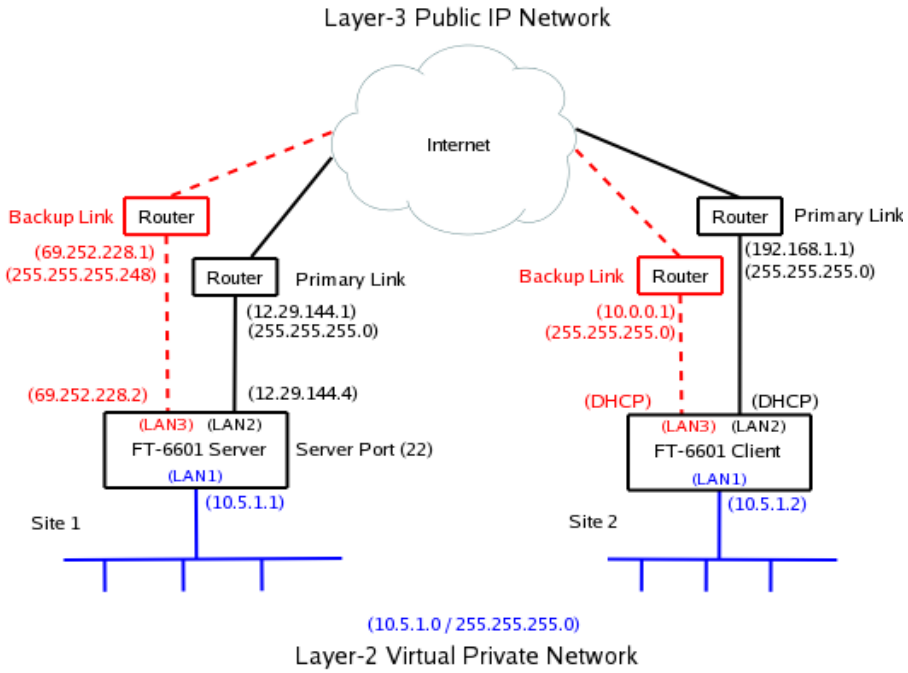
FT-66xx Quick Start Guide

Overview

This quick-start guide will walk you through the minimum steps necessary to setup a pair of FTs to tunnel a private network over a public network. It will not go into detail, but will touch upon the steps and the order they should be performed. The steps should be repeated for each FT device except where noted.

The FTs use a client-server architecture. One unit is designated as the server. It listens for connections from clients. One or more clients may be configured to connect to the server. For our walk-through, please refer to the following diagram. Addresses in the diagram are intended as an example. A blank copy of this diagram, which you may use to plan your configuration, can be found on the last page of this document.



Step 1: Setting Initial LAN1 IP address

LAN1's default IP address is 192.168.0.1 with a subnet mask of 255.255.255.0. LAN1 will also be running a DHCP server, assigning addresses in the range 192.168.0.101 through 192.168.0.109. You can skip to the next step if your computer is configured with an IP address on the 192.168.0.0/24 subnet.

You can change the LAN1 IP address and reset the FT-66xx to defaults through the COM port. The COM port operates at 9600 baud, 8 data, 1 stop, no parity, no flow control. You will need a null-modem cable to connect a PC COM port.

FT-66xx Quick Start Guide

To enter serial setup mode, attach the serial cable and press <enter> on your terminal. You should then see a login prompt. Login using the name "setup" and follow the on-screen instruction.

Step 2: Accessing the Web Interface

To access the FT-66xx web interface use the following URL. Please note that it is https and not http.

https://192.168.0.1

Of course, if you changed the LAN1 IP address using the COM port, please use the new address in the above URL.

You will get a security warning, then the web browser should pop up an authentication screen. If this does not happen, see the Important Notes below. Login using the name "admin". Leave the password field blank. The name and password fields are case sensitive.

Important Notes:

- After initial TLS negotiation, some web browsers will display a blank page. If this happens, press the refresh button.
- Your web browser must support the TLS 1.0 protocol. If you have trouble connecting, check your web browser options to make sure TLS 1.0 is enabled. For IE, you will find the TLS 1.0 setting under Advanced/Settings. For Firefox you will find it under Preferences/Advanced/Security.
- Internet Explorer Version 7 and newer or Firefox version 2 or newer are recommended. Older versions of web browsers may fail due to TLS negotiation issues.
- Firefox, Netscape, and Mozilla will not use the TLS 1.0 protocol if they have encountered an error with a server. You must exit all instances of the browser then restart it to clear the error condition.

Setup through the web interface is performed through web forms. There is a menu bar on the left side of the window where you navigate and select the active form. The active form is displayed on the right. You make changes to the form, then press the "submit" button to send the changes to the FT-66xx. If you navigate to a different form without submitting it first, any changes will be lost.

As you go through the forms, you will notice that the each configuration item is hyper-linked. Clicking the hyper-link will take you to a help page describing the configuration item in more detail.

Step 3: Configure LAN1

LAN1 will reside on your private network. Navigate to the LAN1 – IP Configuration form. Set the IP address and subnet mask. The other fields on this page are typically not needed and may be left blank. After making any changes, don't forget to press the "submit" button.

The LAN1 DHCP server is enabled by default to make it easier to do initial setup. However, in most cases you will not want it running. It will interfere any other DHCP servers you may have on your network. Navigate to the LAN1 – DHCP Server form. Disable the DHCP server, or configure it appropriately for you network.

Step 4: Activate Changes

If you changed any of the LAN1 settings, now is a good time to Activate Changes and switch over to using LAN1's new IP address. After you activate the changes, you will need to change the URL in your web browser to the FT-66xx's new IP address.

Step 5: Store Configuration

If you had changes to activate, then you should now Store Configuration. It is usually best to activate changes first, then store them. This give you a change to verify that the changes are OK before committing them to non-volatile storage. If the changes were bad, you can simply power-cycle the unit and get back to your previously working configuration.

Step 6: Configure LAN2

LAN2 is the primary link to the Internet. Navigate to the LAN2 – IP Configuration form. Set the IP address, subnet mask, and gateway. Unlike the LAN1 configuration, a gateway address is almost always needed for LAN2. It should be the address of your Internet router. The other fields on this page are typically not needed and may be left blank.

LAN2 can also connect to the Internet using PPPoE. If your ISP requires PPPoE, navigate to the LAN2-Mode form and set the mode to PPPoE. Then navigate to the LAN2 - PPPoE Configuration form and set the configuration per you ISP's instruction. In most cases, you will only need to set the User Name and Password fields.

Step 7: Configure LAN3

If you have a secondary Internet connection it can be used as backup link. Configure LAN3 in the same manner as LAN2. Otherwise, navigate to the LAN3 – Mode form and disable it.

Step 8: Set the Clock

It is important to set the FT-66xx clock prior to generating the security keys. These keys contain time-stamps, and large clock discrepancies can result in certificate errors. Navigate to Administration – Set Clock to manually set the time. Optionally, navigate to Tools – NTP and configure NTP. If relying on an NTP server to obtain the time, please verify that the time is successfully set prior to generating any keys.

Step 9: Tunnel – Generate CA Key

This step will only be performed once. You should **not** repeat it for each FT device.

A USB flash drive was included with your FT-66xx. Insert the USB flash drive into one of the USB ports on the FT-66xx. Go to Tunnel – Generate CA Key form. Fill out the form. All of the fields, except the password fields, are informational. It really doesn't matter what you put in them, but its best to use information meaningful to you.

The two password fields are the most critical. On this form, you are creating the password. Enter the same password in both places. Make sure to use a password you can remember. You will need it later when you generate local keys.

Press the "submit" button, then wait patiently. Key generation can be a slow process. Also, make sure to read any error messages. USB flash drives sometimes fail to register correctly. Upon error, it may be necessary to remove the USB drive, wait 5 or so seconds, then reinsert the drive.

If you forget your password, there is no way to recover it. Your only option is to generate new a CA key, which will overwrite the old one.

Step 10: Tunnel – Generate Local Key

This step will be performed for each FT device. As a reminder, make sure the FT's clock has been set before proceeding.

Insert the USB flash drive, containing your CA Key, into one of the USB ports on the FT-66xx. Navigate to the Tunnel – Generate Local Key form. For the name field, use a unique and descriptive name for the device. For example, the server FT-66xx could be named "Home Office Server" and the client FT-66xx could be named "Remote Office Client". The lifetime field specifies the number of days that the key is to be certified. Unless you plan to frequently change your keys, its best to choose a big number.

For the password field, enter the same password you set when you generated the CA key.

Press the "submit" button, then wait patiently. Key generation is a slow process. Also, make sure to watch for any error messages. USB flash drives sometimes fail to register correctly. Upon error, it may be necessary to remove the USB drive, wait 5 or so seconds, then reinsert the drive.

Remove the USB Flash drive and store it in a safe place. You will need it in the future if you plan to add more client FT-66xx devices to your server.

Step 11: Tunnel – Mode

Navigate to the Tunnel – Mode form and select whether the FT-66xx is operating as the server or the client.

Step 12: Tunnel – Configuration (Server)

This step is only performed for the server tunnel.

The server will default to listening to TCP port 22. For most applications there is no need to change this value. However, if you need to use a different TCP port for you application, navigate to the Tunnel – Configuration form and set the port number. You may optionally have the server listen to a second port number, but again, this is usually not necessary.

Step 13: Tunnel – Configuration (Client)

This step is only performed for the client tunnel(s).

Navigate to the Tunnel – Configuration form. Set the "Connect to Server" field to the Server's LAN2 IP address. Referring to example setup, this would be the 12.29.144.4 address. Set the "port" field to the same port number set in the previous step. Set the "via interface" to LAN2.

If you have a backup Internet connection on LAN3, you can also set the fail-over fields. In our example configuration this wold be the 69.252.228.2 address. The "port" field is the same as above and the "via interface" would be LAN3.

Note: If you have a backup link at client side but not at the server side, it is OK to use the same "Connect to Server" for both the primary and fail-over settings. Only the "via interface" field needs to be different. Likewise, if you have a backup link at the server side but not at the client side, the "via interface" would both be set to LAN2 but the "Connect to Server" would differ for the primary and fail-over settings.

Step 14: Activate & Store Changes

Activate and save the final configuration. You can now navigate to the Status – Interface page and verify LAN interfaces. You can also navigate to the Status – Tunnel Log page to determine the state of the tunnel.

FT-66xx Quick Start Guide