USB-IP-4LC
USB over IP Extender
User Manual

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USB-IP-4LC is compatible with PCs or laptops with Windows XP/Vista/7/8/10.   It supports 32- and 64-bit operating systems.

USB-IP-4LC is not compatible with Windows 11, Linux, or MAC OS.

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Introduction

This revolutionary USB Extender utilizes technologies that streamlines and enhances functionalities between USB devices and multiple PCs. Current solutions from other companies provide minimum functionality at high costs. They use significant amounts of resources and effort to achieve the required features, whereas this USB Extender utilizes significantly less resources for more features. Most solutions allow printer-only peripheral devices. However, this USB Extender allows you to use a multi-function combo device such as a Multiple Function Printer. Another added benefit is that you can connect multiple printers/scanners/faxes to the USB Extender through a USB Hub. These are just some of the features that make our product one of the standards today. The USB Extender application provides a user-friendly interface between you and the USB Extender, enabling you to monitor, manage and use the convenient and powerful functions provided by this USB Extender.

Features

Centralized remote USB Extender Management
Centralized remote USB Extender Status Monitoring
Centralized remote USB Device Management
Centralized remote USB Device Status Monitoring

Installation

To install the USB Extender program, please double click the USB Extender setup file.
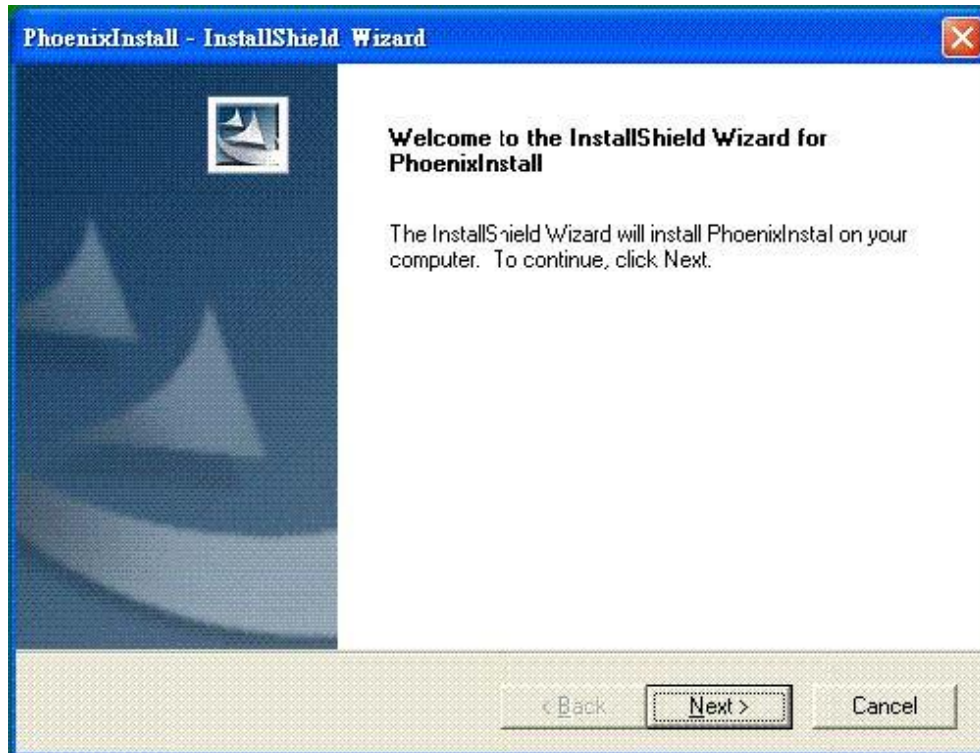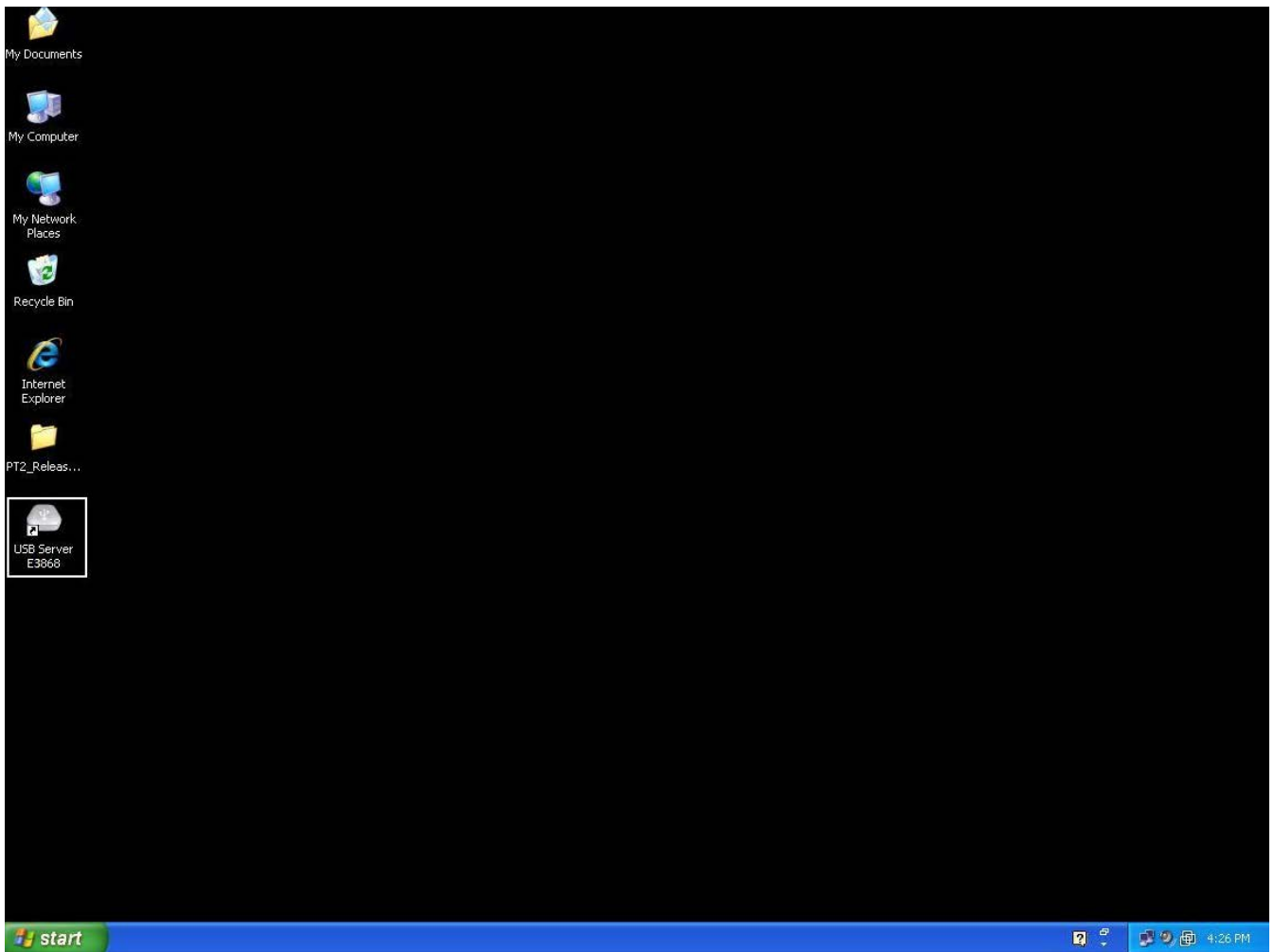

Then please follow the instructions of the wizard to complete the installation process.

Please reboot the system as requested by the installer when the process ends, otherwise the software might not work properly.

Running Program

To start the USB Extender program, please double click the shortcut icon of the "USB Server" on the Desktop.
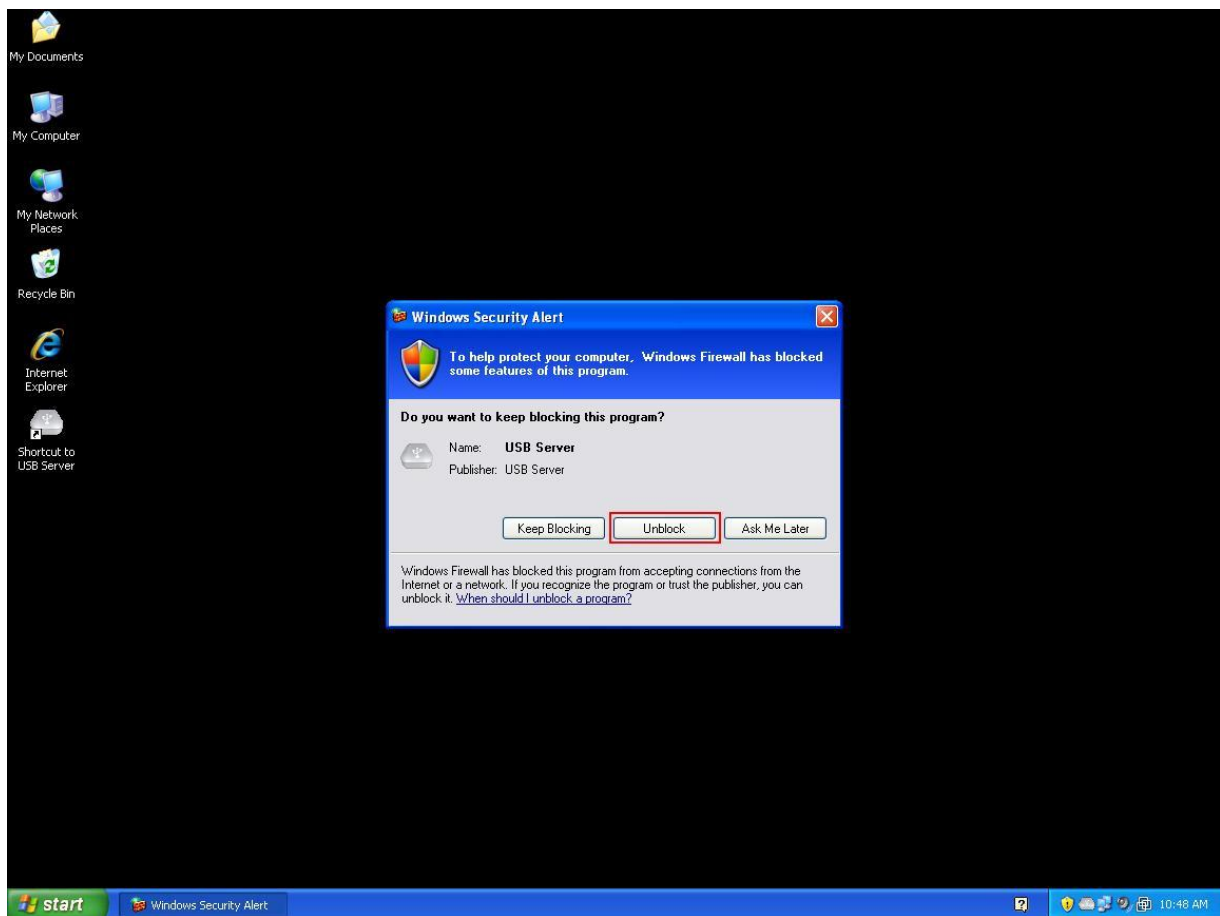

This would bring up the main dialog as shown below.
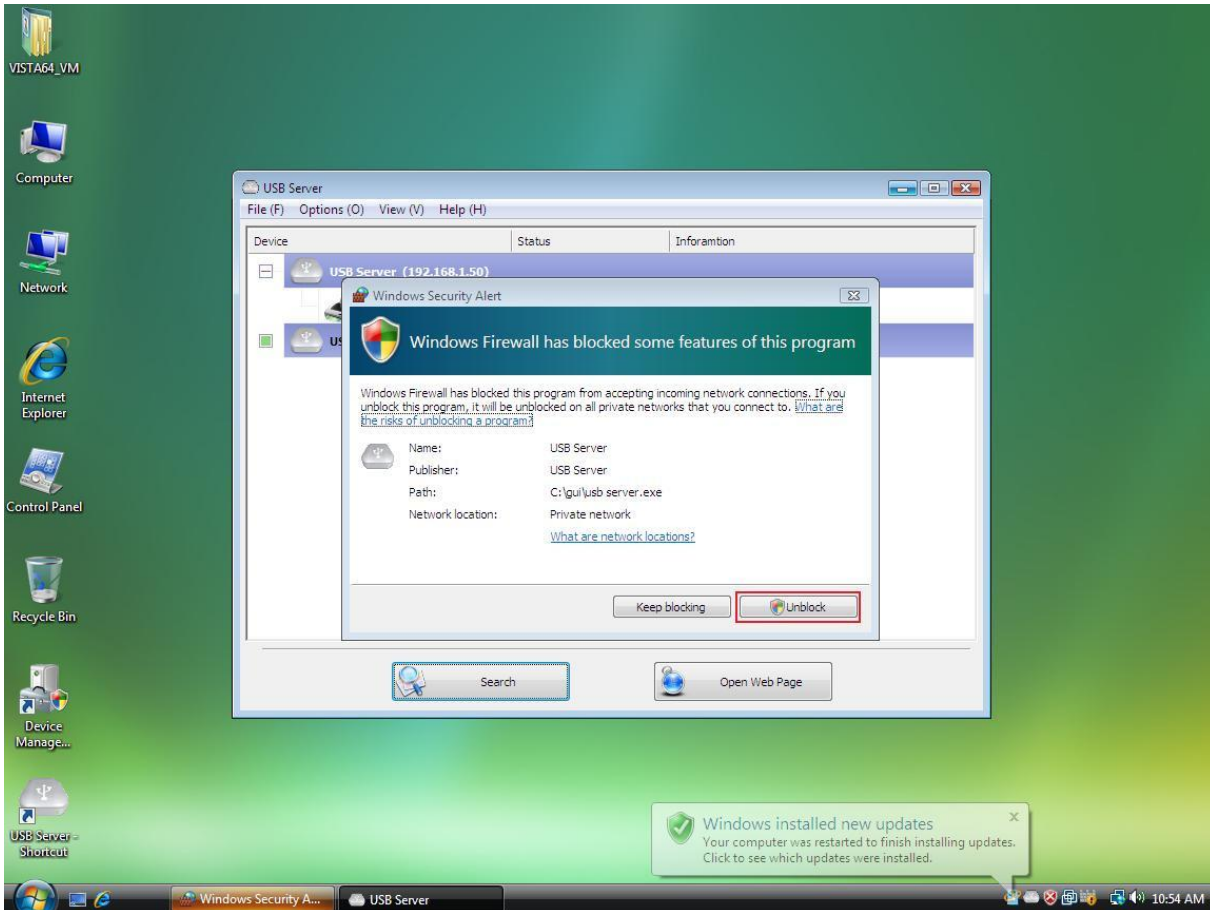
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System Firewall

When you start the program for the first time, your Windows OS will prompt you for Firewall Access. Please make sure you unblock the software or grant it access, otherwise the program will not work correctly.
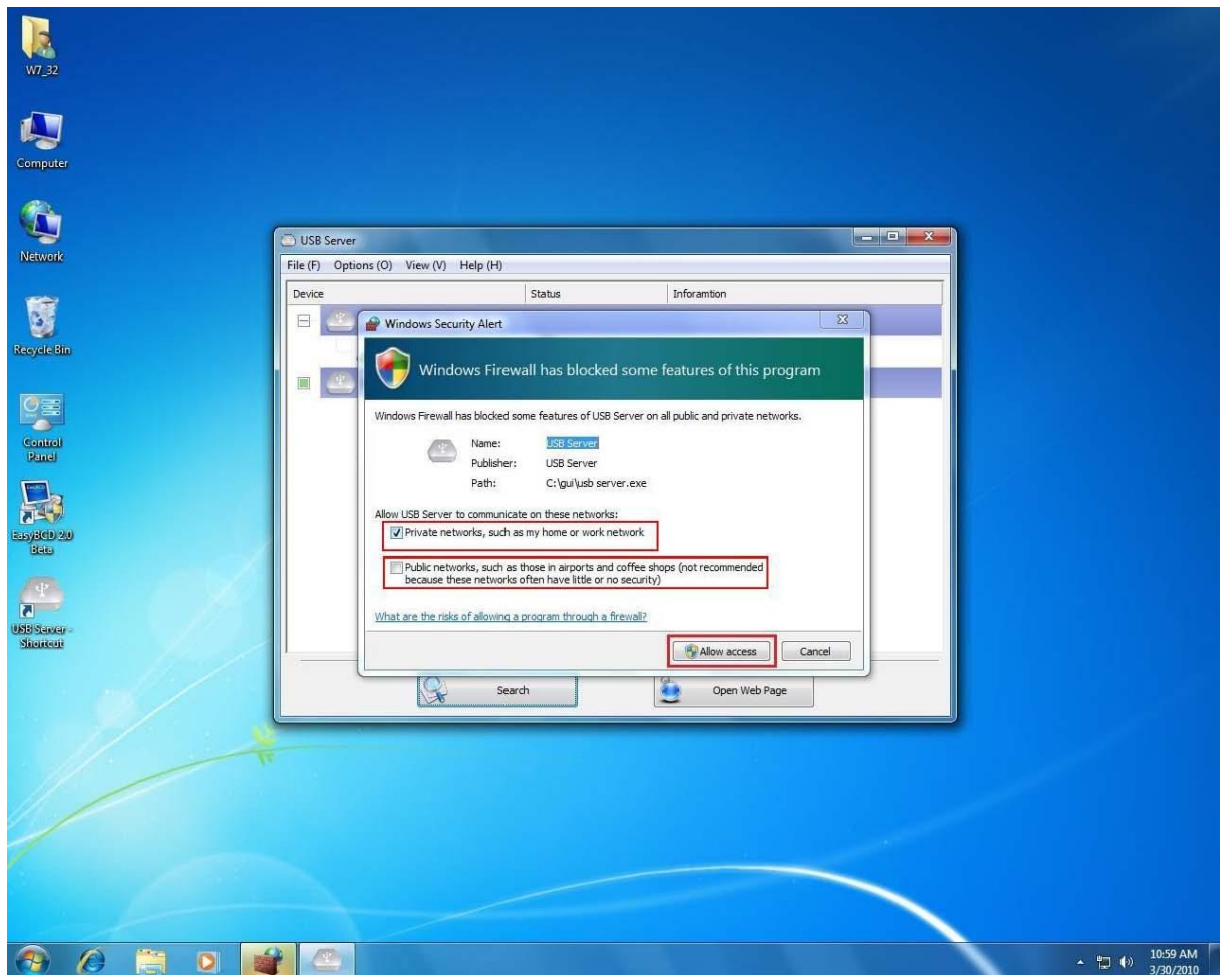
Windows XP Firewall Access Alert

Please make sure you "Unblock" the program.

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Windows Vista Firewall Access Alert

If your system is running Windows Vista, please make sure you "Unblock" the program.

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Windows 7 Firewall Access Alert

If your system is running Windows 7, please make sure you check both of the network options and then click on "Allow access" when you see this alert.

Once you have done this once, the system will remember your setting and will not prompt you again the next time you run the software.

WARNING: Failing to provide the USB Extender software with access through the system firewall will cause malfunction in the program.

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Main Dialog Box

Once you start up the program and grant it access through the firewall, you will see this main dialog box.
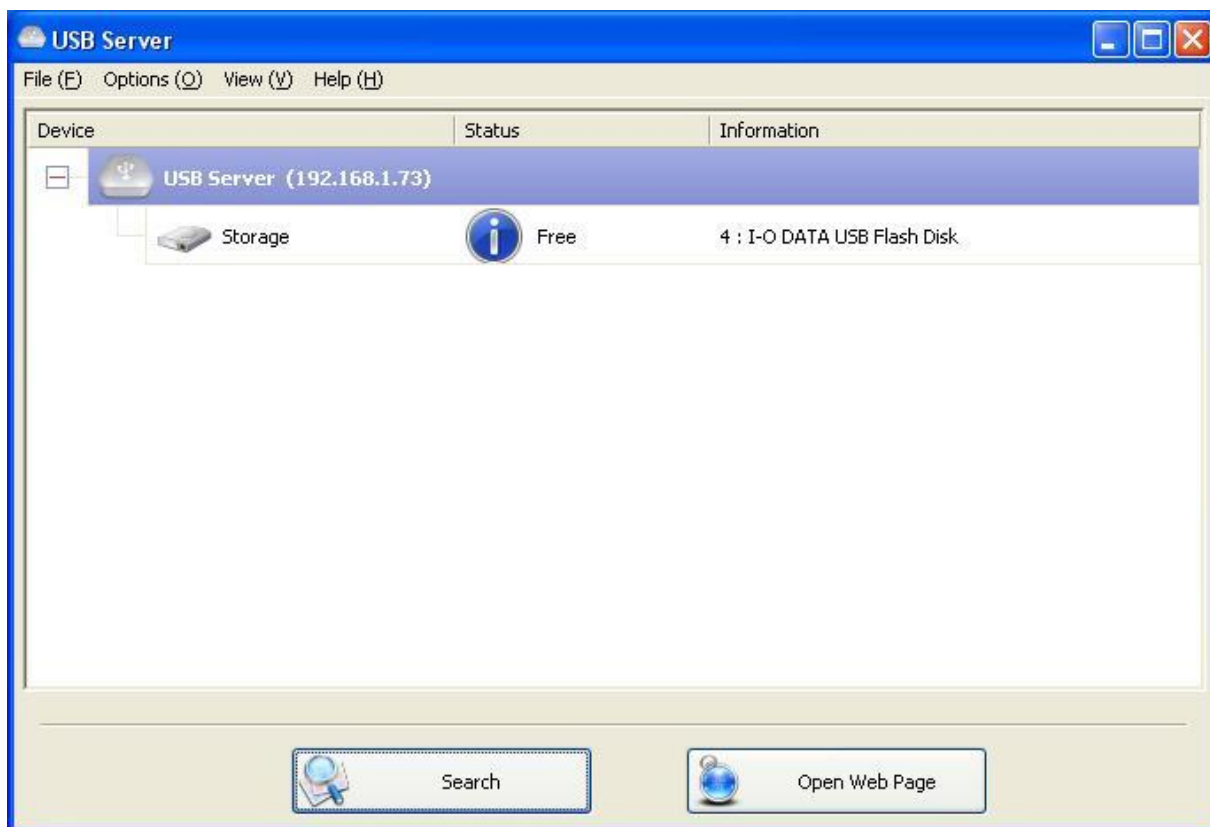

The main dialog box consists of a **Control Menu** (File, Options, View and Help), a tree view in the middle that displays a list of all devices discovered on the network, a **Search** button to get the current status of all USB Extenders and devices, and a button that toggles between **Open Web Page** and **Connect Device** depending on the node you select on the tree view. The **Open Web Page** button toggles to Connect Device when a device is highlighted.

Status of USB Extender and Devices

The tree view also tells you the status of all the USB Extenders and devices that are discovered on the network. Any inaccessible USB Extender might or might not show up on the list if it is either disconnected from the network, powered off or suffering from other technical difficulties. The device might be in one of the following states and there are different things you can do with it in each of the states. Each status is represented by a specific icon.

Device Free
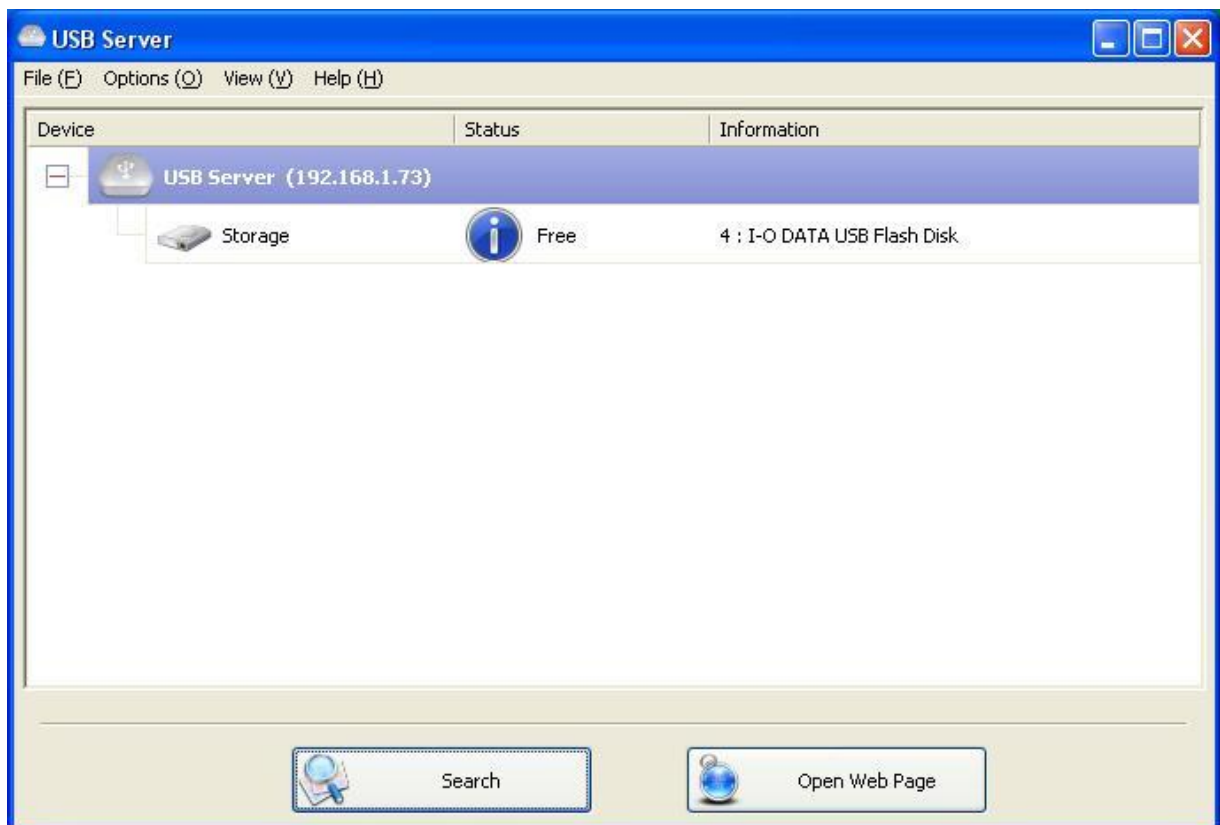
A device with **Device Free** status is unoccupied and ready to be connected.

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Occupied by Yourself
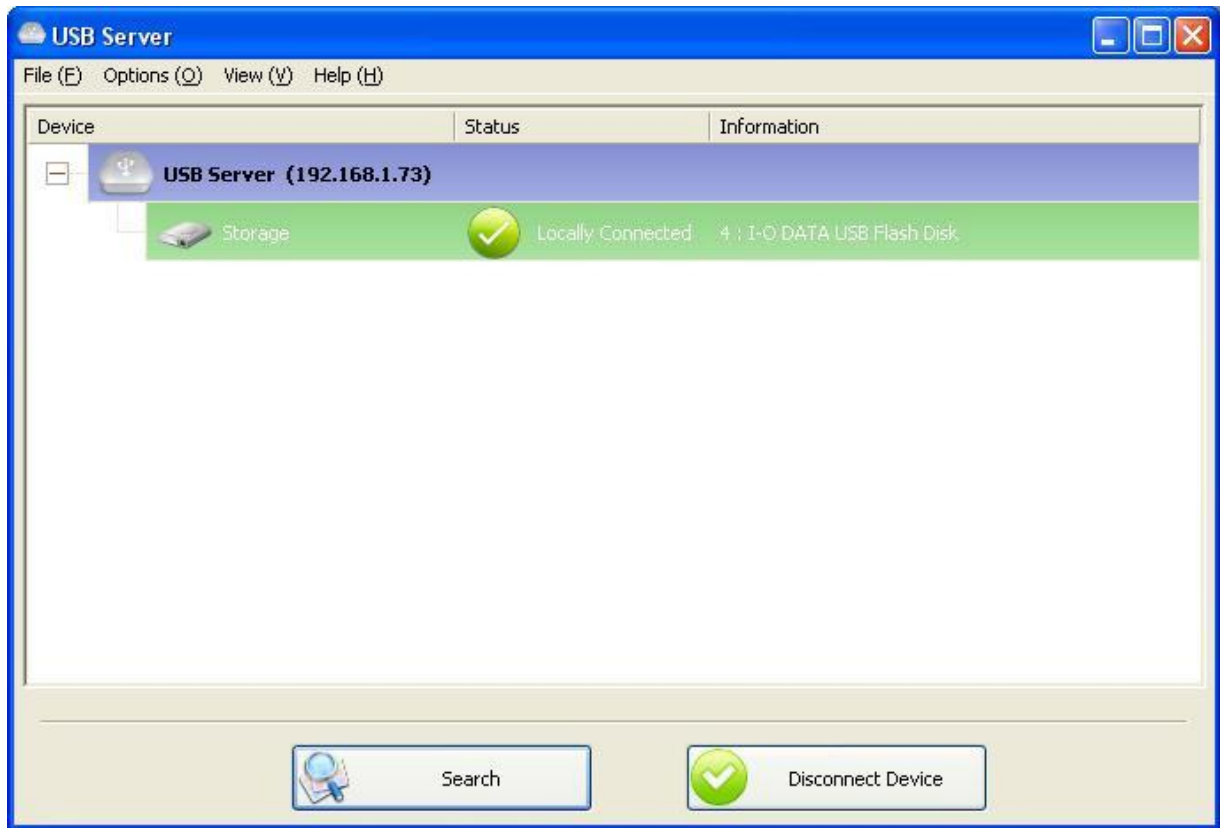
When the device has been occupied, the icon and Status change to indicate so.

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Occupied By Other User

This status icon indicates the device is occupied by another user on your network and you can not connect to that device at the moment.

Device on Different Segment

This icon with question mark indicates that the Extender's IP address is on a different network segment from your PC. You can NOT connect to a device attached to such an Extender. Please check your network settings. However you can still change its network settings.

Unsupported Device

Some of the devices are not supported by this USB Extender. Such device will be identified by a stop sign icon as shown. Of course, connecting to an unsupported device is not allowed.

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Accessing a Device
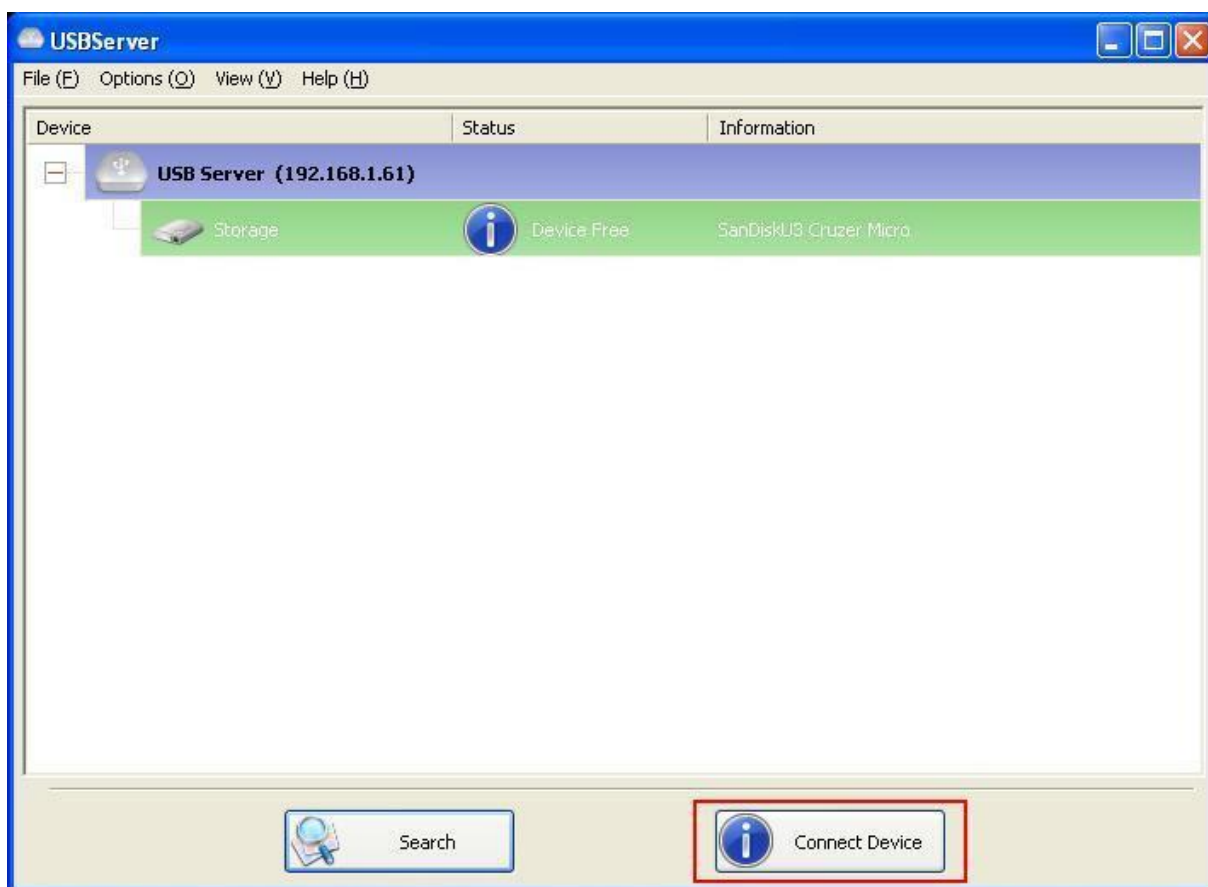
To connect to a USB device, please select it on the tree view and click on **Connect Device** button or double-click on it. This process might take from a few seconds up to a minute, depending on the complexity of the device. **Then you can operate a connected USB device as if it is connected to your PC's USB port directly.**

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If you select a connected device on the UI, you can see that the **Connect Device** button is changed to **Disconnect Device**：
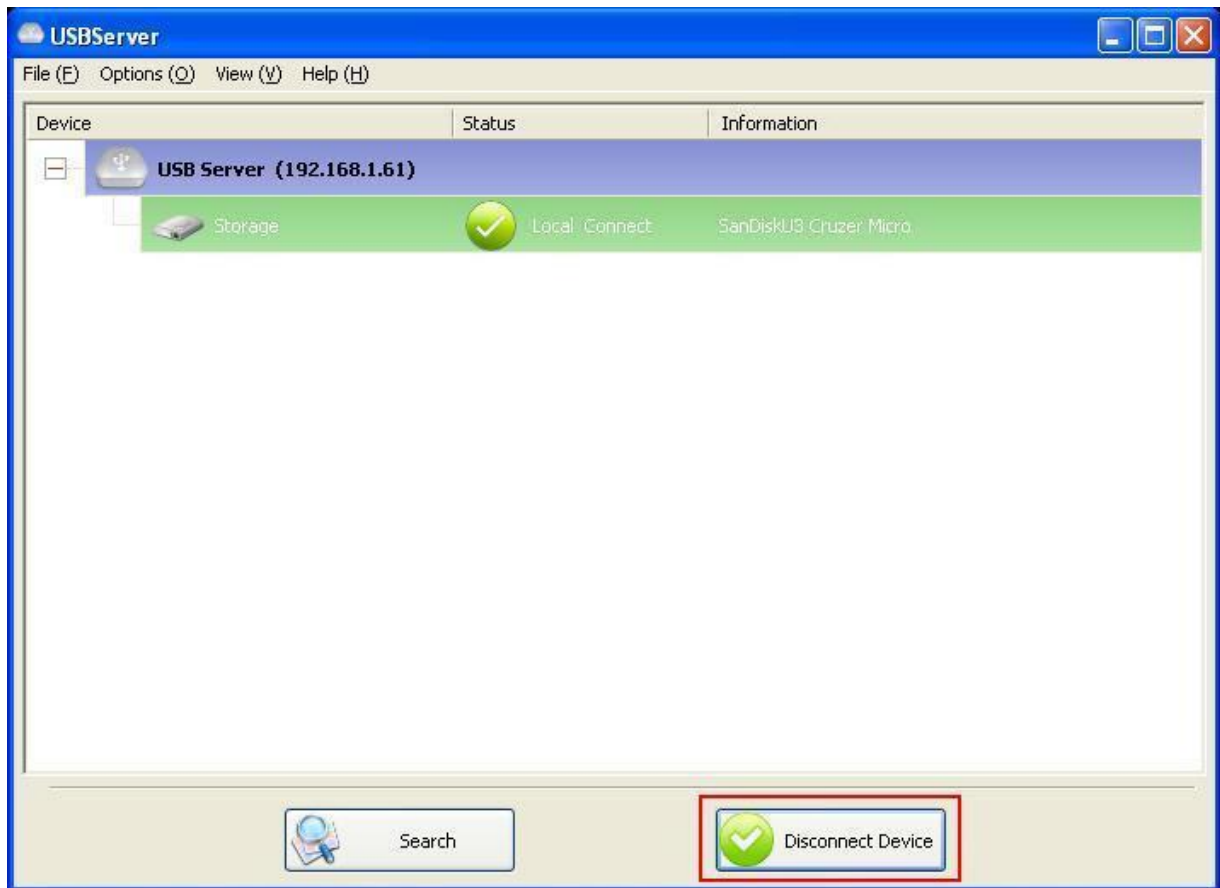
Clicking on this button releases the selected device for other users. Once you see the icon change back, the device has been disconnected and other users will then be able to connect to it.
This operation is exactly like when you unplug a USB device from your PC's USB port.

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Extender Configuration
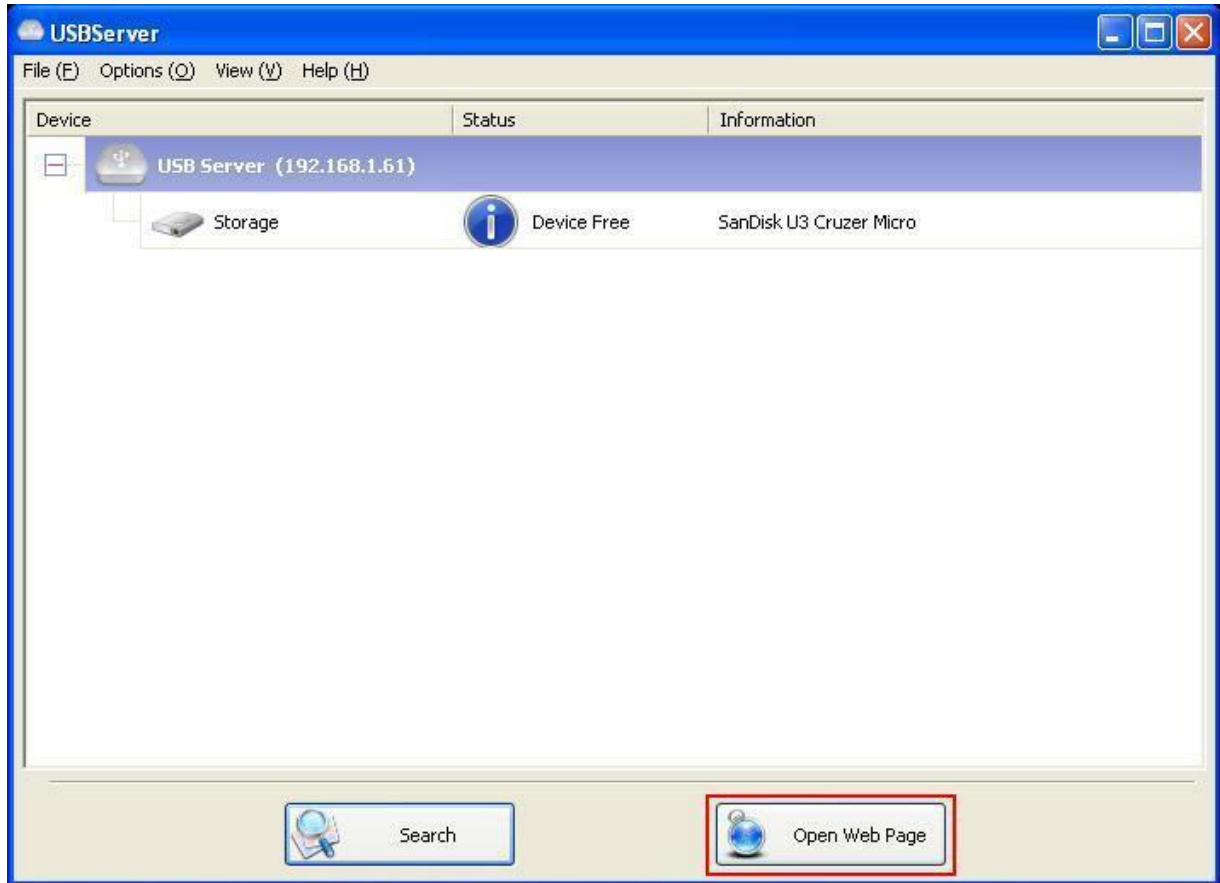
We allow the users to configure the settings of the USB Extenders via the web-based UI. Select the target server on the tree view and then click on the Open Web Page button or the same option on the right-click menu of the server icon, to bring up the web-based configuration UI.

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Configuration with Web-based UI

Your default web browser will pop up and take you into the web-based UI of the Extender.
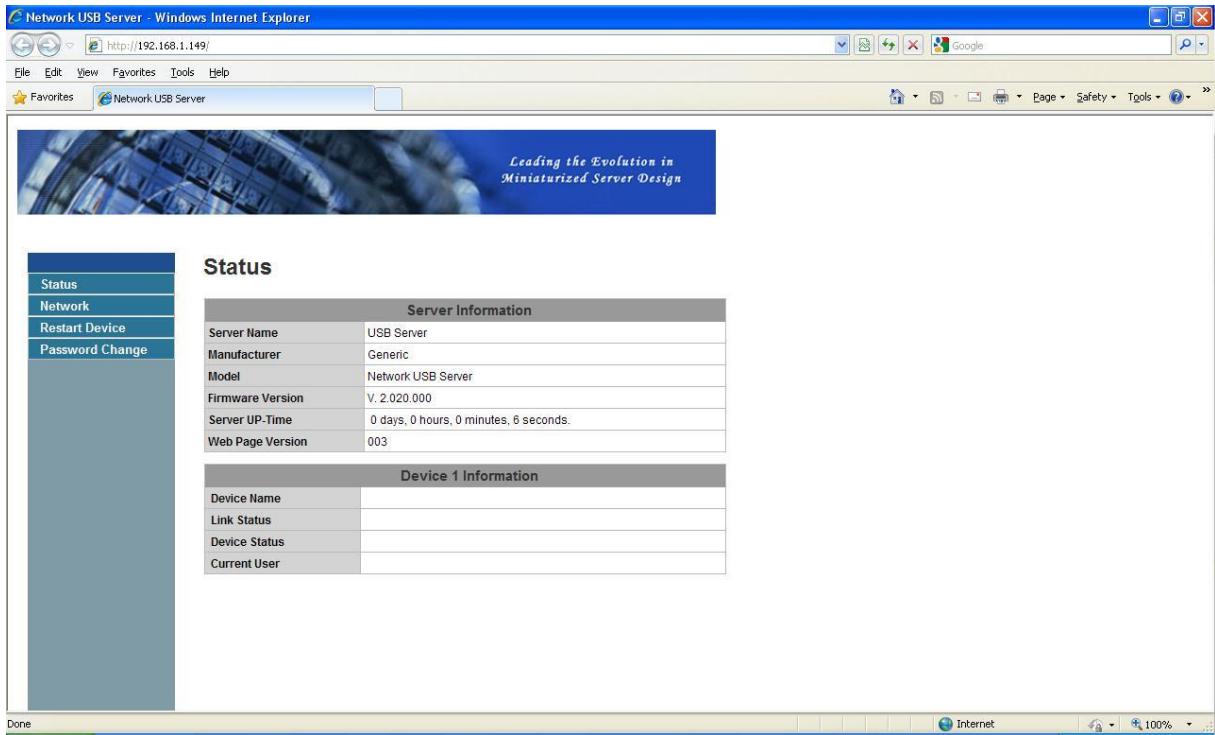
This is the main page. You can see the important information about the USB Extender and the device(s) connected to it. The 4 links at the left-hand side take you to different pages with other information about this Extender or functions you could perform.
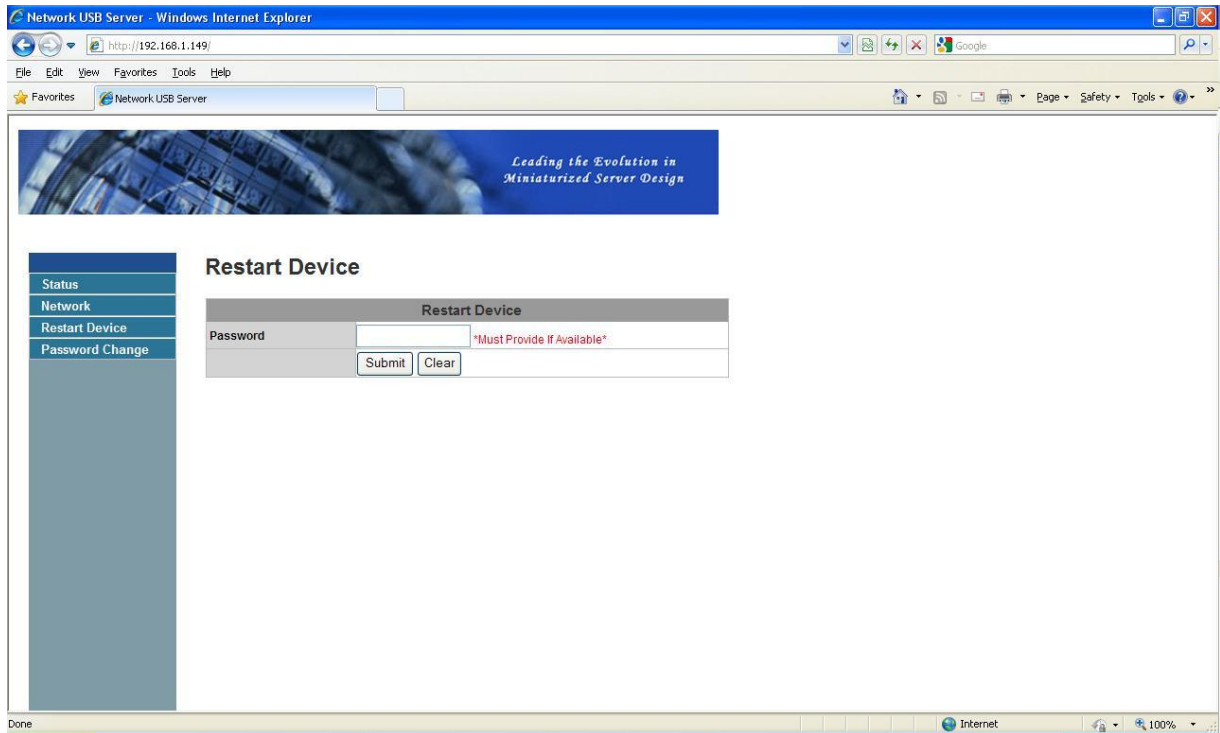
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Network Information
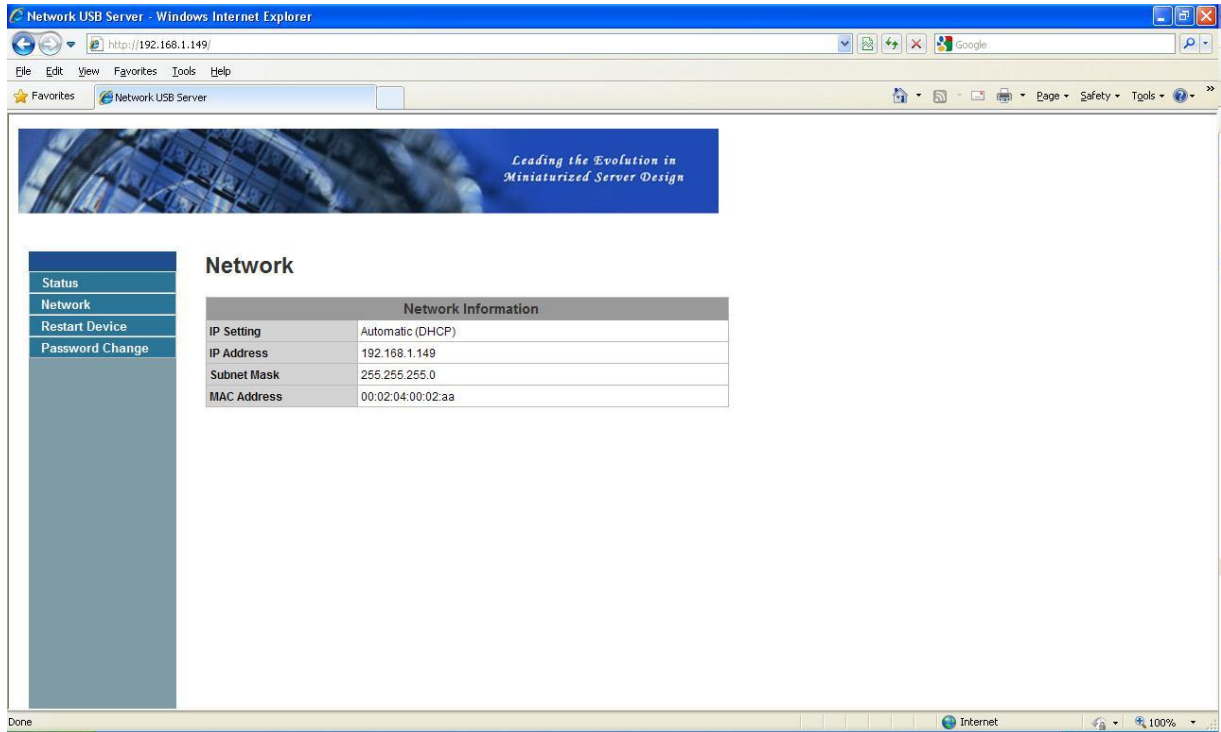
This page displays the current network setting of the Extender, like the current IP setting and the MAC address.
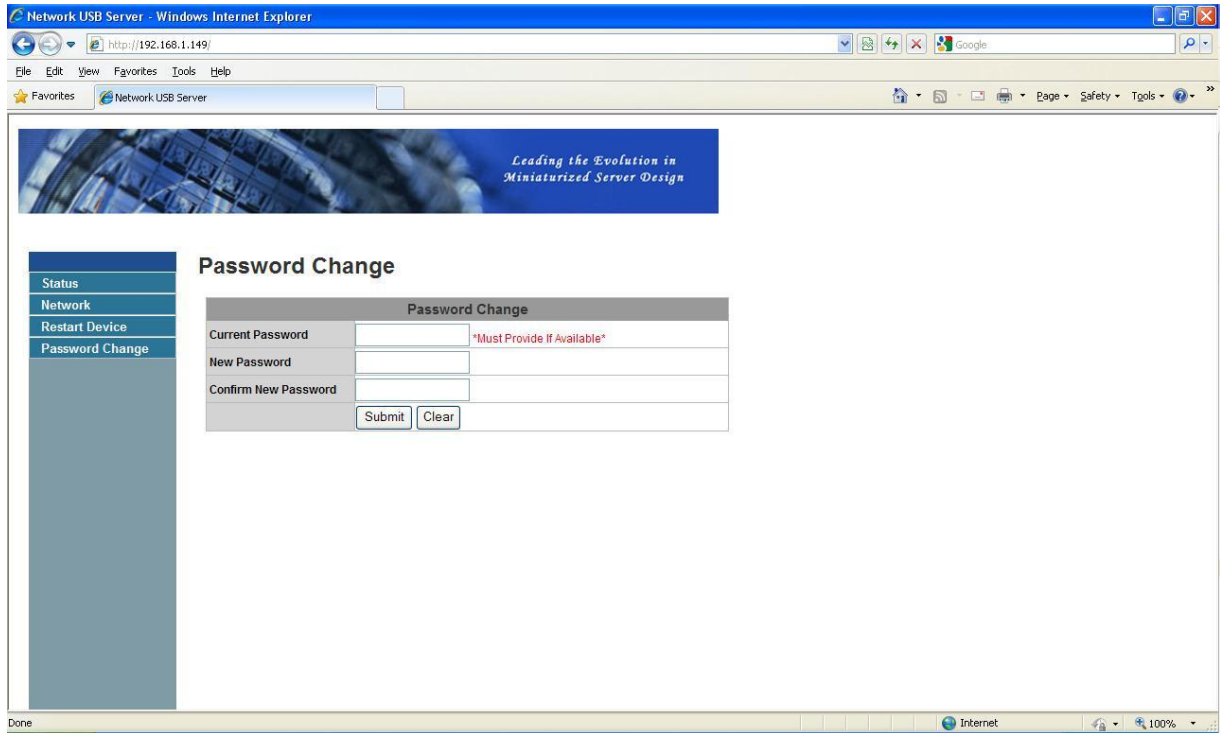
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Extender Reset

Clicking on this link takes you the page shown below:

Click on the **Submit** button with the correct password provided will reboot this USB Extender. If no password has been set, then simply click on **Submit** button to perform this function.
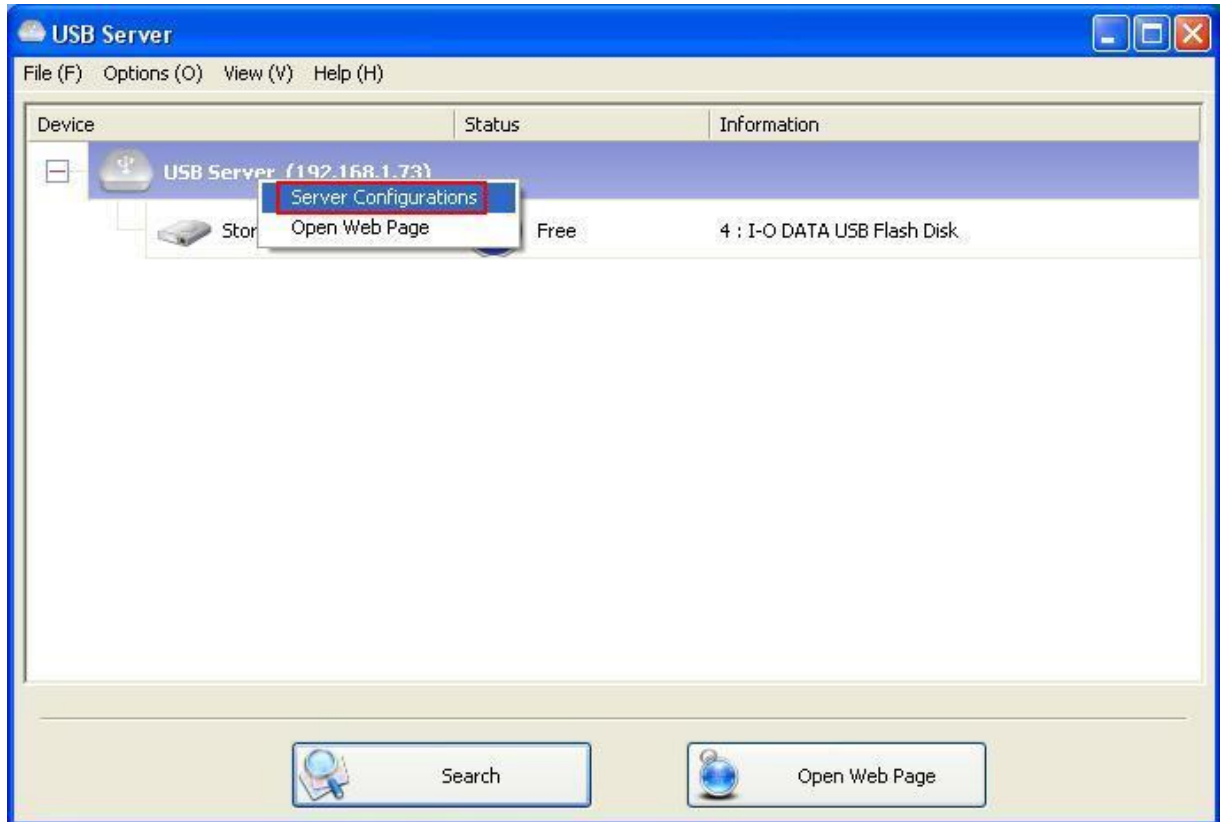
Change Password

Clicking on this link takes you to the password update page below:

To change the password, you must enter current password, enter new password and enter it again for confirmation, and then click on Submit to set the new Password. If you are setting the password for the first time, you don't have to provide current password.

Configuration with the Utility

Another way to configure the Extender is via the configuration dialog of USB Extender. To bring up the configuration dialog, please RIGHT-CLICK on the Extender icon to bring up this menu, and select **Server Configurations**
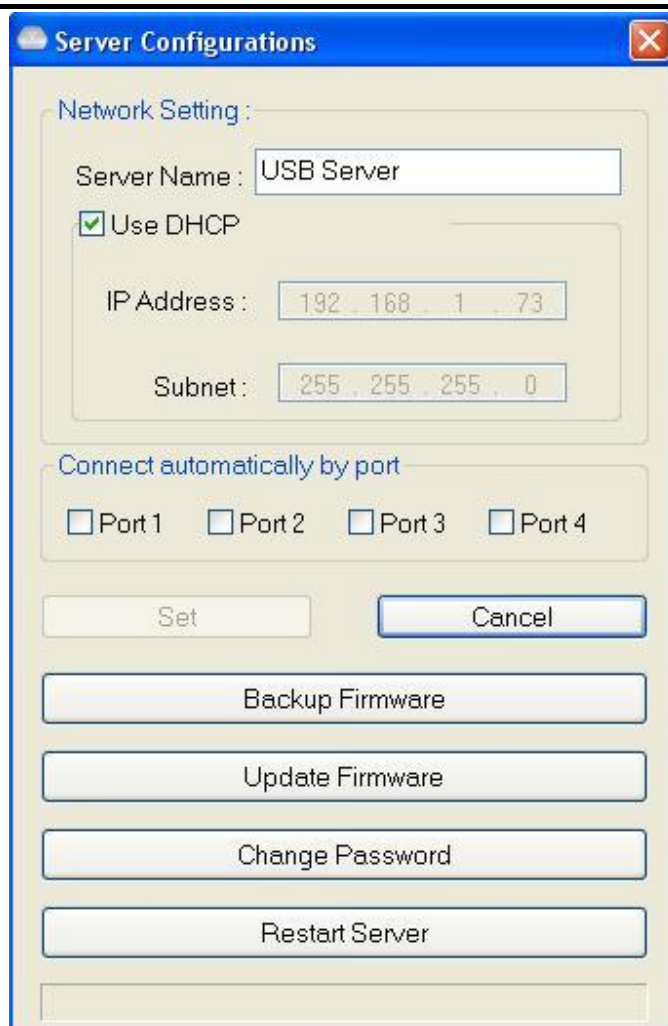
You might be prompted to enter password if a password has been set. If not, you will immediately see the above dialog.

Server Name: This field allows you change the Extender name. Change it whatever you want. **USE DHCP:** When this field is checked, your extender acquires IP address automatically. Uncheck it and you can enter IP address automatically.

NOTE: You can apply this function to an extender on a different network segment. HOWEVER, some router/switch hubs do not allow communication between extender in different segments. In this case, you won't even see the extender on a different network segment.

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Connect Automatically By Port: This is a new function that, when enabled, allows any USB device plugged into the enabled port to be connected automatically. Please see "Featured Functions" chapter for a detailed description of this function.

Backup Firmware: this function is a fail-safe mechanism for the "Update Firmware" function. Just browse to where you want to save the backup file and click on "Save" to save the file.

Update Firmware: update firmware with this function. Use the Browse button to choose the firmware to update. Click on "Open" to start.

Change Password: Simply enter the new password and enter it again for confirmation. Click on "Submit" to change.
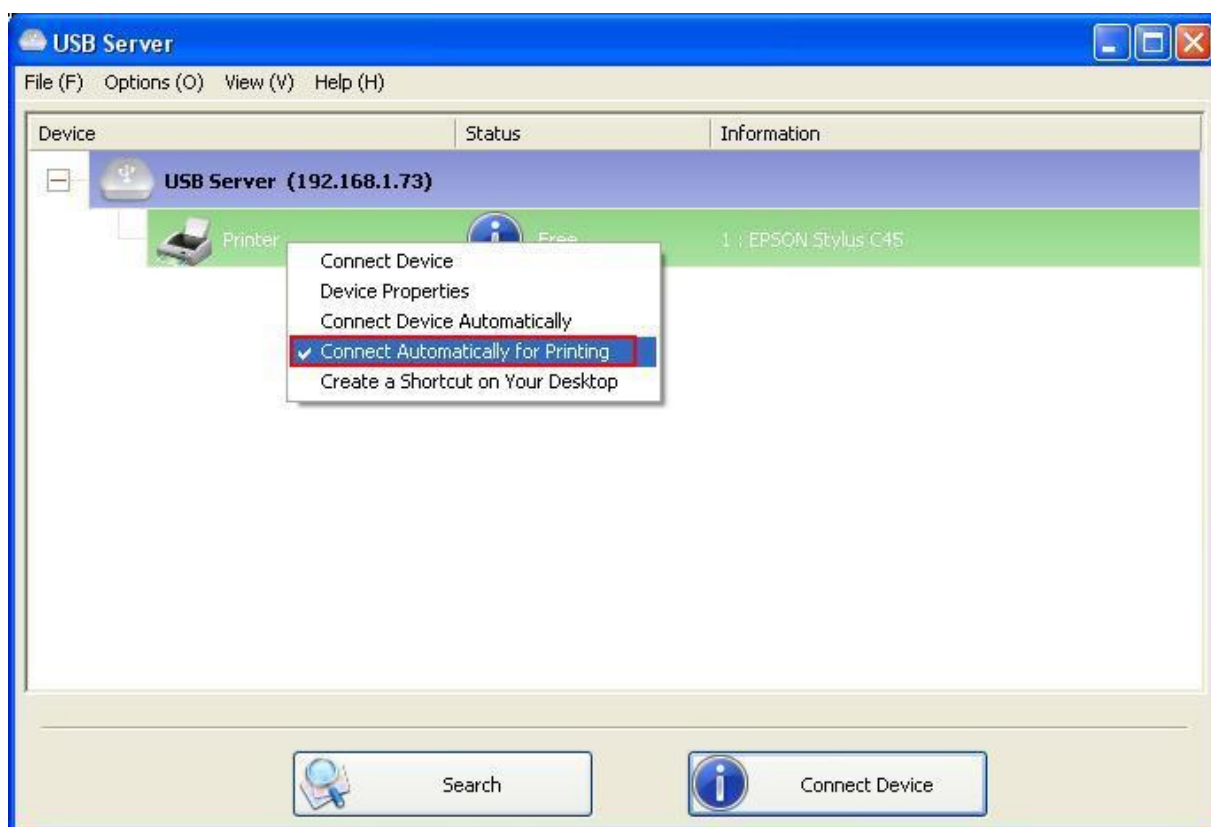
Restart Server

This button reboots the Extender. Please note that this function will not work if the Extender you attempt to reset has a device connected to it and the device is occupied by a user.

Featured Functions

Connect Automatically for Printing

This is another one of our very convenient functions.

What this function does is that when you send a printing task to this printer, it detects this printing task and **AUTOMATICALLY** connects this printer to print out the document. When the printing task is done, the printer will then be **AUTOMATICALLY** disconnected so that other users can use it. The user no longer has to manually connect and disconnect the printer.

NOTE: This function will be enabled for printers or MFPs that have been installed and used on your PC. For a new printer/MFP, please make sure you have installed it (has been connected via USB port or via USB Extender software and works correctly) on your PC first.

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Automatic Connection

There two ways to automatically connects USB devices: automatic connection by device and automatic connection by USB port.
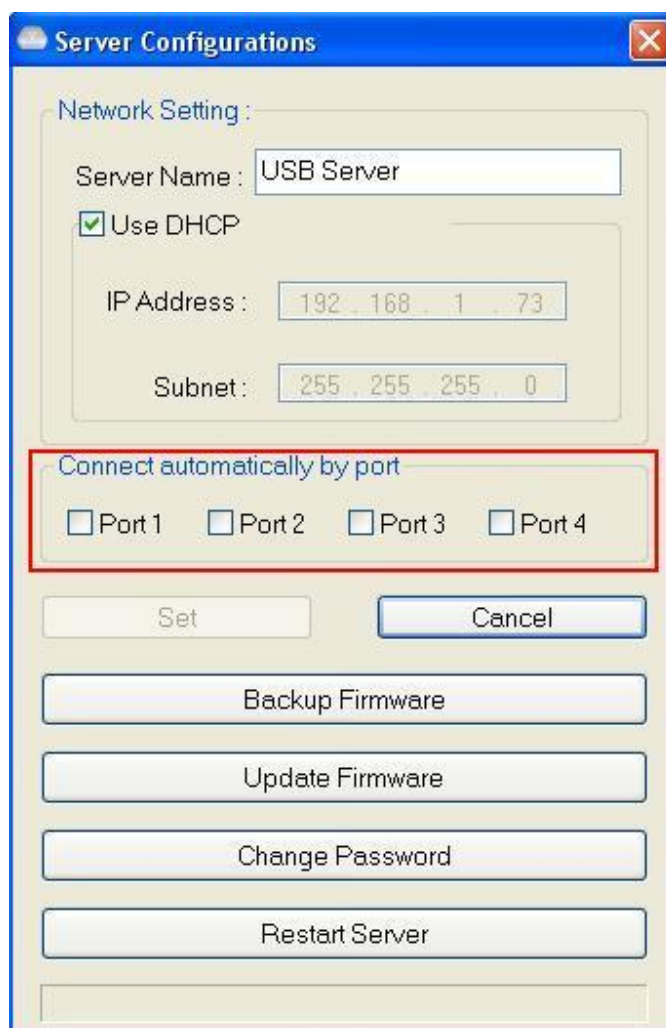
Automatic Connection by Device
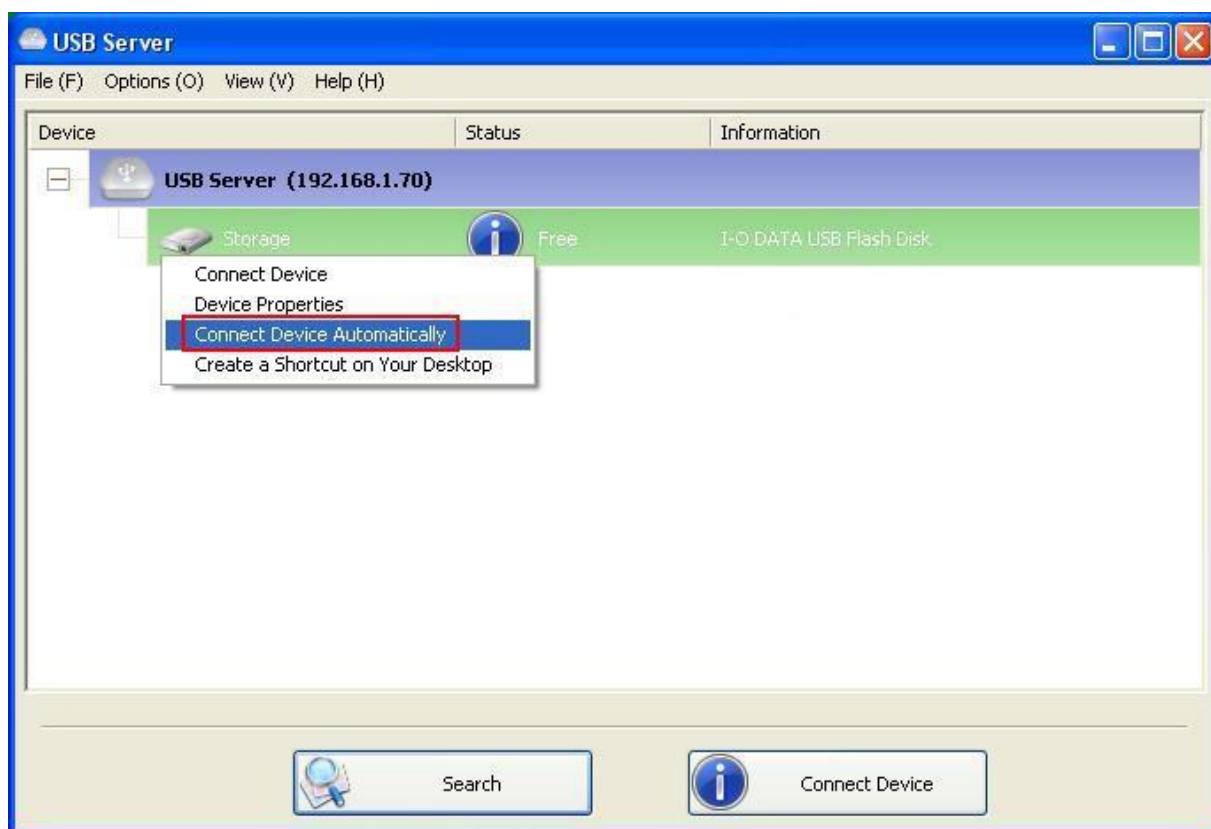
Once enabled, THIS PARTICULAR DEVICE will be automatically connected when:

1   The software starts up and the device is online and Free.
2   The software is running and the device comes online.
3   The software is running and the device status changes to Free from any other type of status.

HOWEVER, if the user manually disconnects the device, it will NOT be automatically connected again until the software has been restarted.

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## Automatic Connection by Device

When this function is enabled for the port, the USB devices will be automatically connected when:

1   The device is plugged into the port when the software is running.
2   The device is plugged into the port and is Free when the software starts up.
3   The device is plugged into the port and the status changes to Free from any other status when the software is running.

Also, like automatic connection by device function, if the user disconnects the device manually, it will NOT be automatically connected again until the software has been restarted.

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Create a Shortcut on Your Desktop
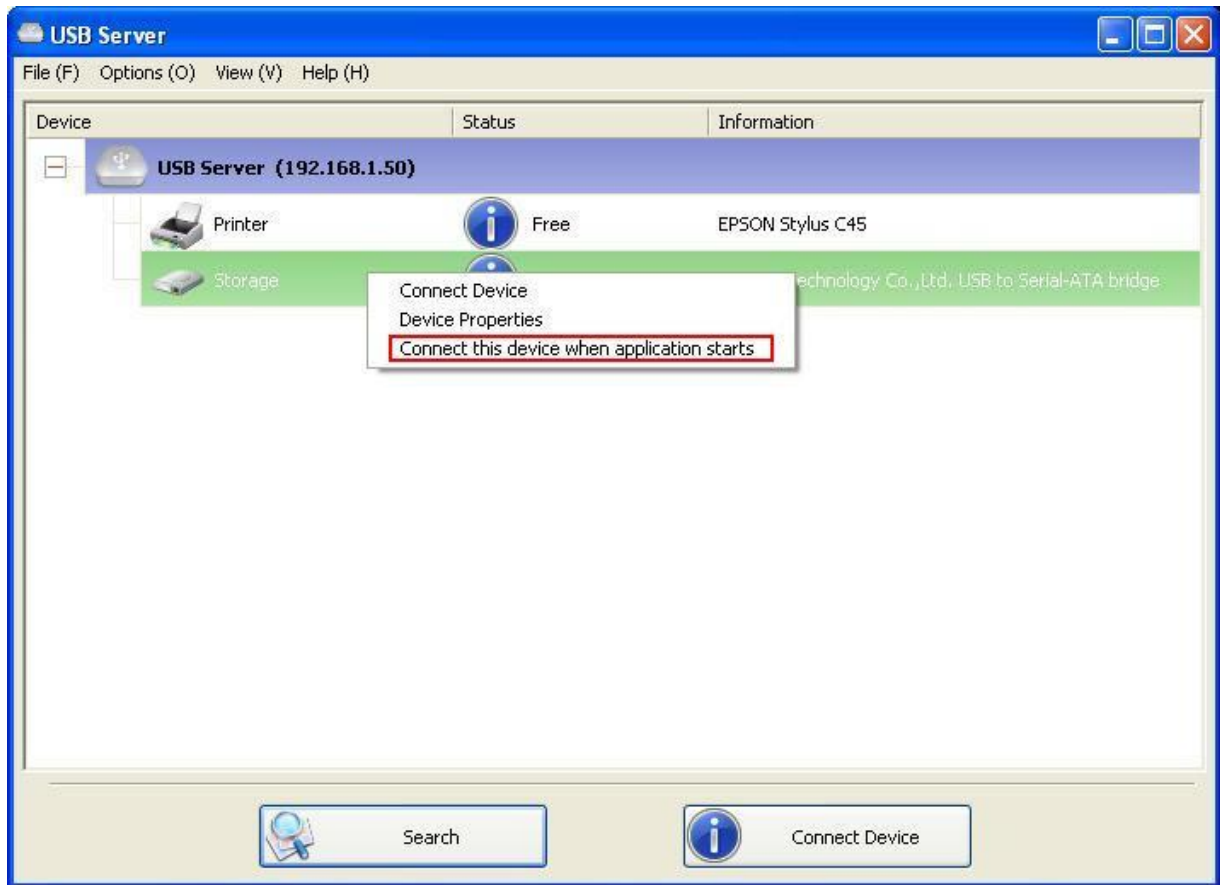
This function creates a shortcut on your Desktop that, when double-clicked, starts up an application and connects a targeted device at the same time. This function is particularly useful when the functions or one of the functions of the targeted device must work with a specific application, such as a multi-function printer and the photo/picture scanning utility. Normally, if you want to scan with a scanner connected to a USB Extender, you must first connect the Scanner with the USB Extender software, then run the scan software and start scanning. When you finish with scanning you have to close the scan software and then disconnect the scanner so that other users can use it.

However, this shortcut function consolidates these steps into two quick double-click. Let's see an example use case.
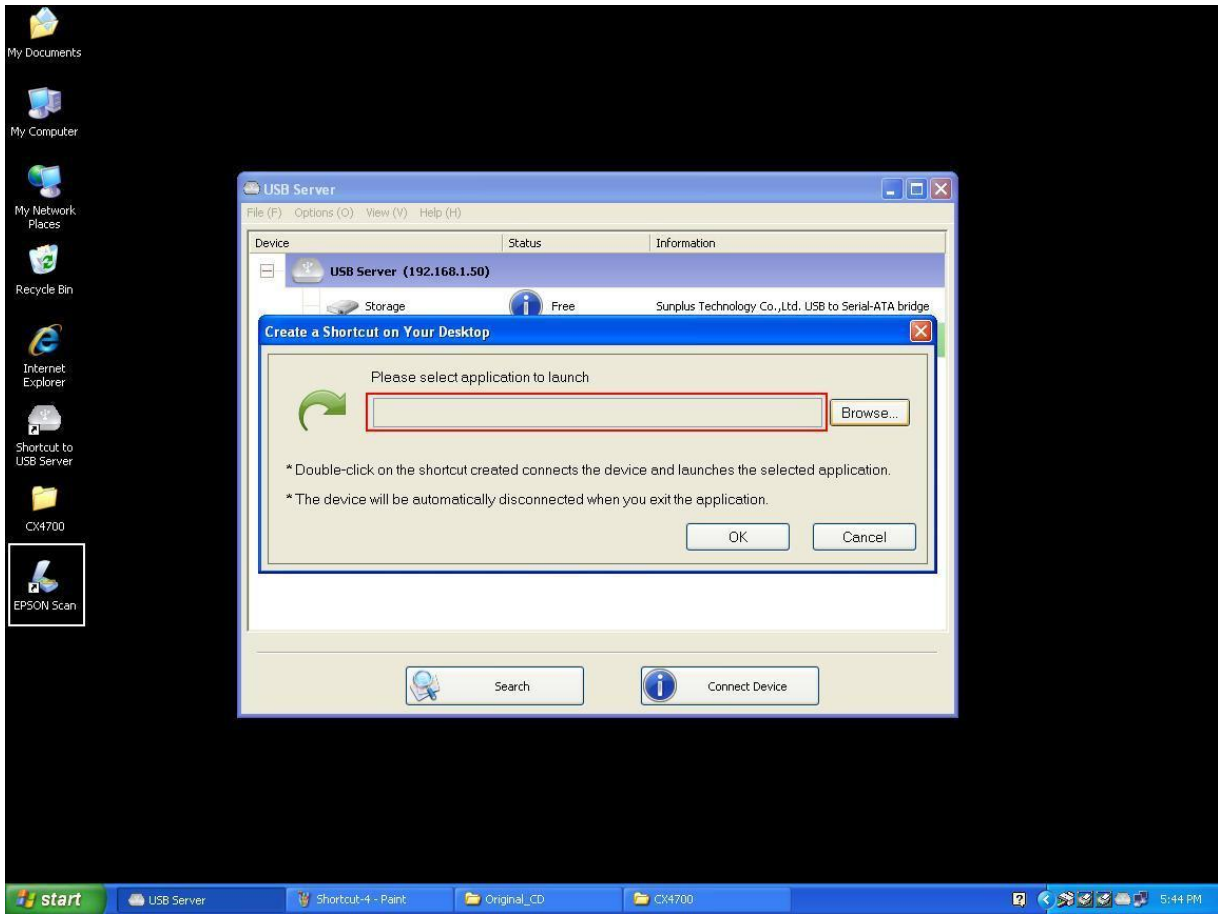
Take this EPSON MFP as an example.
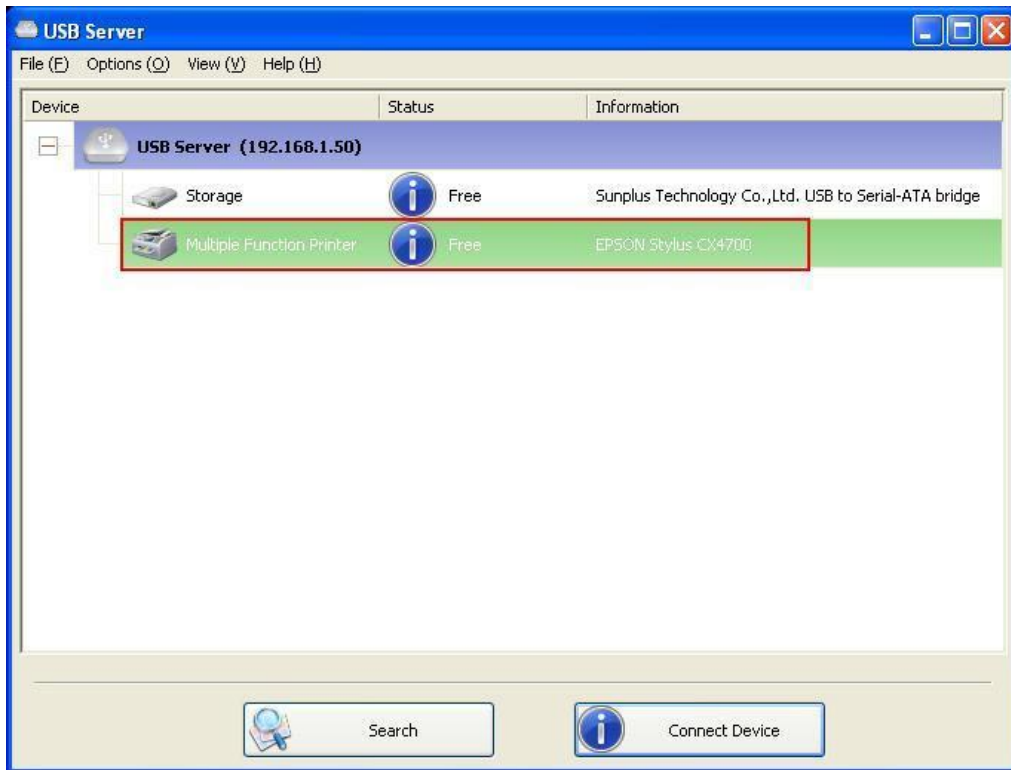
Right click on it and select the "Create a Shortcut on Your Desktop" option.
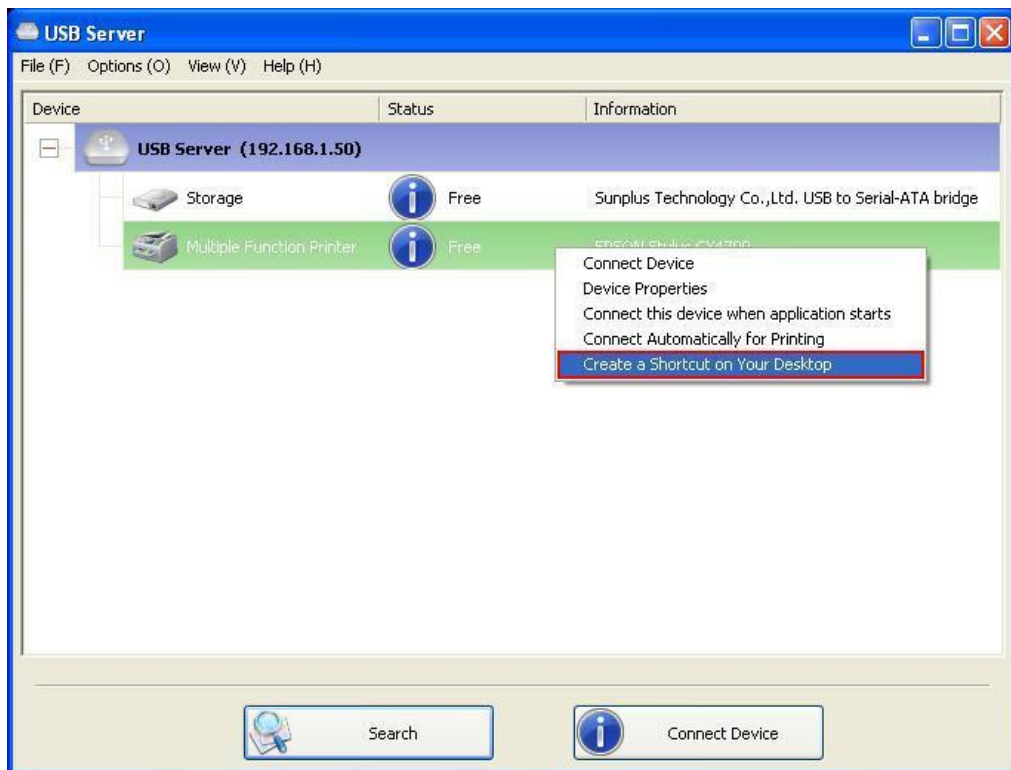
Then you will see this setup dialog pop up.

So, this EPSON MFP comes with a scanning application called EPSON Scan. You can see a shortcut of this EPSON Scan software being placed on your Desktop. Now you can either Drag-and-Drop the EPSON Scan shortcut into the highlighted text field.....
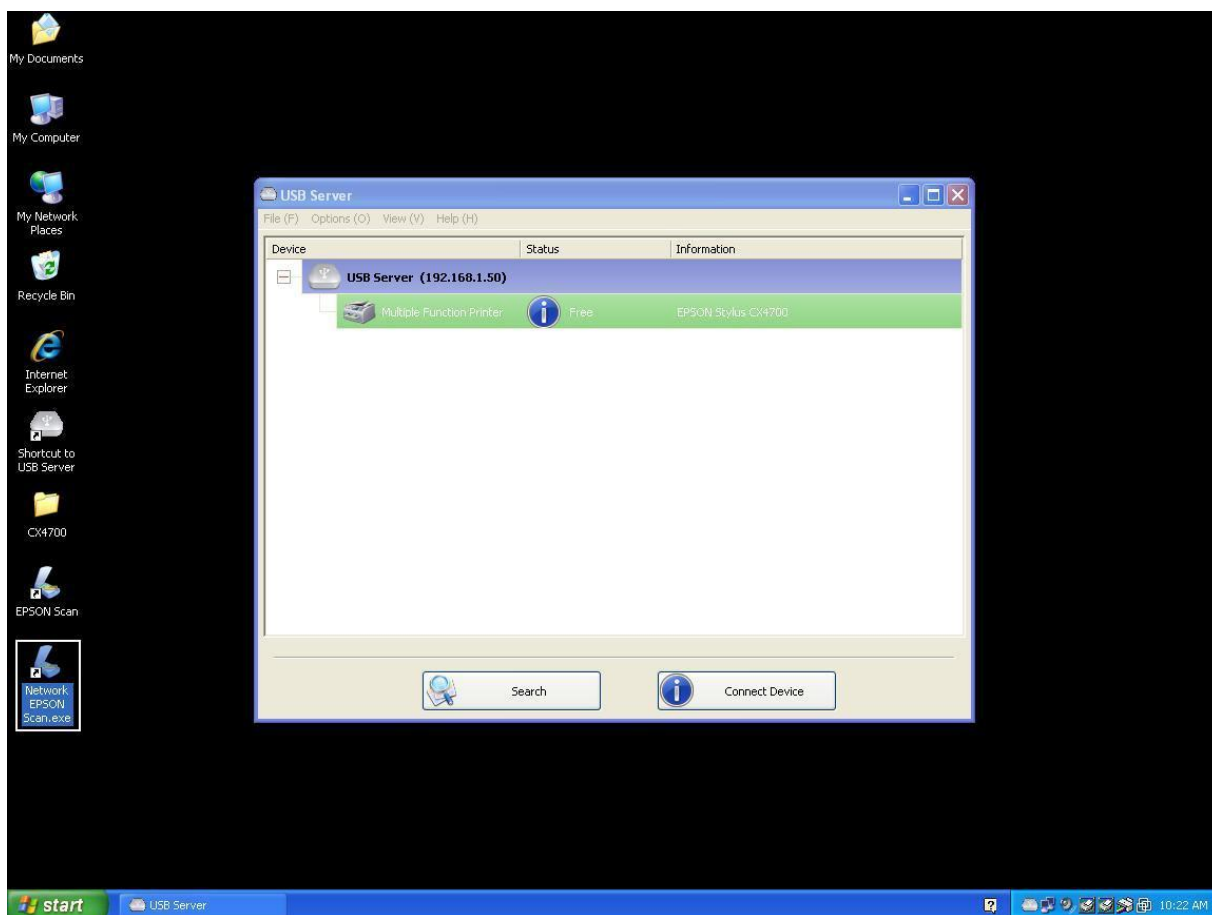
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.....or you can see the browse button to select the shortcut.
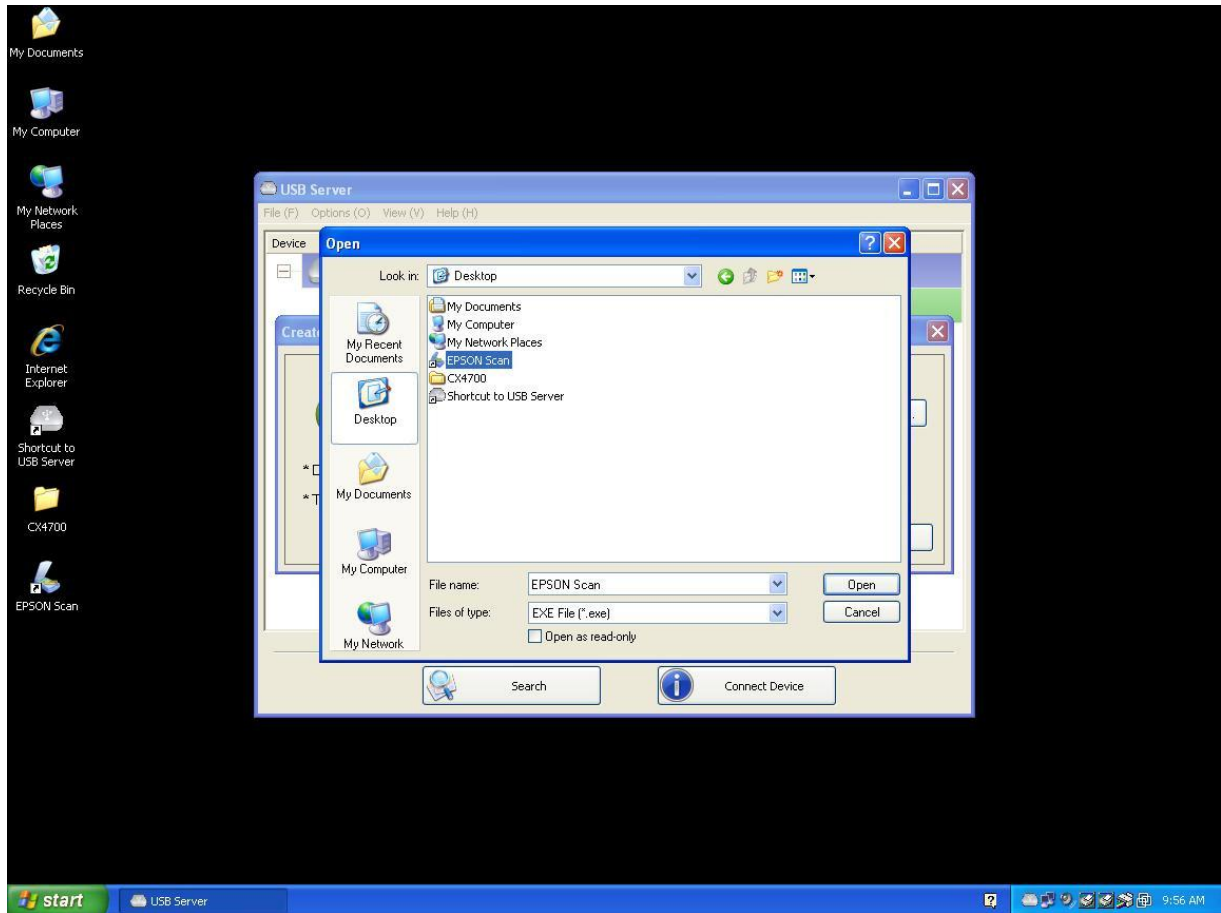
Either way, observe that the program path has been correctly captured and then click on the **OK** button.

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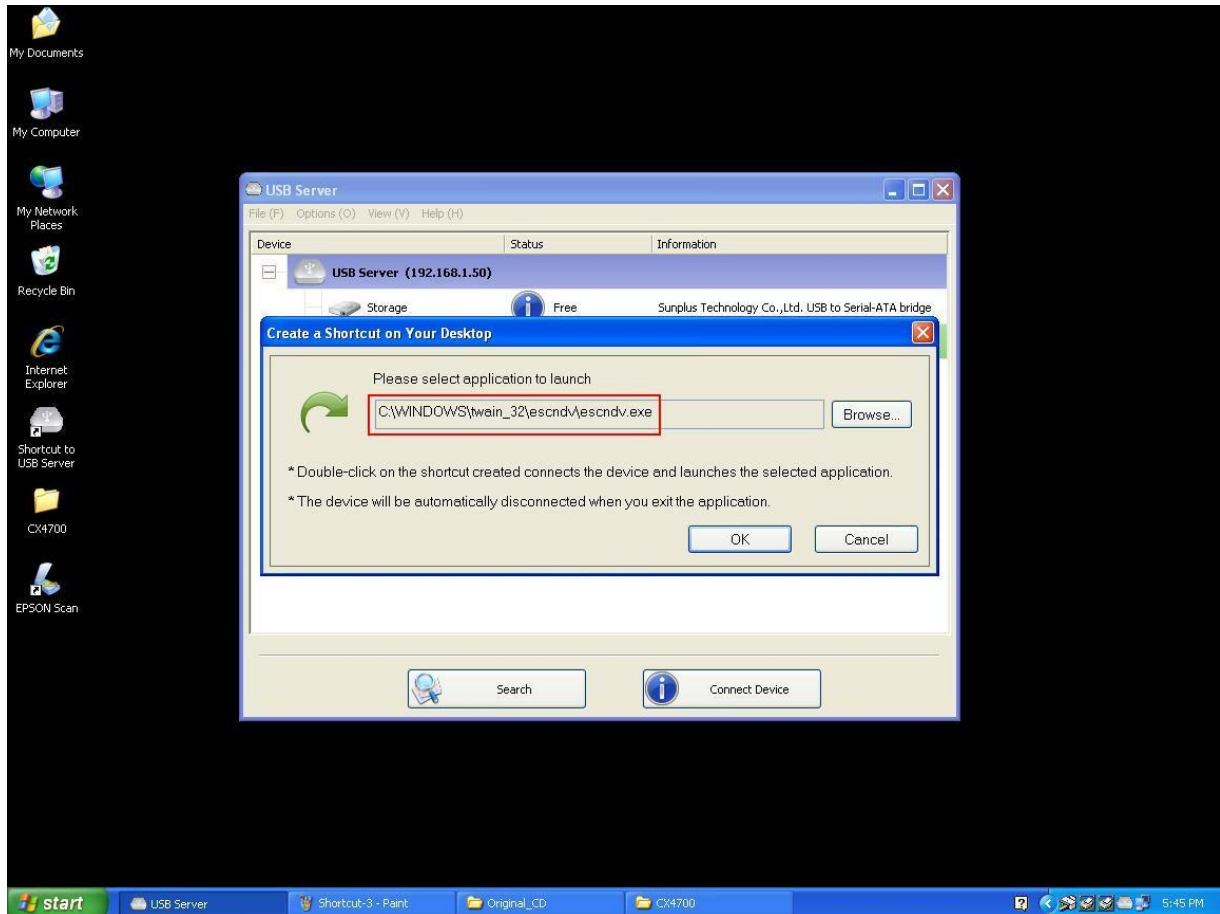
Then you will see a new shortcut being created on the Desktop.

The naming rule of the new shortcut is adding a "Network" prefix to the name of the original shortcut.

Now, when you double-click the new "Network EPSON Scan" shortcut, the software runs and the EPSON MFP gets connected at the same time.
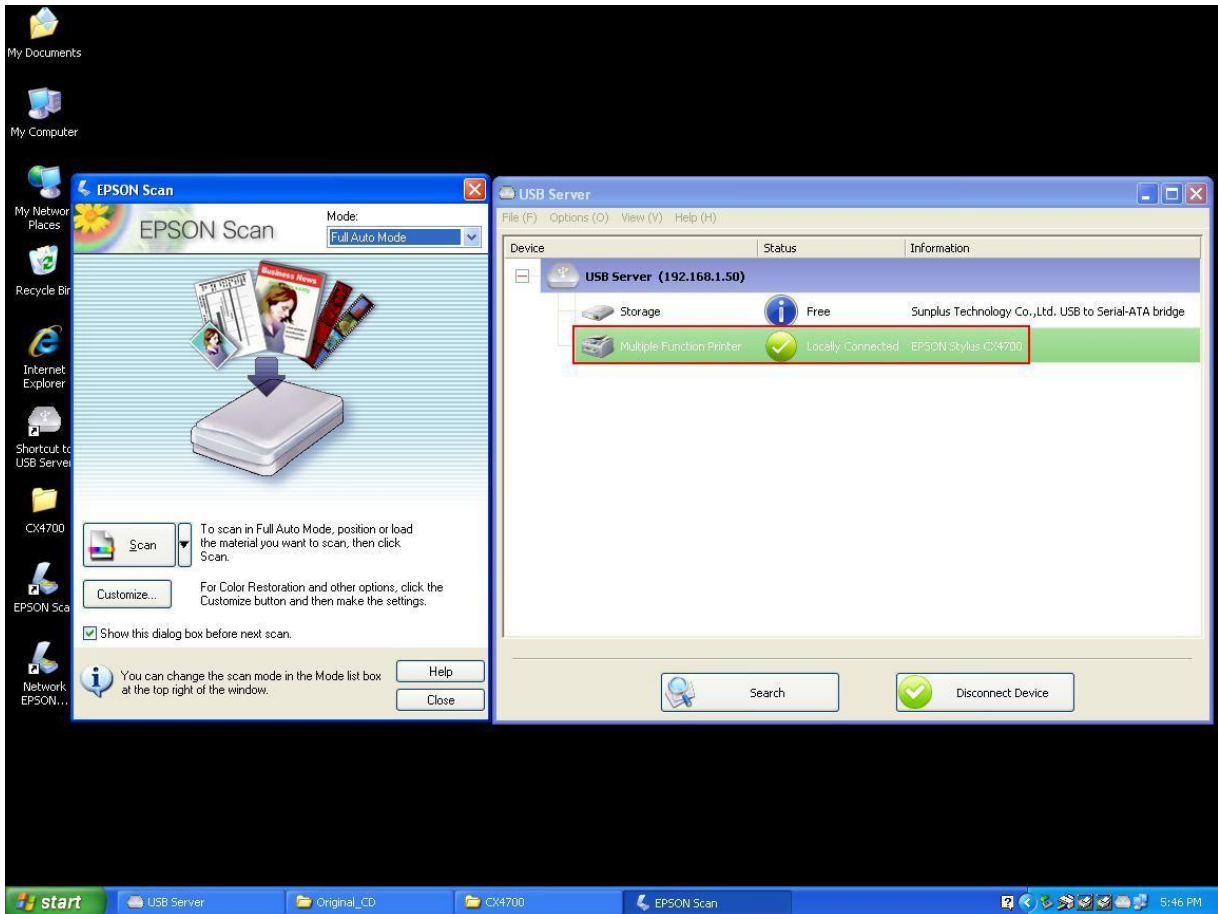
You can then start your scanning task.

When you are finished, simply close the EPSON Scan utility and the EPSON MFP will be disconnected automatically.
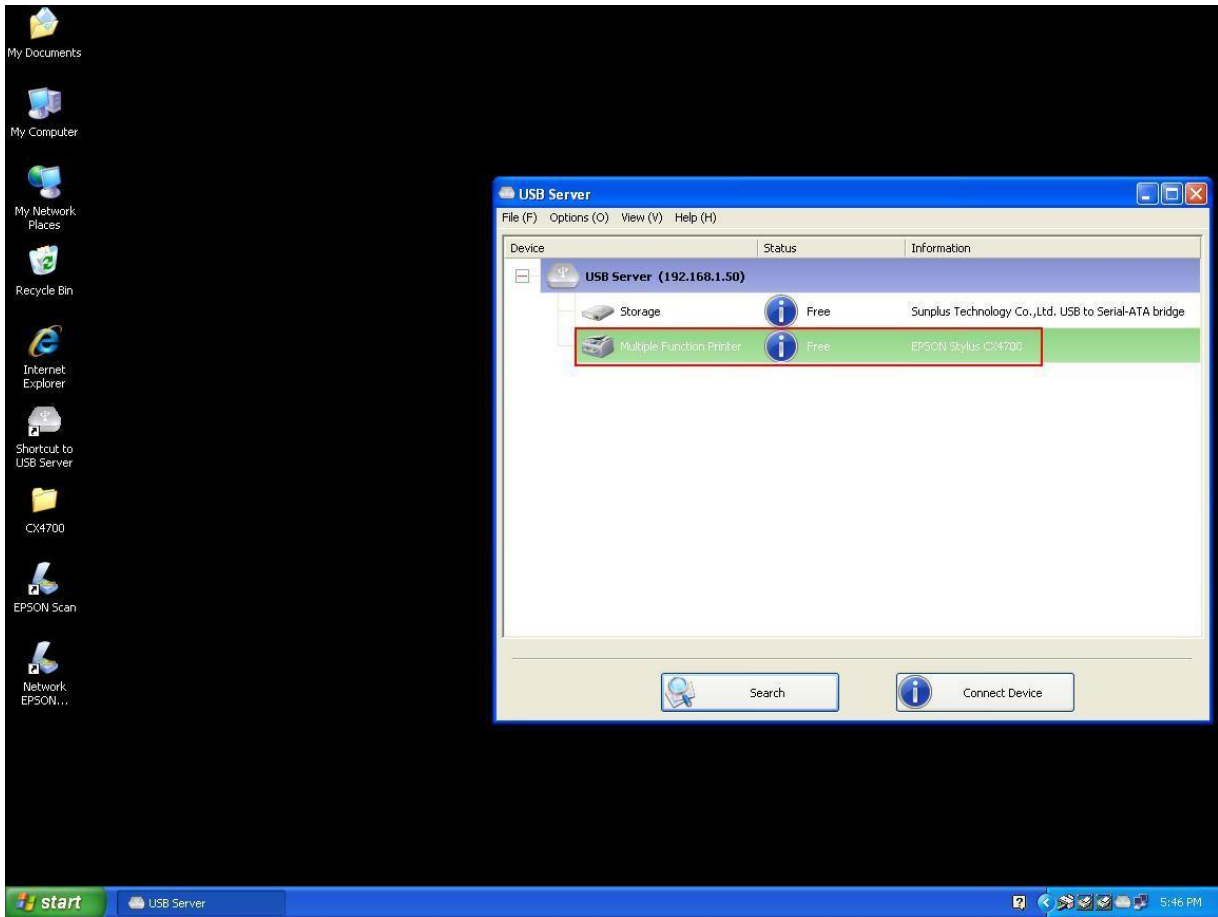
Now you can operate your MFP or Scanner with a shortcut on your Desktop and keep the USB Extender software minimized at the system tray.

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## Auto Disconnection Printer/MFP/Storage Device

These functions are there to prevent the case when one user connected a Printer or Storage device but forgot to disconnect it when he/she was done with the device.

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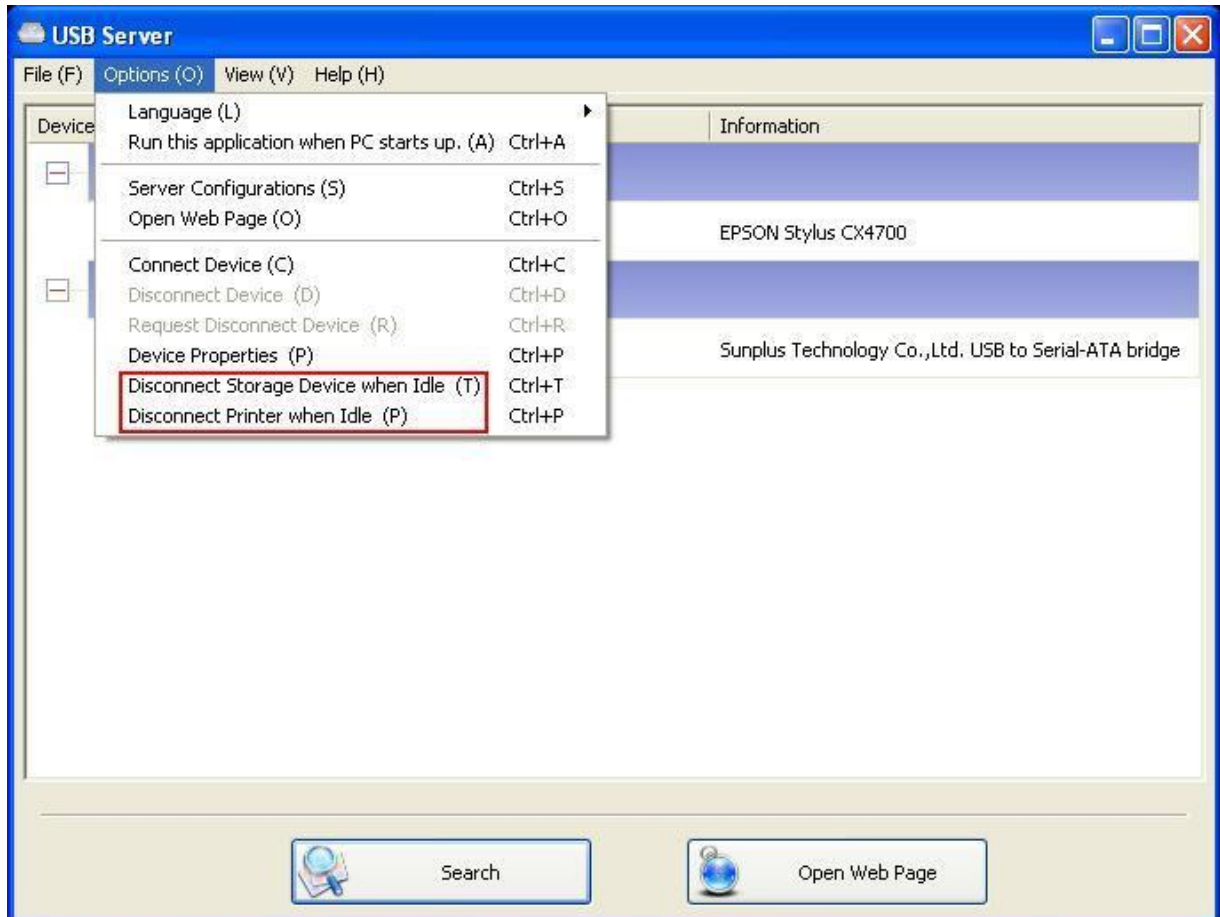
When：these two functions are enabled, you will see this message when you connect a Storage device or a printer.

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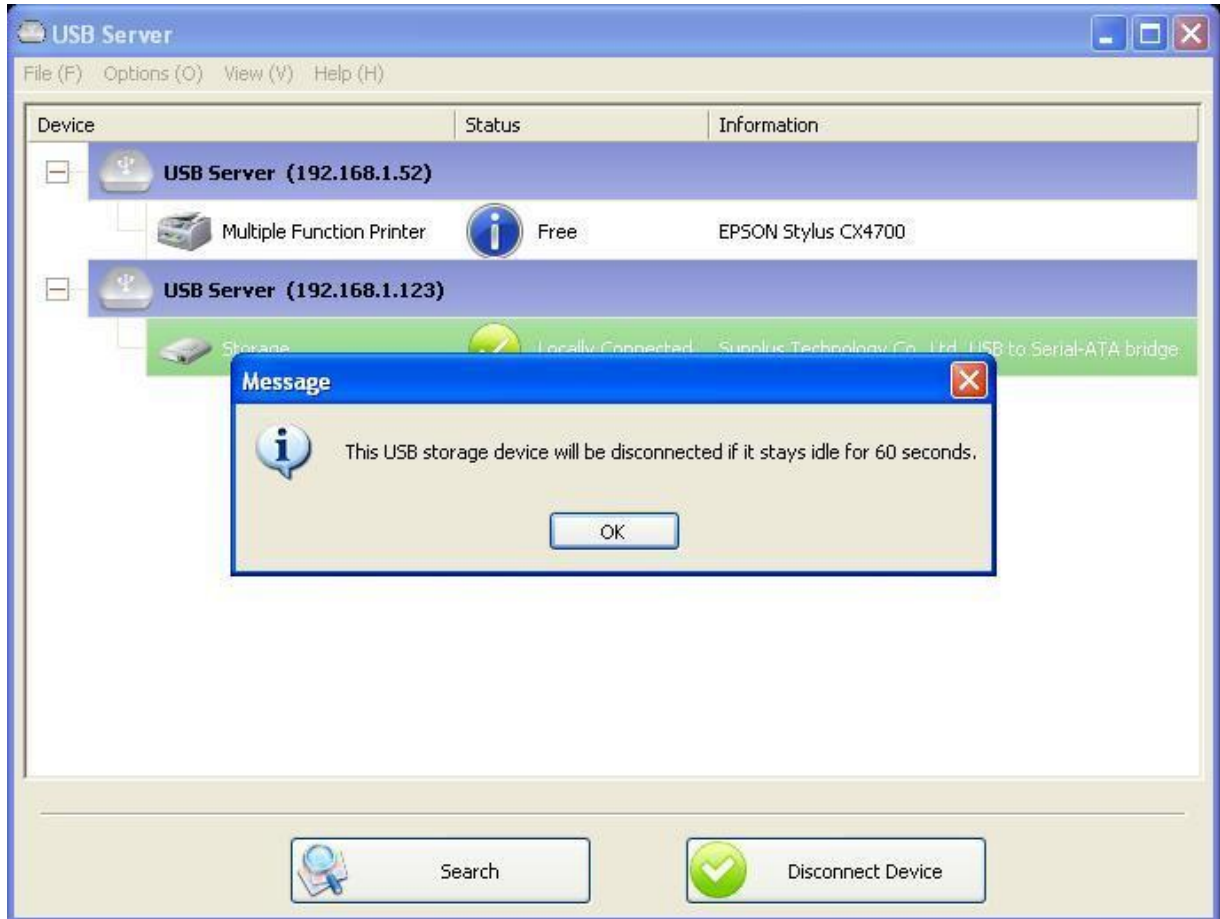
When the Idle time is up and the device has been disconnected, you get another notification：
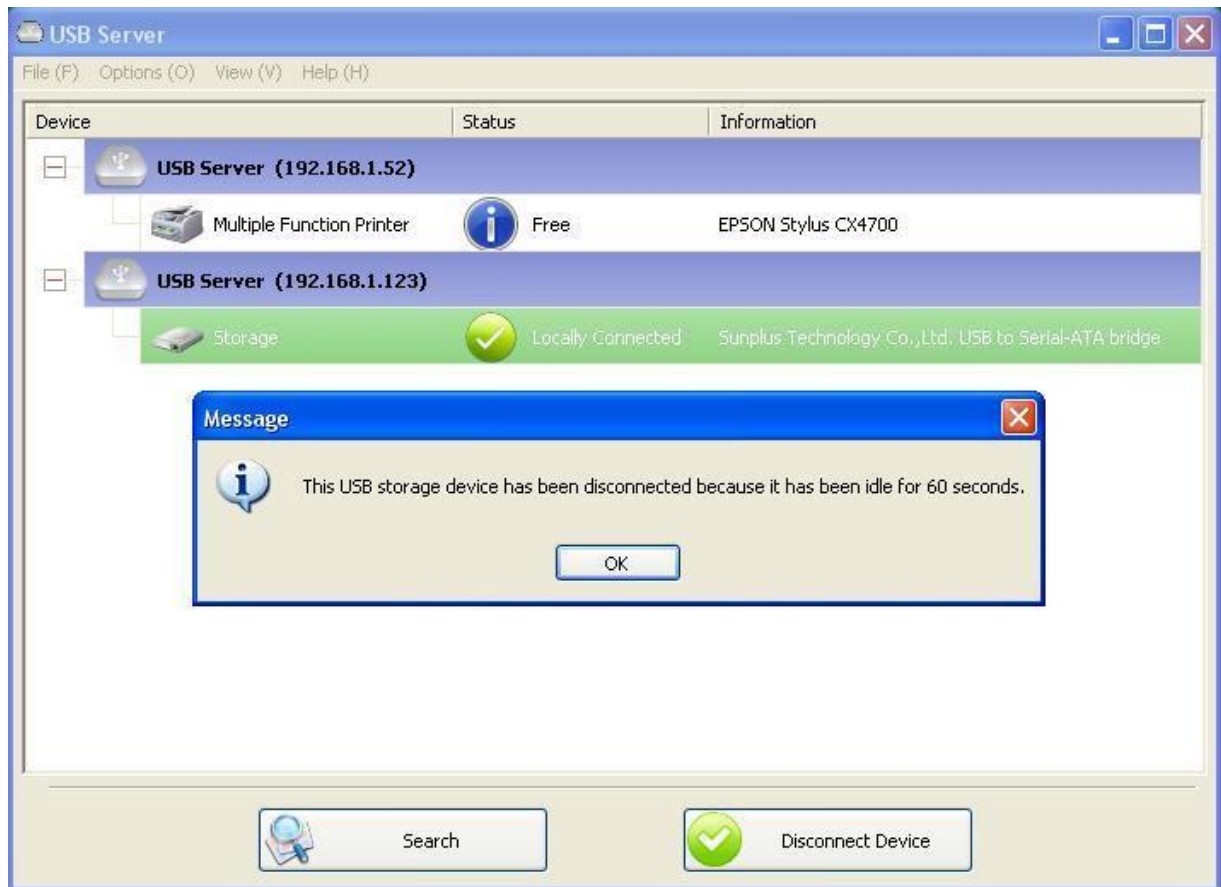
NOTE: This function might not work with Storage device such as a pen driver/flash driver. These devices tend to periodically (on a millisecond basis) communicate with the OS even when the user is not reading data from it or writing data to it. So it never actually stays "Idle" and will never be automatically disconnected by this function. External USB HDD type storage devices do not have this problem.

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Device Property

Click on the Device Property to bring up the Device Property dialog box.
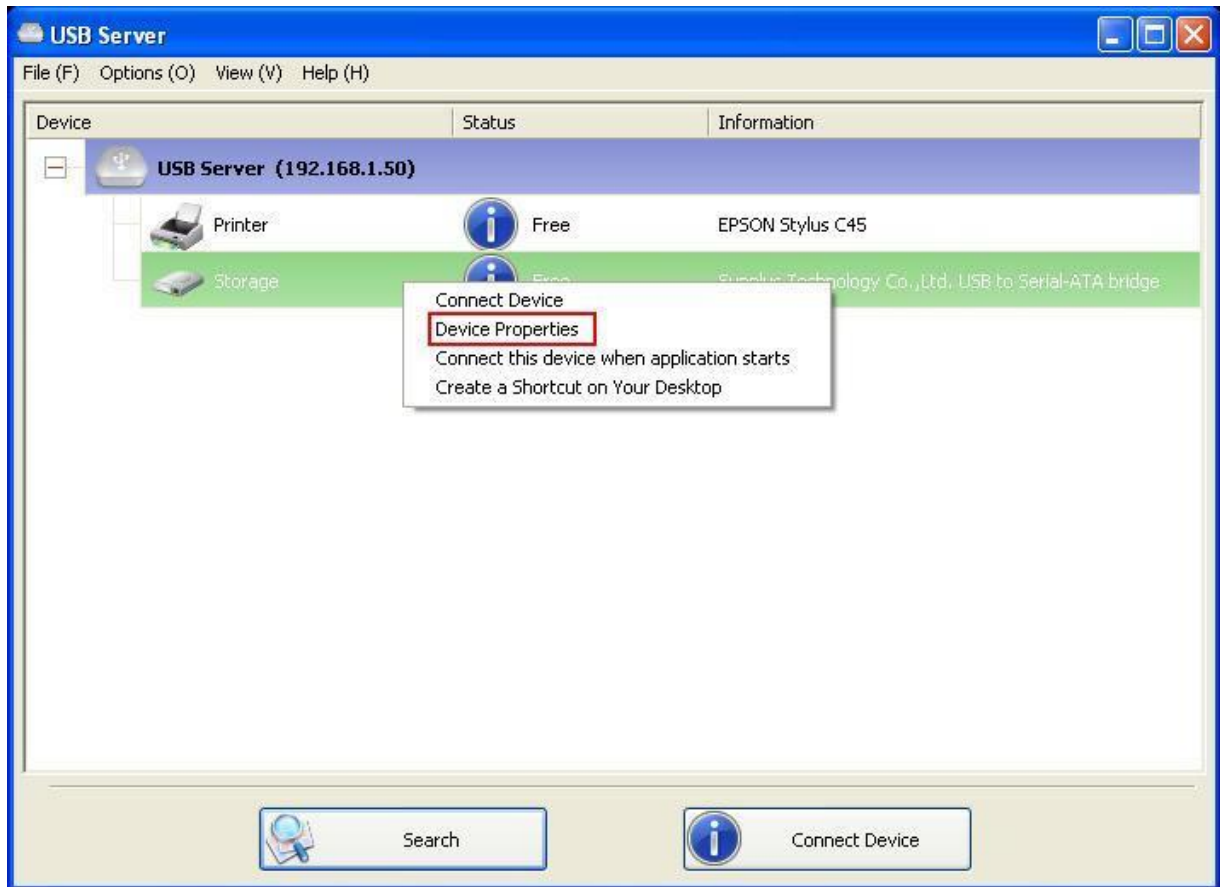
Device Property dialog box displays information of the USB device. If the device is occupied, it also displays the occupying PC name and the IP of the PC occupying it.

This dialog box provides a quite useful function. Check the **"Launch a program when this device connects**" checkbox and provide the path to that program/utility/application software. Then the program/utility/application software will automatically start up after you connect the device. This function is particularly useful when the USB device you connect works with an application, such as scanning utility with a multiple function printer.
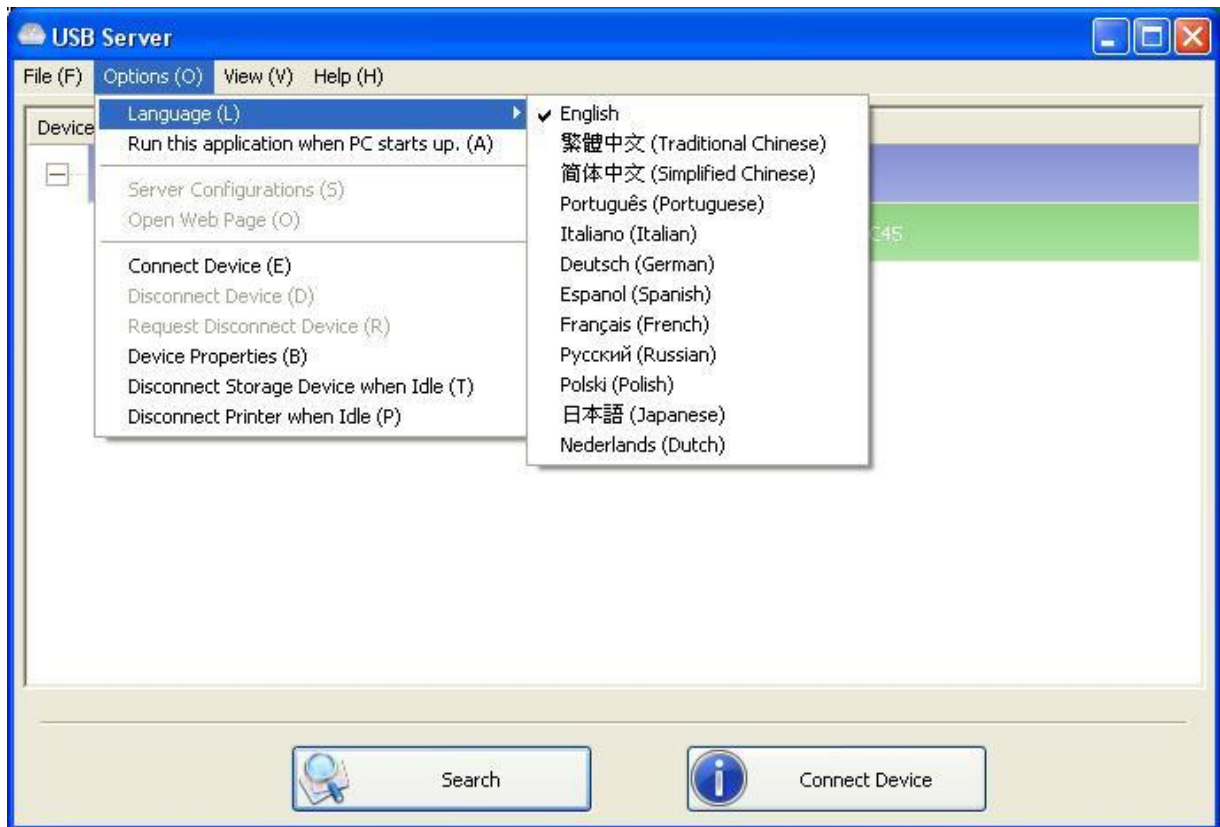
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File

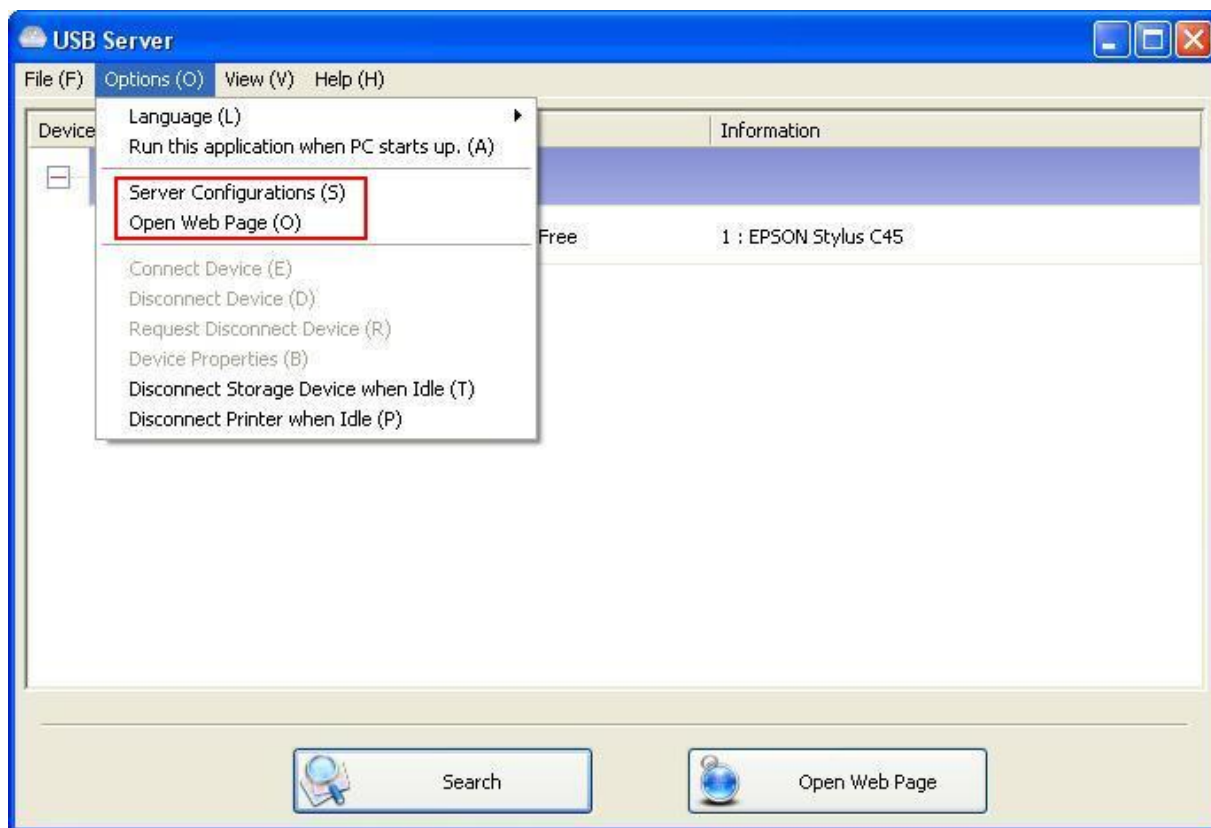The **Quit** function exits the program.

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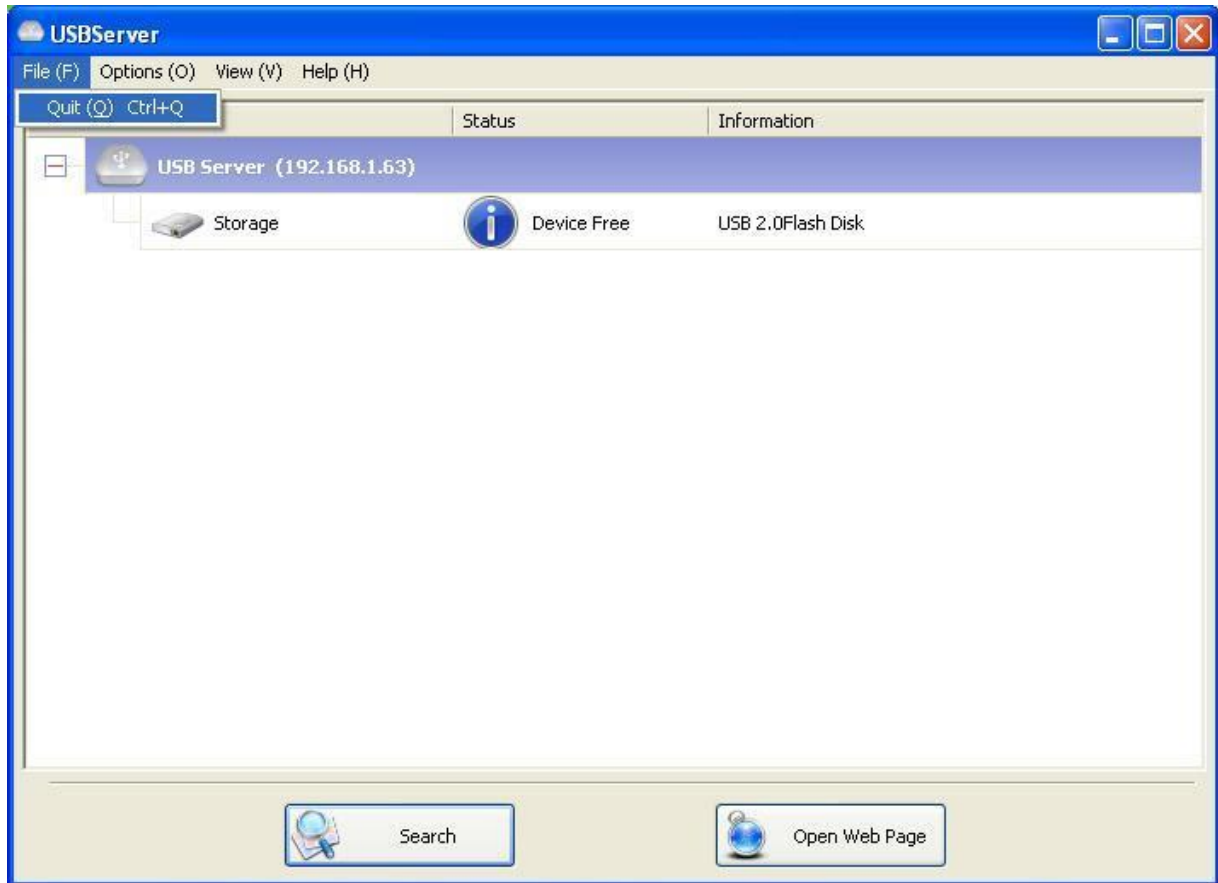
Options

Language

You can change the utility's language with this option. The default language would be the same as your system's language.
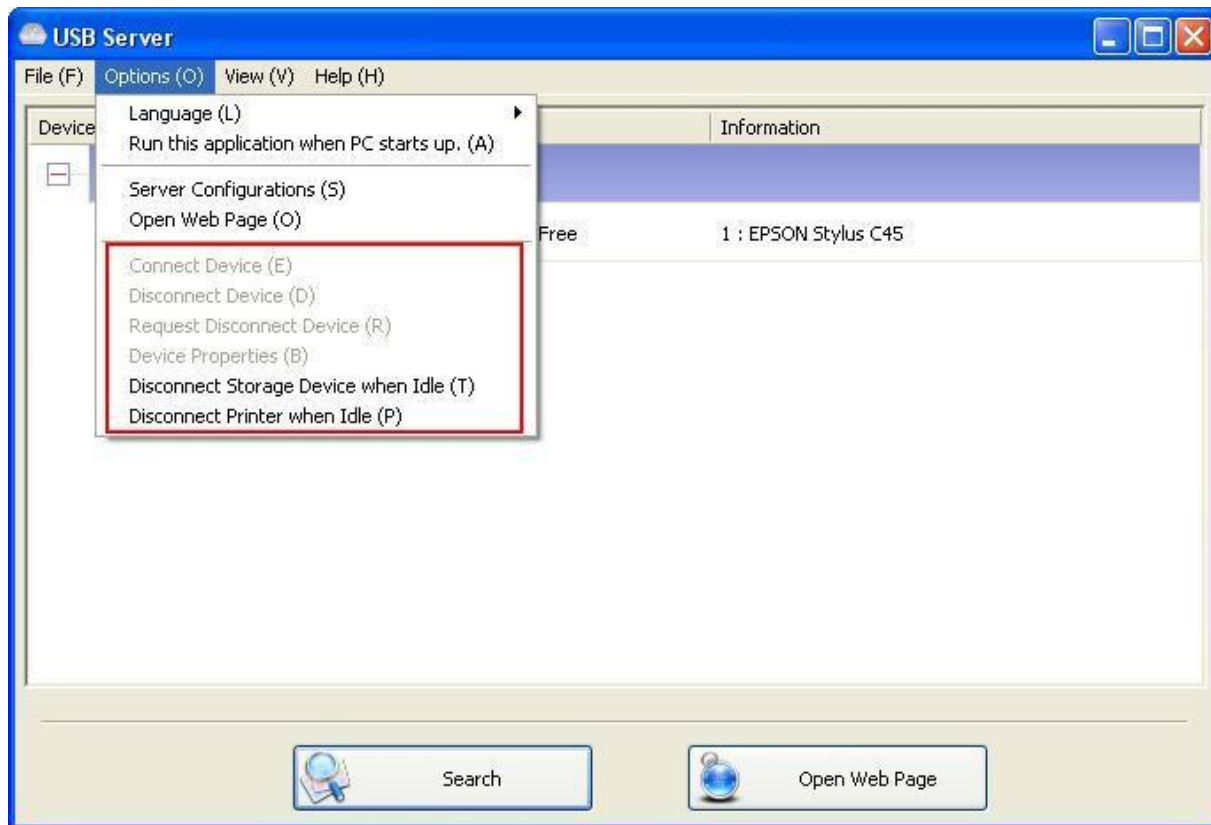
Extender Settings

Setting Server: Same function as the Setting Server option on the server icon's right click menu

Run USB Server When PC Starts Up: This utility automatically runs the Extender program when your system starts up.

Open Web Page: Brings up the Extender's configuration web pages.

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Device Settings

Connect Device and Disconnect Device: Connects and disconnects the selected device.

Request Disconnect Device: When you want to use a device occupied by another user, you can highlight that device and use this function. This sends a message to the occupying user with your request. The occupying user would either release the device or deny the request if he/she is still using the device.

Device Properties: Brings up the device properties dialog the same way as the Device Properties option when you right click on the device icon.

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Search

When you are in need of knowing the status of all the extenders and devices immediately, use the **Search** button.
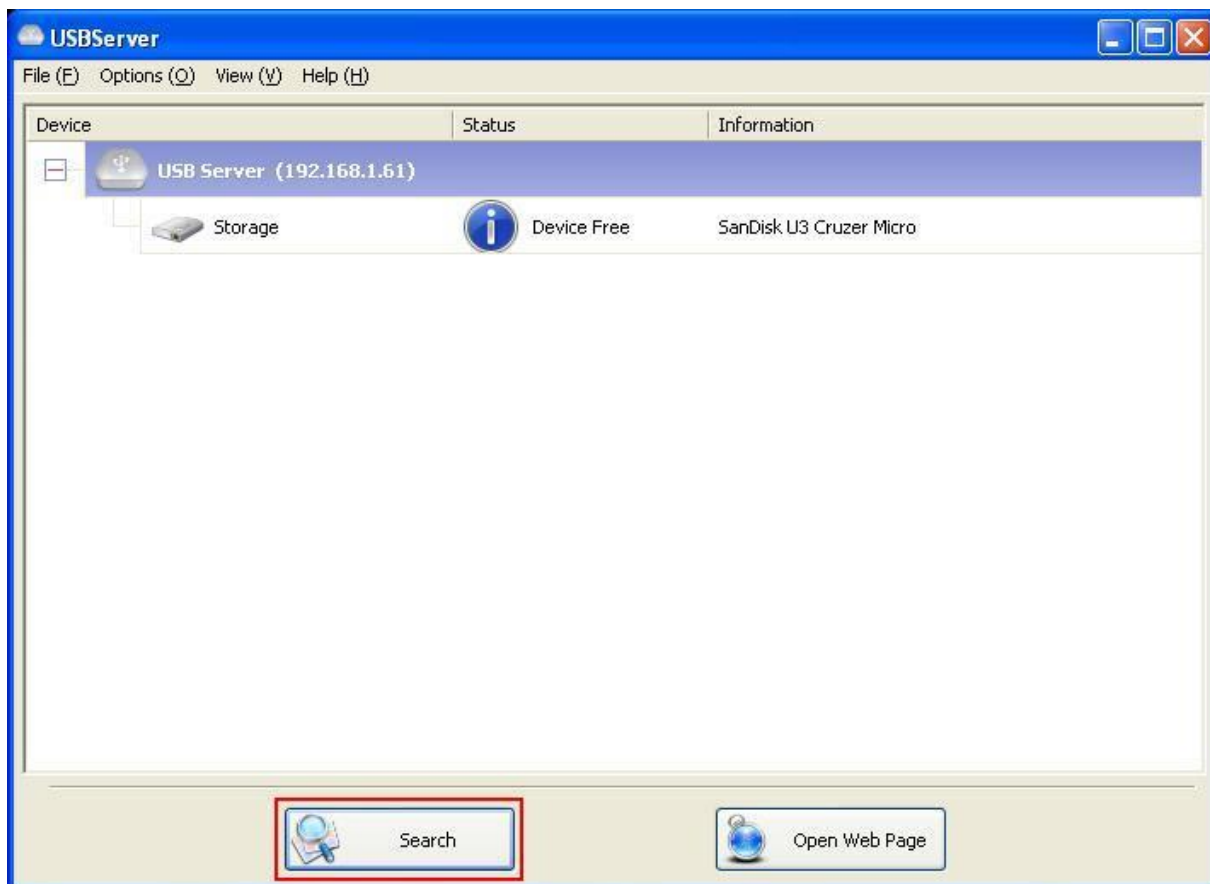

Clicking on the **Search** button triggers the program to immediately poll the network for the status of all the extenders and devices. The result will be updated to the tree view.

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View

The tree view in the main dialog has two display modes: "Extenders and Devices" mode and "Devices Only" mode. The default setting is "Devices Only" mode. You can toggle between these two display modes with the View option on the control menu:
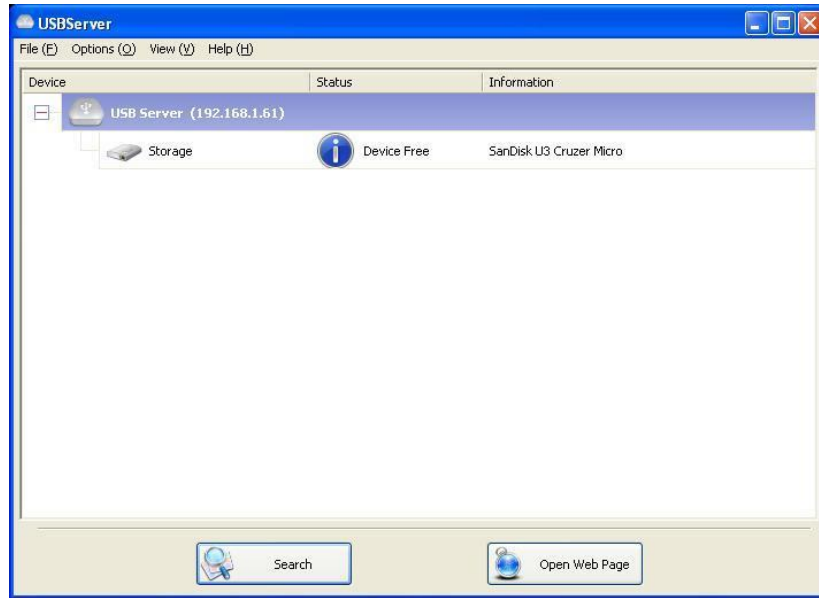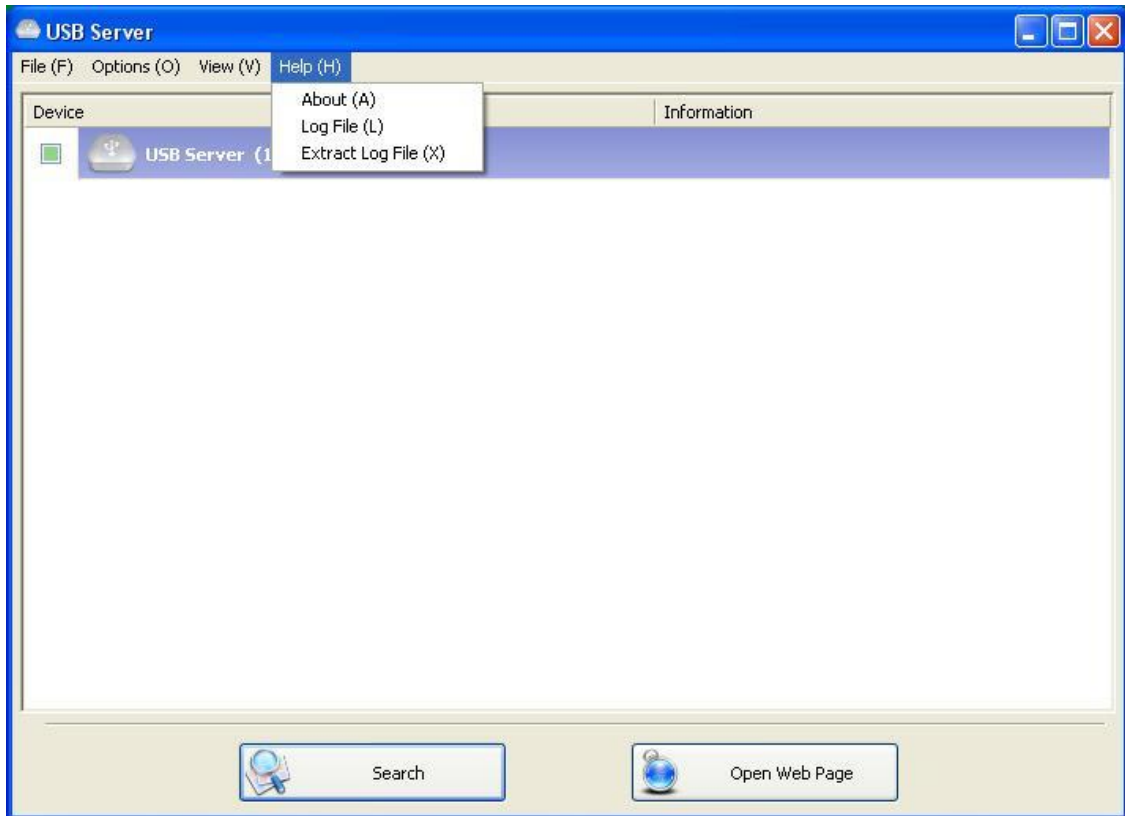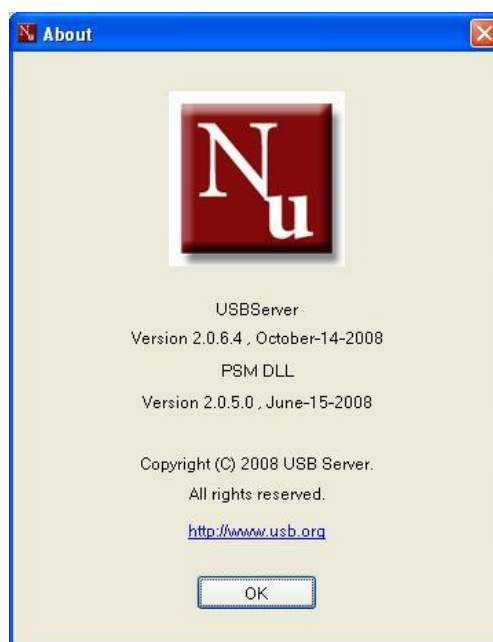
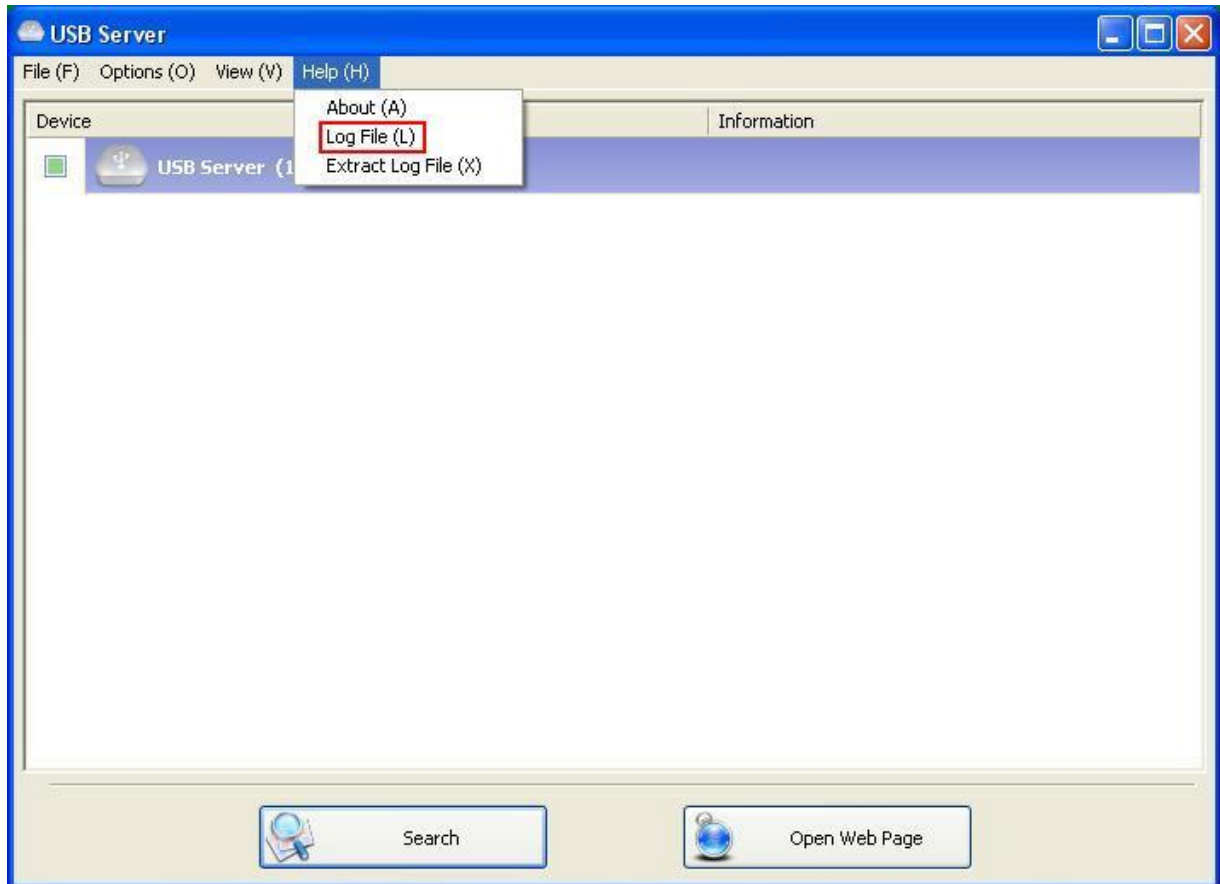**Extenders and Devices view**
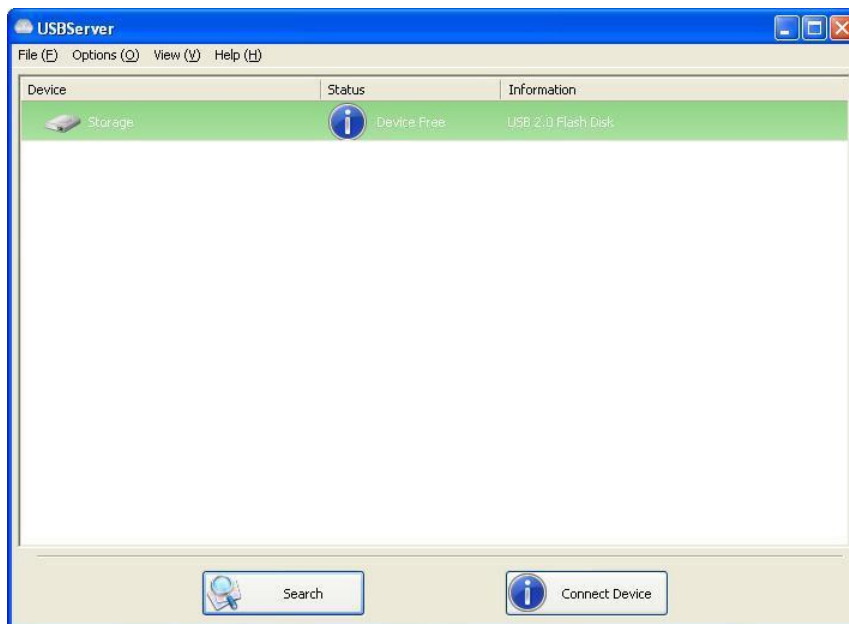
Device Only View

Help

About

About option brings up a dialog box with legal and other relative information displayed:

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Log

Enabling Log function allows the USB Extender software to generate a log file that records data which might help software developers debug a problem. So if you want to report a bug, enable this function and repeat the steps to reproduce the bug. Once you have seen the bug happen again, you can use the Extract log file function to extract the file and send the file in for analysis.

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Extract Log File
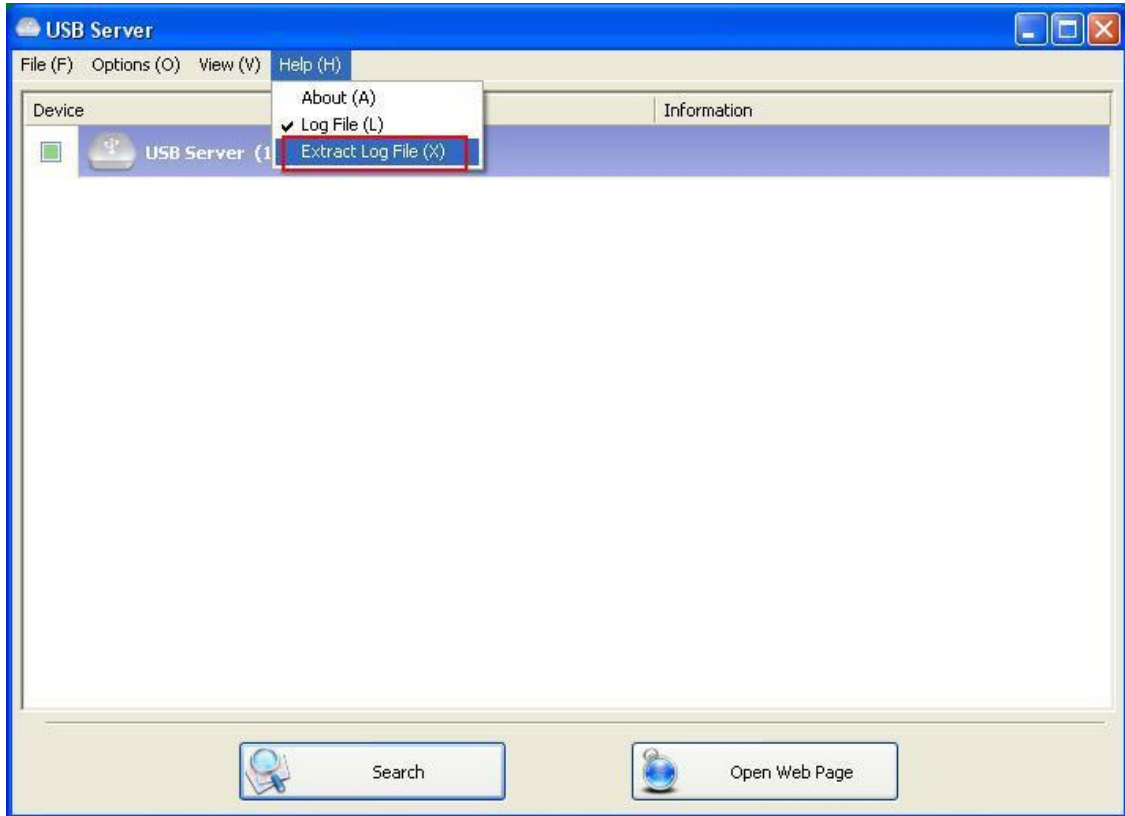
Clicking on this option brings up the folder where the log file is kept.

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