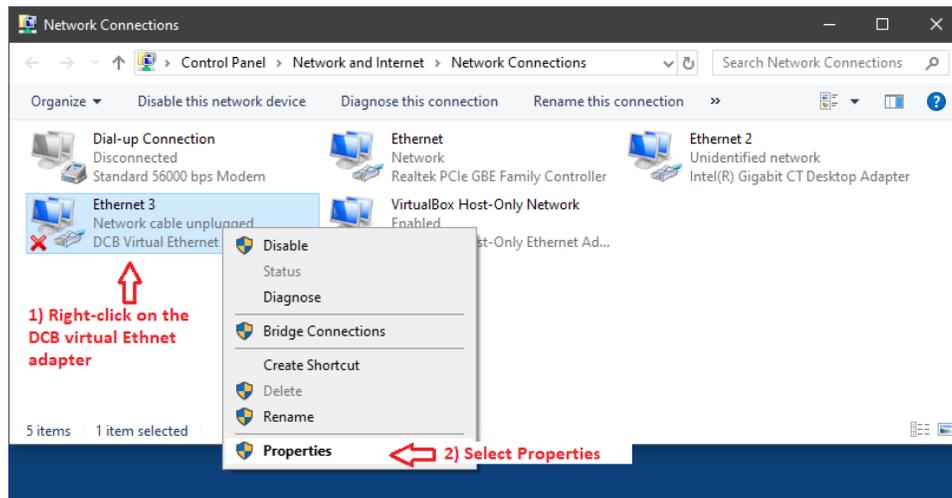
UT-Soft creates a Virtual Ethernet Adapter on your system. Before running UT-Soft, this Virtual Ethernet Adapter should be configured appropriately for your application. Configuring the Virtual Ethernet Adapter is similar to configuring a physical Network Adapter. However, it is recommended that the Virtual Ethernet Adapter have a static IPv4 configuration and NOT be configured to “obtain an address automatically”. Trying to obtain an address automatically will override the physical Network Adapter’s gateway resulting in a routing failure.

1. Right-click on *Start* and select *Run*. Run the command “ncpa.cpl” to open the Network Connections window.

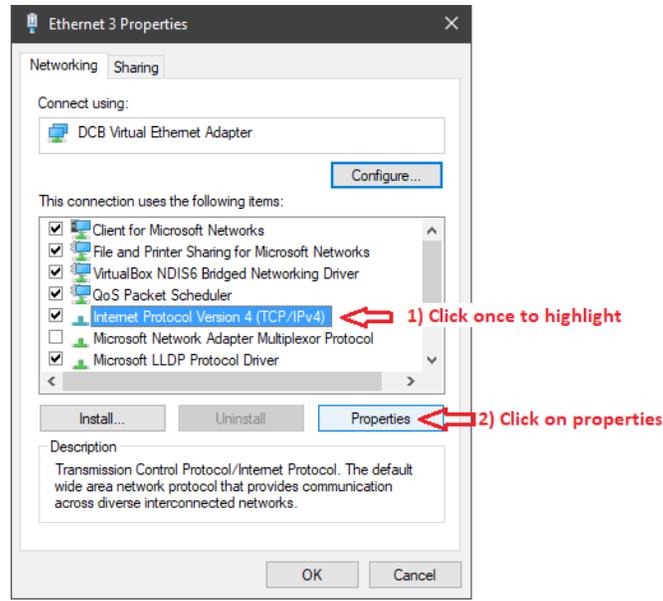




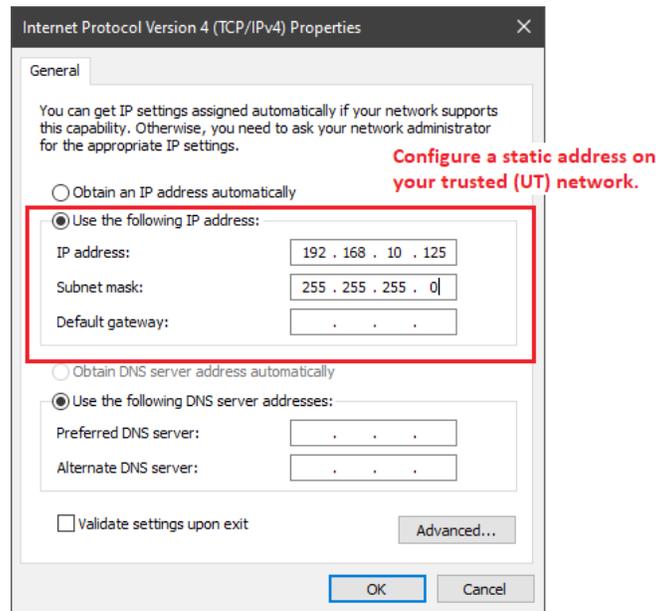
2. Locate and right-click on the DCB Virtual Ethernet Adapter. Select “Properties”.



3. Highlight “Internet Protocol Version 4” and click on “Properties”.



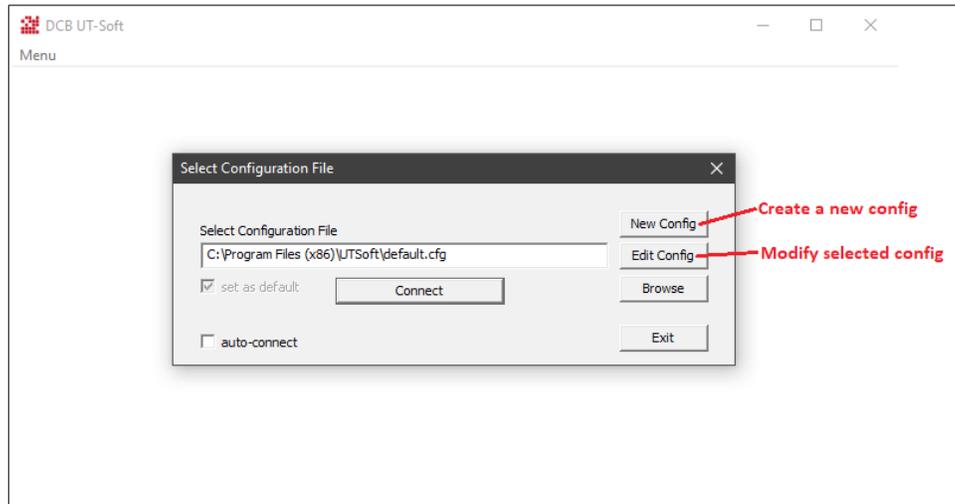
4. Configure the Virtual Adapter with a static address on your private UT network. The IP address and Subnet mask shown below is for demonstration purposes and will likely differ for your application. However, **do NOT set a default gateway**. Doing so will interfere with the active default gateway setting for the physical network adapter.



5. Exit the IPv4 properties by pressing “OK”, then exit the Ethernet properties by pressing “OK”.

Configuring UT-Soft

Start the UT-Soft application using the desktop icon or by finding UT-Soft in the start menu. The first time UT-Soft is run, it is necessary to create a configuration file. You may choose to create a new configuration file or to modify the default configuration.



Enter the **Tunnel Configuration** information for your UT/ET/XT network. The configuration must correspond with the UT/ET/XT Server's configuration. The initial screen will appear to have data already entered. This is just place holder data. When done, press the "Save" button to save the configuration in the currently selected configuration file. Optionally, press the "Save as" button to save the configuration under a new file name.

Virtual Interface is the DCB virtual interface to use when connected. Typically there is only one DCB virtual interface and it is automatically selected. If this field is blank, then there was an error during installation. UT-Soft will need to be reinstalled. Make sure UT-Soft is installed by an administrator and that a valid software key was provided. Otherwise the virtual adapter driver will fail to install.

Shared Secret is a system-wide shared secret. The server tunnel and all clients connected to the server use the identical shared secret.

Encryption type is the system-wide encryption choice. The server tunnel and all clients connected to the server must use the identical encryption (or no encryption).

Protocol selects the transport protocol to use for communication between UT-Soft and the server device. If the server is a UT device, then UDP must be selected. If the server is an ET device, the TCP must be selected. If the server is an XT device, then it must match the XT Server's protocol configuration.

Client Name is the name of this UT-Soft client – it must be configured in the UT/ET/XT Server's remote client table.

Client Password is the password associated with this client – it must also be configured in the UT/ET/XT Server's remote client table.

Don't Save Password when checked, will prevent the client password from being stored in the configuration file. At connect-time, UT-Soft will prompt for the password. This is a security feature to prevent unauthorized access to the tunnel. As an alternative, please see the "Encrypt Config File" option.

Remote Server IP is the IP address of the remote UT/ET/XT server. The UT-Soft client connects to this server address. If a port-forwarding router is used at the server, you may be required to use public facing IP address of the router instead of the servers actual IP address.

Remote Server Port is the port number of the remote server – this must match the port number used by the UT/ET/XT Server. If a port-forwarding router is used at the server, you may be required to use public facing port configured for forwarding by the router, instead of the servers actual port.

Idle Disconnect Time is the number of seconds this client will wait, on an idle connection, before determining there is a connection problem. When this occurs, the current connection is closed and a new connection started. If set to zero, the client will never disconnect. Do not set to zero unless you really know what you are doing.

Send Keep-Alives is the time (in seconds) this UT will wait while idle before sending a keep alive packet. The keep alive value should be lower than the Idle Disconnect Time value. If set to zero, the client will never send a keep-alive packet. Do not set to zero unless you really know what you are doing.

VLAN Tag is an advanced feature and not needed for a typical application. It is for when the UT/ET/XT server is connected to an 802.1q VLAN trunk and sending/receiving tagged VLAN packets. See the in-application help for more information.

Limit UDP Packet Size: This feature refers to the communication between UT-Soft and the UT/XT server. When enabled, UT-Soft will break large UDP packets up into smaller packets before sending. This is to prevent IP fragmentation on the untrusted network. Some ISPs block or limit IP fragmentation, which can cause very poor performance when using UT-Soft.

UDP Max: This feature works in conjunction with Limit UDP Packet Size. It controls the maximum size of the UDP payload in the UDP fragments. Before choosing any value lower than 1412, make sure your UT/XT server also supports the smaller value. 1412 is a good choice when running over wired networks. 1316 is a good choice when running over an LTE network. Smaller values may be necessary when operating inside of another tunnel, such as IPSec.

IPv4 is an advanced feature and not needed for a typical application. This item allows modification of the IPv4 address at run-time. See the in-application help for more details.

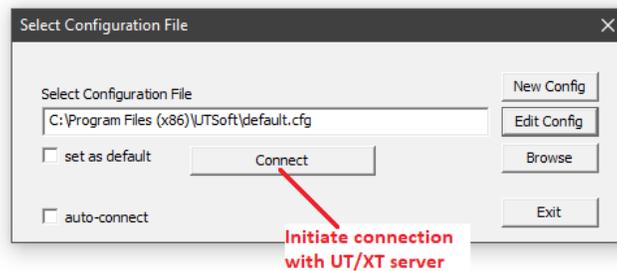
Routes is an advanced feature and not needed for a typical application. This item allows modification of the IPv4 routing table at run-time. See the in-application help for more details.

IP Filters is an advanced feature and not needed for a typical application. It is similar in concept to the IP Filters feature in the UT/ET/XT hardware devices. See the in-application help for more details.

Encrypt Config File: When checked, the configuration file will be stored in an encrypted format, using a user-supplied password as the key. When an encrypted configuration file is used to make a UT-Soft connections, the user must supply the password in-order to decipher the file. This is a security feature to prevent unauthorized access to the tunnel and to the security keys stored within the file.

Connecting to the server

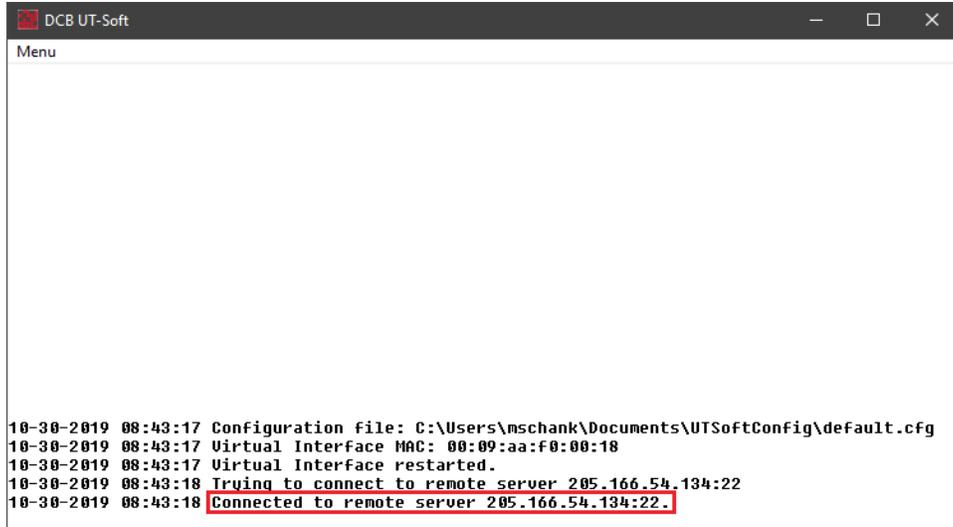
Select a configuration file and then press the “**Connect**” action button to connect to the UT/ET/XT server, or press Exit to exit the program.



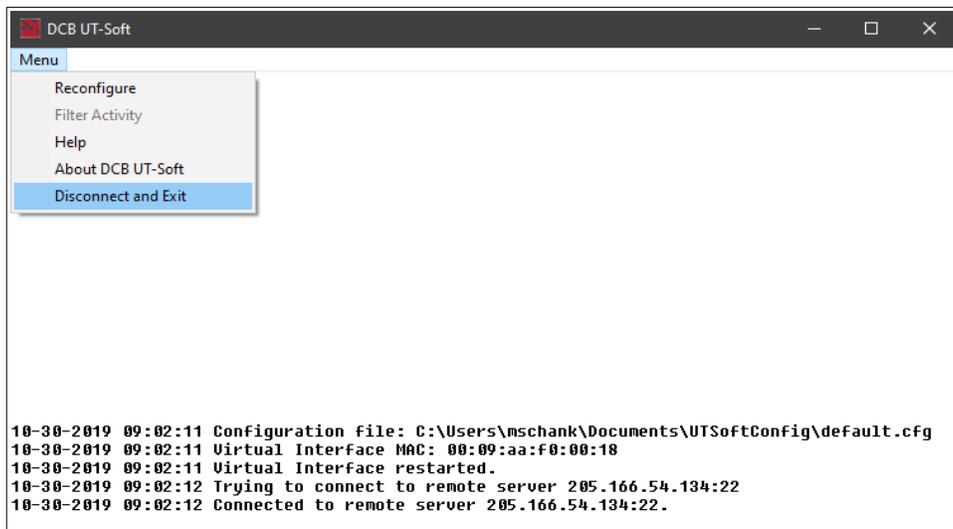
If UT-Soft successfully connects with the server, the program will automatically minimize into the task bar. Pressing on the UT-Soft task icon will reopen the main UT-Soft window.



The main UT-Soft window will display logging information. This information can help with diagnosing any connection problems.



From the main UT-Soft window, clicking on the “Menu” drop down box will display options to reconfigure, access help, or exit the connection.



Selecting “**Reconfigure**” will close the current tunnel connection and return to the “Select Configuration File” window.

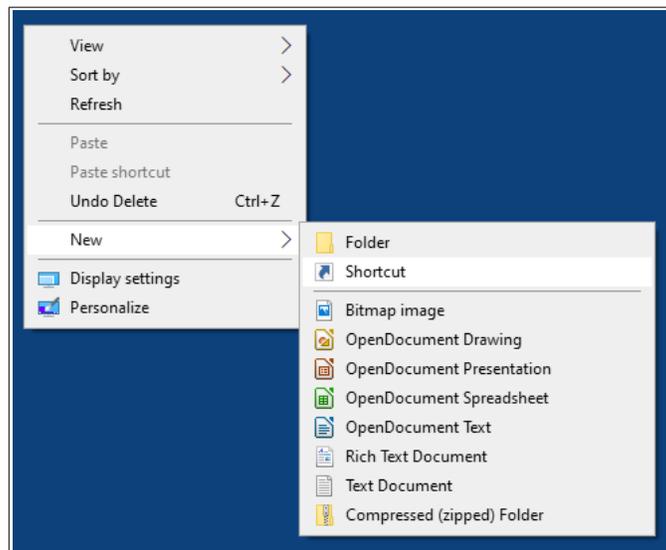
Selecting “**Disconnect and Exit**” will close the current tunnel connection and exit the program. Pressing the “X” button, on the title bar, will also disconnect and exit.

To Create Additional Connections using desktop icons

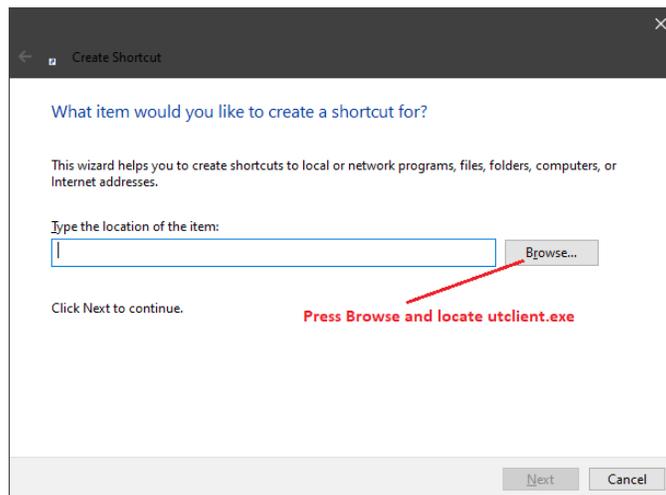
For users that frequently connect to different servers, it is possible to create a desktop shortcut that automatically loads a specific configuration file. This is achieved by creating a shortcut and adding a command-line argument, specifying the full path to the configuration file, to the shortcut target.

On older versions of Windows, an easy way to do this was to simply copy the default UT-Soft desktop icon and then modify it. **Do not use this method with Windows 8 and 10.** Instead always create a new shortcut.

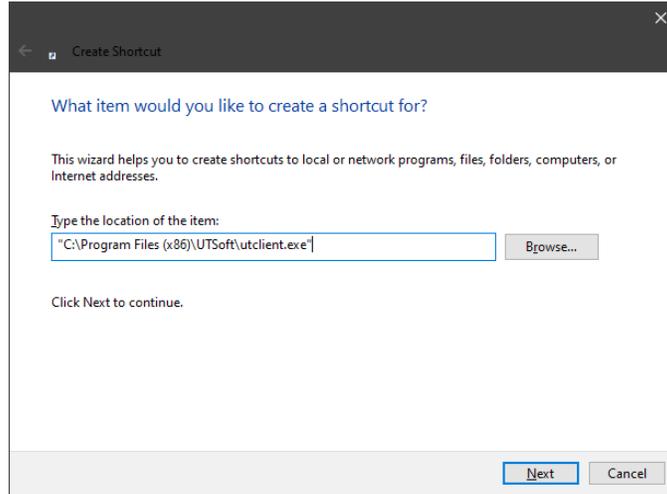
Create a new shortcut by right-clicking on the desktop, selecting *New* → *Shortcut*.



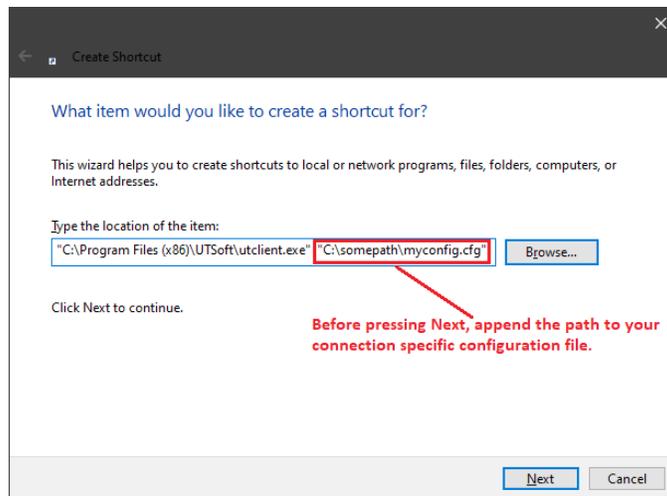
Browse and locate “utclient.exe”, normally located in “C:\Program Files (x86)\UTSoft”.



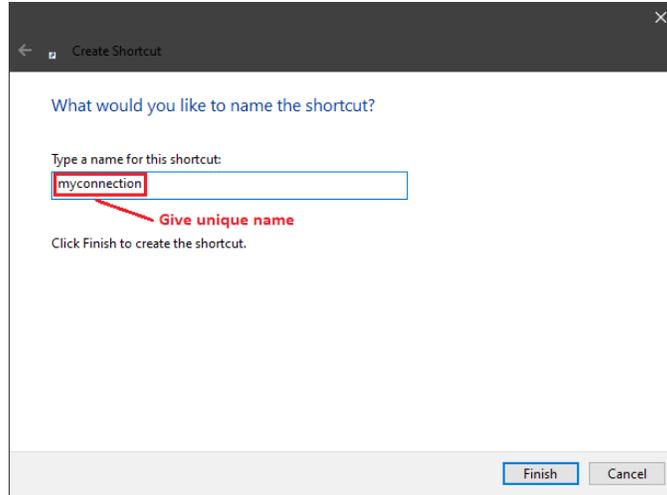
Before pressing “Next”, append the full pathname to your configuration file.



Make sure to add a space following the current target and to enclose the configuration file name between double quotes.



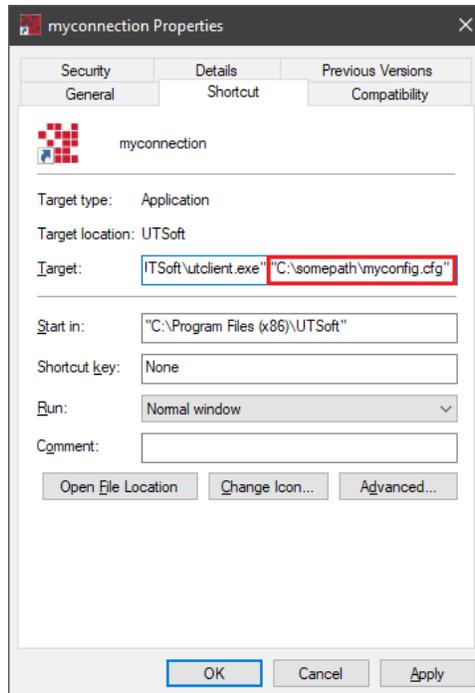
Press “Next” and assign the shortcut a unique name.



The resulting desktop icon will look something like the one below:



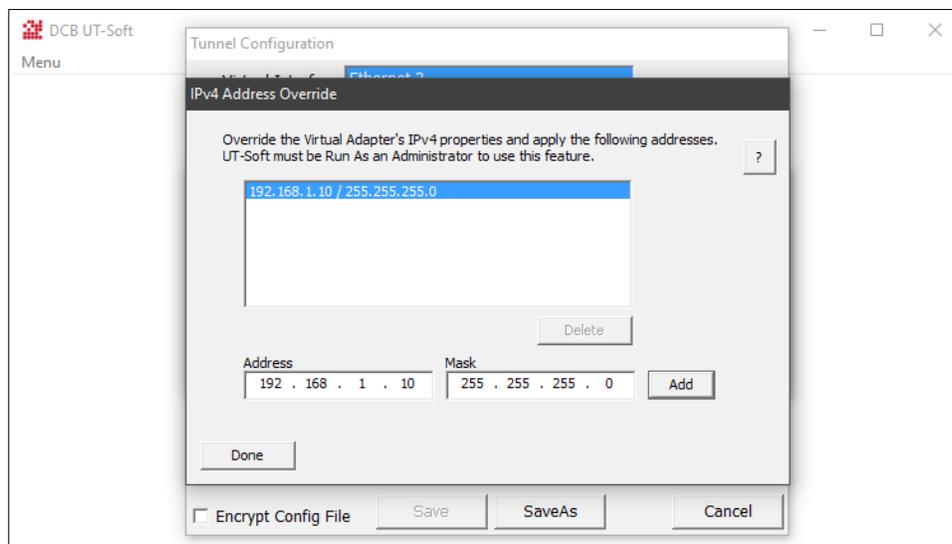
If needed, right-click the icon and select “Properties” to modify the shortcut target.



Changing the Network Adapter IP Address and Subnet Mask to match different server connections

If you use UT-Soft to connect to different UT servers, and those servers are have different trusted-side subnets, you may need to change the Network Adapter IP address on your PC. For example, if one server is 192.168.1.x, the other is 192.168.100.x, you will likely have to change the IP Address of the DCB virtual network adapter.

UT-Soft can be configured to automatically change the IP address based on the selected configuration file. This is achieved pressing the “IPv4” button in the Tunnel Configuration window and entering the desired IP address and subnet mask. To use this feature, UT-Soft must be “run as an administrator”.

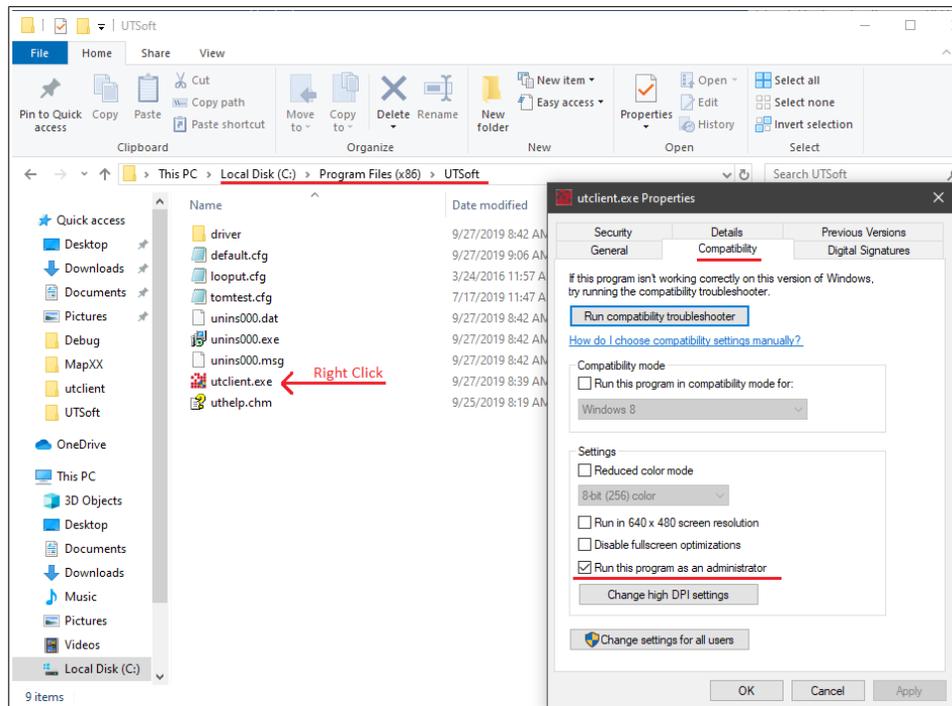


How to configure UT-Soft to “run as an administrator”

The Windows system will not allow an application, running under non-administrator credentials, to modify an adapters configuration or to modify the system routing table. To use the IPv4 address or Routing Table features, UT-Soft must be running as an administrator. You can do this automatically by setting the “Run this program as an administrator” property for the “utclient.exe” executable. Each time UT-Soft is started, you will be presented with the UAC prompt and possibly need to enter the administrator's password.

Using the Windows file browser, locate the “utclient.exe” executable, usually installed in the “C:\Program Files (x86)\UTSoft” folder. The exact location may be different for your specific system since the install location can be modified during setup.

Right click on “utclient.exe” and select Properties. Choose the *Compatibility* tab and check the *Run the program as an administrator* box.



How to Connect a PC to 2 or more UT Servers at the same time

If there is a need for a PC to connect simultaneously to two or more different servers, the user should add an additional virtual interface for each connection.

Additional virtual interfaces can be added by running the installer again and checking the "Create virtual Ethernet adapter" box. See page 3 of this document for a screen shot of this choice.

The “Create virtual Ethernet adapter” box is automatically checked on the first install and automatically unchecked on subsequent installs. Installing additional virtual Ethernet adapters requires a unique key for each adapter instance.