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Canon WFT-E1 (A) Wireless File Transmitter

Network Support Guide

Windows XP - Infrastructure Wireless Mode Connection

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Setting up the WFT-E1A on Windows XP Home or Professional – Infrastructure Wireless Mode

This document will take you through the process of setting up the WFT-E1A wireless file transmitter in conjunction with a PC running Windows XP Home or Professional Edition.

In this example we have used the following test specifications:

Canon Eos 1DS Mk II Camera Body
Canon WFT-E1A Wireless File Transmitter
D-Link DWL-122 USB Wireless Transmitter
Netgear WG602 Wireless Access Point
Pentium III 1Ghz PC with 512MB Ram
Windows XP Home or Professional Edition
Filezilla FTP Server Version 0.9.11

Three Stages to Complete Setup

There are three stages to setting up the WFT-E1A with your PC.

1. Setting up your Wireless Network on your computer & your Wireless Access Point
2. Setting up your FTP Server on your computer
3. Setting up your WFT-E1A to talk to your Wireless Access Point and FTP Server

Stage 1 – Setting up your Wireless Network on your computer

Stage 1 will involve installing a wireless transmitter on your PC. Most transmitters come in the form of a USB "dongle" that is inserted into a spare USB port on your PC. The "dongle" should come with a manufacturer's installation disk that installs the necessary drivers for the "dongle". Once your "dongle" has installed correctly you should see an entry in Window's "My Network Places" called "Wireless Network Connection".

If you experience difficulties installing your wireless transmitter on your PC you should contact your manufacturer for assistance with its installation.

We will start the network set up with the assumption that you have installed your PC's wireless transmitter (dongle) and it is working correctly.

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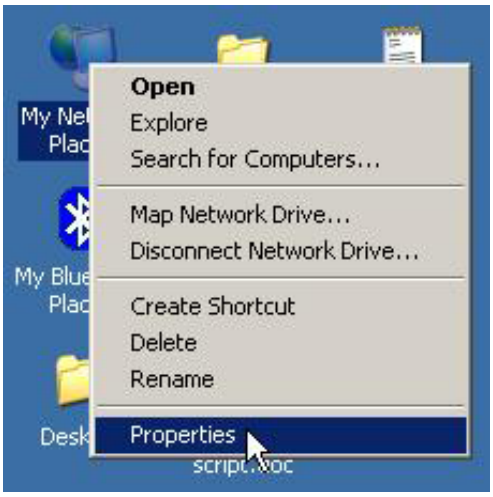
On your desktop, right click on the “My Network Places” icon.

Select Properties



This opens your Network Connections pane. If you have a correctly installed Wireless “Dongle” on your computer you should see the Wireless Network Connection entry displayed here

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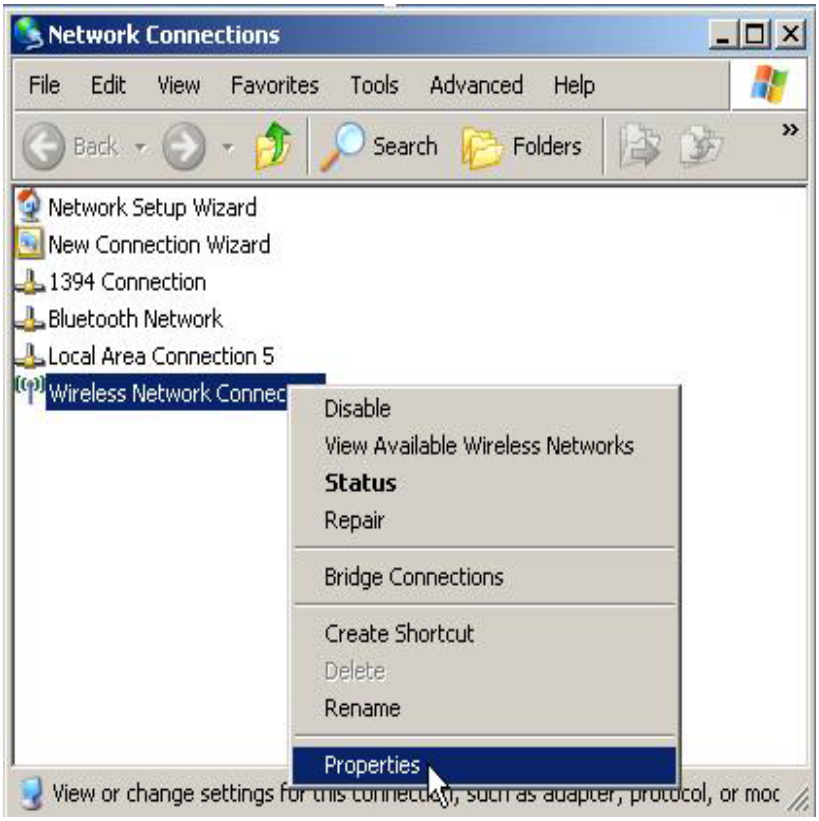
Right Click on your Wireless Network Connection and select Properties.



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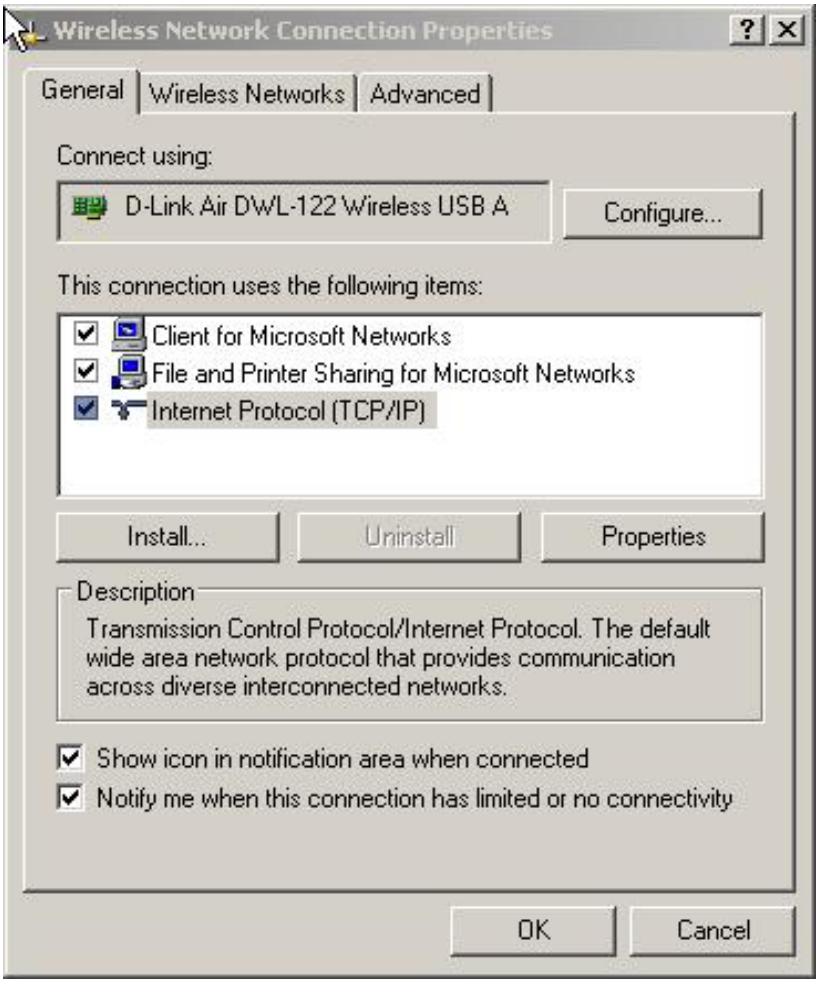
This brings up the Wireless Network Connection Properties dialog box



In the Wireless Network Connections dialog box you should see Client for Microsoft Networks, File and Printer Sharing for Microsoft Networks and Internet Protocol (TCP/IP). If you your dialog box does not contain all of the above, or has different entries, you should contact your PC support company to assist you in installing the relevant Windows Networking Components from your XP Home or Professional original disk, as these are an intrinsic part of the operating system.

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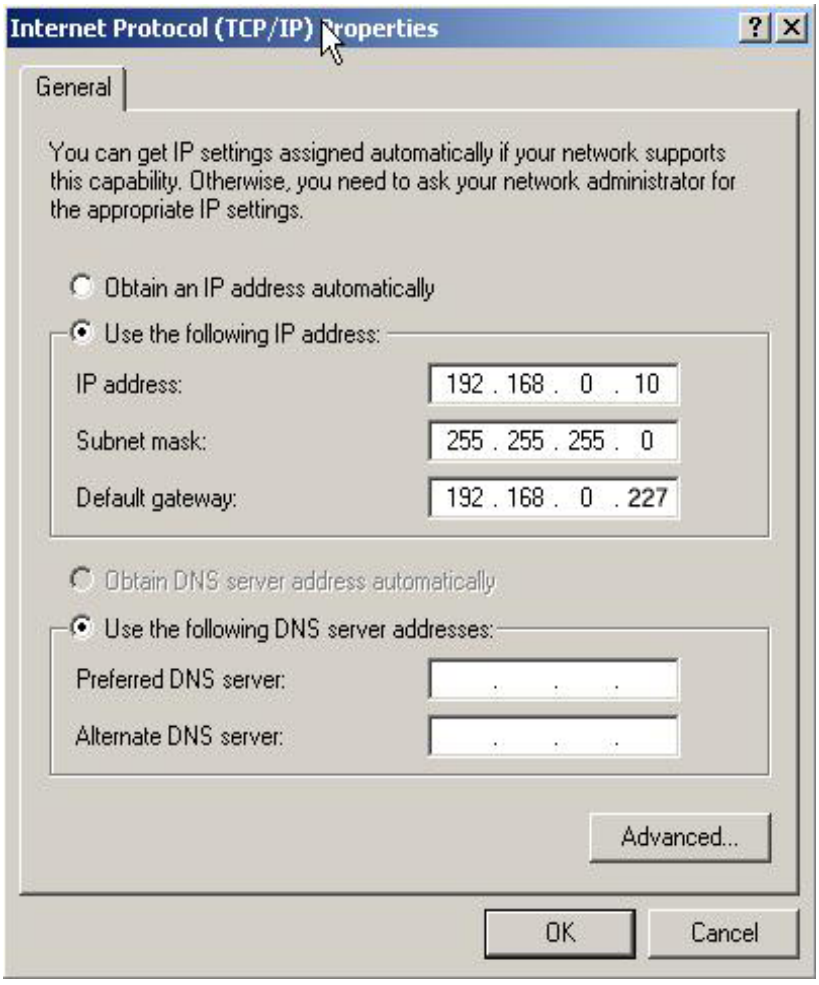
We will need to create a static IP address for the computer on the network.

To do this, select the General tab, select Internet Protocol (TCP/IP) and click the Properties button.

You should now see the following screen. In this screen, select “Use the Following IP address, and enter a unique IP address for the computer. In this example we have used 192.168.0.10 which will be the IP address which identifies the PC to the network. The Subnet mask should be set to 255.255.255.0 as the only number range in the IP address that is going to alter is the last set of numbers. In the Gateway address, enter the IP address of the wireless access point you are using. Leave the DNS entries blank. Nothing needs changing under “Advanced” so leave that as is.



Click on OK to return to the Wireless Network Connection Properties screen.

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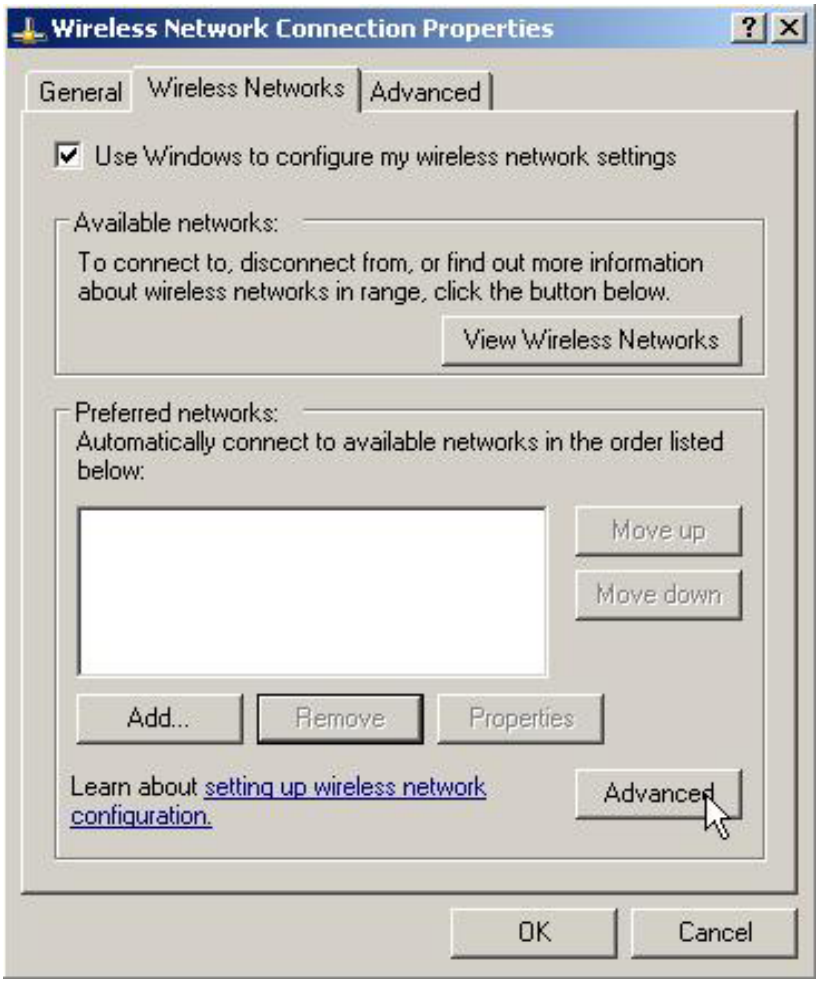
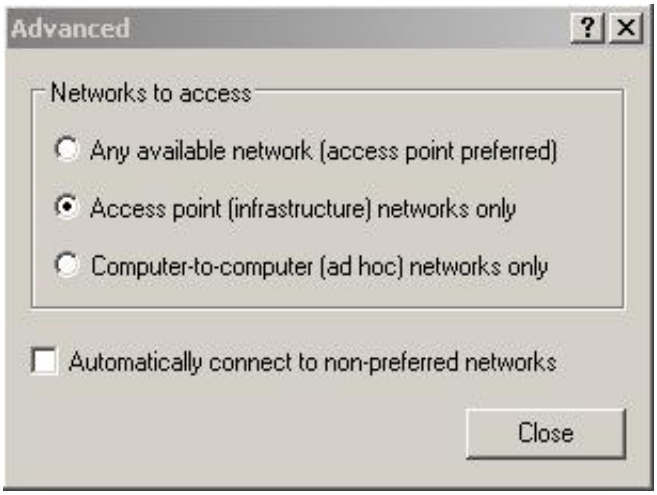
You will now need to tell your network to connect in Infrastructure. Select the “Wireless Networks” tab, and tick the “Use Windows to configure my wireless network settings” box. Next click Advanced



In the Advanced screen, select Access point (infrastructure) only as below and then select Close.



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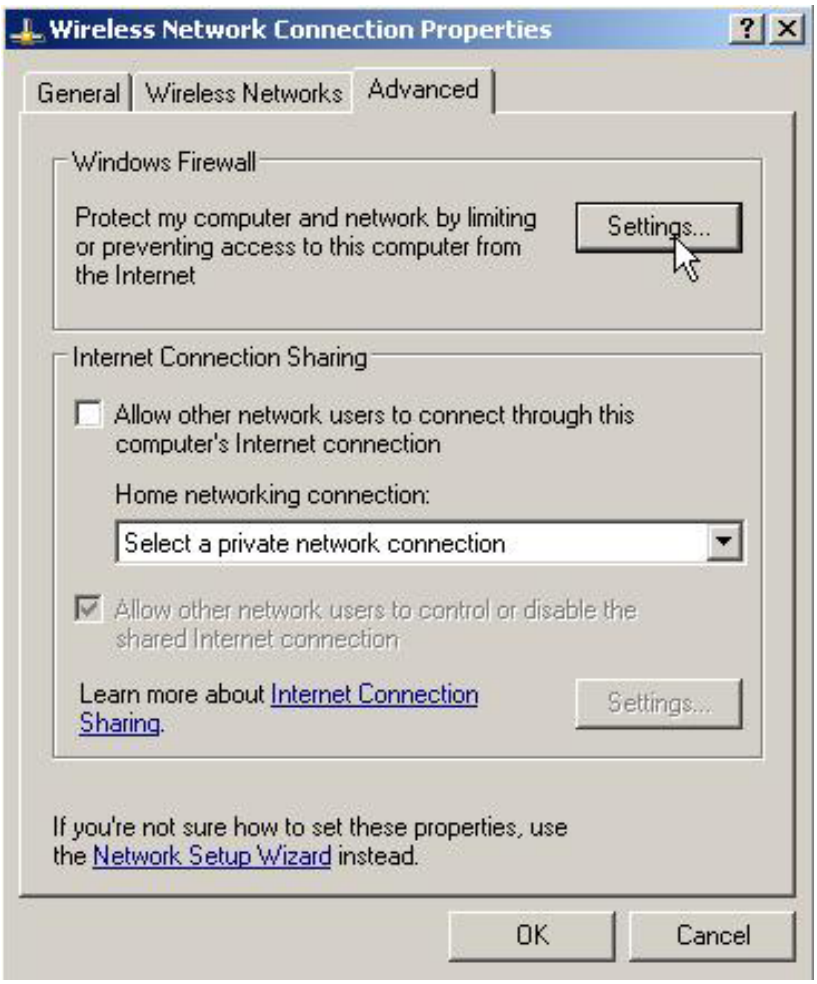
This will return you to the Wireless Network Connection Properties screen. Click on the “Advanced” tab and under Windows Firewall click the Settings Button.



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On the Windows Firewall screen, if you do not require a firewall to be active then select “Off”. If you do require a firewall you will need to carry out the next step to allow the FTP port to be allowed through.

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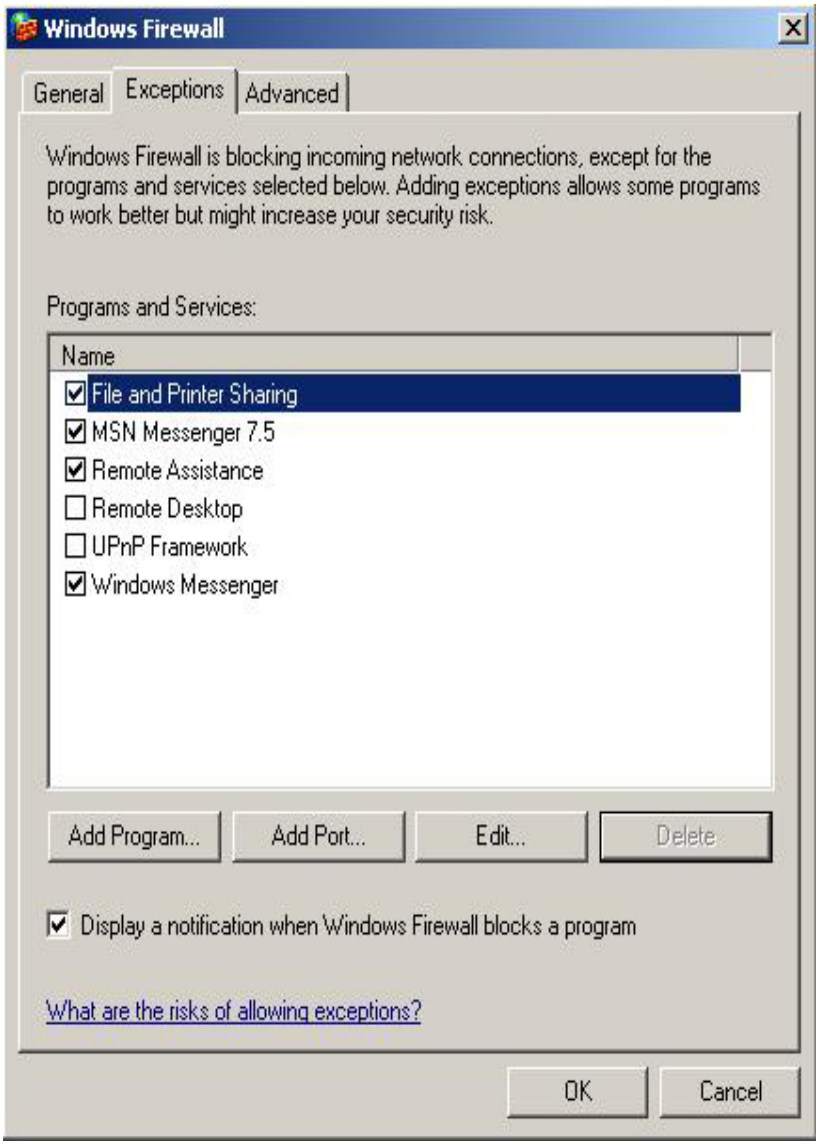
If you elect to switch on your firewall, click on the “Exceptions” tab. And click on the Add Port button



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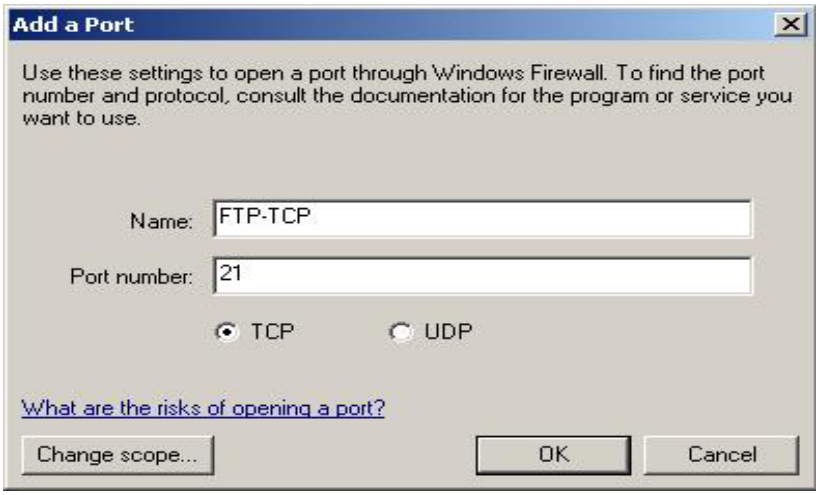
In the Add a Port screen, enter the name as FTP-TCP, and the port number as 21. Make sure TCP is selected. This will open a TCP connection on port 21through the firewall to enable control communication between the WFT-E1A and the FTP server. Click on OK.



Now we need to open port 21 for UDP data also, so click on the “Add Port” button again

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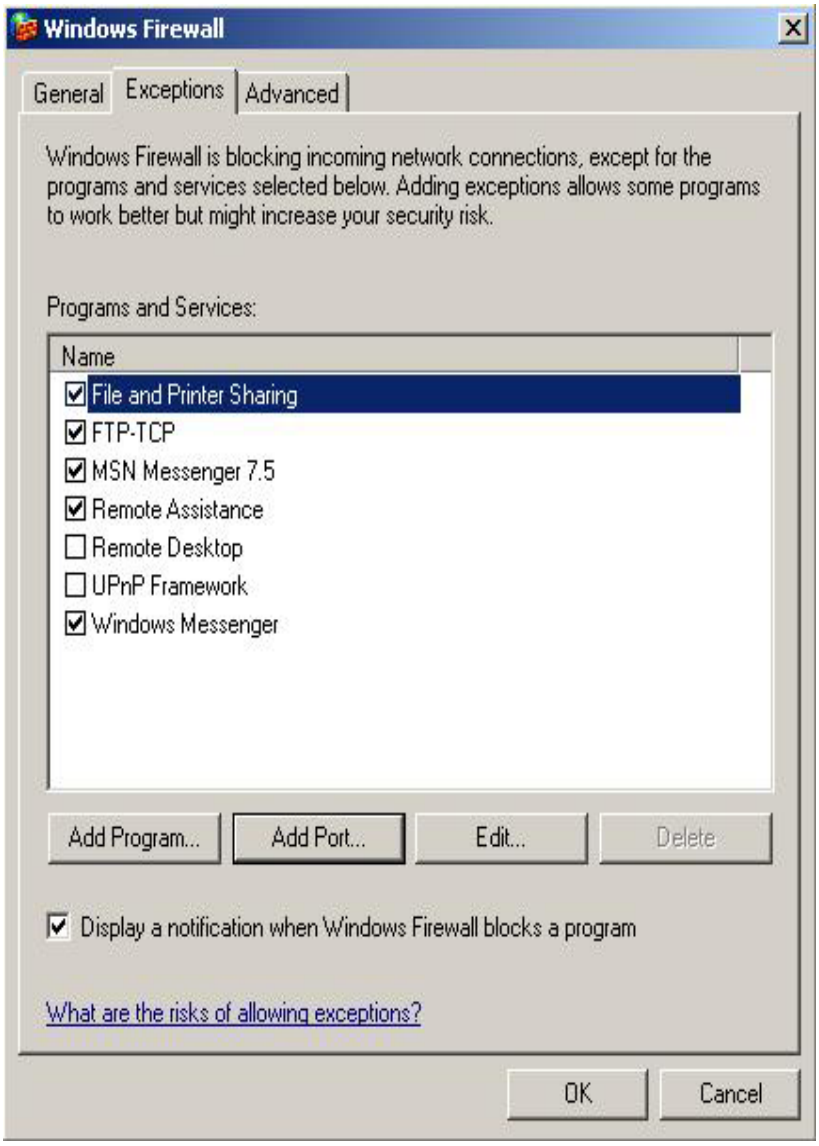
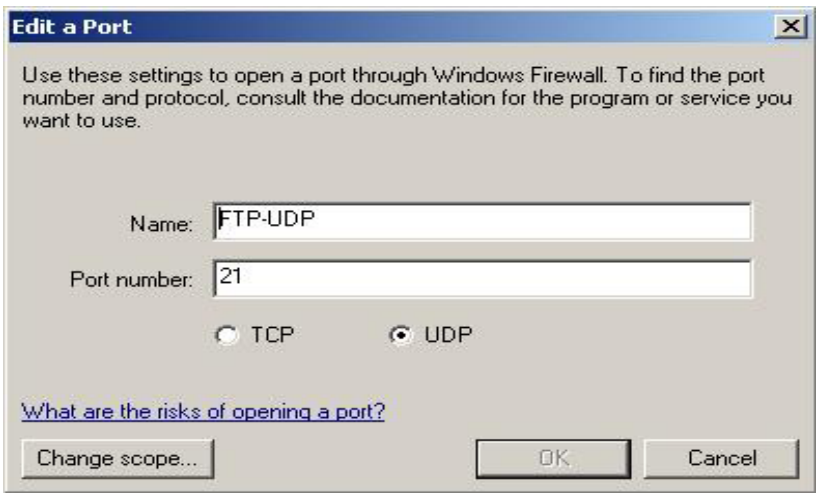
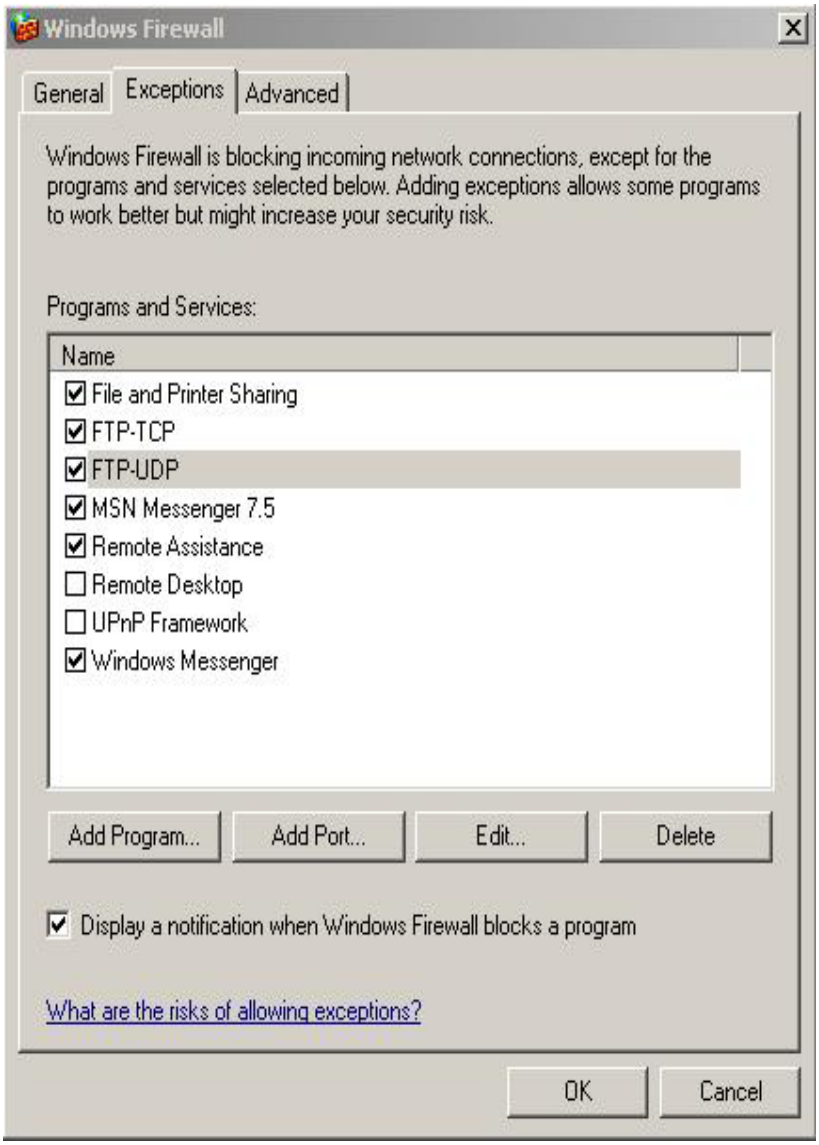


In the Add a Port screen, enter the name as FTP-UDP, and the port number as 21. Make sure UDP is selected. This will open a UDP connection on port 21through the firewall to enable data communication between the WFT-E1A and the FTP server. Click on OK



You should now have FTP-TCP and FTP-UDP entries in your Firewall Exceptions; port 21 is now open through your firewall. No settings on the Windows Firewall “Advanced” tab require any attention. Click OK.



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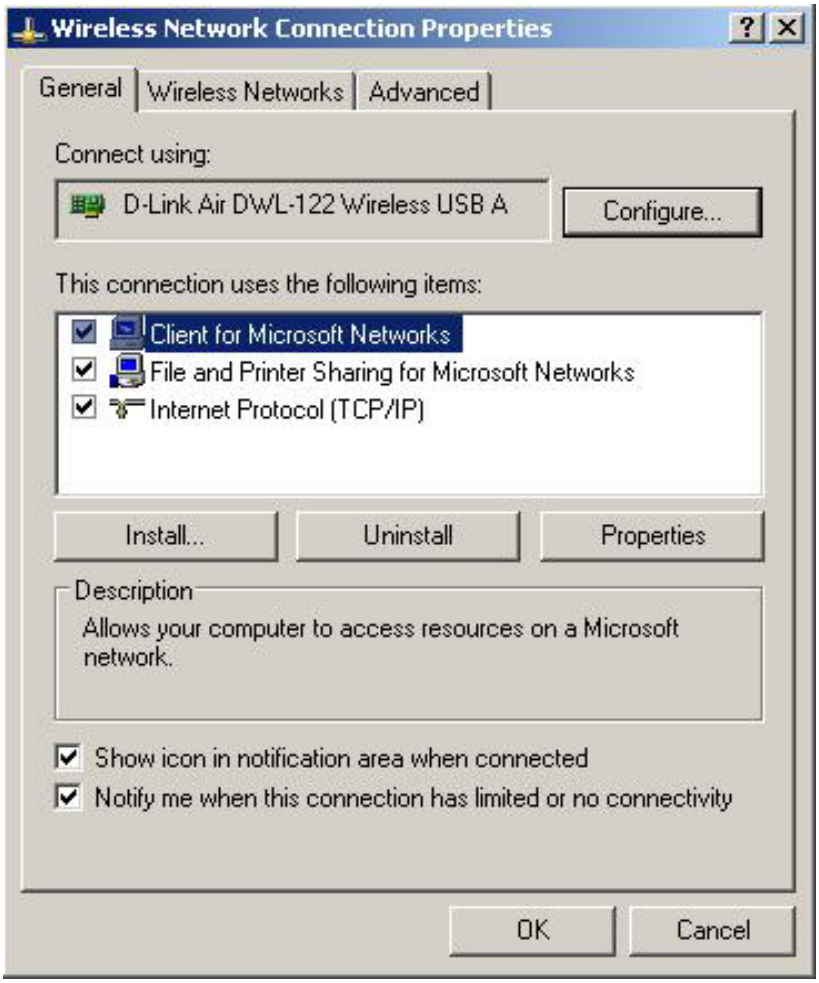
Click OK on the Wireless Network Connections Properties screen and close the Network Connections window. You should now connect to your access point from your “dongle” and establish a connection between the two. It should show as connected under the Wireless Network tab, after pressing the Show Wireless Networks button.



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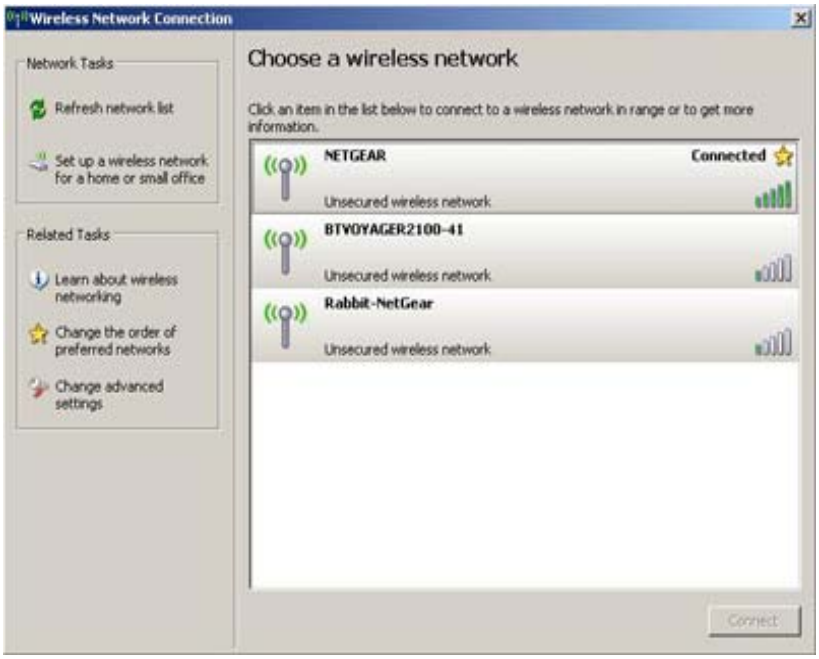
Wireless Network Connection
Network Tasks
Refresh network list
Set up a wireless network for a home or small office
Related Tasks
Learn about wireless networking
Change the order of preferred networks
Change advanced settings
Choose a wireless network
Click an item in the list below to connect to a wireless network in range or to get more information.
NETGEAR
Connected
Unsecured wireless network
BTVOYAGER2100-41
Unsecured wireless network
Rabbit-NetGear
Unsecured wireless network
Connect

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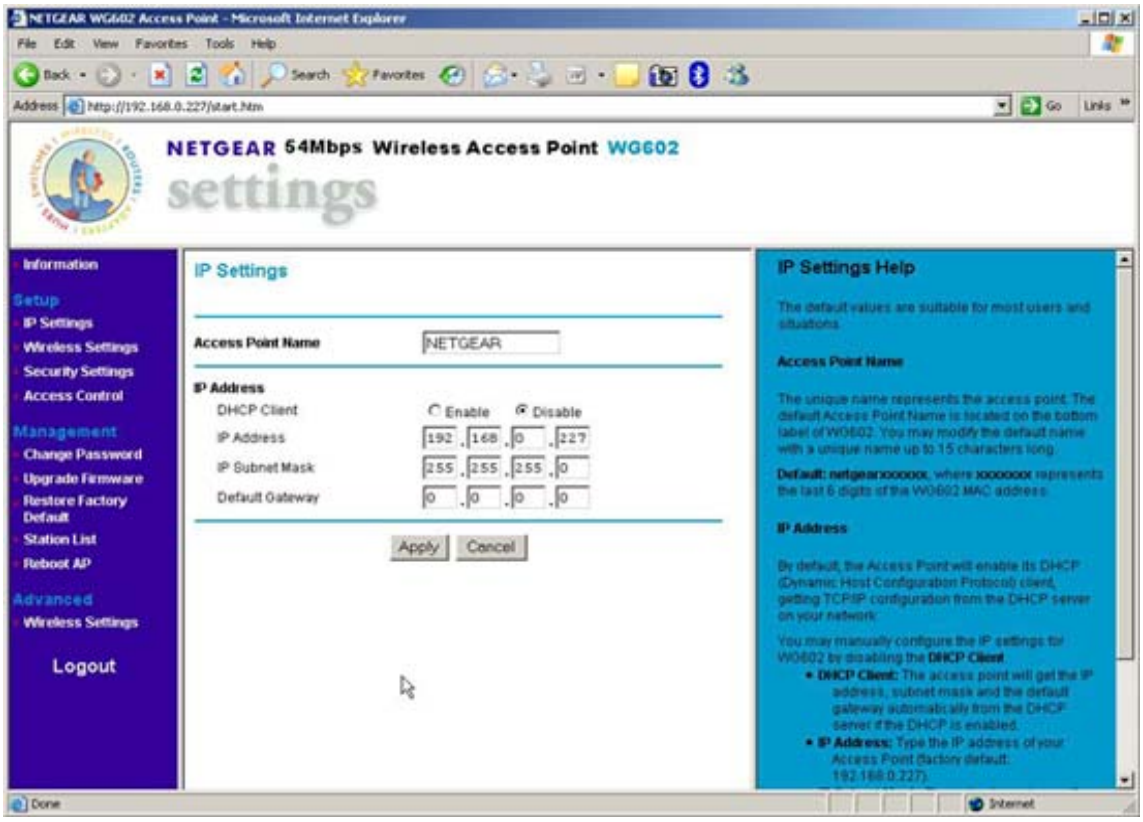
You will now need to set up your Access point, we will be setting up a Netgear WG602 here, however the settings should be similar on other makes of access point, however you may need a different IP address to get to the access point's administration screen, so refer to your access point's manual for this. The Netgear's administration screen is located at 192.168.0.227, so we will open an internet explorer window and type the IP address into the URL bar. You will need to login to your access point (consult your access point's manual for the username and password)

Firstly set the IP address of your Access Point. This will be the "Gateway" setting that you enter later. Here we have left the Netgear default setting of 192.168.0.227. Disable DHCP and ensure the subnet mask is set to 255.255.255.0 and the gateway address is set to 0.0.0.0. Set your Access Point Name here too, although ensure it is in capital letters, as this will form your SSID which is case sensitive. If incorrect case is used for the AP name and the SSID on either the AP or the WFT-E1A you will not be able to communicate between the two



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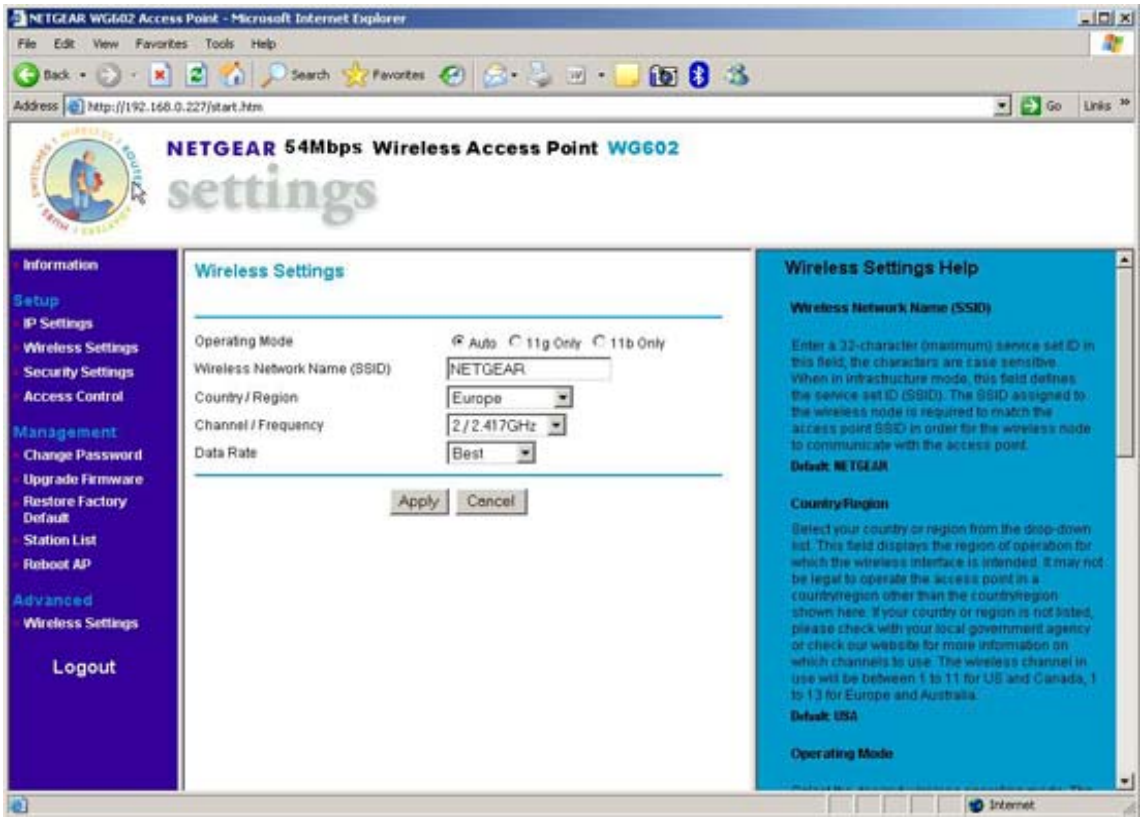
Next you will need to set your Wireless settings. Use Auto or 11g only, as we will be using infrastructure mode, the SSID should be set here, for clarity we are setting this to the same as the access point name, ensure it is in capital letters, as SSID's are case sensitive. If incorrect case is used for the SSID on either the AP or the WFT-E1A you will not be able to communicate between the two.

Set your country region and the channel frequency, and lastly set the data rate to "Best". If this is not available set it to 54Mbps as this is the fastest you can transmit in infrastructure mode. Click Apply.



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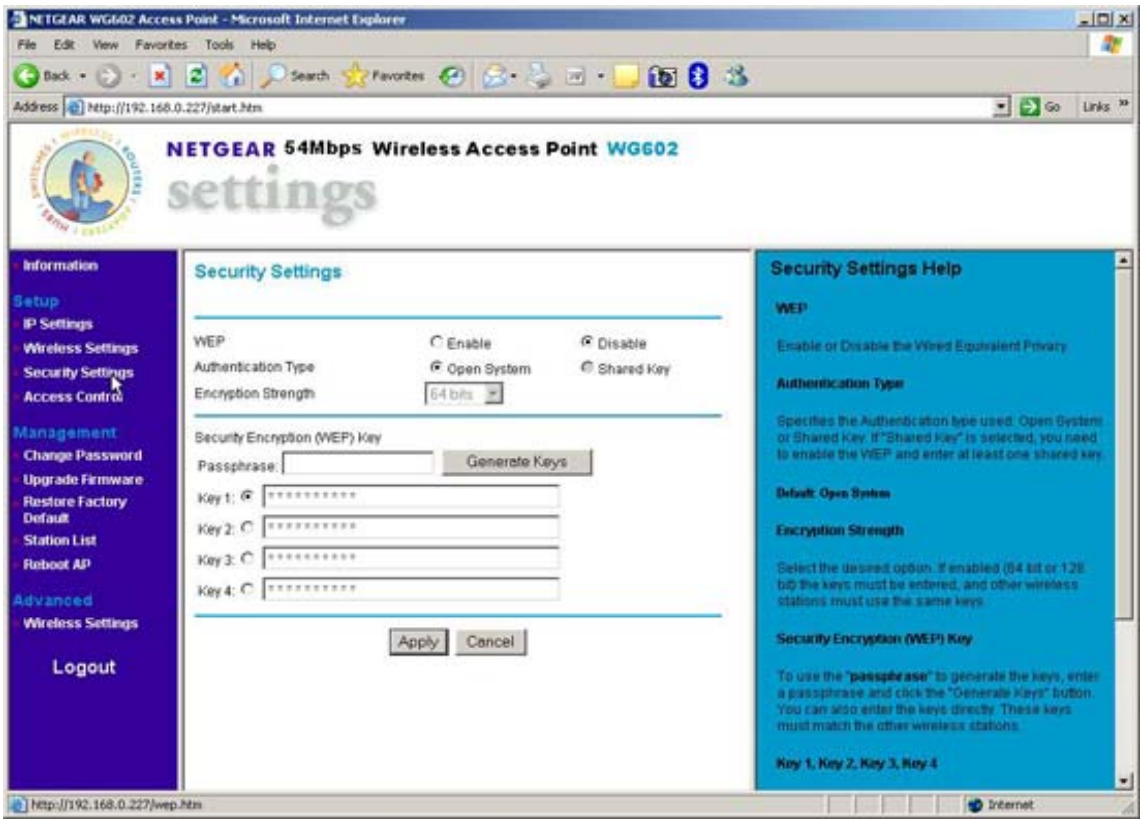
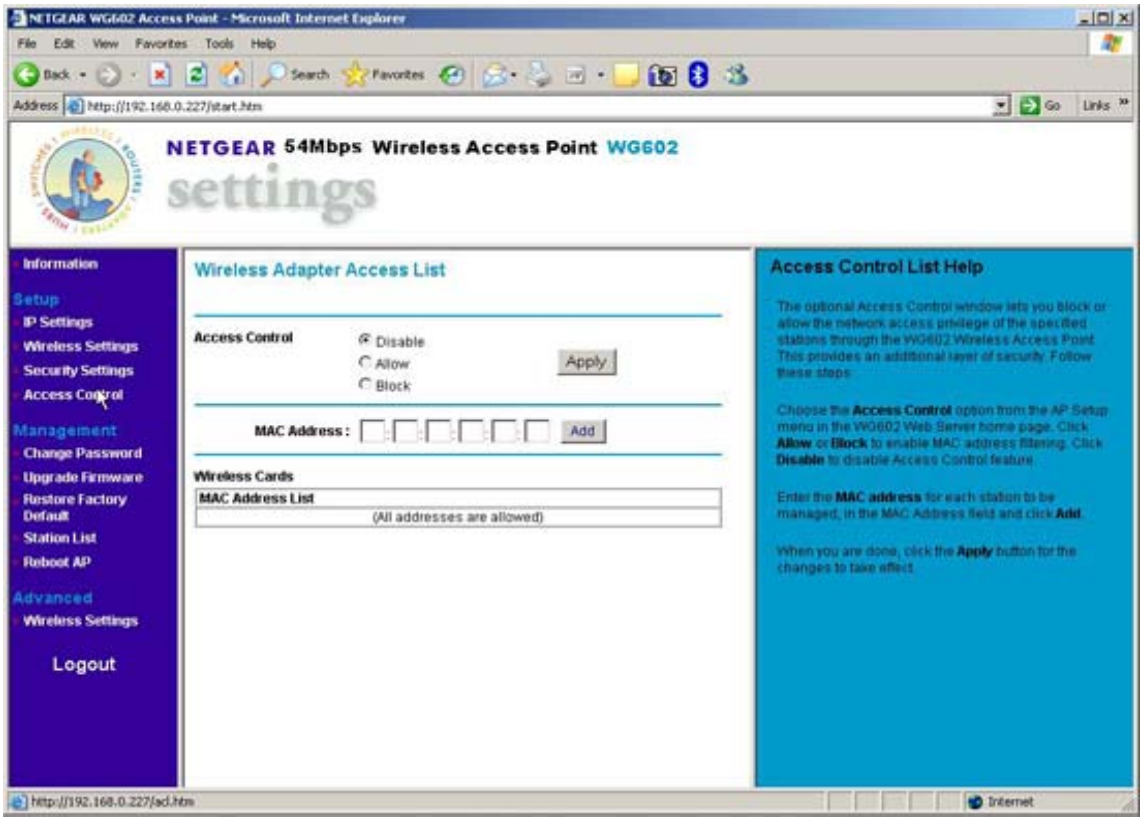
Leave your security and access settings off for now.





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Stage 2

Setting up your FTP server on Windows XP Professional Edition

(For XP Home Edition proceed to Stage 2A – Filezilla FTP Server Setup instead)

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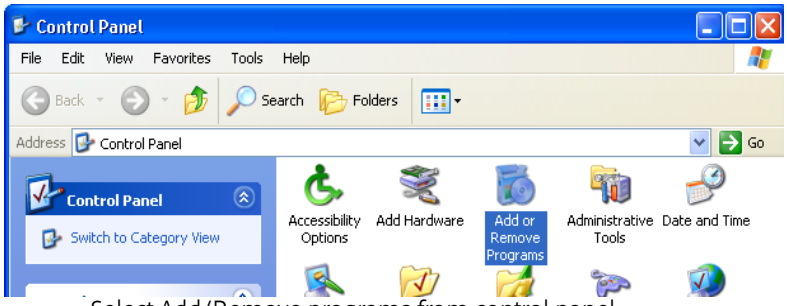
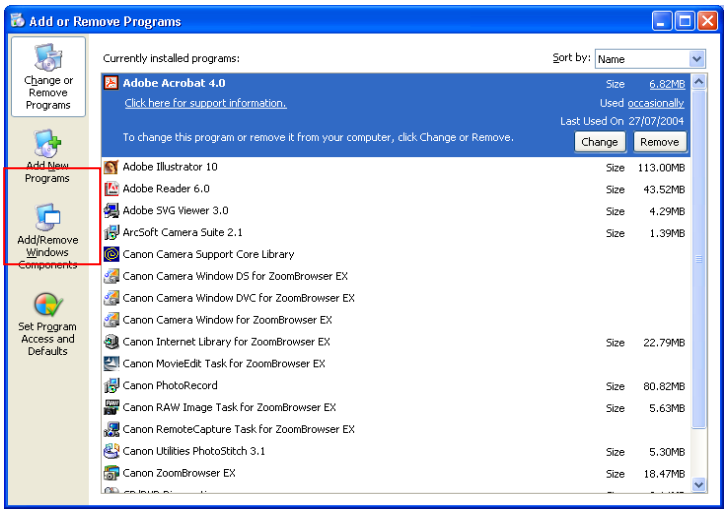
Setting up the FTP server on Windows XP Professional

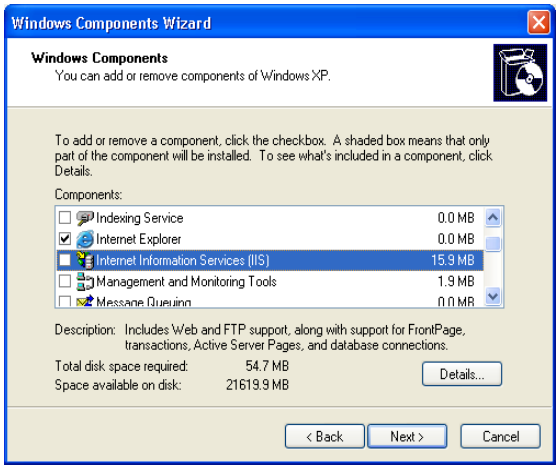
Installing the ftp server – Windows XP



- Select Add/Remove programs from control panel
- You must be an administrator of the local machine for this to be possible. If not contact your local IT department and ask them to do it.

Select add/remove windows components then Windows Components Wizard displays





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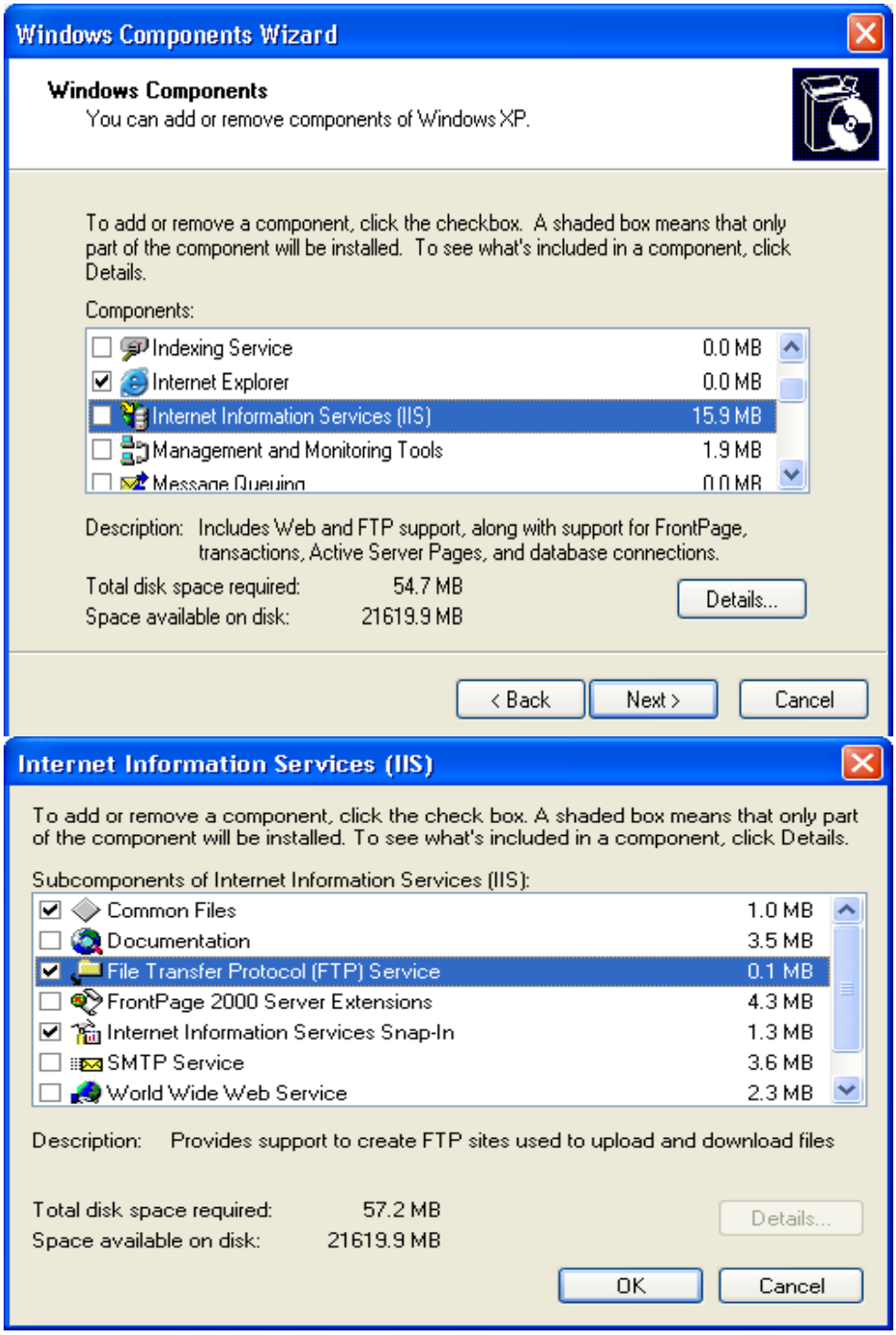
- Select the Internet Information Services option, and click Details...



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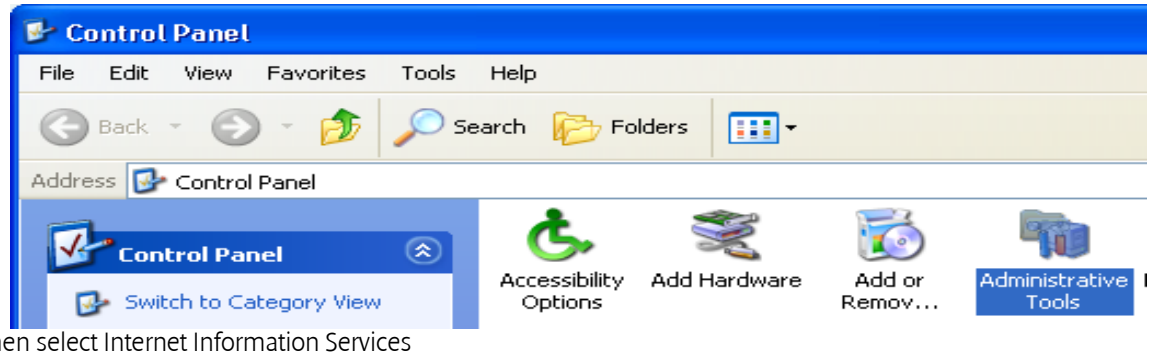
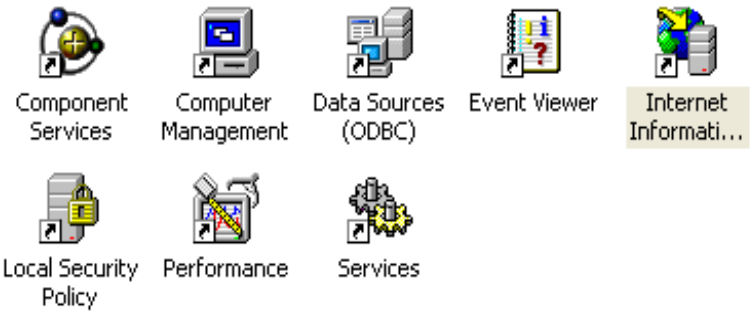
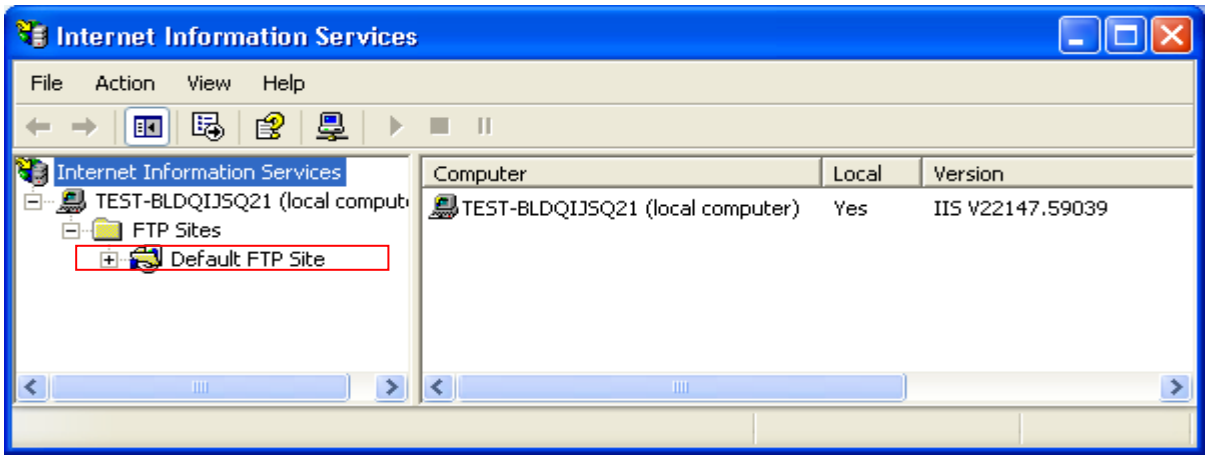
From control panel select Administrative Tools



Then select Internet Information Services



Right click and select properties on the Default FTP Site. If you wish you may rename this by right clicking on it and selecting rename.



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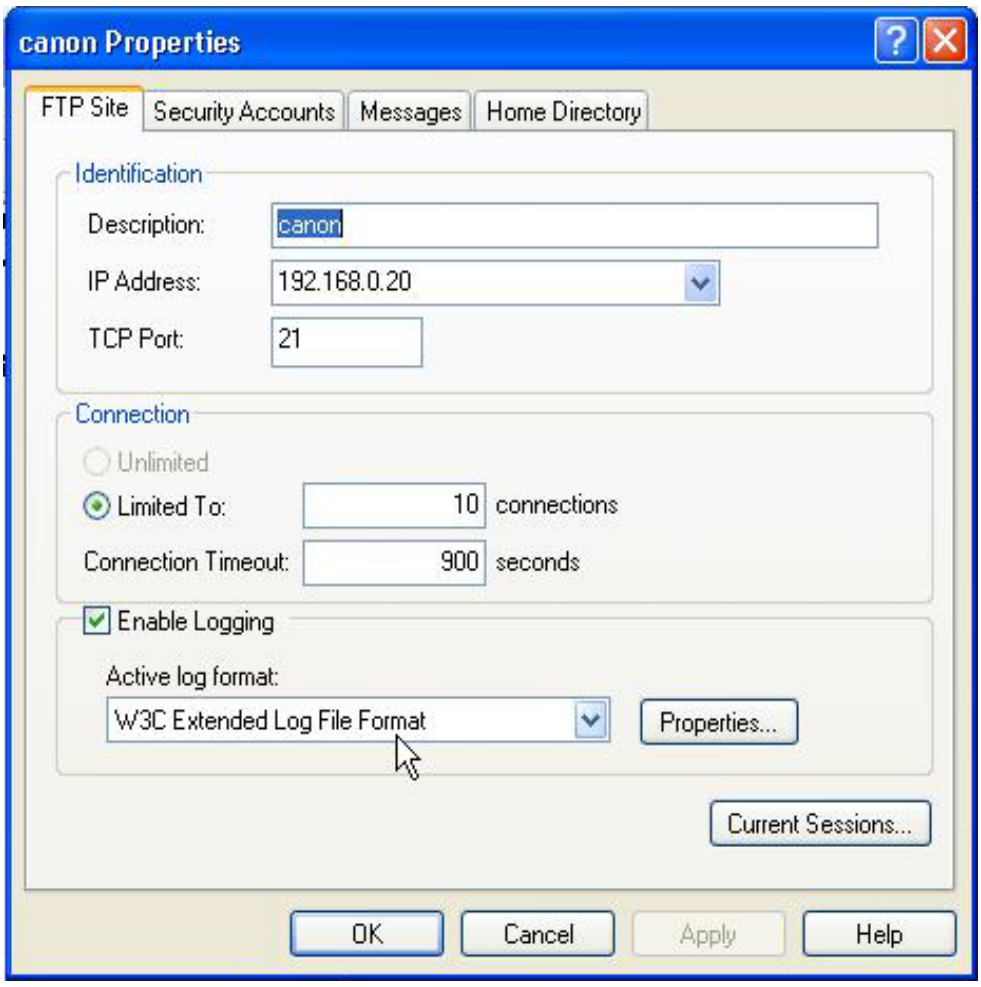
Under the FTP Site Tab enter a description for the FTP server. Here we have used the name canon. Please note that this is case sensitive so input in lower case to avoid confusion.

In IP address, your computer's IP address should be available for selection, select this from its drop down menu. Ensure the port is set at port 21. Also ensure that "Enable Logging" is ticked to provide a log should you need to troubleshoot your setup at a later date.



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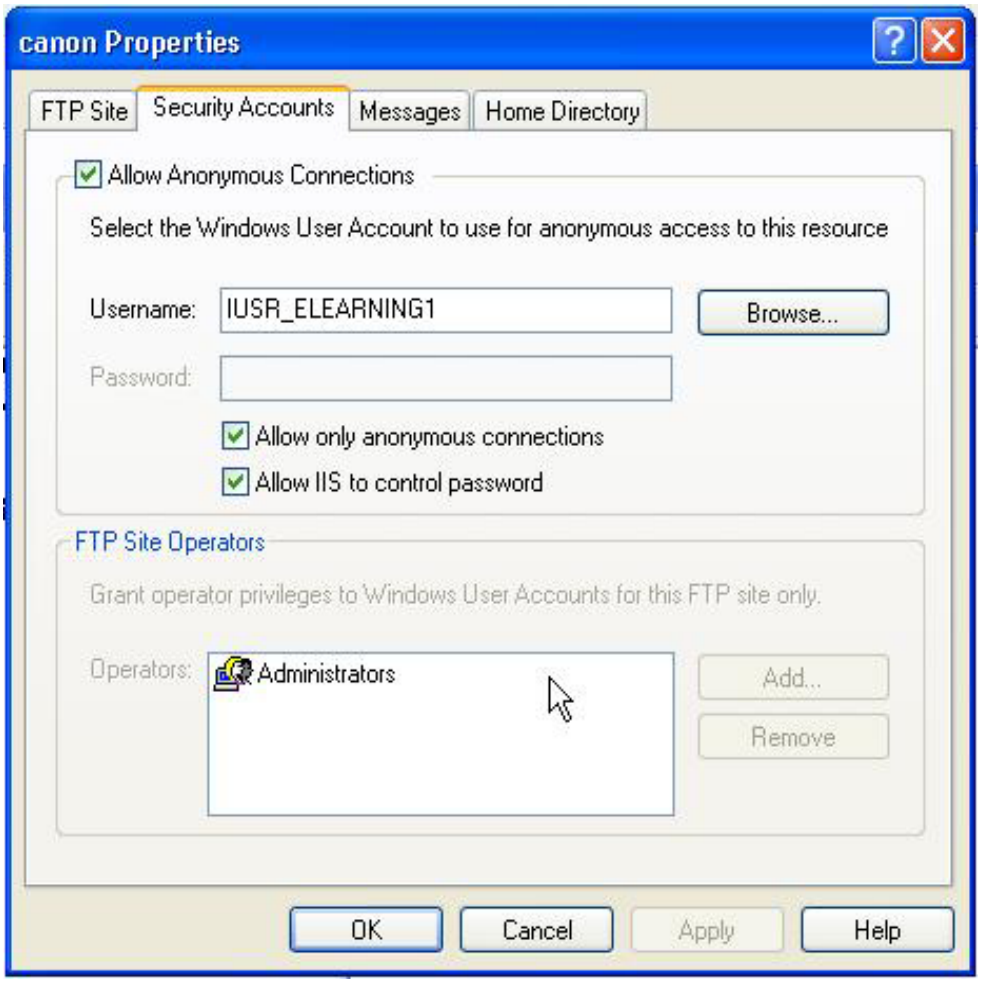
Under the Security Accounts tab, you should tick Allow Anonymous connections, and leave the username as set by the Microsoft IIS FTP Server. This is usually in the format IUSR_ and then immediately followed by the name of the computer the server is running on. Make sure that Allow only anonymous connections and Allow IIS to control password are ticked.



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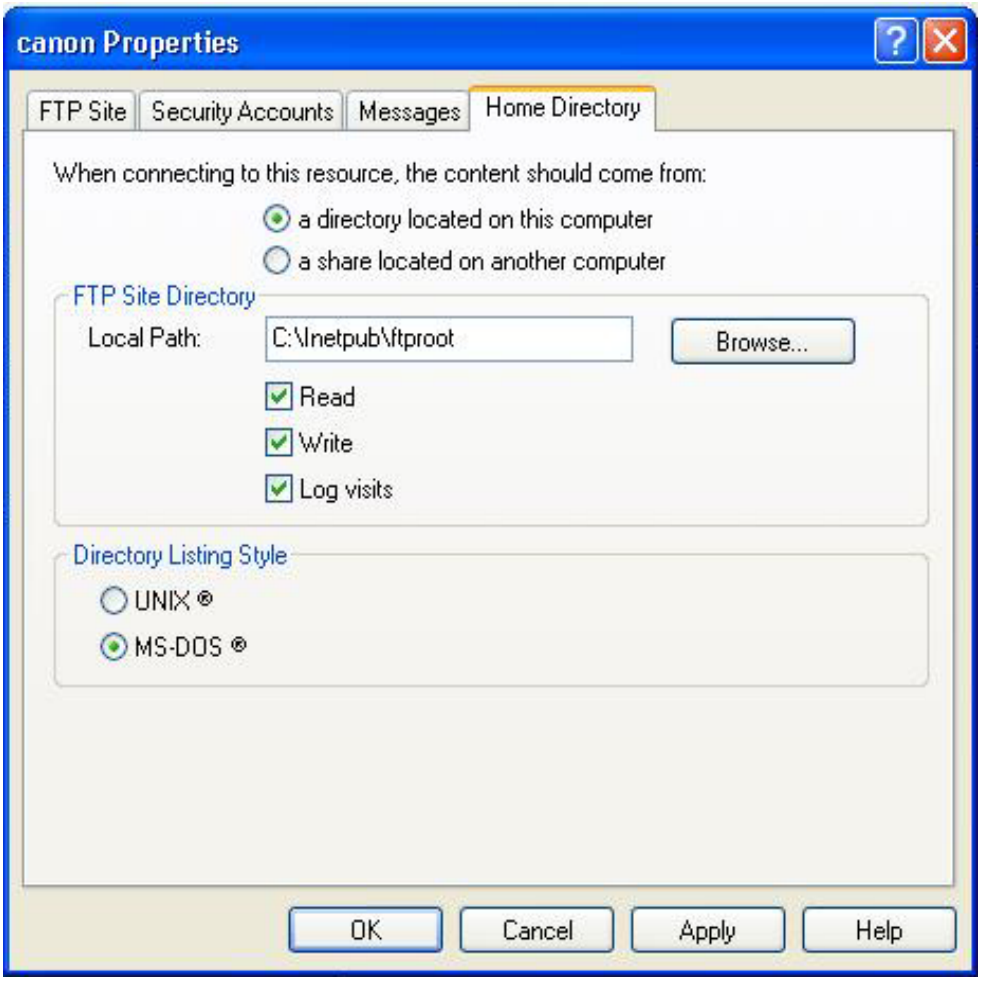
Nothing is required on the messages tab, so proceed to the Home Directory page. The local path should be set to C:\Inetpub\ftproot as this is the area IIS uses for the FTP storage, and will be where the transmitted images are sent to. Ensure that Read / Write and Log Visits are all ticked.



When setting up the WFT-E1 (A) username and password settings in Stage 3, you should use the username **anonymous** with **no password set.**

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Stage 2A

Setting up your FTP server on Windows XP Home Edition

(For XP Professional Edition see Stage 2 – IIS FTP Server Setup instead)

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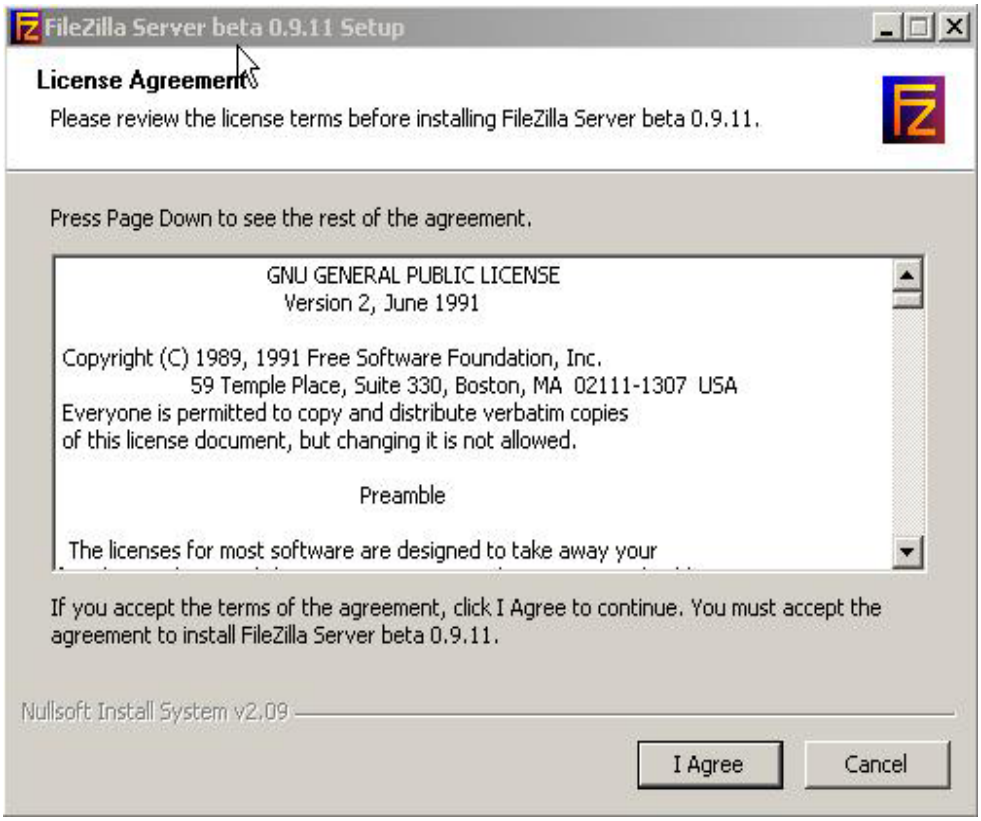
Stage 2A – Setting up Filezilla FTP Server on your PC

Download and install Filezilla FTP Server from http://sourceforge.net/projects/filezilla/

This is a freeware application covered by the GNU General Public Licence, please read this to ensure you comply with the license terms, however please note that this program is not provided by Canon and Canon cannot be responsible for any losses howsoever arising from its use in any way. Customers use this program at their own risk, and Canon cannot be held liable for any losses that result from the settings that may be suggested in this guide.



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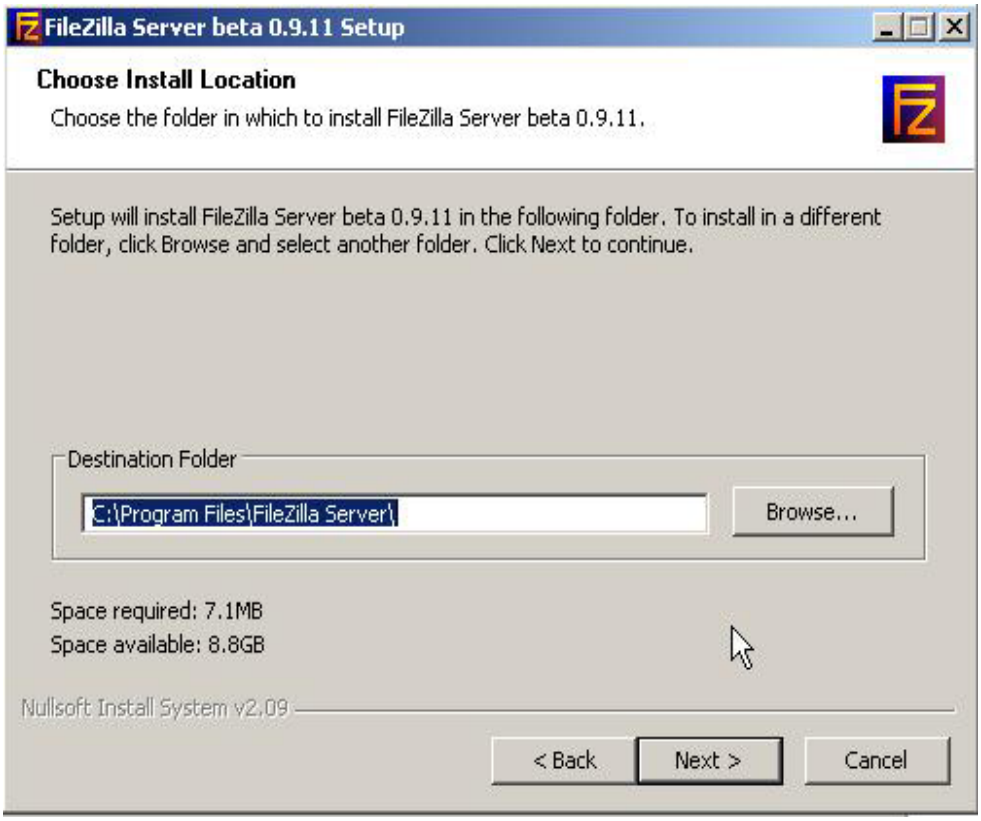
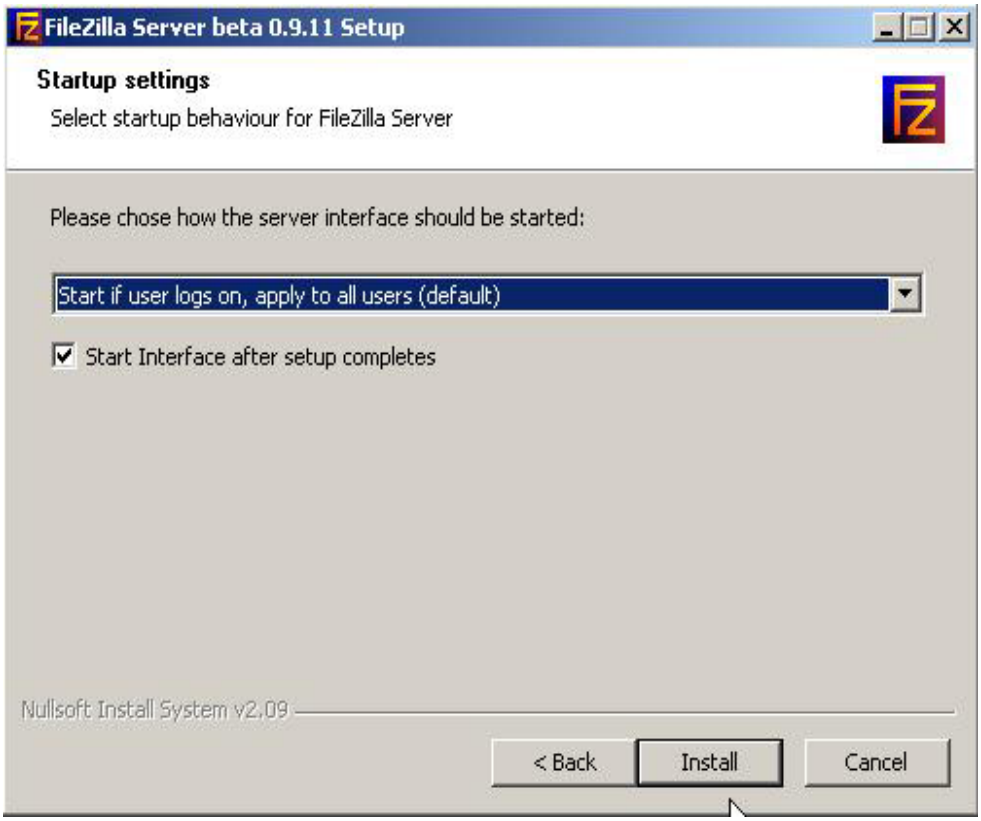

FileZilla Server beta 0.9.11 Setup
Choose Install Location
Choose the folder in which to install FileZilla Server beta 0.9.11.
Setup will install FileZilla Server beta 0.9.11 in the following folder. To install in a different folder, click Browse and select another folder. Click Next to continue.
Destination Folder
C:\Program Files\FileZilla Server\
Browse...
Space required: 7.1MB
Space available: 8.8GB
Nullsoft Install System v2.09
< Back
Next >
Cancel


FileZilla Server beta 0.9.11 Setup
Startup settings
Select startup behaviour for FileZilla Server
Please chose how the server interface should be started:
Start if user logs on, apply to all users (default)
Start Interface after setup completes
Nullsoft Install System v2.09
< Back
Install
Cancel

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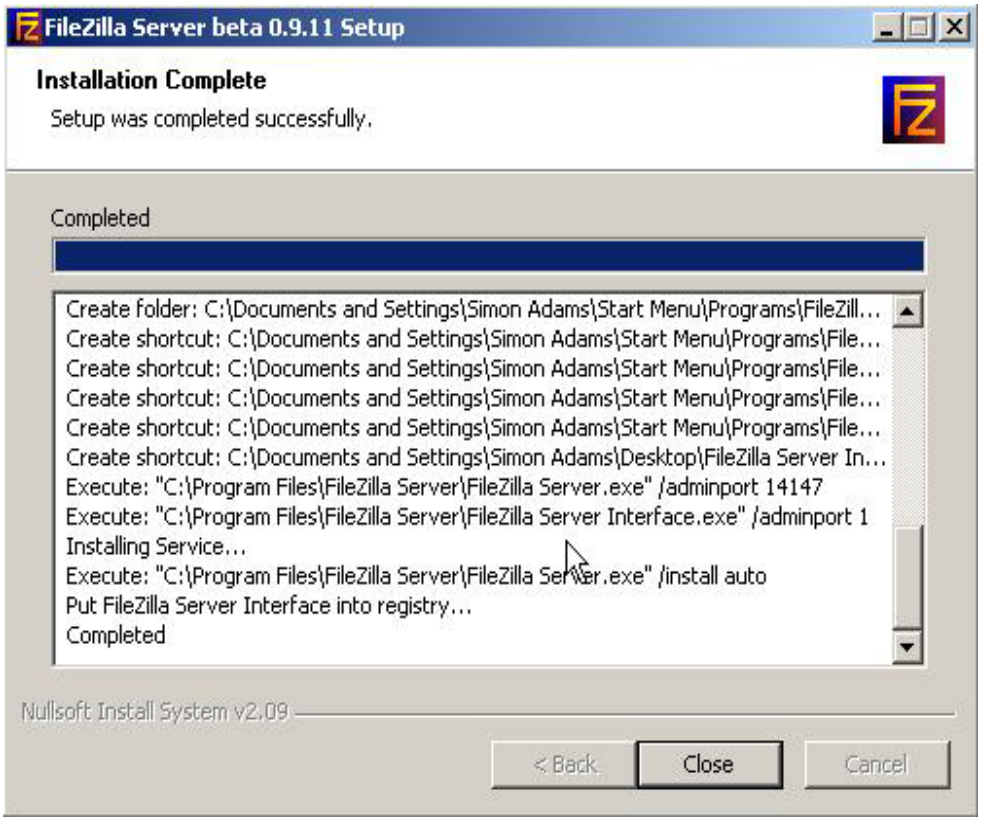
FileZilla Server beta 0.9.11 Setup
Installation Complete
Setup was completed successfully.
Completed
Create folder: C:\Documents and Settings\Simon Adams\Start Menu\Programs\FileZill...
Create shortcut: C:\Documents and Settings\Simon Adams\Start Menu\Programs\File...
Create shortcut: C:\Documents and Settings\Simon Adams\Start Menu\Programs\File...
Create shortcut: C:\Documents and Settings\Simon Adams\Start Menu\Programs\File...
Create shortcut: C:\Documents and Settings\Simon Adams\Start Menu\Programs\File...
Create shortcut: C:\Documents and Settings\Simon Adams\Desktop\FileZilla Server In...
Execute: "C:\Program Files\FileZilla Server\FileZilla Server.exe" /adminport 14147
Execute: "C:\Program Files\FileZilla Server\FileZilla Server Interface.exe" /adminport 1
Installing Service...
Execute: "C:\Program Files\FileZilla Server\FileZilla Server.exe" /install auto
Put FileZilla Server Interface into registry...
Completed
Nullsoft Install System v2.09
< Back
Close
Cancel

Connect to Server
Server Address:
Port:
127.0.0.1
14147
If the server address is not 127.0.0.1, you have to specify the server password:
Always connect to this server
OK
Cancel

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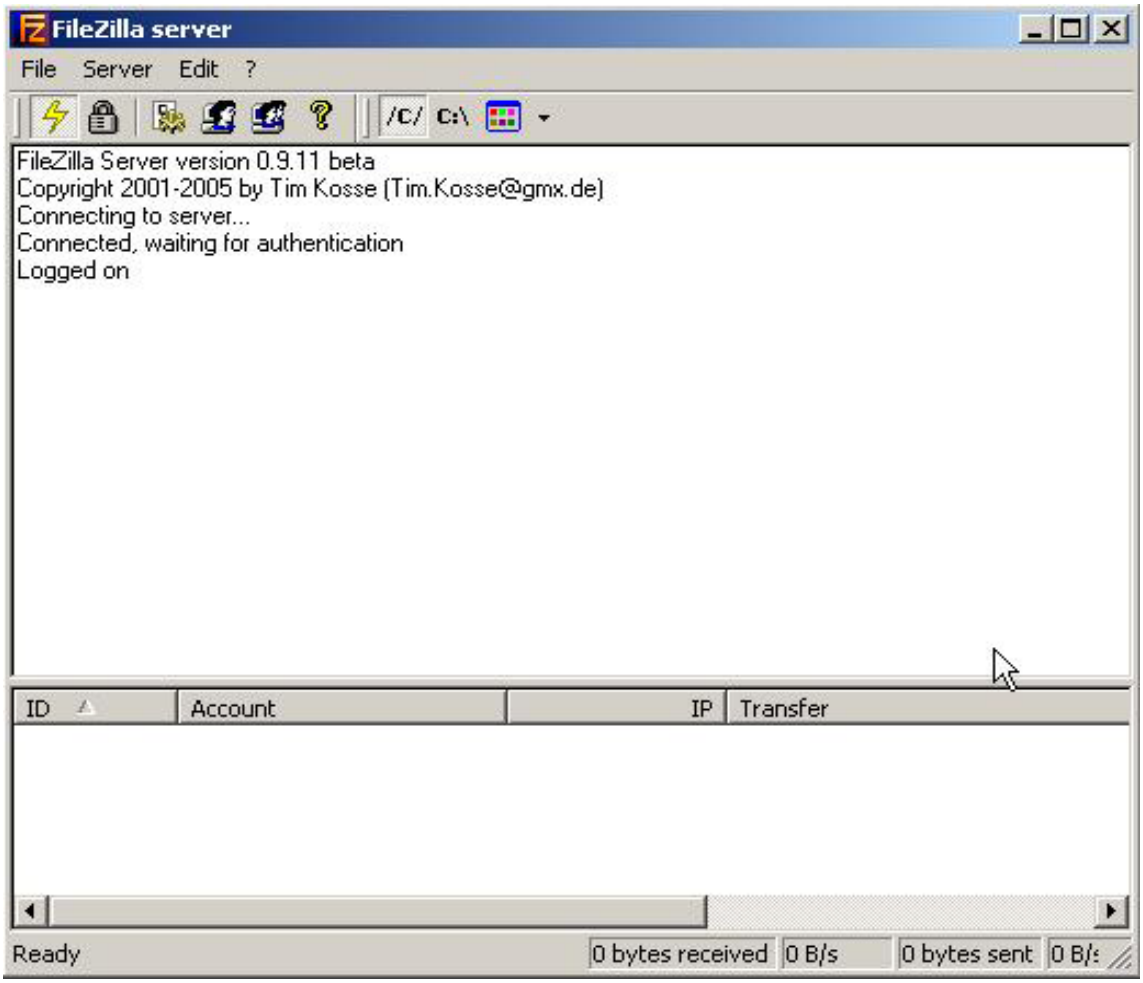
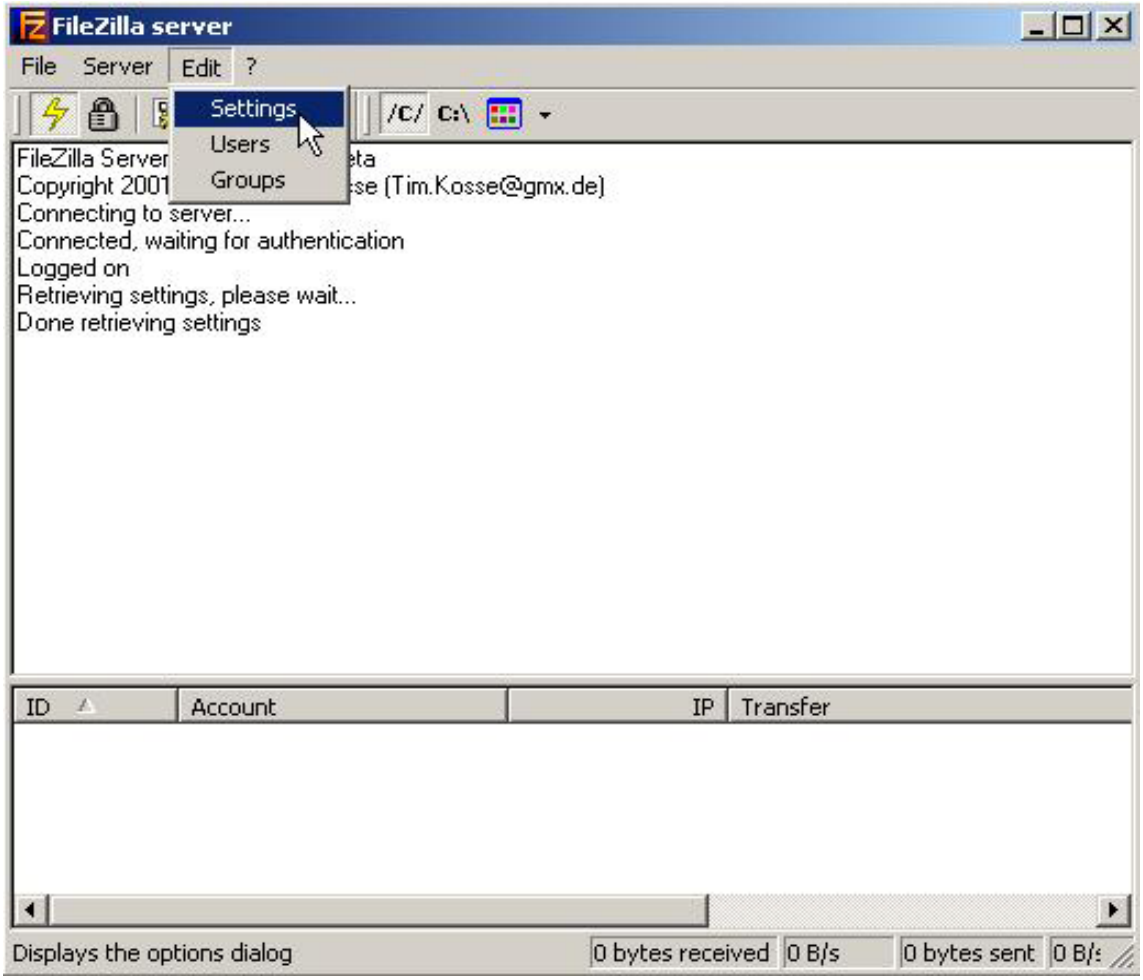

FileZilla server
File Server Edit ?
/C/ C:\
FileZilla Server version 0.9.11 beta
Copyright 2001-2005 by Tim Kosse (Tim.Kosse@gmx.de)
Connecting to server...
Connected, waiting for authentication
Logged on
ID
Account
IP
Transfer
Ready
0 bytes received
0 B/s
0 bytes sent
0 B/s

Once you have Filezilla FTP Server installed, you'll need to configure the properties of the server so that it can communicate through the computer and to the outside world correctly. Click Edit, Settings to do this. And copy the settings from the screenshots. The fields should be similar in other FTP server programs, and the same setting should be used regardless of the FTP server program used. Timeout settings should be set to 0 so no timeout takes place or the WFT-E1A will be logged out if idle.



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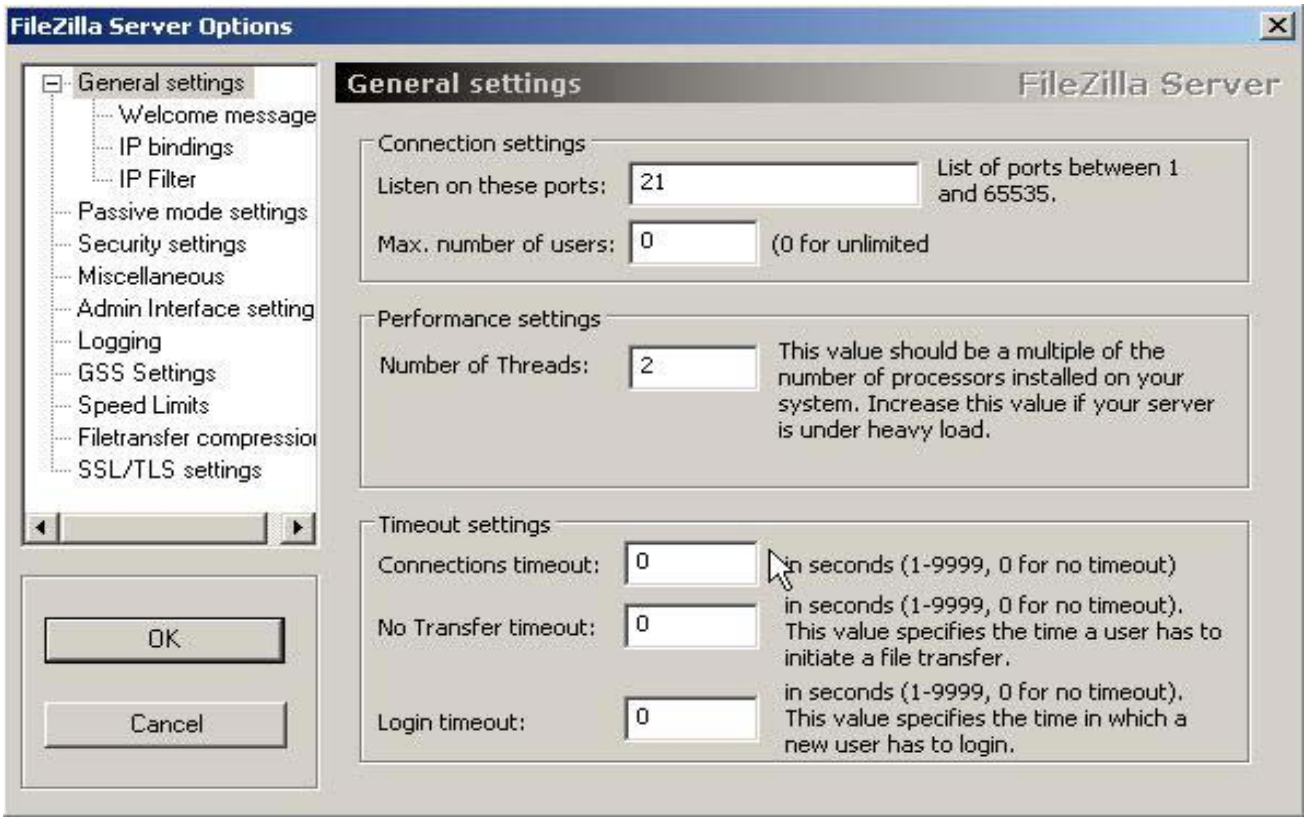

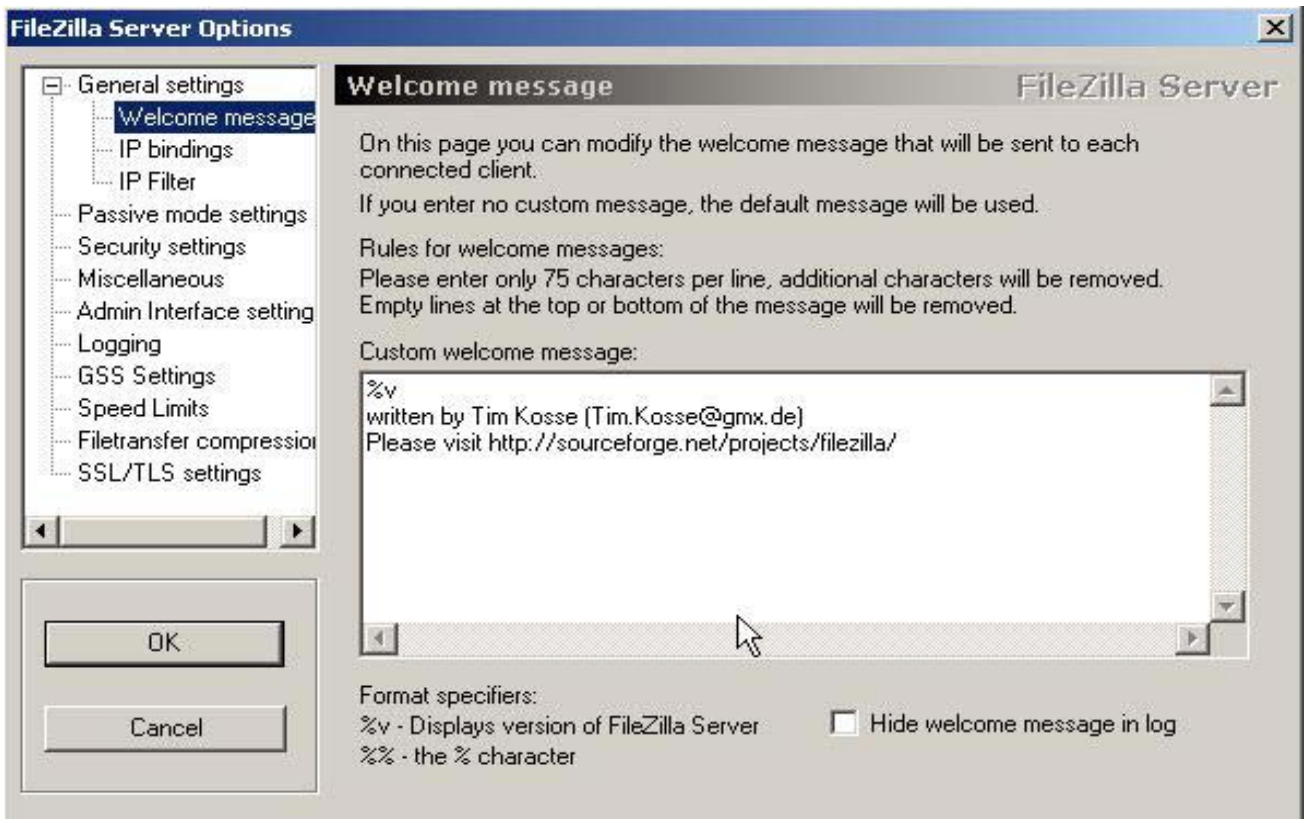

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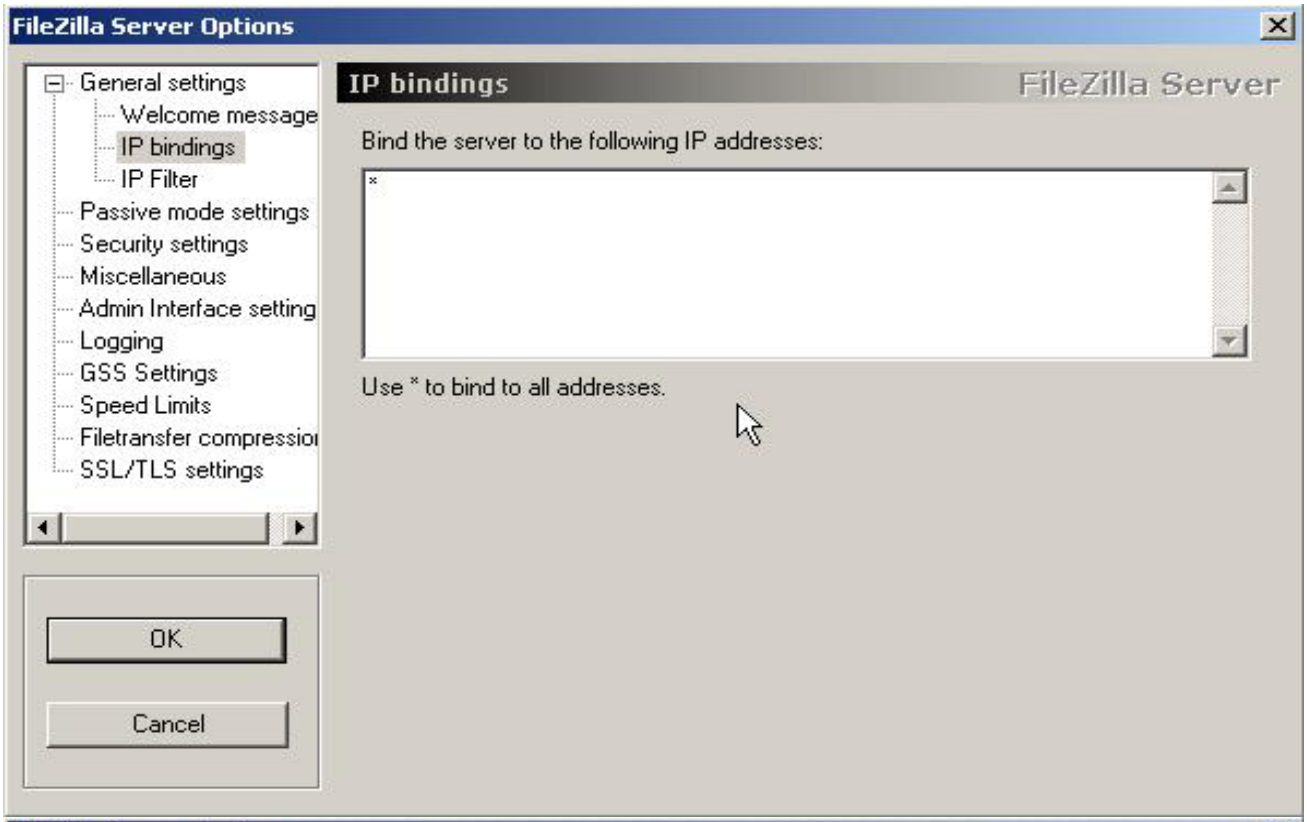
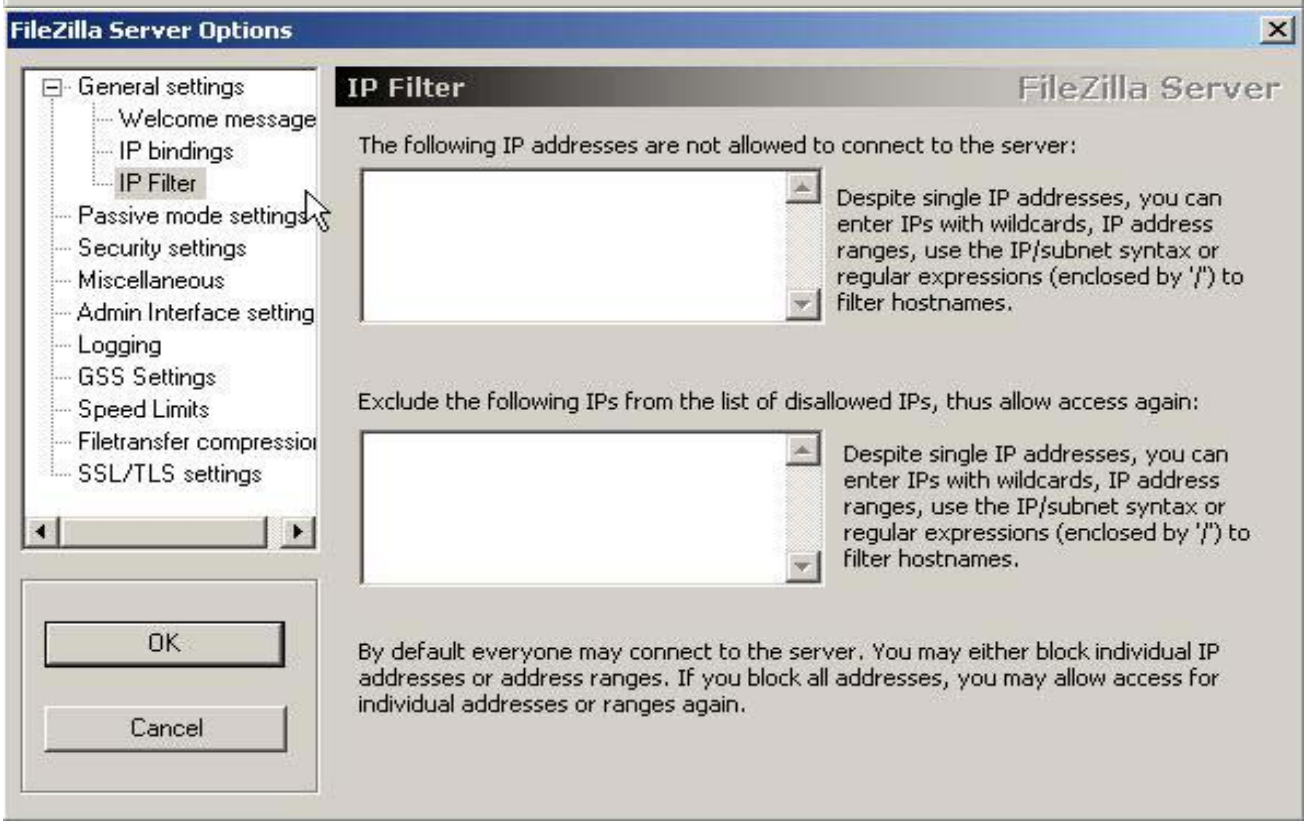

FileZilla Server Options
General settings
Welcome message
IP bindings
IP Filter
Passive mode settings
Security settings
Miscellaneous
Admin Interface setting
Logging
GSS Settings
Speed Limits
Filetransfer compressio
SSL/TLS settings
IP bindings
FileZilla Server
Bind the server to the following IP addresses:
*
Use * to bind to all addresses.
OK
Cancel


FileZilla Server Options
General settings
Welcome message
IP bindings
IP Filter
Passive mode settings
Security settings
Miscellaneous
Admin Interface setting
Logging
GSS Settings
Speed Limits
Filetransfer compressio
SSL/TLS settings
IP Filter
FileZilla Server
The following IP addresses are not allowed to connect to the server:
Despite single IP addresses, you can enter IPs with wildcards, IP address ranges, use the IP/subnet syntax or regular expressions (enclosed by '/') to filter hostnames.
Exclude the following IPs from the list of disallowed IPs, thus allow access again:
Despite single IP addresses, you can enter IPs with wildcards, IP address ranges, use the IP/subnet syntax or regular expressions (enclosed by '/') to filter hostnames.
By default everyone may connect to the server. You may either block individual IP addresses or address ranges. If you block all addresses, you may allow access for individual addresses or ranges again.
OK
Cancel

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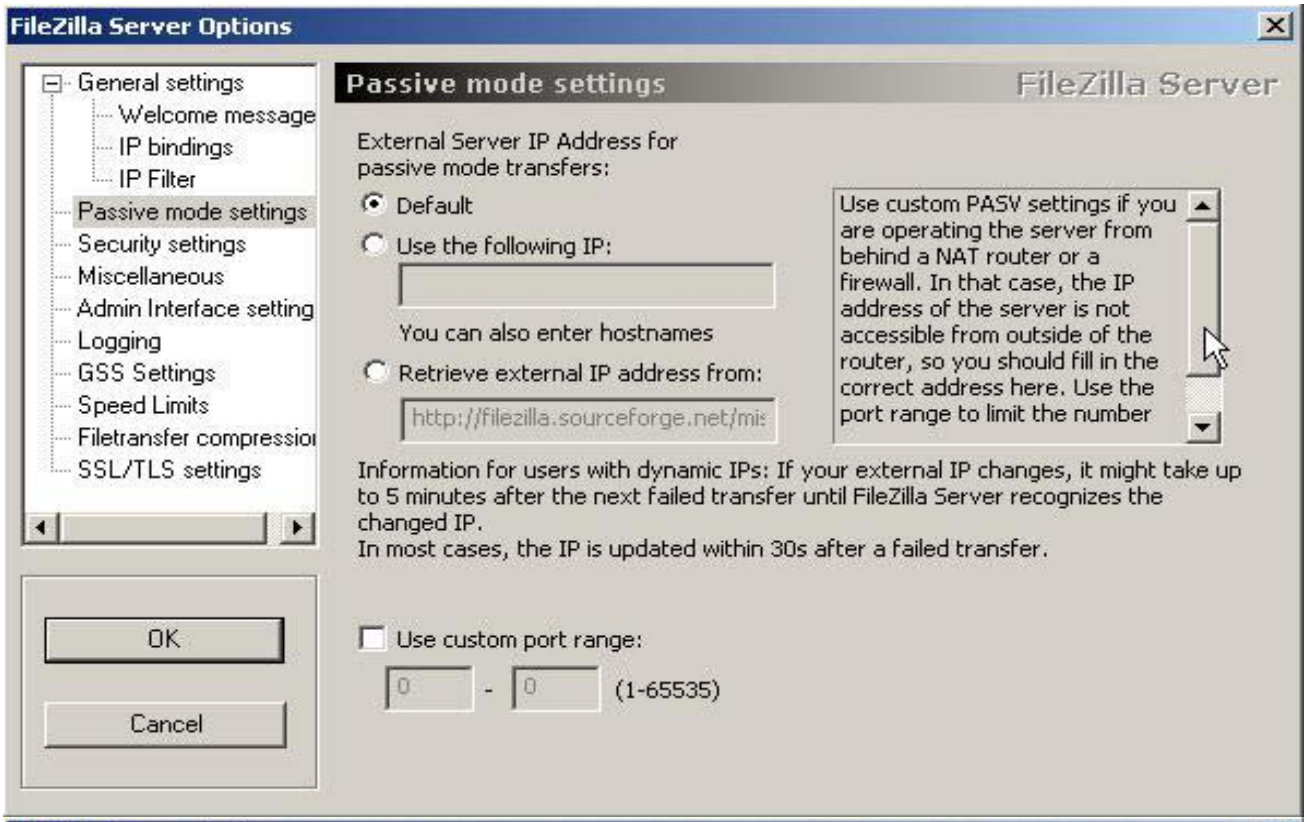
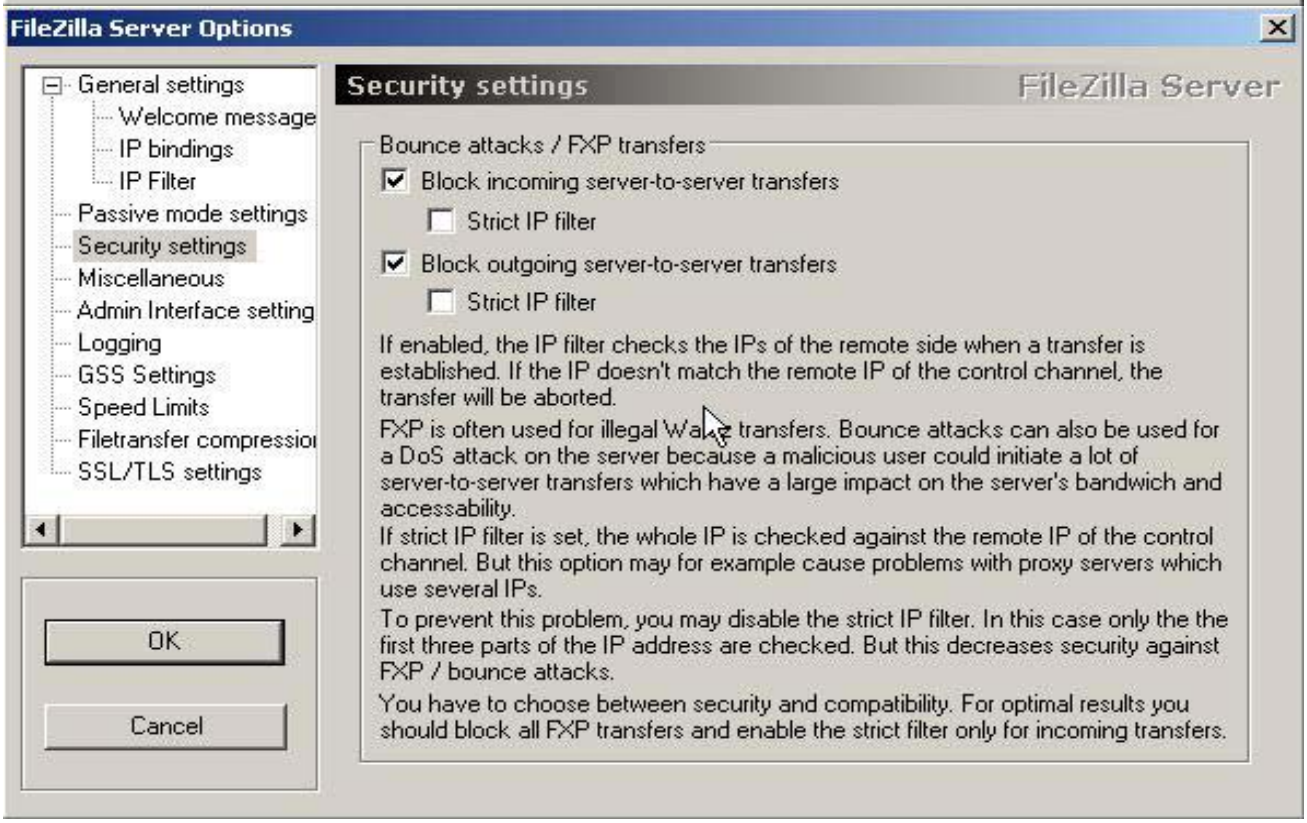
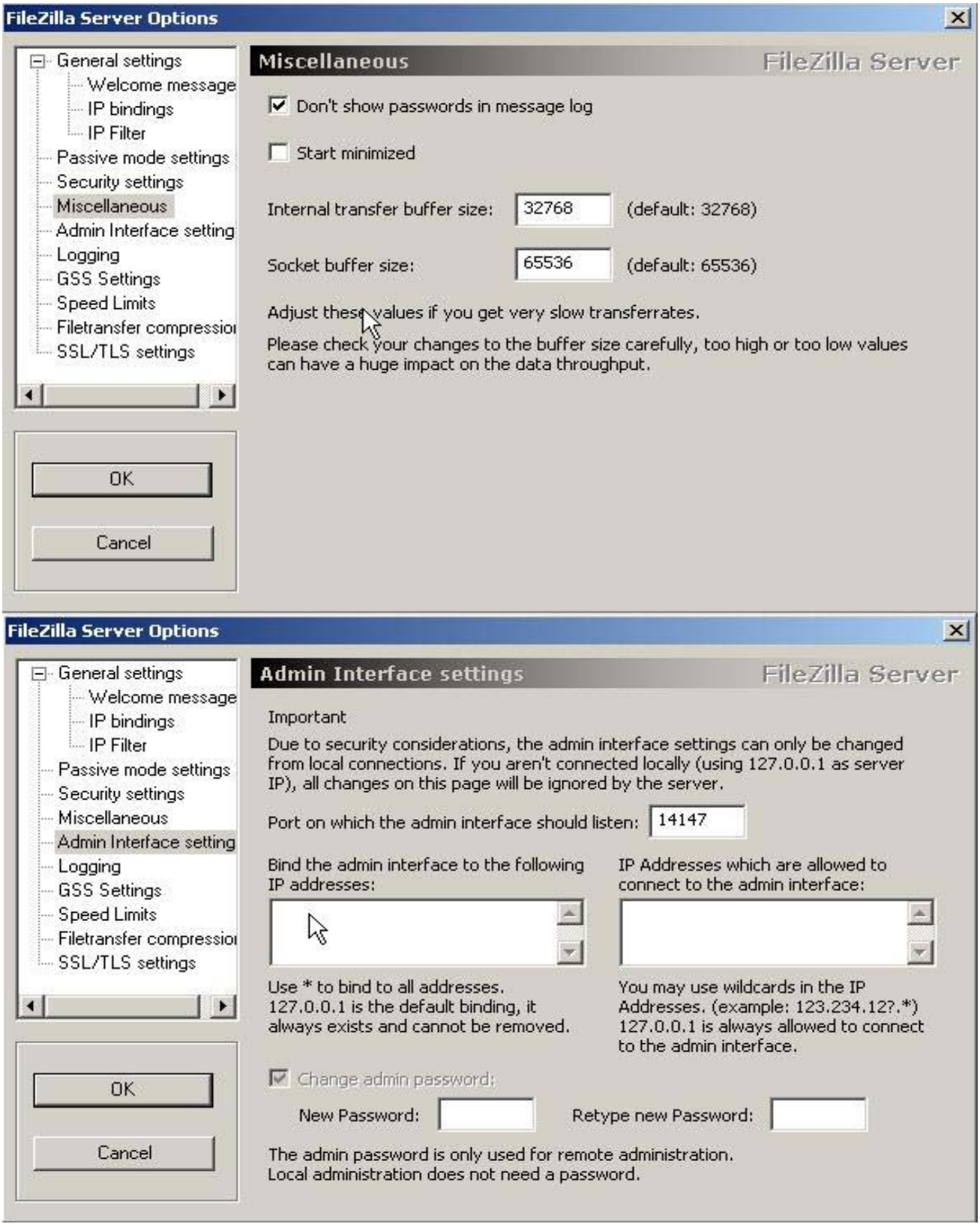
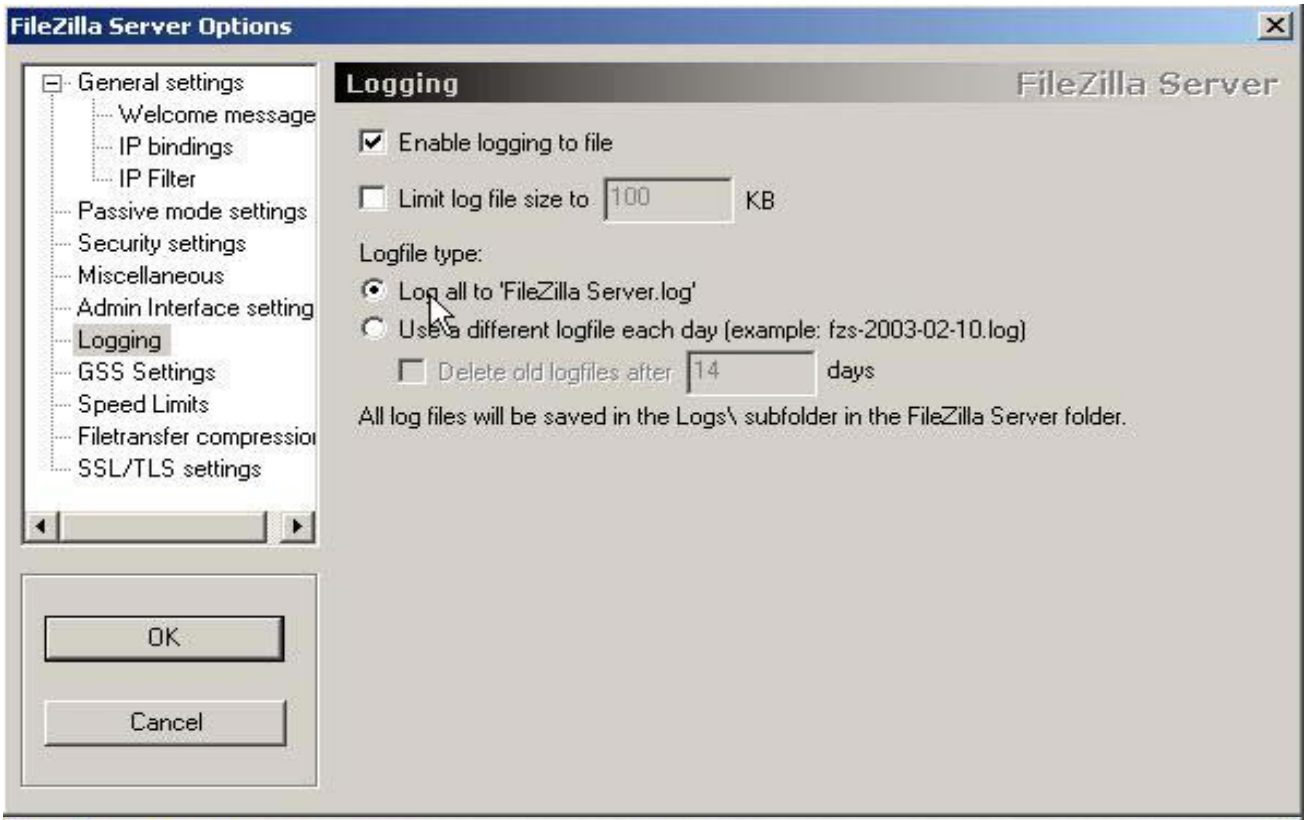
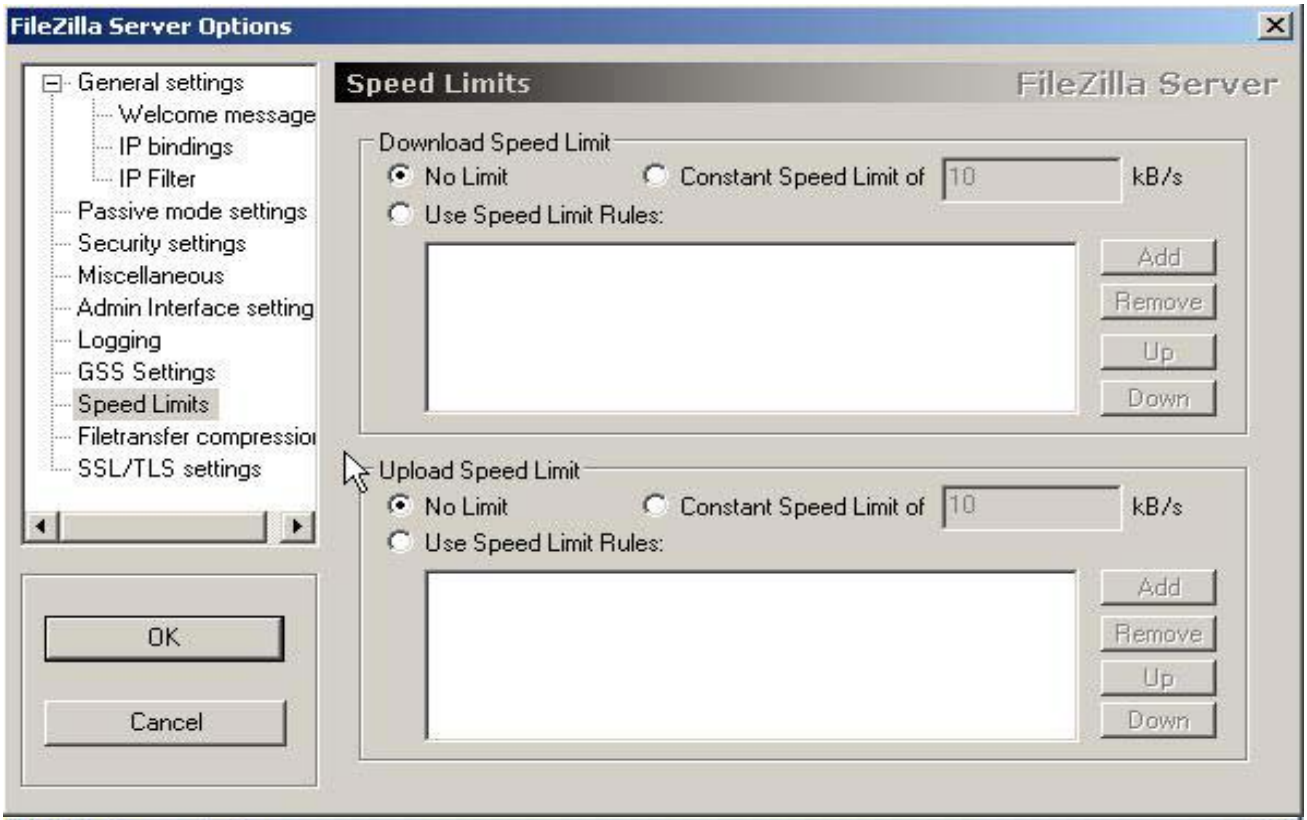

FileZilla Server Options
General settings
Welcome message
IP bindings
IP Filter
Passive mode settings
Security settings
Miscellaneous
Admin Interface setting
Logging
GSS Settings
Speed Limits
Filetransfer compressio
SSL/TLS settings
Passive mode settings
FileZilla Server
External Server IP Address for passive mode transfers:
Default
Use the following IP:
You can also enter hostnames
Retrieve external IP address from:
http://filezilla.sourceforge.net/mi
Use custom PASV settings if you are operating the server from behind a NAT router or a firewall. In that case, the IP address of the server is not accessible from outside of the router, so you should fill in the correct address here. Use the port range to limit the number
Information for users with dynamic IPs: If your external IP changes, it might take up to 5 minutes after the next failed transfer until FileZilla Server recognizes the changed IP.
In most cases, the IP is updated within 30s after a failed transfer.
Use custom port range:
0 - 0 (1-65535)
OK
Cancel

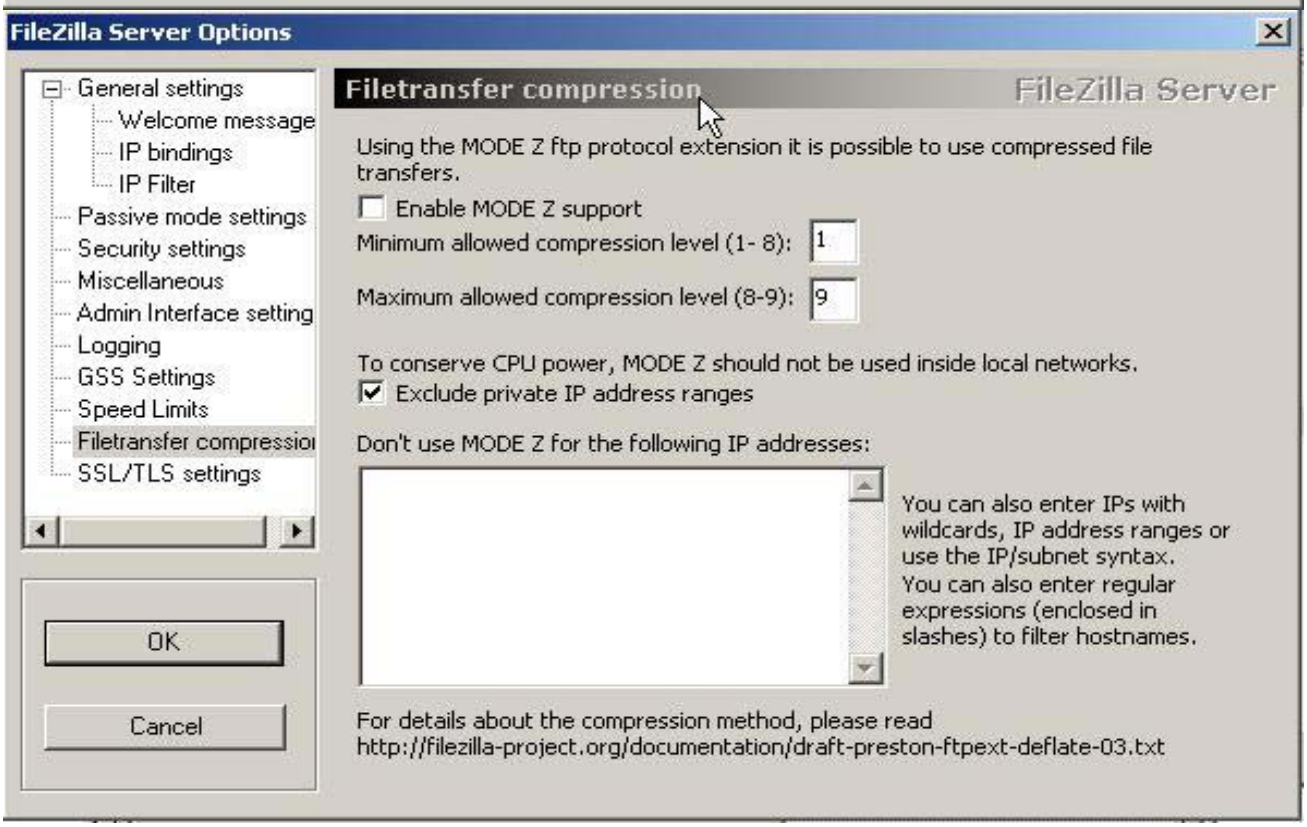

FileZilla Server Options
General settings
Welcome message
IP bindings
IP Filter
Passive mode settings
Security settings
Miscellaneous
Admin Interface setting
Logging
GSS Settings
Speed Limits
Filetransfer compressio
SSL/TLS settings
Security settings
FileZilla Server
Bounce attacks / FXP transfers
Block incoming server-to-server transfers
Strict IP filter
Block outgoing server-to-server transfers
Strict IP filter
If enabled, the IP filter checks the IPs of the remote side when a transfer is established. If the IP doesn't match the remote IP of the control channel, the transfer will be aborted.
FXP is often used for illegal Warez transfers. Bounce attacks can also be used for a DoS attack on the server because a malicious user could initiate a lot of server-to-server transfers which have a large impact on the server's bandwich and accessability.
If strict IP filter is set, the whole IP is checked against the remote IP of the control channel. But this option may for example cause problems with proxy servers which use several IPs.
To prevent this problem, you may disable the strict IP filter. In this case only the the first three parts of the IP address are checked. But this decreases security against FXP / bounce attacks.
You have to choose between security and compatibility. For optimal results you should block all FXP transfers and enable the strict filter only for incoming transfers.
OK
Cancel

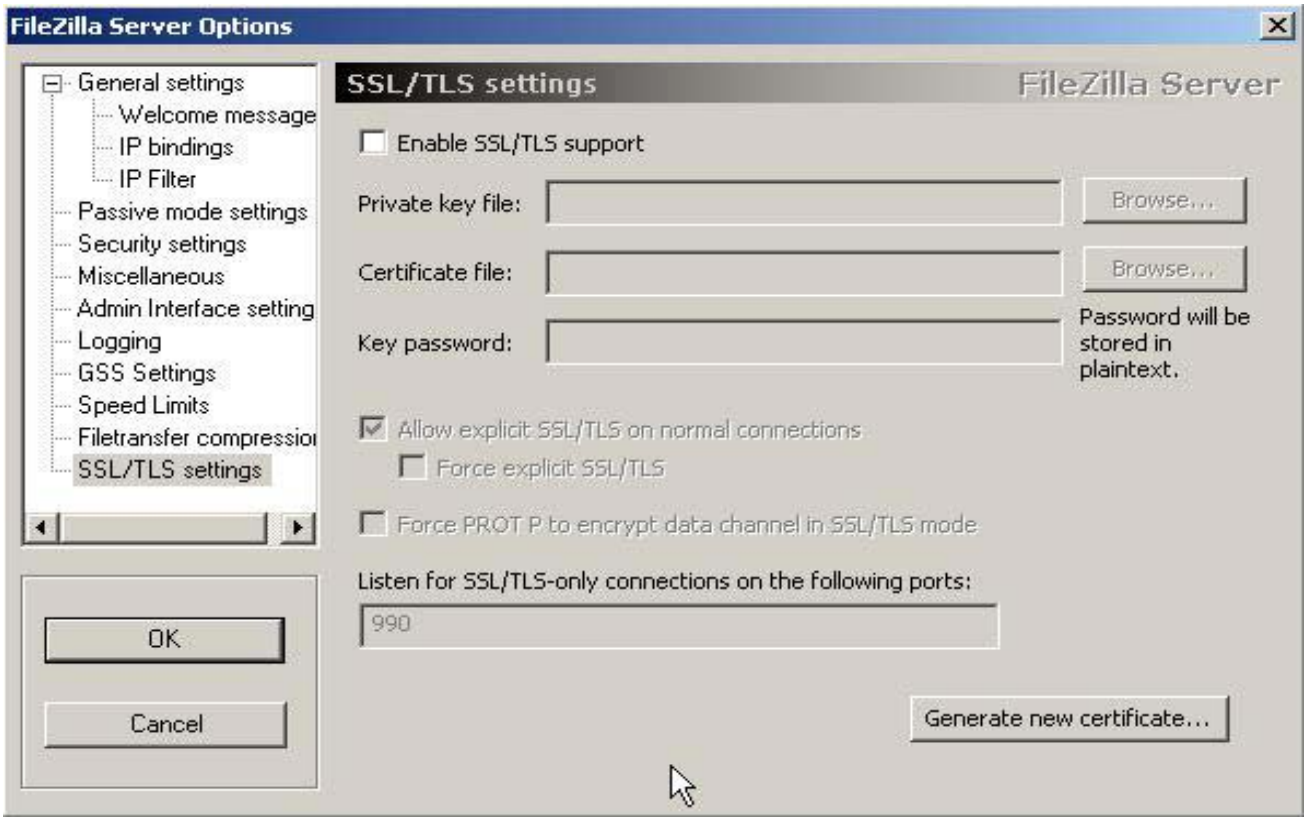

FileZilla Server Options
General settings
Welcome message
IP bindings
IP Filter
Passive mode settings
Security settings
Miscellaneous
Admin Interface setting
Logging
GSS Settings
Speed Limits
Filetransfer compressior
SSL/TLS settings
Miscellaneous
FileZilla Server
Don't show passwords in message log
Start minimized
Internal transfer buffer size: 32768 (default: 32768)
Socket buffer size: 65536 (default: 65536)
Adjust these values if you get very slow transferrates.
Please check your changes to the buffer size carefully, too high or too low values can have a huge impact on the data throughput.
OK
Cancel
FileZilla Server Options
General settings
Welcome message
IP bindings
IP Filter
Passive mode settings
Security settings
Miscellaneous
Admin Interface setting
Logging
GSS Settings
Speed Limits
Filetransfer compressior
SSL/TLS settings
Admin Interface settings
FileZilla Server
Important
Due to security considerations, the admin interface settings can only be changed from local connections. If you aren't connected locally (using 127.0.0.1 as server IP), all changes on this page will be ignored by the server.
Port on which the admin interface should listen: 14147
Bind the admin interface to the following IP addresses:
IP Addresses which are allowed to connect to the admin interface:
Use * to bind to all addresses.
127.0.0.1 is the default binding, it always exists and cannot be removed.
You may use wildcards in the IP Addresses. (example: 123.234.12?.*)
127.0.0.1 is always allowed to connect to the admin interface.
Change admin password:
New Password:
Retype new Password:
The admin password is only used for remote administration.
Local administration does not need a password.
OK
Cancel


FileZilla Server Options
General settings
Welcome message
IP bindings
IP Filter
Passive mode settings
Security settings
Miscellaneous
Admin Interface setting
Logging
GSS Settings
Speed Limits
Filetransfer compressio
SSL/TLS settings
Logging
FileZilla Server
Enable logging to file
Limit log file size to 100 KB
Logfile type:
Log all to 'FileZilla Server.log'
Use a different logfile each day (example: fzs-2003-02-10.log)
Delete old logfiles after 14 days
All log files will be saved in the Logs\ subfolder in the FileZilla Server folder.
OK
Cancel

FileZilla Server Options
General settings
Welcome message
IP bindings
IP Filter
Passive mode settings
Security settings
Miscellaneous
Admin Interface setting
Logging
GSS Settings
Speed Limits
Filetransfer compressio
SSL/TLS settings
GSS Settings
FileZilla Server
Enable Kerberos GSS support
Prompt for password if necessary
It's recommended to use Kerberos for Windows 2.2 beta 2 or later.
If used with Kerberos for Windows 2.1, it is very likely that FileZilla Server will crash if a user authenticates.
OK
Cancel


FileZilla Server Options
General settings
Welcome message
IP bindings
IP Filter
Passive mode settings
Security settings
Miscellaneous
Admin Interface setting
Logging
GSS Settings
Speed Limits
Filetransfer compressio
SSL/TLS settings
Speed Limits
FileZilla Server
Download Speed Limit
No Limit
Constant Speed Limit of
10
kB/s
Use Speed Limit Rules:
Add
Remove
Up
Down
Upload Speed Limit
No Limit
Constant Speed Limit of
10
kB/s
Use Speed Limit Rules:
Add
Remove
Up
Down
OK
Cancel


FileZilla Server Options
General settings
Welcome message
IP bindings
IP Filter
Passive mode settings
Security settings
Miscellaneous
Admin Interface setting
Logging
GSS Settings
Speed Limits
Filetransfer compressio
SSL/TLS settings
Filetransfer compression
FileZilla Server
Using the MODE Z ftp protocol extension it is possible to use compressed file transfers.
Enable MODE Z support
Minimum allowed compression level (1- 8):
1
Maximum allowed compression level (8-9):
9
To conserve CPU power, MODE Z should not be used inside local networks.
Exclude private IP address ranges
Don't use MODE Z for the following IP addresses:
You can also enter IPs with wildcards, IP address ranges or use the IP/subnet syntax.
You can also enter regular expressions (enclosed in slashes) to filter hostnames.
For details about the compression method, please read
http://filezilla-project.org/documentation/draft-preston-ftpext-deflate-03.txt
OK
Cancel


FileZilla Server Options
General settings
Welcome message
IP bindings
IP Filter
Passive mode settings
Security settings
Miscellaneous
Admin Interface setting
Logging
GSS Settings
Speed Limits
Filetransfer compressio
SSL/TLS settings
OK
Cancel
SSL/TLS settings
FileZilla Server
Enable SSL/TLS support
Private key file:
Browse...
Certificate file:
Browse...
Key password:
Password will be stored in plaintext.
Allow explicit SSL/TLS on normal connections
Force explicit SSL/TLS
Force PROT P to encrypt data channel in SSL/TLS mode
Listen for SSL/TLS-only connections on the following ports:
990
Generate new certificate...

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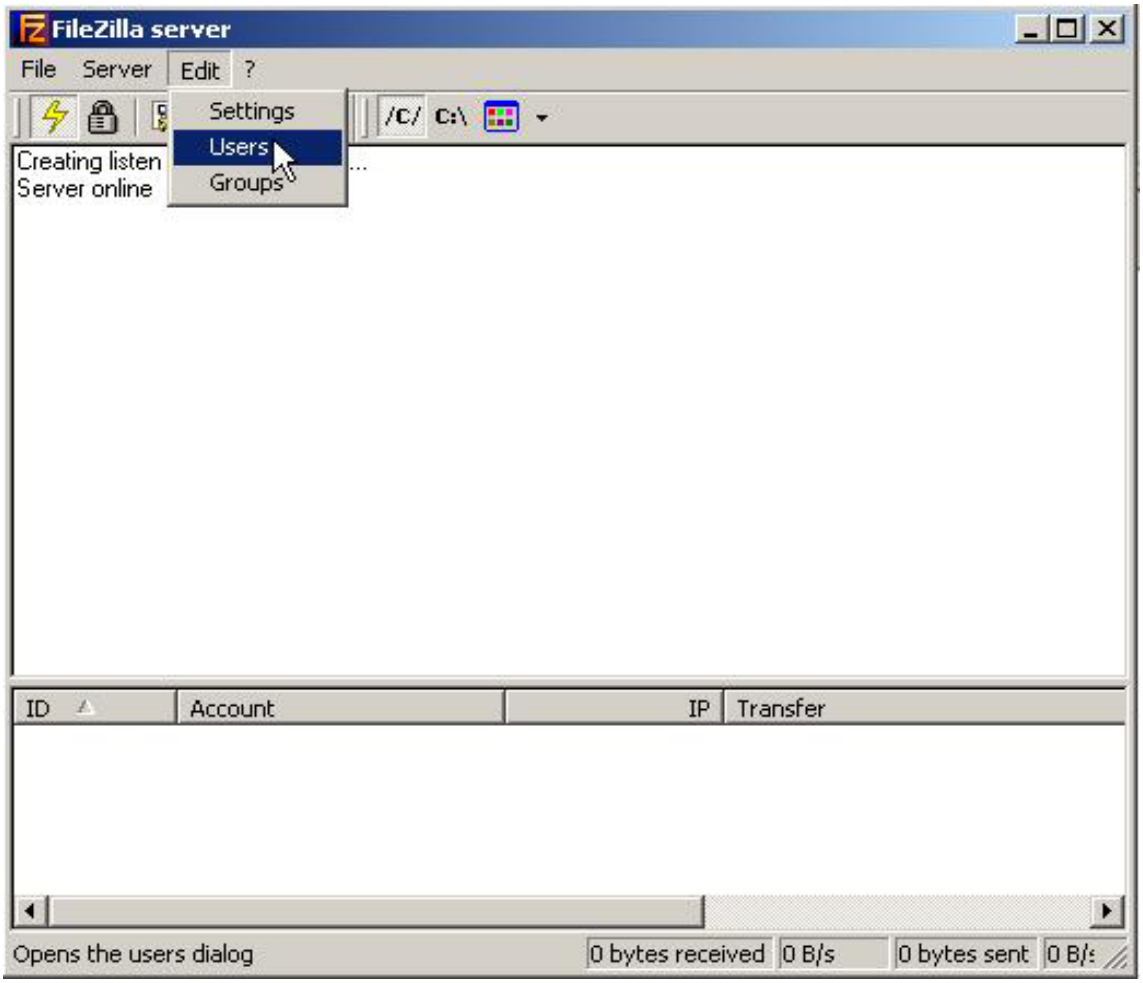
Once all the server settings have been checked, then you will need to create a user for the FTP server. This will ultimately identify the WFT-E1A to the server. Similar fields will appear in other FTP server programs.

To do this, select “Users” from the “Edit” menu.



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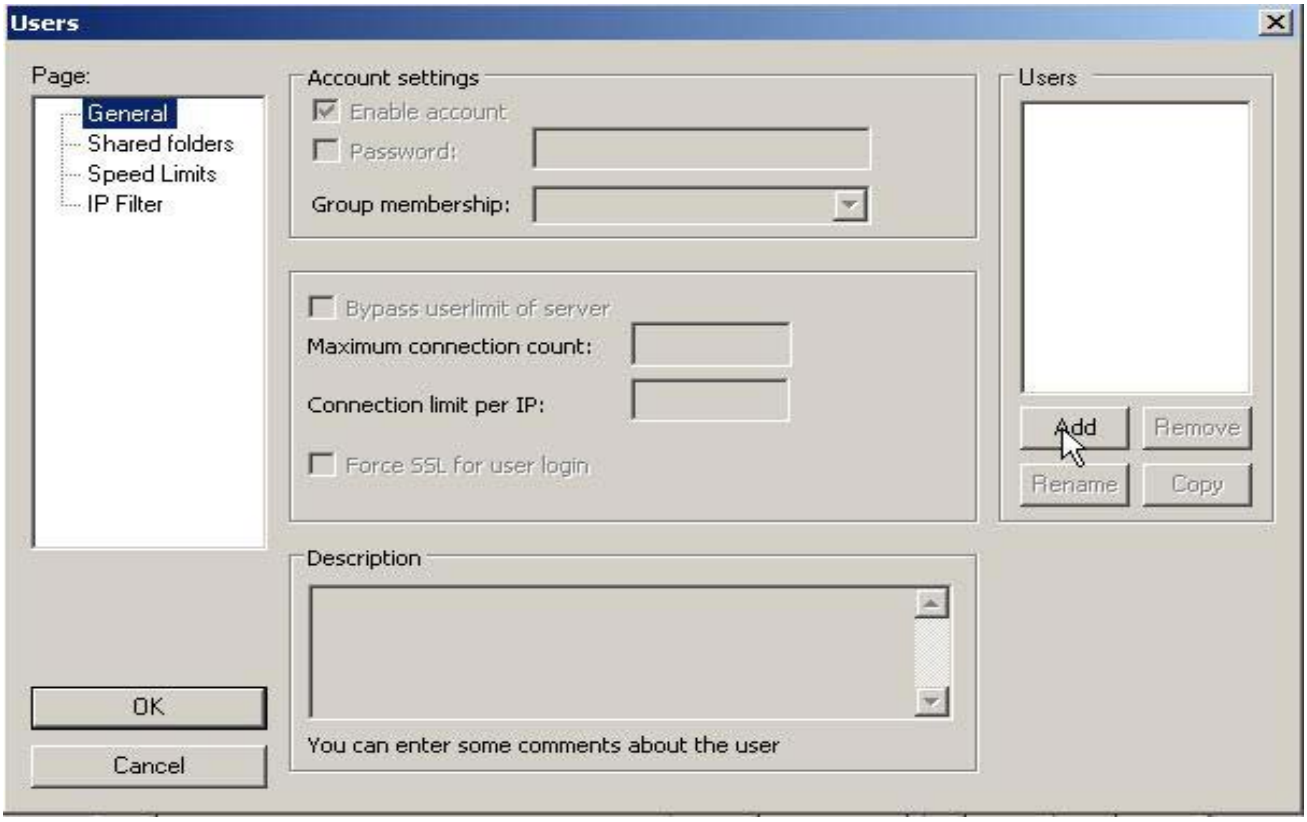
In the General section of the Users screen, click the add button to add a user to the FTP server



Type in a username, ensuring there are no spaces or other non alphanumeric characters. Here the username we have selected is canonuk. Click OK

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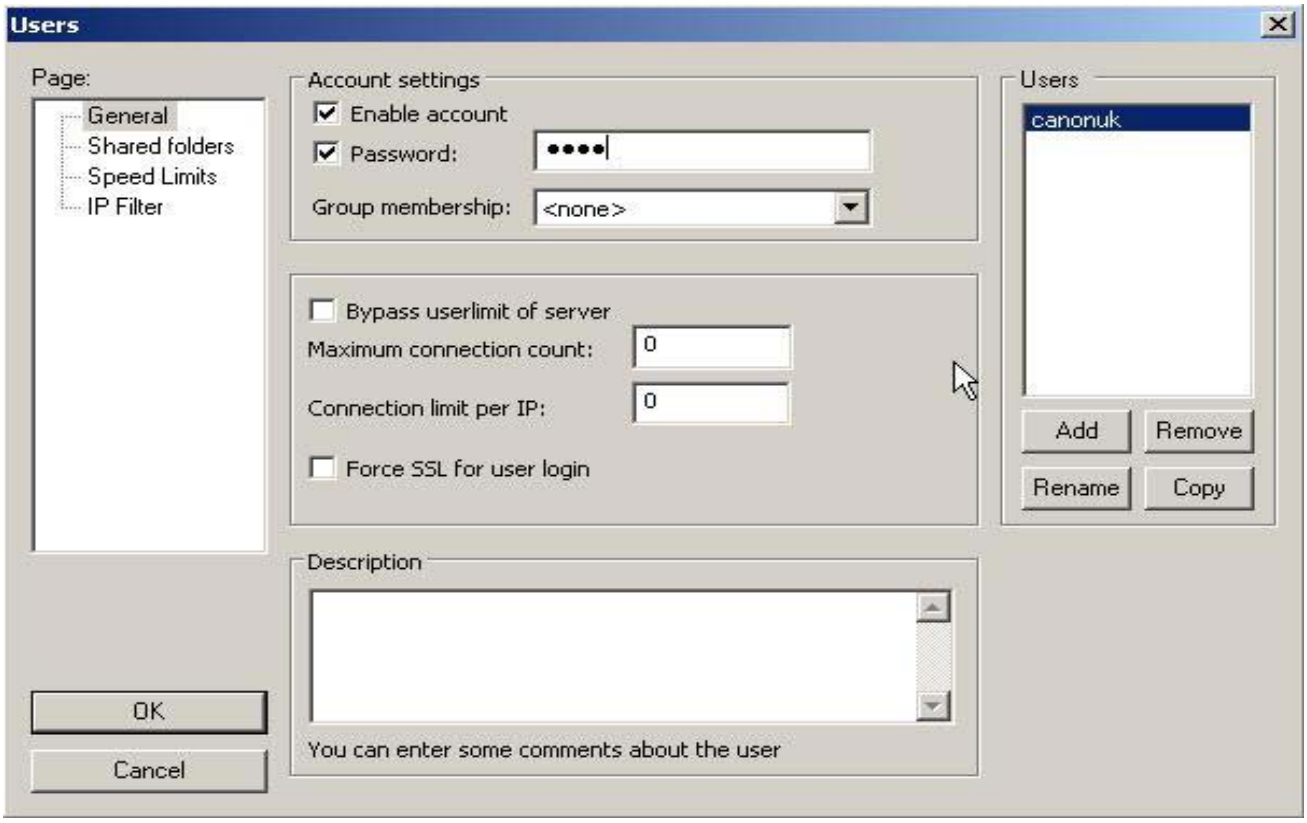
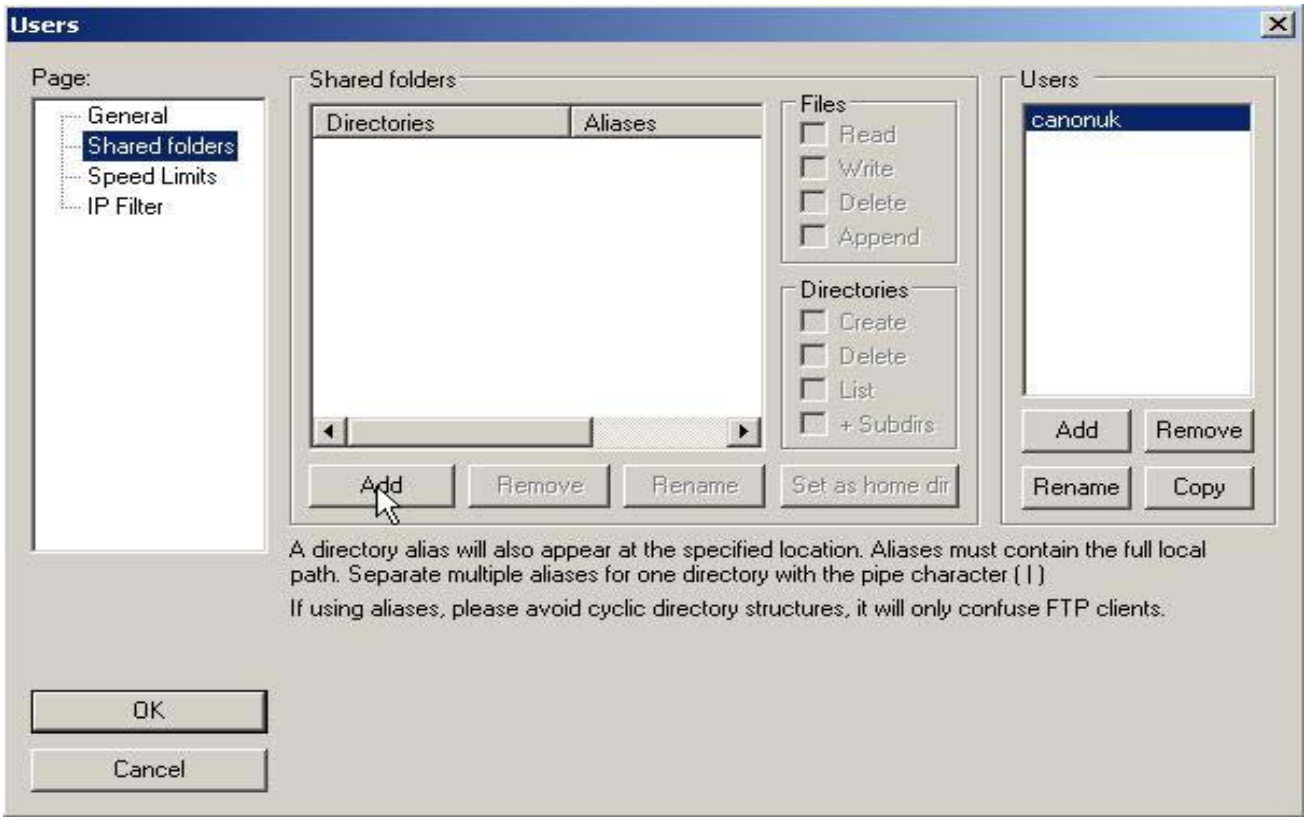
Back in the General section of the Users screen, tick the password box and enter a password, again only using alphanumeric characters and no spaces. Here we are using the password pass.



 © Canon 2006

Before the next step, create a folder on your C: driver called FTP. This is where your images will be transferred to. This can be a folder anywhere on your hard drive but for ease of use we'll stick to the C: drive here. Make you don't include any spaces or non alphanumeric characters in this folder name.

Select the Shared folders section of the Users menu. In the Shared folders click the Add button to add a folder where the images will be transferred to.



The "Browse for Folder" window appears

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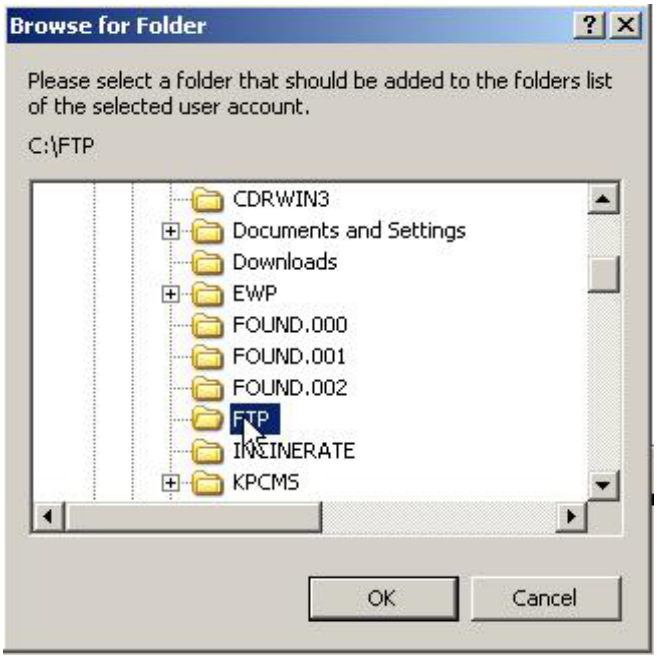
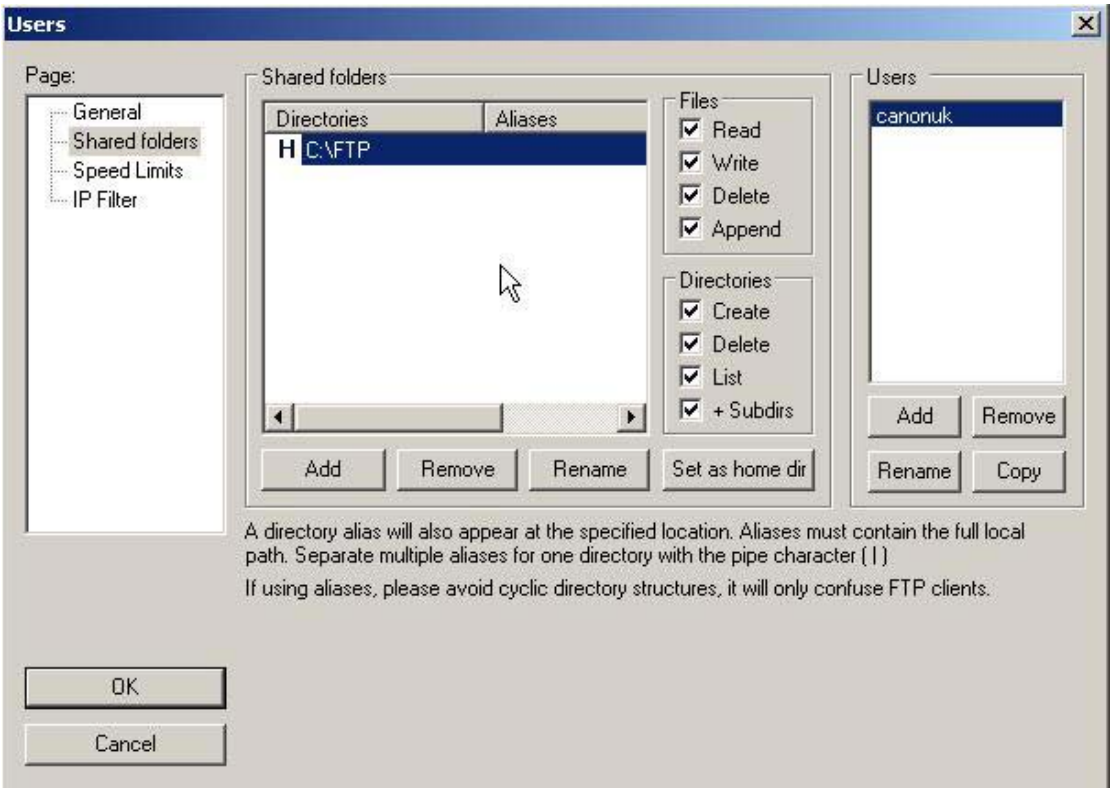
Select the FTP folder we created on the C: drive earlier and click OK.



Now we have defined our destination folder, you must set the permissions of access for the WFT-E1A. You must set full read and write permissions on the destination folder, failure to do so will result in the WFT-E1A issuing an error and failing to transmit the picture.



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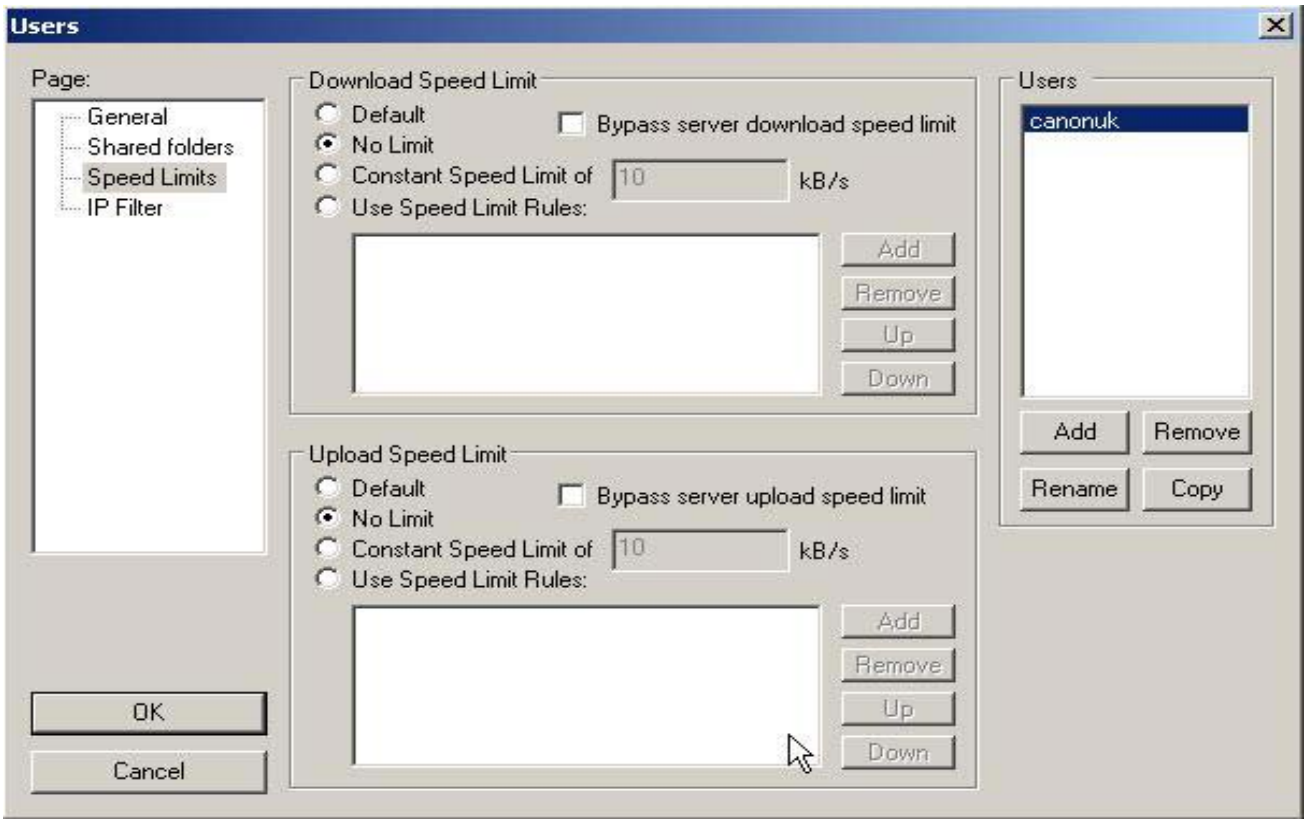
Select the speed limit page and select “No Limit” on both download and upload.



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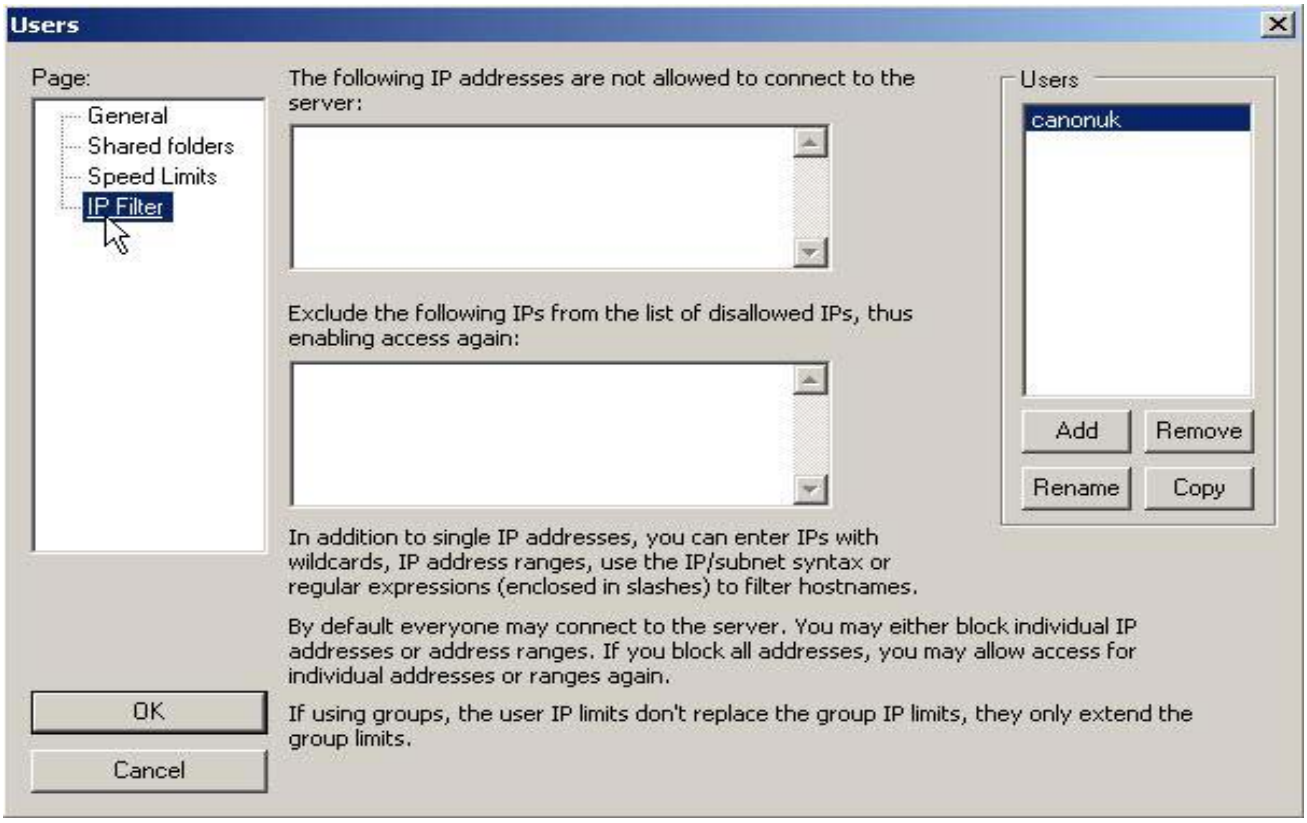
The IP Filter page should be left blank. Click OK to return to the Server window



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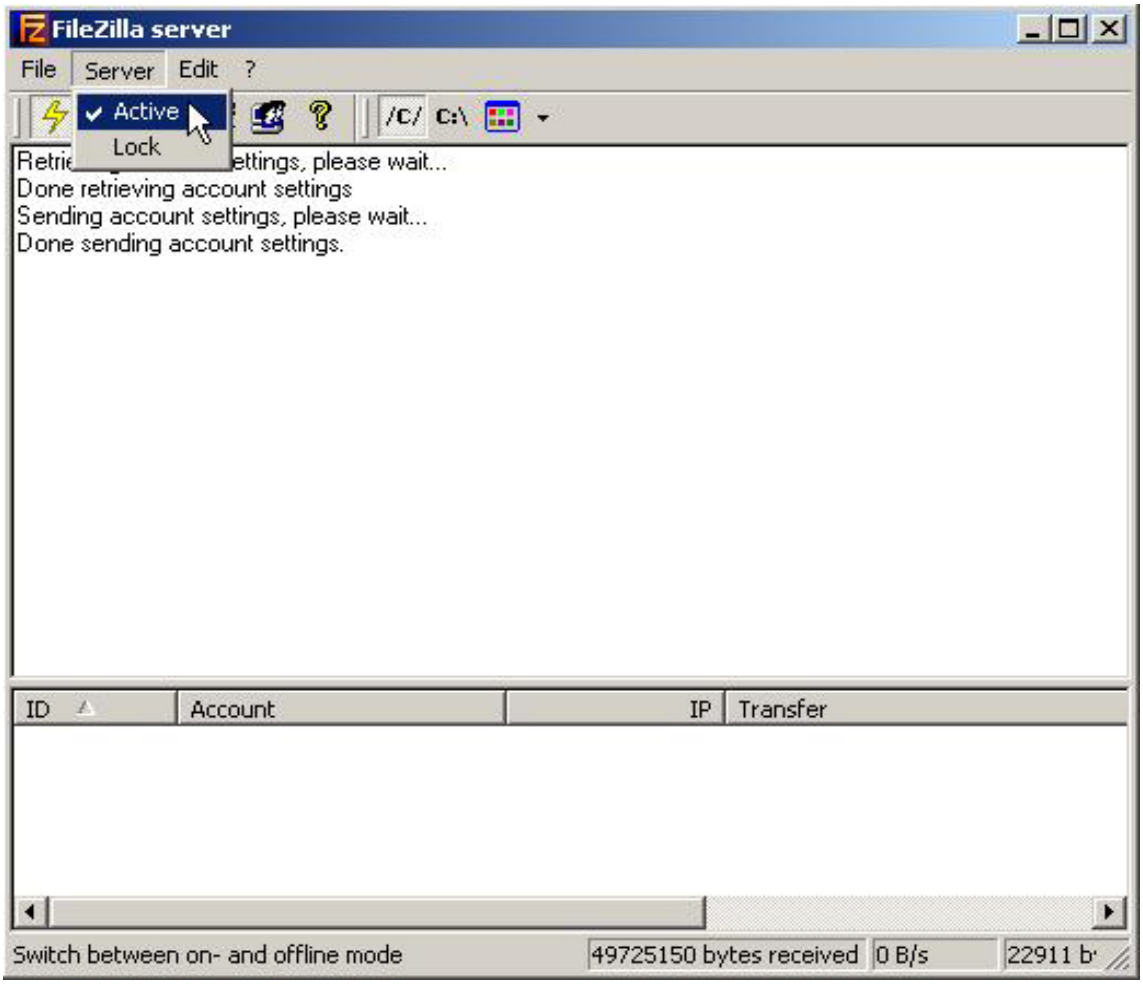
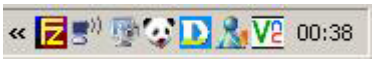
From the main server window click on the Server menu and make sure there is a tick next to Active. This ensures that the server is active, running and ready to receive data from the WFT-E1A unit.



Ensure your server shows as running in the taskbar here shown as the FZ (Filezilla) logo.



Stage 2 is now complete, the computer is ready to receive pictures via your wireless network from the WFT-E1A, and we can now move onto stage 3, setting up the WFT-E1A on the camera body itself.

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Stage 3 – Setting up the WFT-E1A using the WFT-E1A Utility

Load the utility from the Canon WFT-E1A disc.

In the first tab TCP/IP, select "Use the following IP address" and enter an IP address here which will identify the WFT-E1A to the network. Ensure this address is not used by any other network device. We have used 192.168.0.50 here. The subnet mask should be set to 255.255.255.0 as only the last set of numbers will change on the network.

As we are using an access point in infrastructure mode, we need to specify the access points IP address as the Gateway. Enter your access points IP address in the gateway field. DNS servers are not required so we have left this blank.

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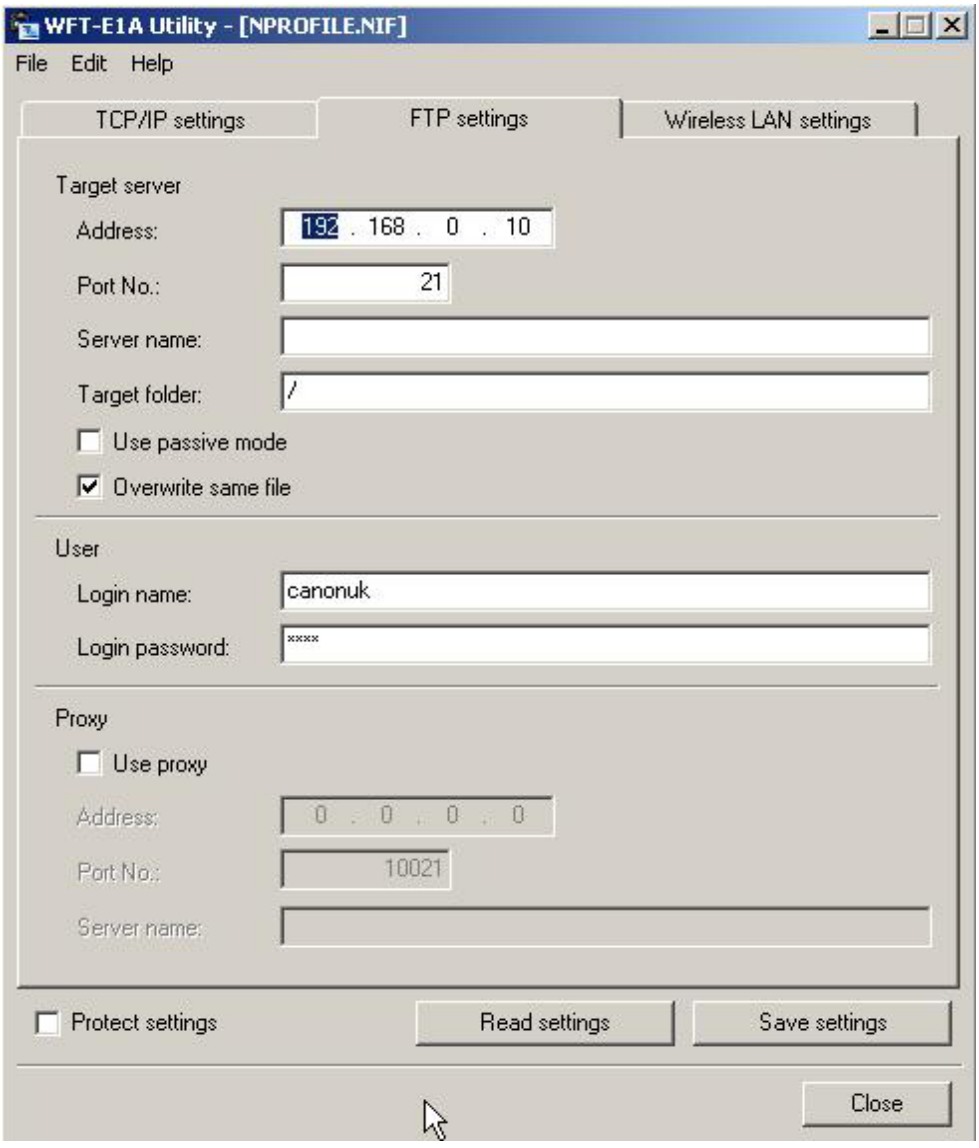
Select the FTP settings tab, here we will enter settings that match the FTP server settings we set up in stages 1 & 2 within the Wireless Network Properties and Filezilla FTP server.

The target server address should be should match the address of the PC's wireless transmitter (dongle) in this case it is 192.168.0.10. The port number should match the port number we opened in the FTP server, in this case Port 21 (which is in fact the industry standard port for FTP transfers).

The server name should be left blank, as the Target Server IP address identifies the FTP server, and as the target folder is set from within the FTP server Filezilla itself, then you should specify / as the target folder which means "Root folder" in FTP terms. Leave passive mode off, and overwrite same file on if you want to

Use the login and password you set in Filezilla earlier, in this case we are using the username canonuk and the password pass. Ensure that you use the exactly the same characters, and ensure they are the same case, any mismatch in the username and password will result in the WFT-E1A issuing an error and failing to transmit its images.

No proxy is required so leave this blank.



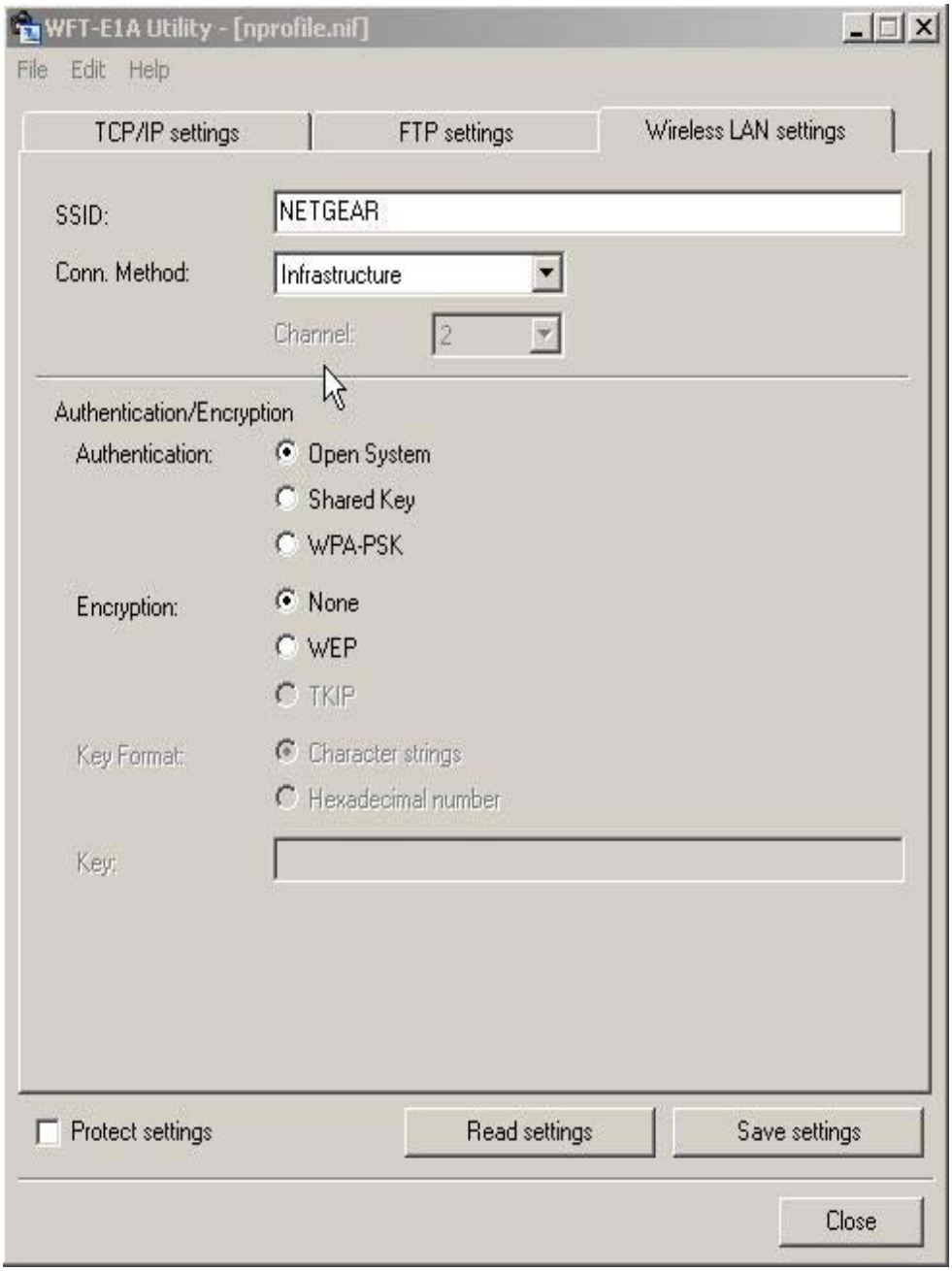
 © Canon 2006

Now select the Wireless LAN settings tab.

In the SSID setting, you must enter the name of the SSID you set on your Access Point. Ensure the SSID is in capital letters, as SSID's are case sensitive. If incorrect case is used for the SSID on either the AP or the WFT-E1A you will not be able to communicate between the two.

No encryption is used here for simplicities sake, however if you do input security keys, they must match both in the Wireless Network Property Settings and the WFT-E1 exactly or communications will fail.

Finally save these settings to your CF card using a card reader / writer device connected to your PC, ready to insert into the camera connected to the WFT-E1A



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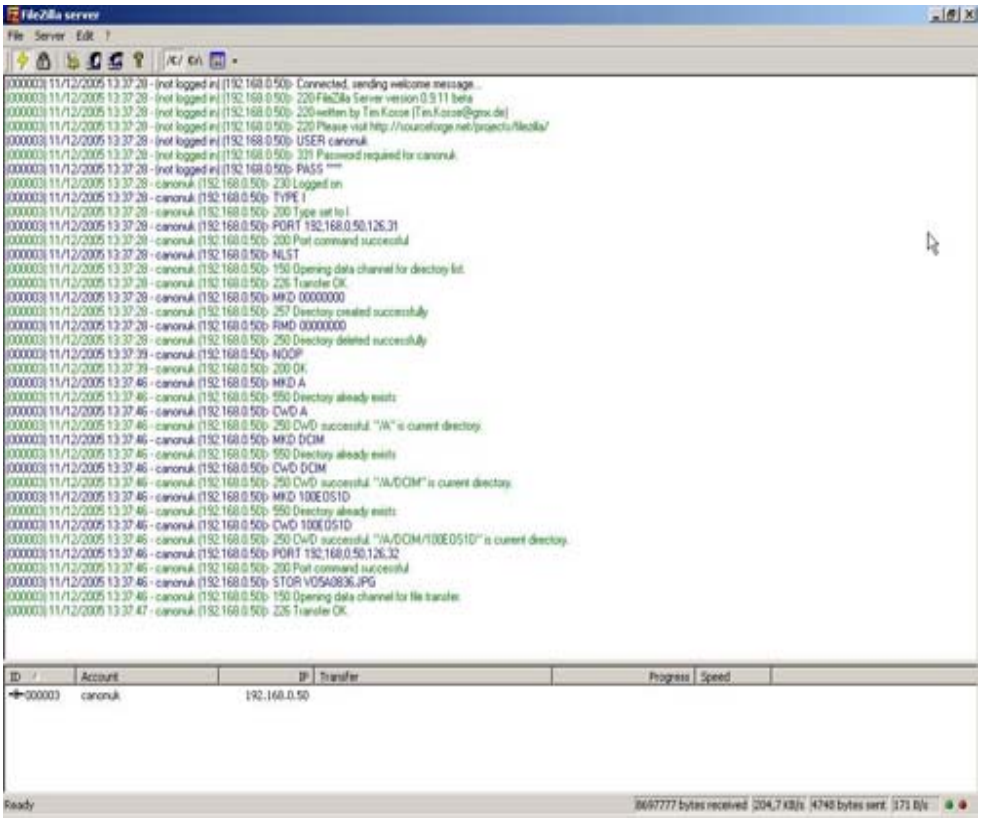
Lastly you will need to load the settings file into your camera. Insert the CF card containing the .NIF file and load the settings into your camera as detailed on page 23-25 of the WFT-E1A manual.

The orange link light should blink a few times, disappear, then remain steady and the display should show the connected speed as in the picture below.

After taking a picture you should see some activity in your FTP server as it receives the files



That's it! Enjoy using the WFT-E1A!

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