

# **Application Note**

## **EST USB Server User Manual**

- **AN2007003**

**March 31, 2008**

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## Table of Content

Introduction.....	4
Features .....	4
Installation.....	5
Windows Vista.....	5
Windows XP .....	12
Running Program.....	14
Windows Vista.....	14
Windows XP .....	15
Main Dialog Box.....	15
Status of EST USB Servers and Devices.....	17
Accessing a Device .....	25
Server Configuration.....	30
Polling Interval.....	44
Language.....	45
Search.....	46
View.....	47
Device Details.....	49
Help.....	51
Technical Support.....	53
FAQ.....	54
Q. How come I don't see any USB servers on the GUI after installing it? .....	54
Q. How come I can't see any USB device on the USB Server GUI?.....	54
Q. How do I check the driver version? .....	54

## Introduction

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

## Features

- Centralized remote EST USB Server Management
- Centralized remote EST USB Server Status Monitoring
- Centralized remote USB Device Management
- Centralized remote USB Device Status Monitoring

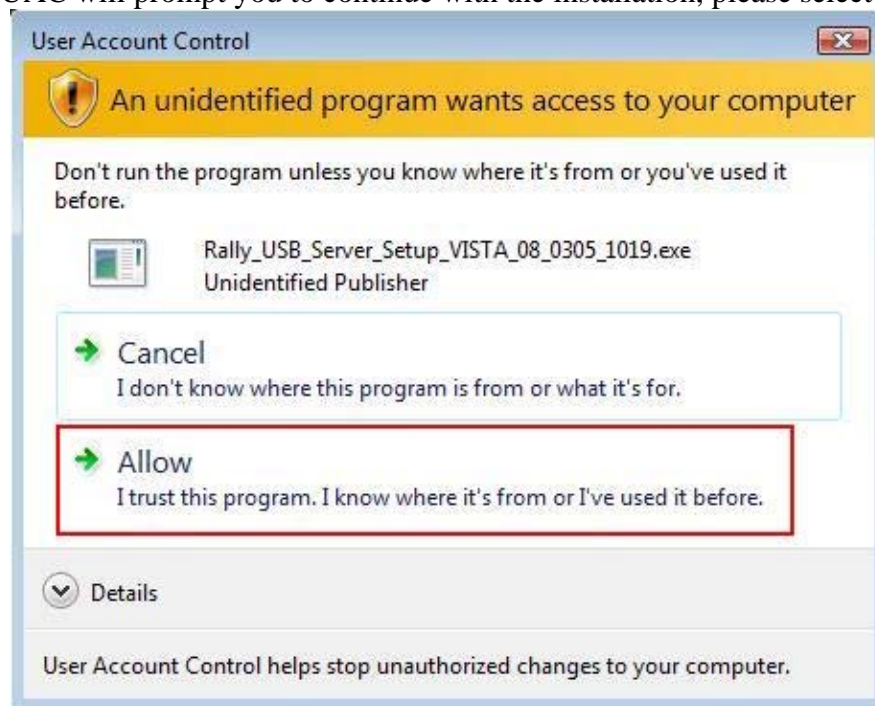
## Installation

### Windows Vista

1. To start the installation, please double click on the installer:



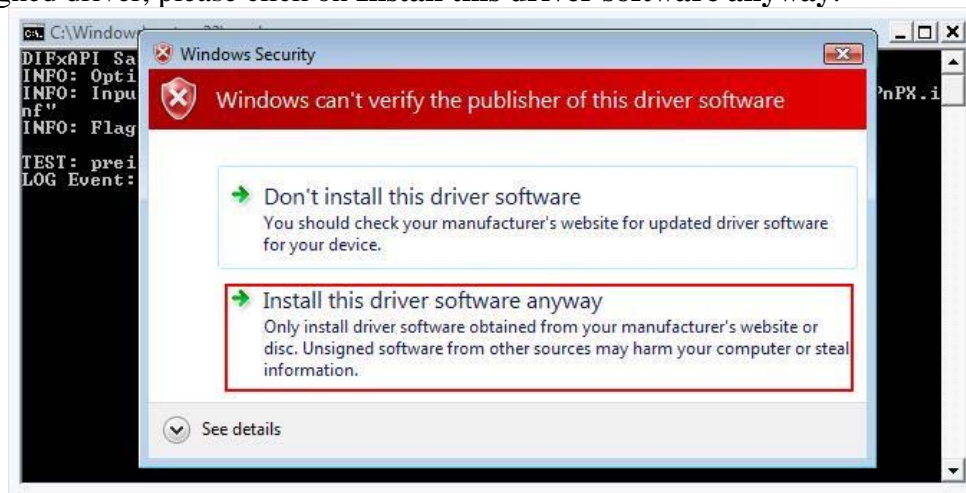
2. VISTA UAC will prompt you to continue with the installation, please select **Allow**:



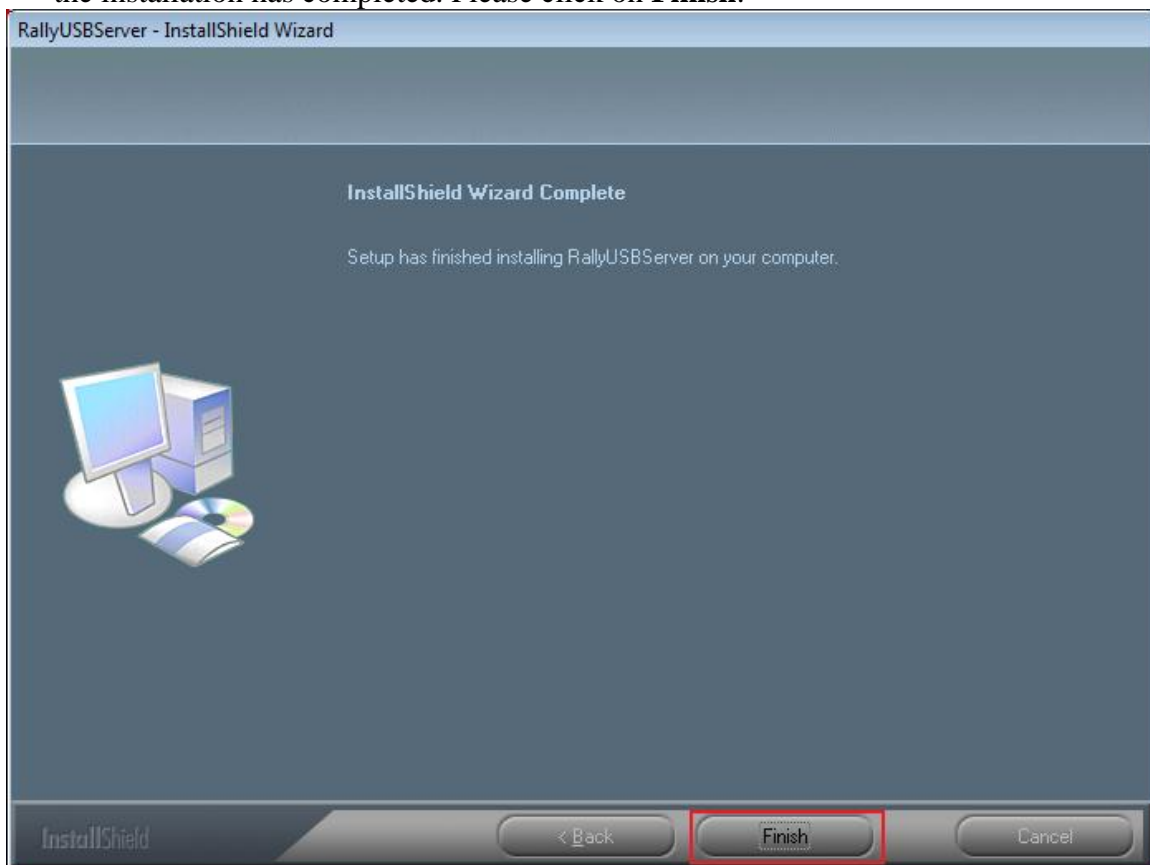
3. Select the installation language and click on **OK**:



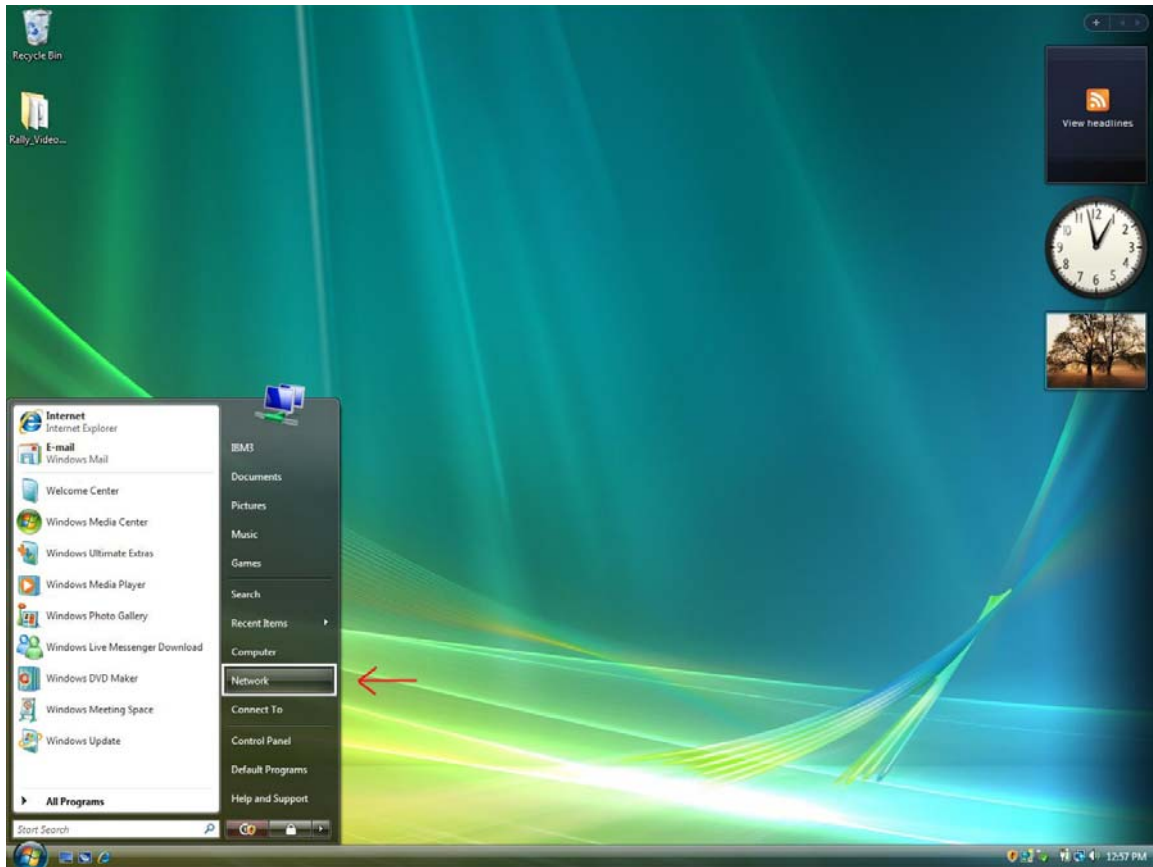
4. During the driver installation, VISTA will prompt you about the installation of an unsigned driver, please click on **Install this driver software anyway**:



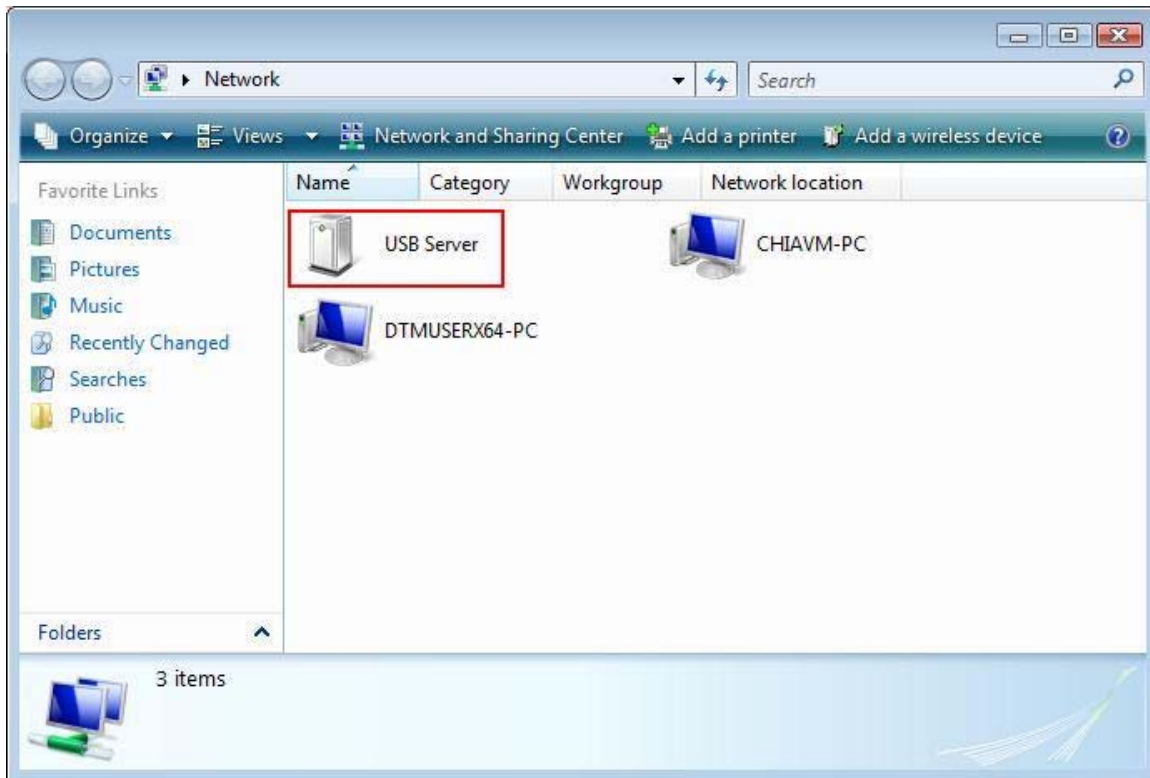
5. Then the driver gets installed automatically and you will be prompted by the installer that the installation has completed. Please click on **Finish**:



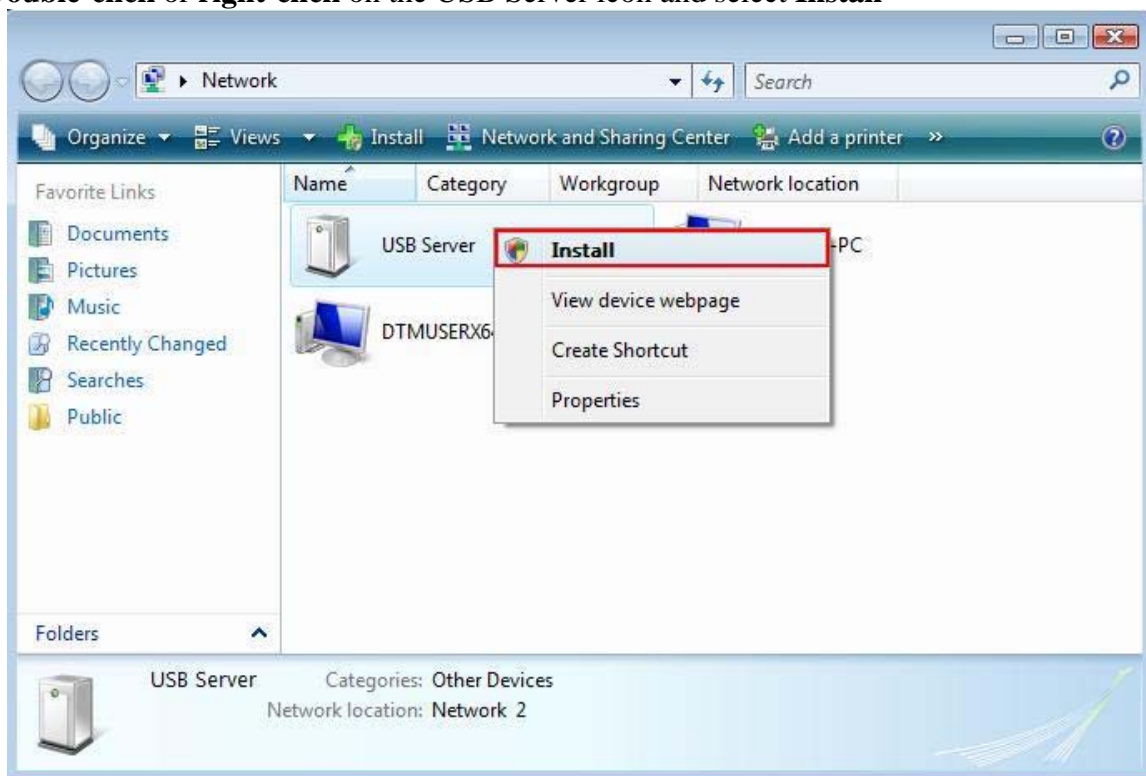
6. Then, please open **Network Explorer** to start installation



Then you will find USB Server icon as shown



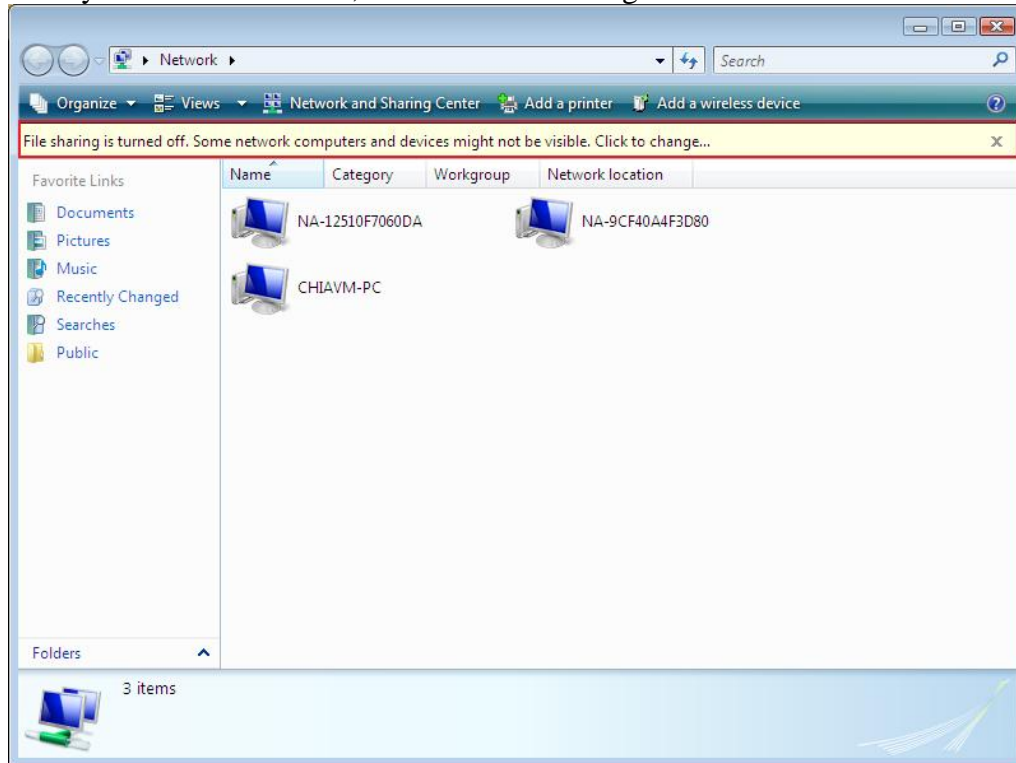
**Double-click or right-click** on the USB Server icon and select **Install**



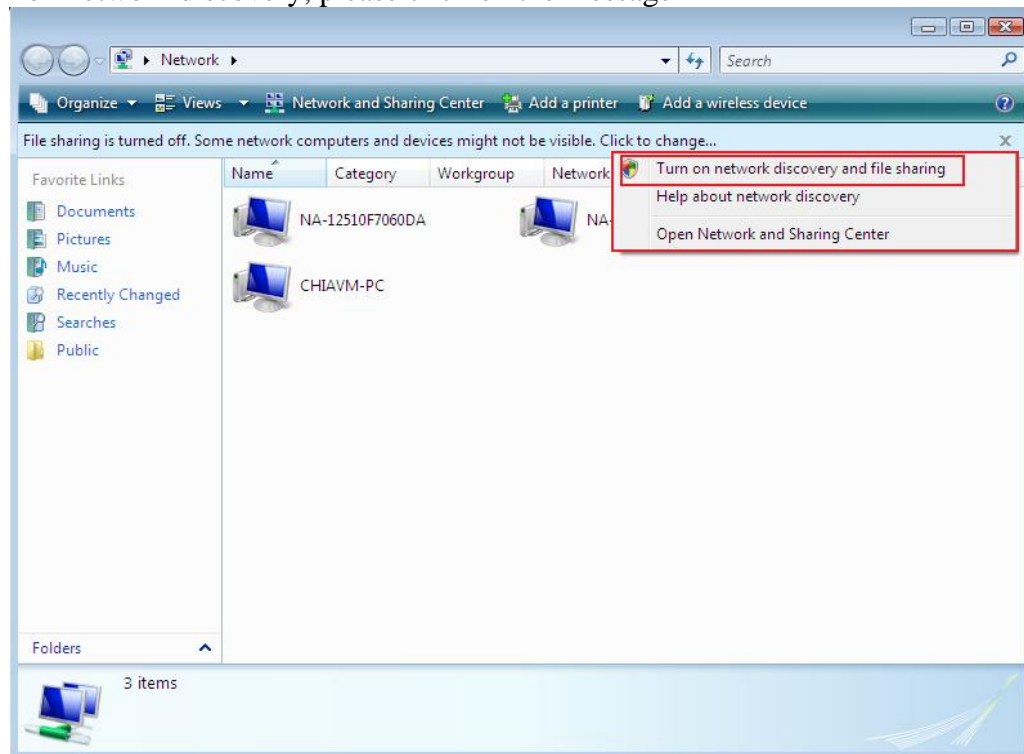
**If you do not see the device icon, please see step 3. Else, please skip to step 4.**



7. If you do not see the Network Video icon, the possible reason could be that the Network Discovery has been turned off, and some device might not be visible.

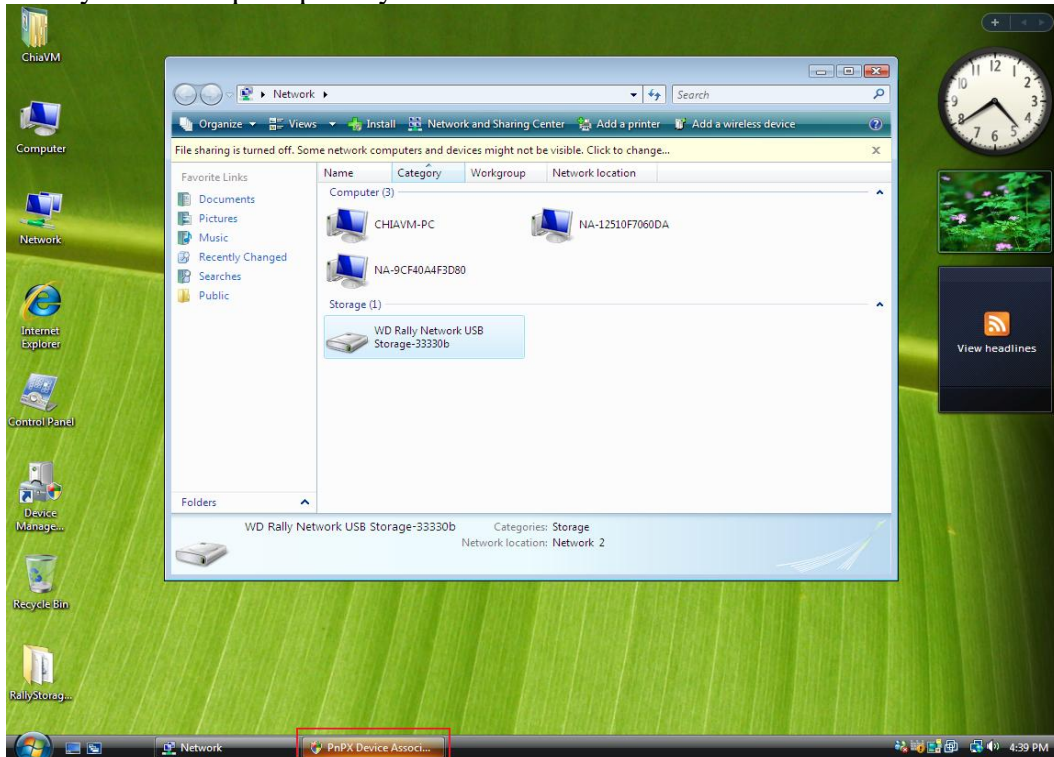


To turn on network discovery, please click on the message

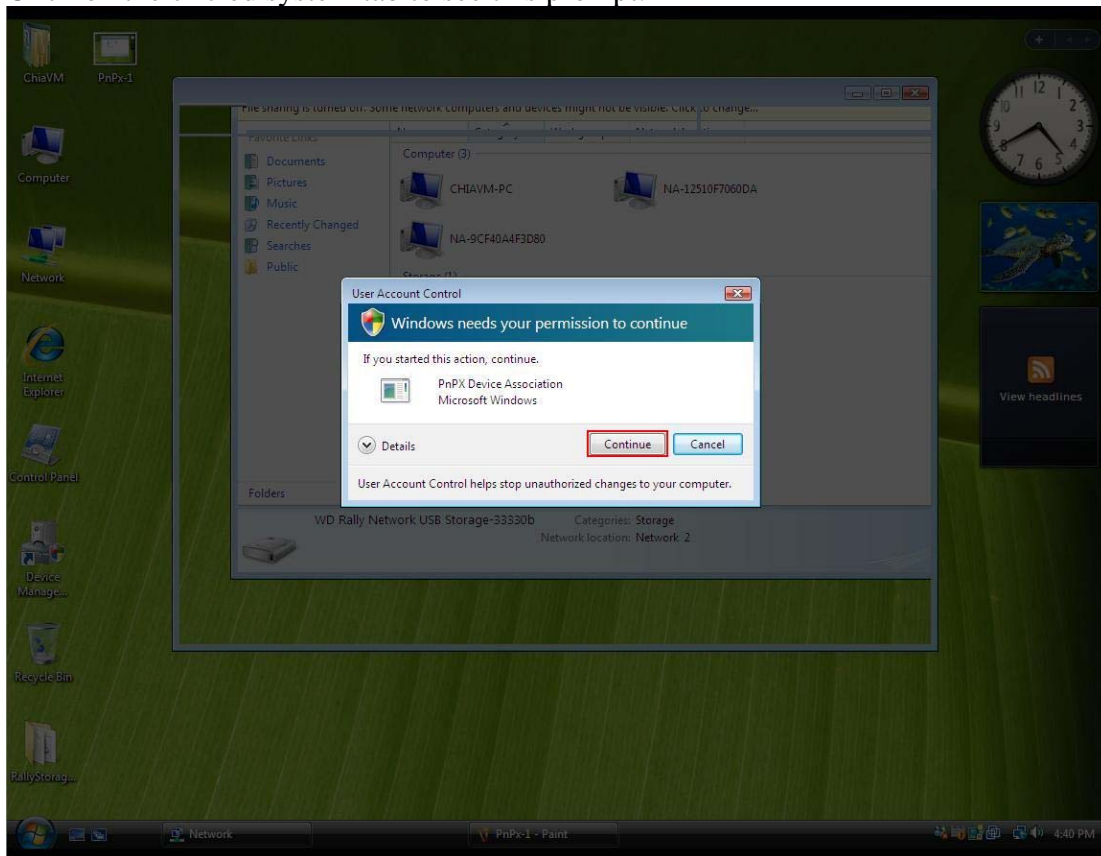


And then select **Turn on network discovery and file sharing**.

Then you will be prompted by the UAC to allow the installation:

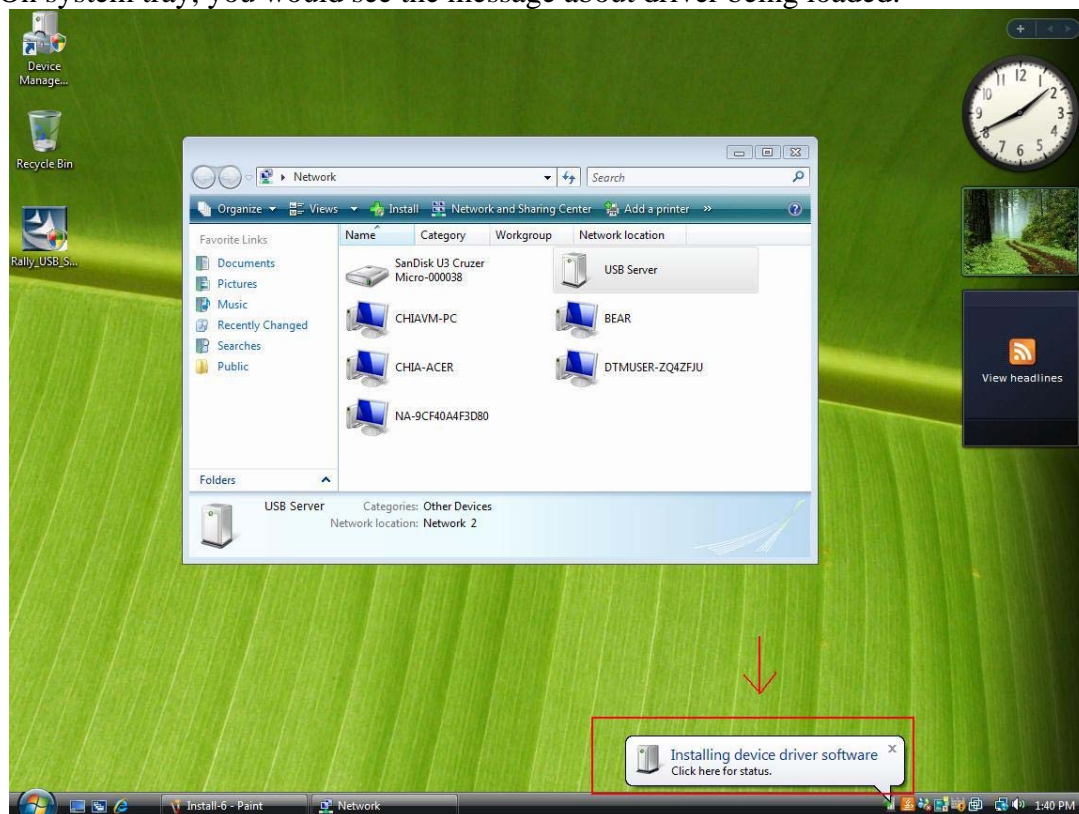


Click on the circled system tab to see this prompt:

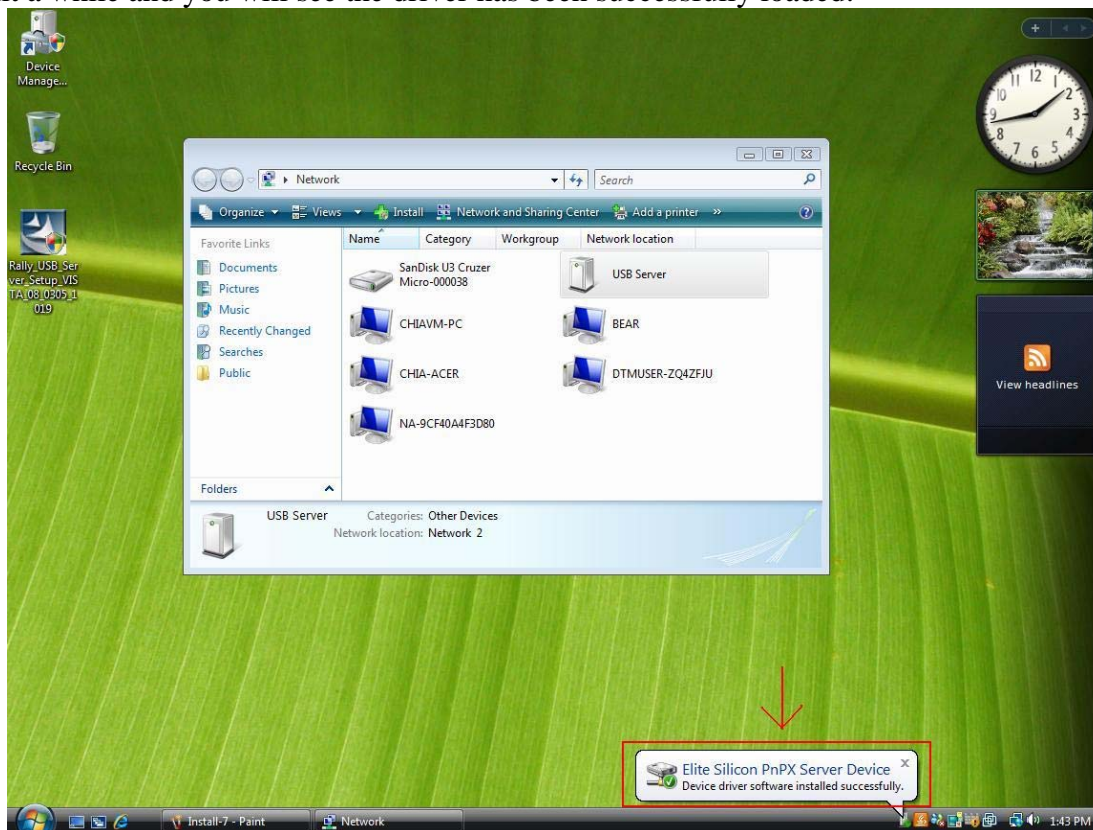


Please click on **Continue** to go on.

8. On system tray, you would see the message about driver being loaded:

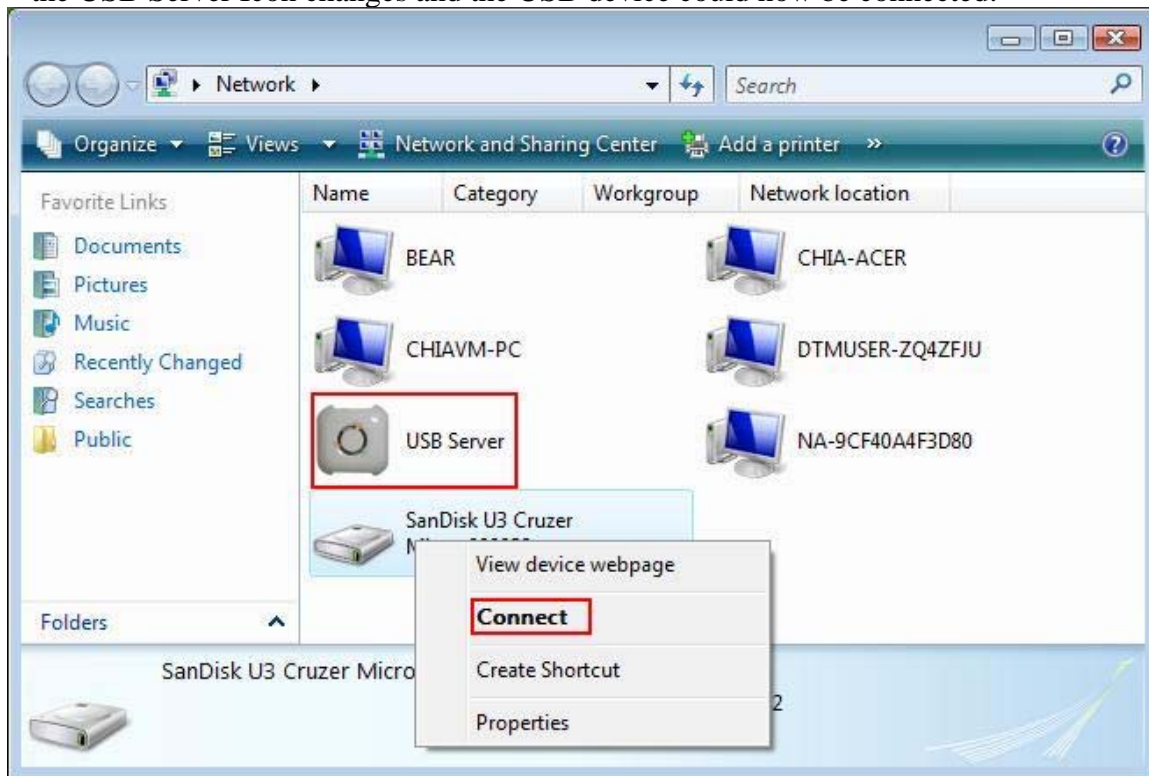


Wait a while and you will see the driver has been successfully loaded:





9. Then, please refresh **Network Explorer** by pressing F5 on your keyboard, you would see the USB Server Icon changes and the USB device could now be connected:

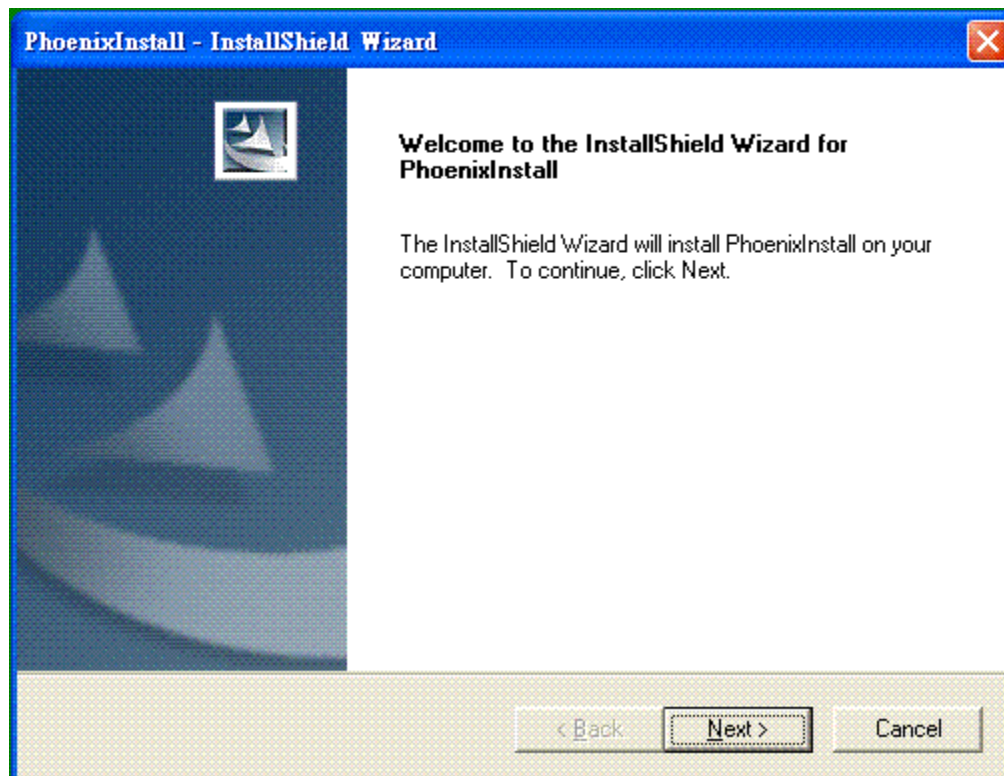


## Windows XP

Rally Technology is not available on either Windows XP. To install the USB Server program, please double click the USB Server setup file. A dialog box should pop up to prompt you to choose desired installing language. There are two choices: English and Traditional Chinese.



After choosing the language, click on OK. The InstallationShield Wizard will start automatically.

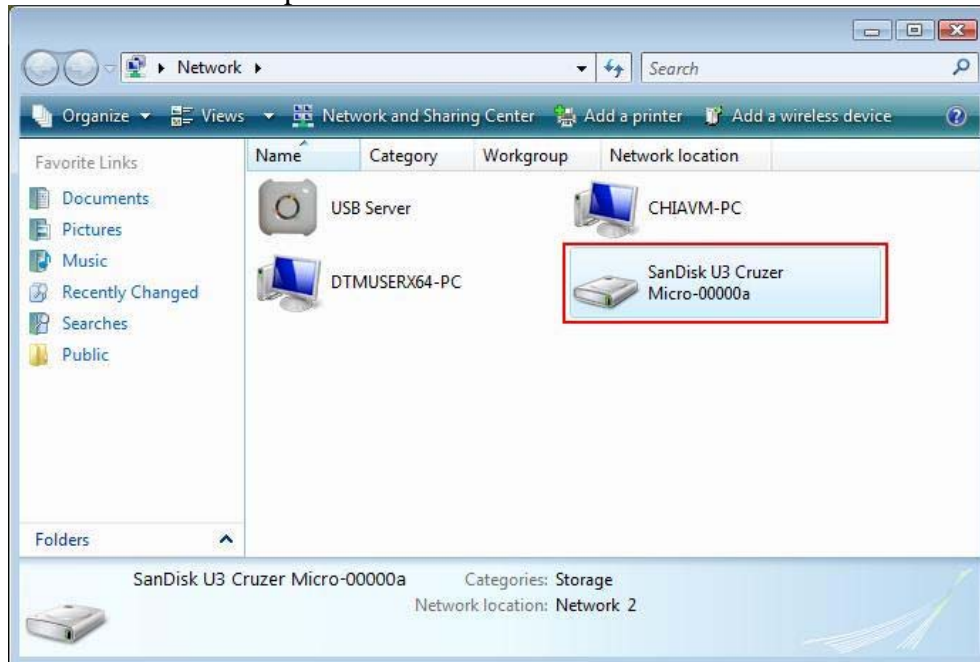


Please follow the instructions of the wizard to complete the installation process.

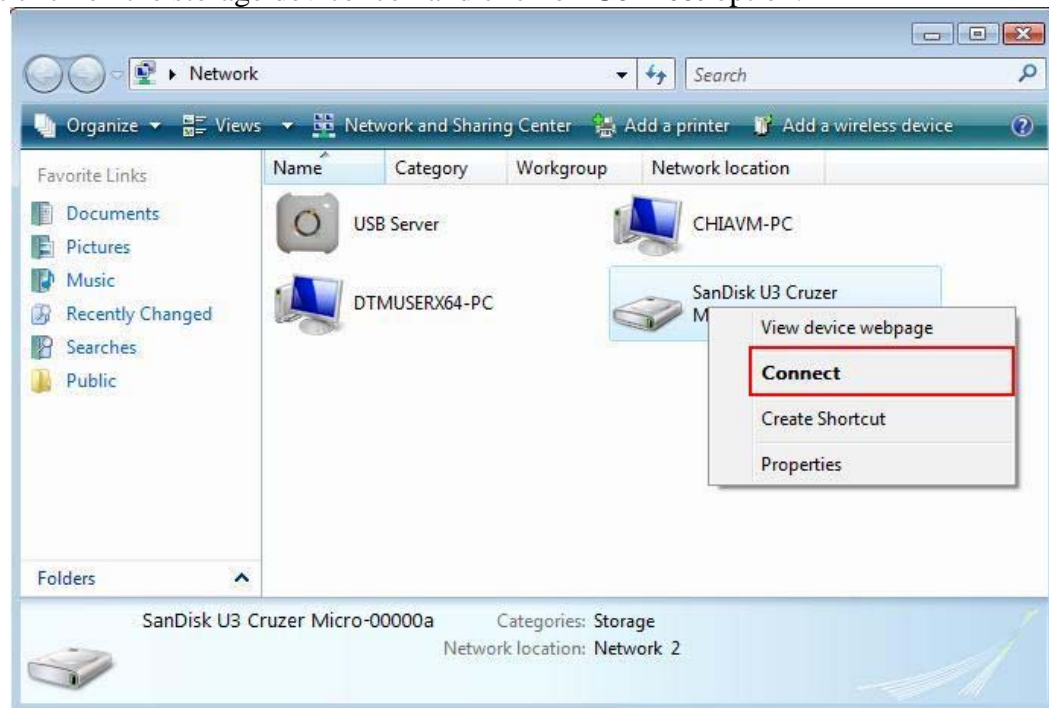
## Running Program

### Windows Vista

1. When an external storage device is connected to the USB Server, the storage icon will appear on the Network Explorer.



Right click on the storage device icon and click on **Connect** option.

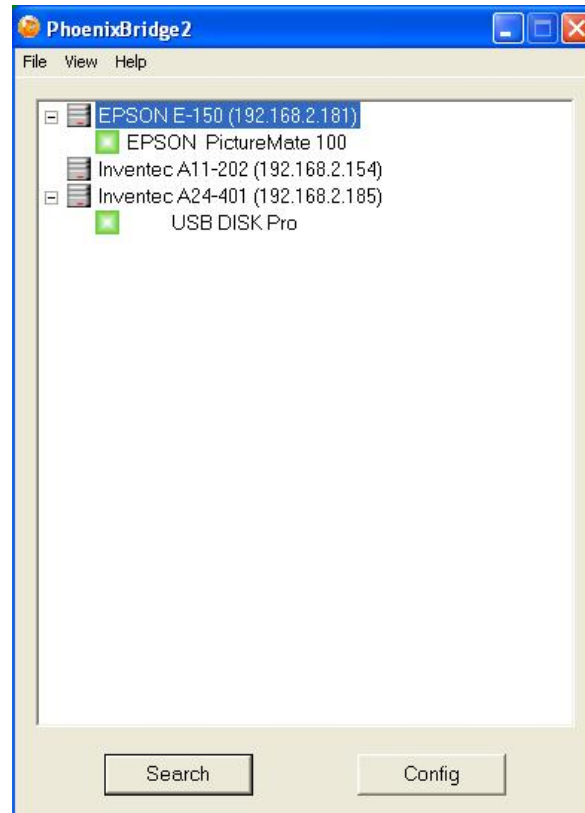


Once connected, you can use the device as if it is connected to your PC's USB port.

## Windows XP

To start the USB Server program, please double click the shortcut icon of the USB Server.exe file the installation program installed for you on the Desktop. You can also go to the folder in which you chose to install the program and double click on the USB Server.exe file to run the program.

## Main Dialog Box



The main dialog box of **USB Server** is shown above. This is what you would see at program start up. It is consisted of a Control Menu (File, View and Help), a tree view, a button of "Search" to get the current EST1868 USB Servers and devices in the network, and a button that toggles between "Config." and "Connect" depending on the node you select on the tree view. It toggles to "Config." when a server is selected on the tree view and to "Connect" when a device is selected. The tree view displays the all the EST1868 USB Servers and devices your PC has access to.

**Note:** You will be allowed to set an alias name for each of the servers on for easy recognition. The alias name with its IP address will be displayed on the tree view. The way to set alias name will be described in the “Config.” section below.



## Status of EST USB Servers and Devices

The tree view also tells you the status of all the EST USB Servers and devices that are accessible to you. An EST USB Servers is either accessible or inaccessible. An inaccessible server is either disconnected from the network, powered off or suffers other technical difficulties that prevent it from being accessed by your PC. Inaccessible server will not show up on the tree view.

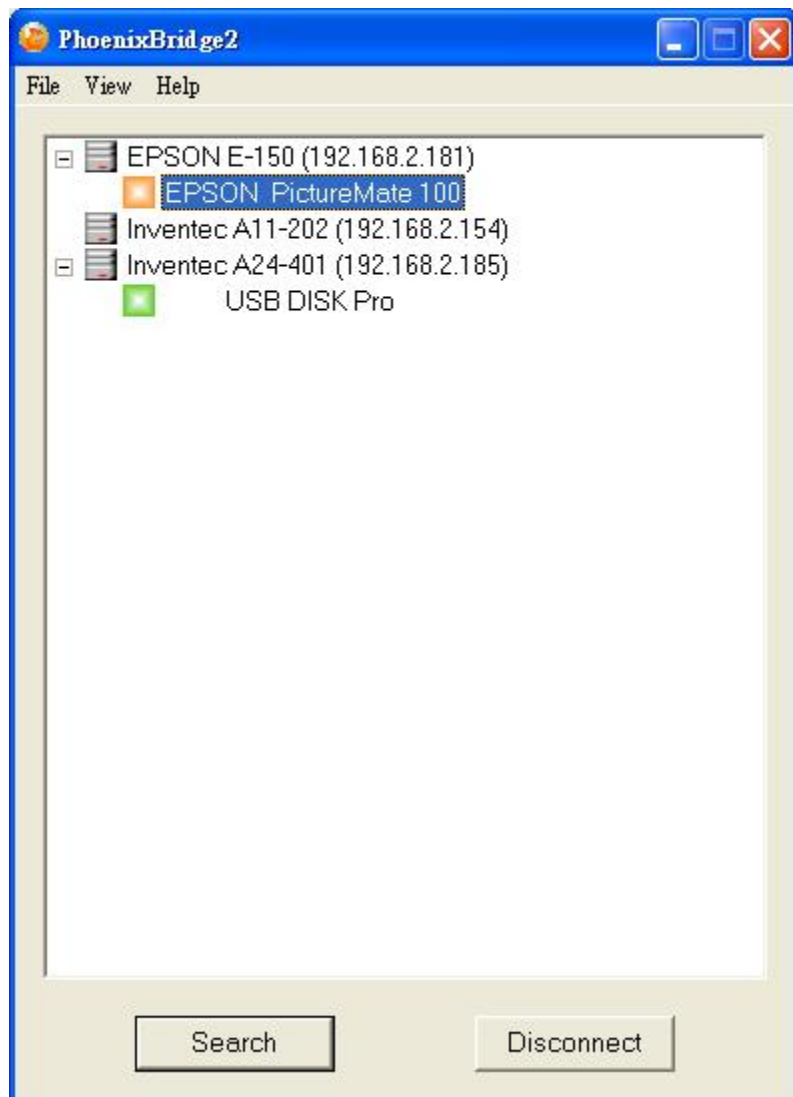
However, the devices have several kinds of status:

### Ready



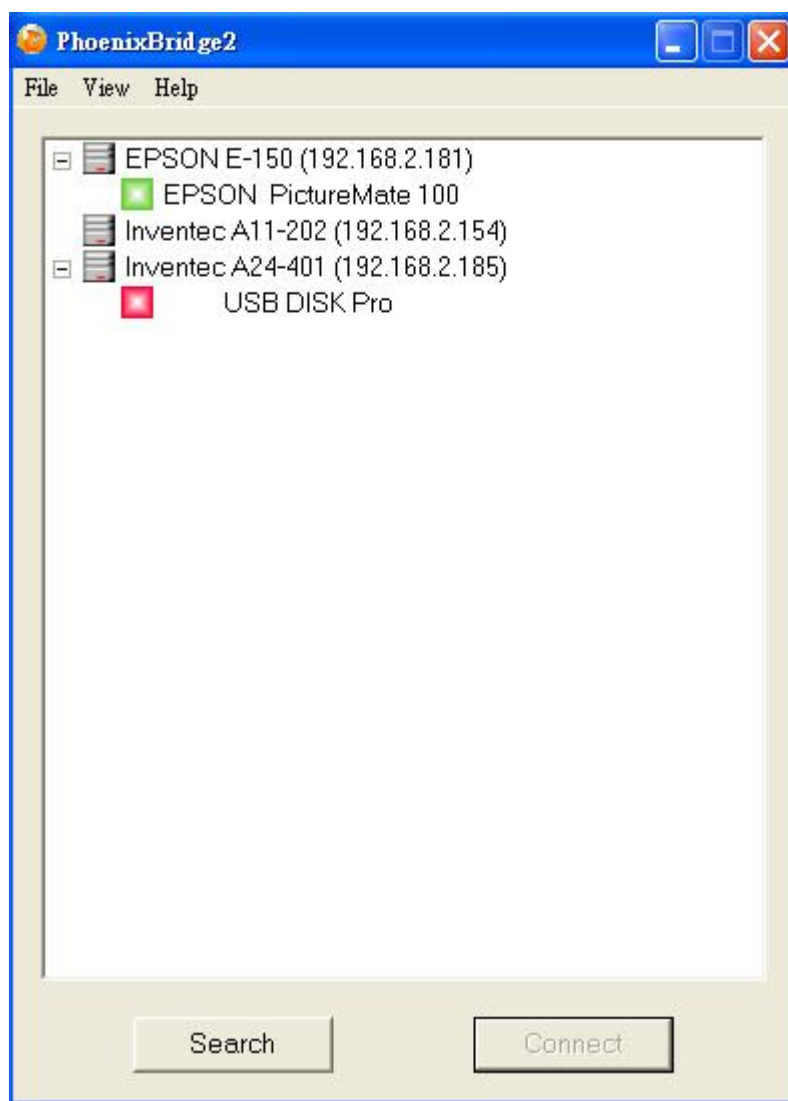
Each status is represented by an icon of different color. A device with “Ready” status is indicated by a square green icon as shown in the picture above. This green icon indicates that the device is unoccupied and ready to be connected.

### Occupied by Yourself



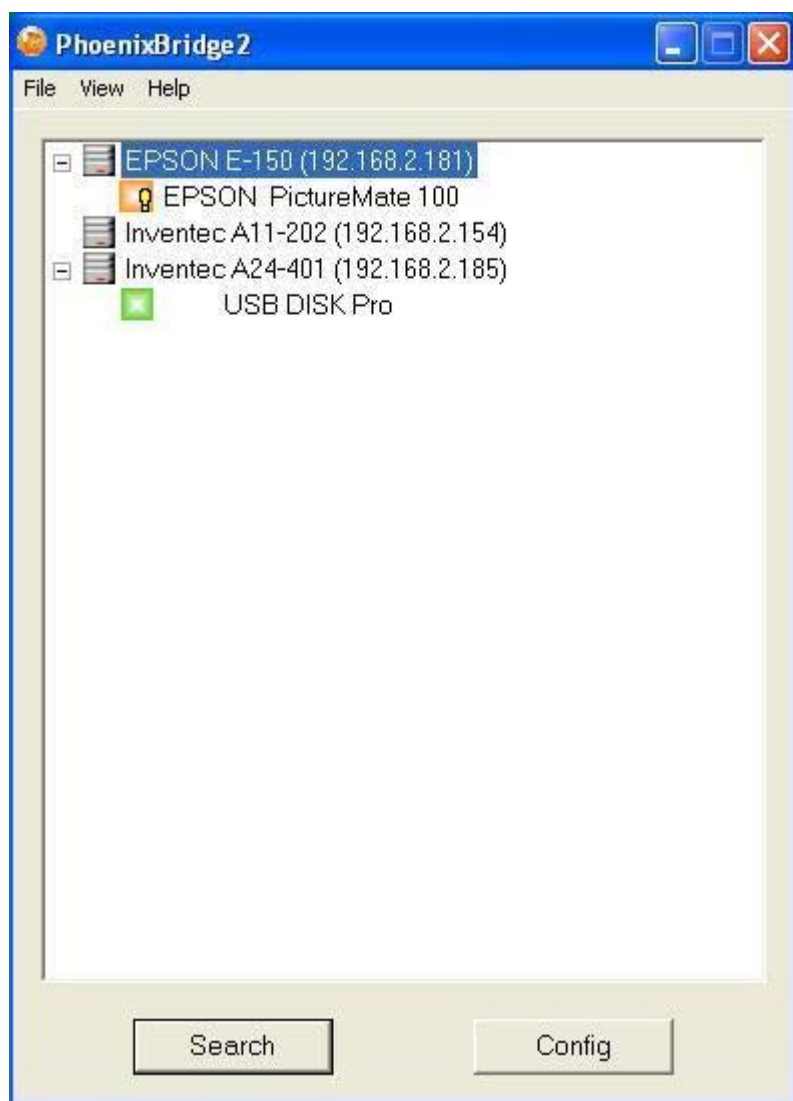
When you are “Connected” to a device, the green icon turns into an orange icon to signify the establishment of the connection.

## Occupied By Other User



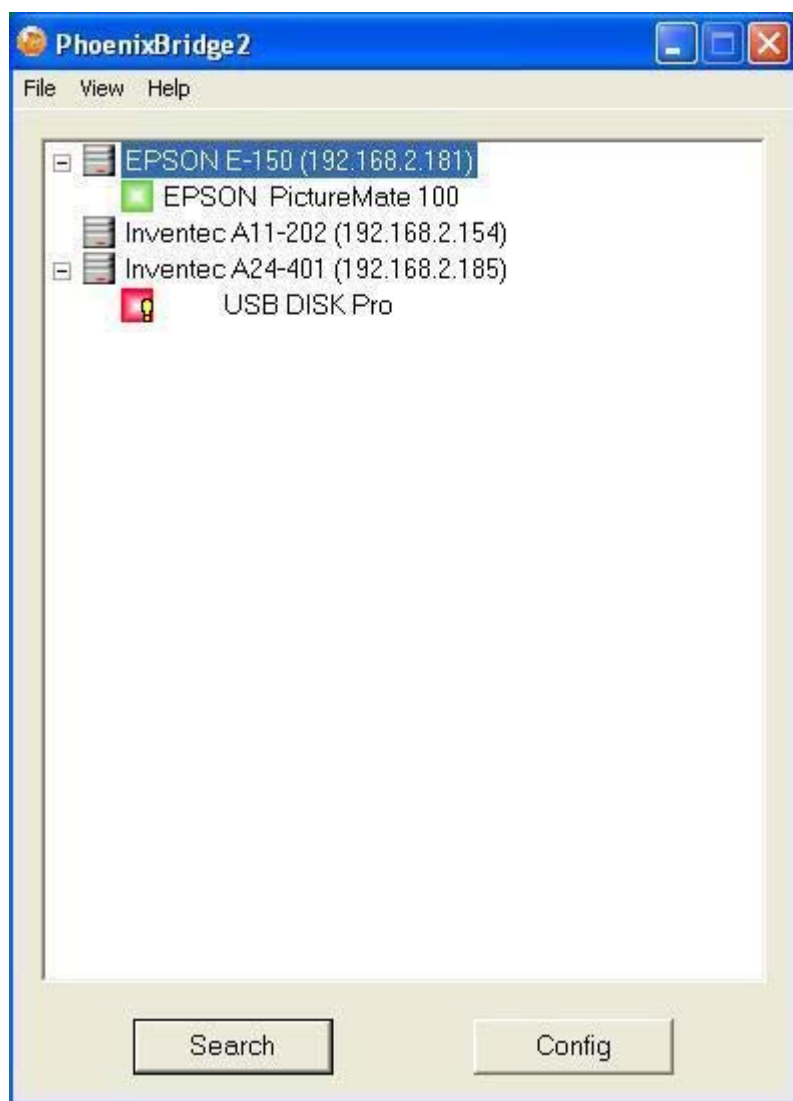
The red icon indicates the device is occupied by another user and you are prohibited to connect to that device.

## Self Occupied with Error



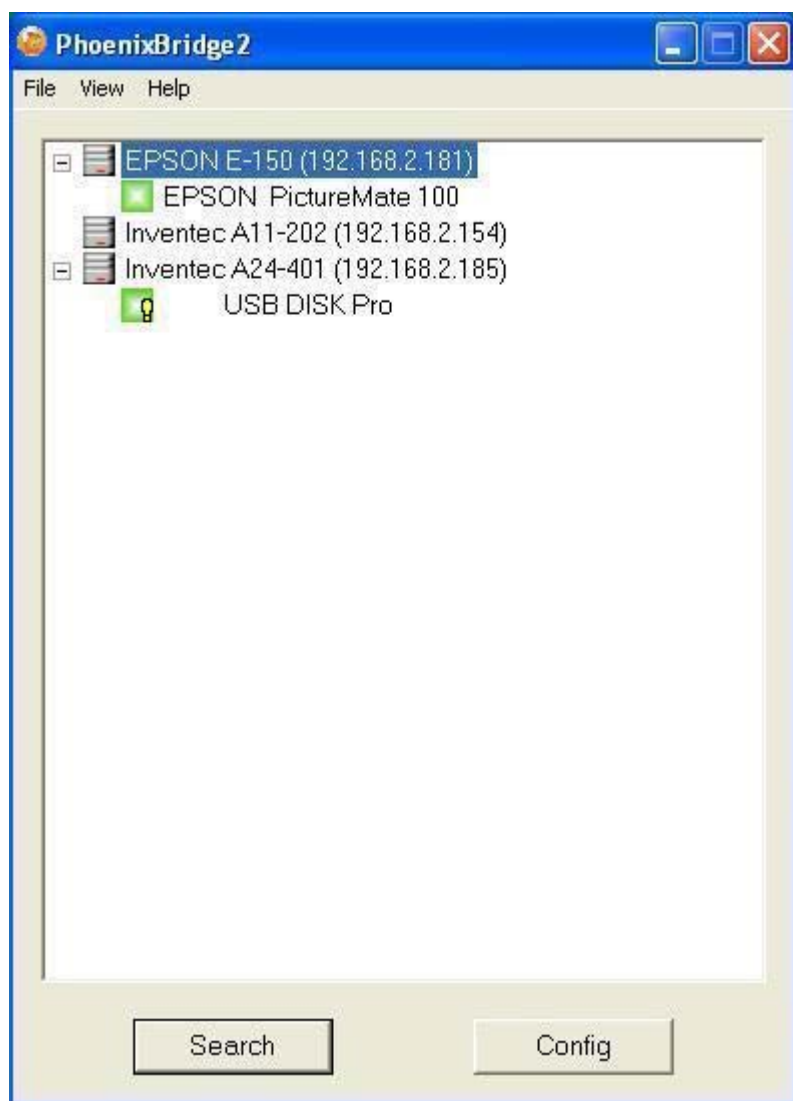
When an error happens on the device you are connected to, you will see a small exclamation mark appears at the right lower corner of the icon as show above. This error could be a paper-out error if you are trying to print with a printer that has just run out of paper.

## Occupied by Others with Error



When you see this red-with-exclamation icon, it signifies that a problem occurs on the device that is occupied by another user. This problem could be out of ink, out of paper or paper jam, etc.

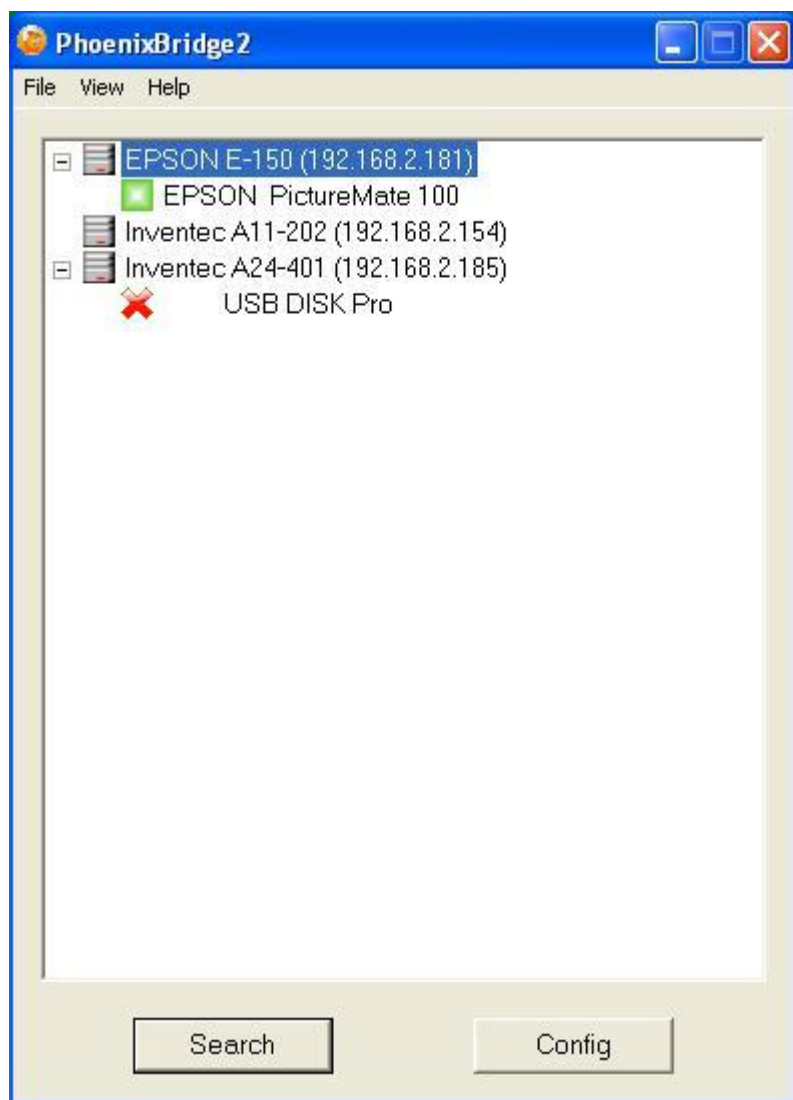
## Free with Error



A green icon with exclamation mark indicates that this device is not connected by anyone but does have some type of problem such as out of ink. It is recommended that you get this problem resolved before connecting to it.

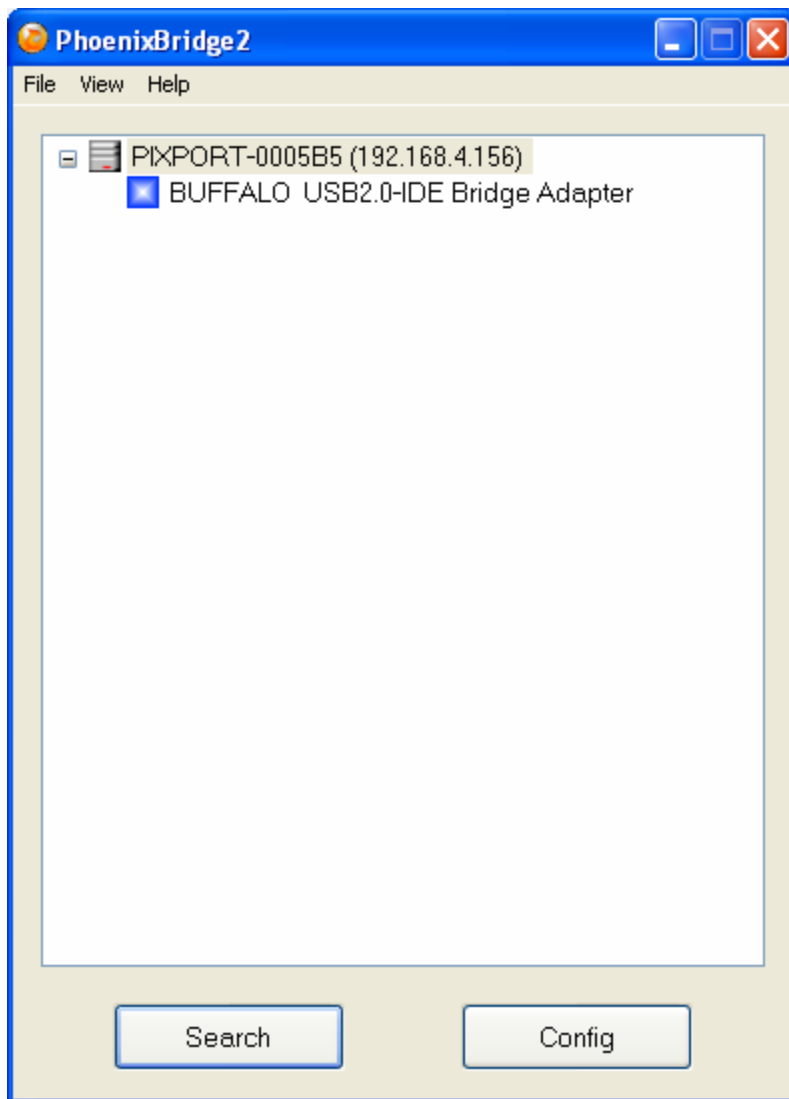
## Unsupported Device

Some of the devices are not supported by our EST USB server. Such device will be identified red cross as shown:



Of course, connecting to an unsupported device is not allowed.

## Device On Different Segment



Blue icon indicates that the server's IP address is on a different network segment as from yours. You can NOT connect to a device attached to such server.



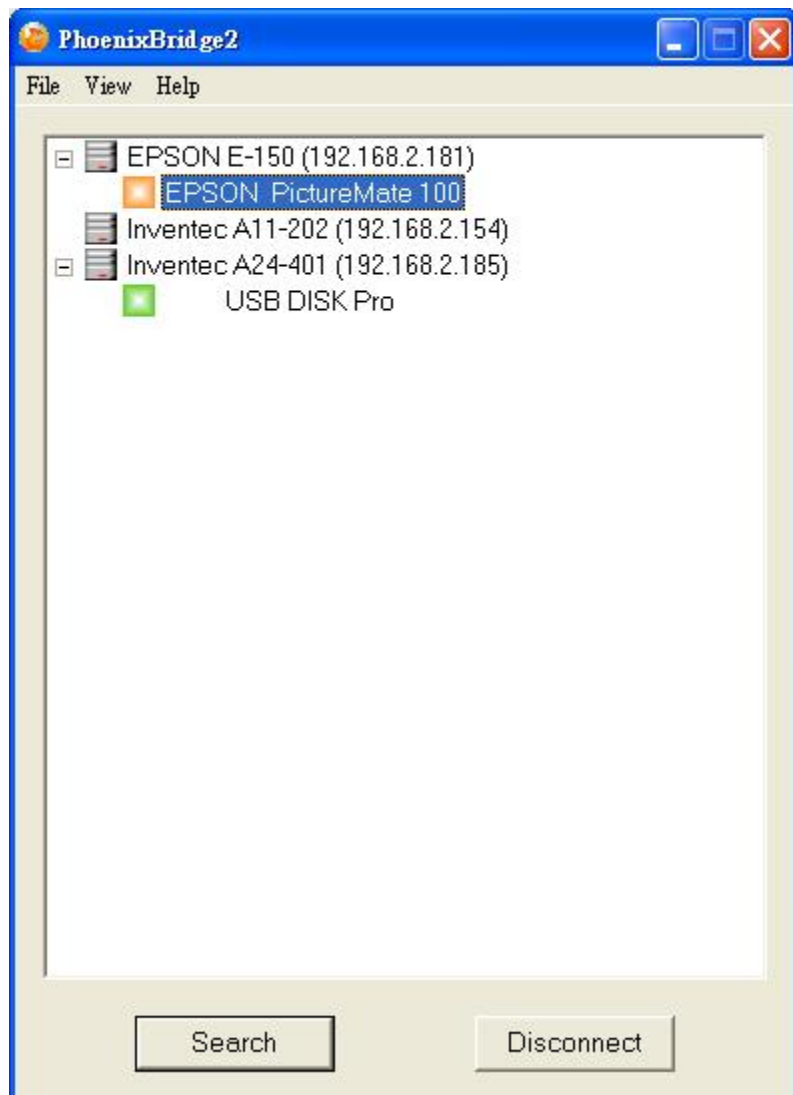
## Accessing a Device



The EST USB Server allows you to share the resources, such as scanning function, of a multi-functional printer over the network. To use a multi-function printer connected to a server, you must first establish a connection to the printer. You can utilize the printer you want to use by using the OS built-in printer management application on your PC. To connect to a printer, please select the target printer on the tree view and click on “Connect” button, or the “Connect” option on the right-click menu, to establish the connection. When you see the green icon turns red, it means you are successfully connected and are ready to work. You can now bring up the corresponding control

applications of the printer to perform the desired tasks. You may also connect to a device by double clicking it on the tree view.

If you select a connected device on the UI, you can see that the **Connect** button is changed to **Disconnect**:



Clicking on the button disconnects you from the selected device. Once you see the icon turns green, the device has been completely disconnected.

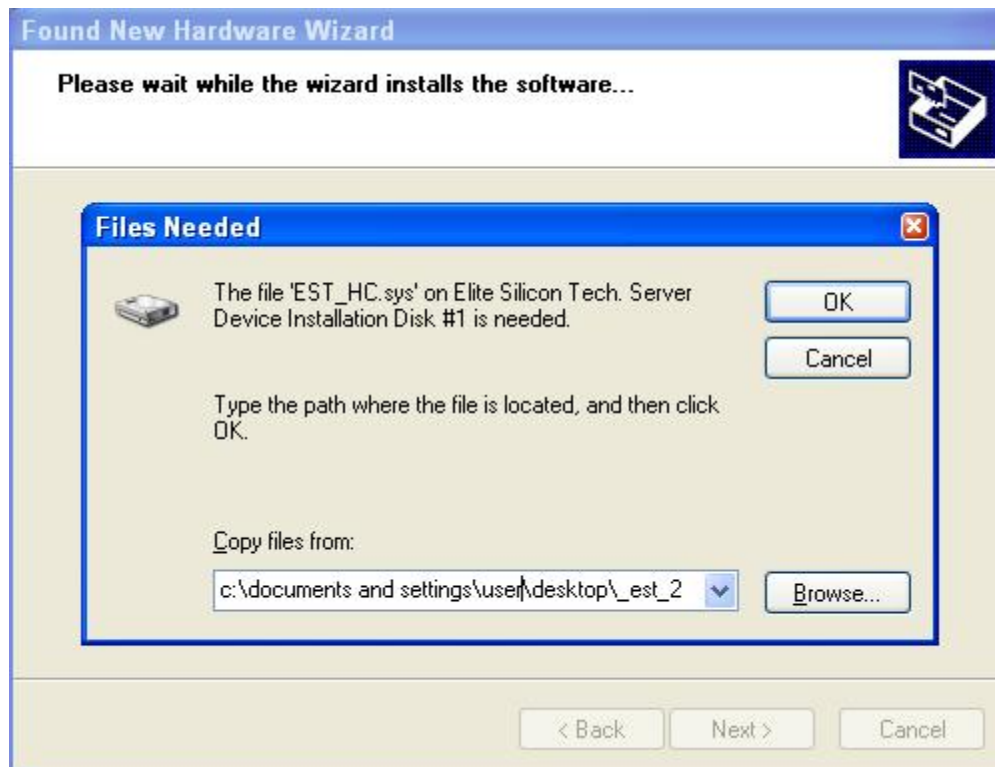
At the first time you connect to a device, you will be prompted to install the driver for EST USB server:



Please select “No, not this time” when you see this prompt and then click on “Next” button, which should bring you to this next prompt:



Please choose “Install the software automatically” option and then click on “Next” button to start installation. If you already have the drivers installed on the PC, then the installation will complete by itself. Otherwise, you will be prompted to provide the path to the driver on your PC:



Click on “OK” to continue with the installation once you have provided the path to the driver. The driver will then install automatically if the path is correct and you should see this:

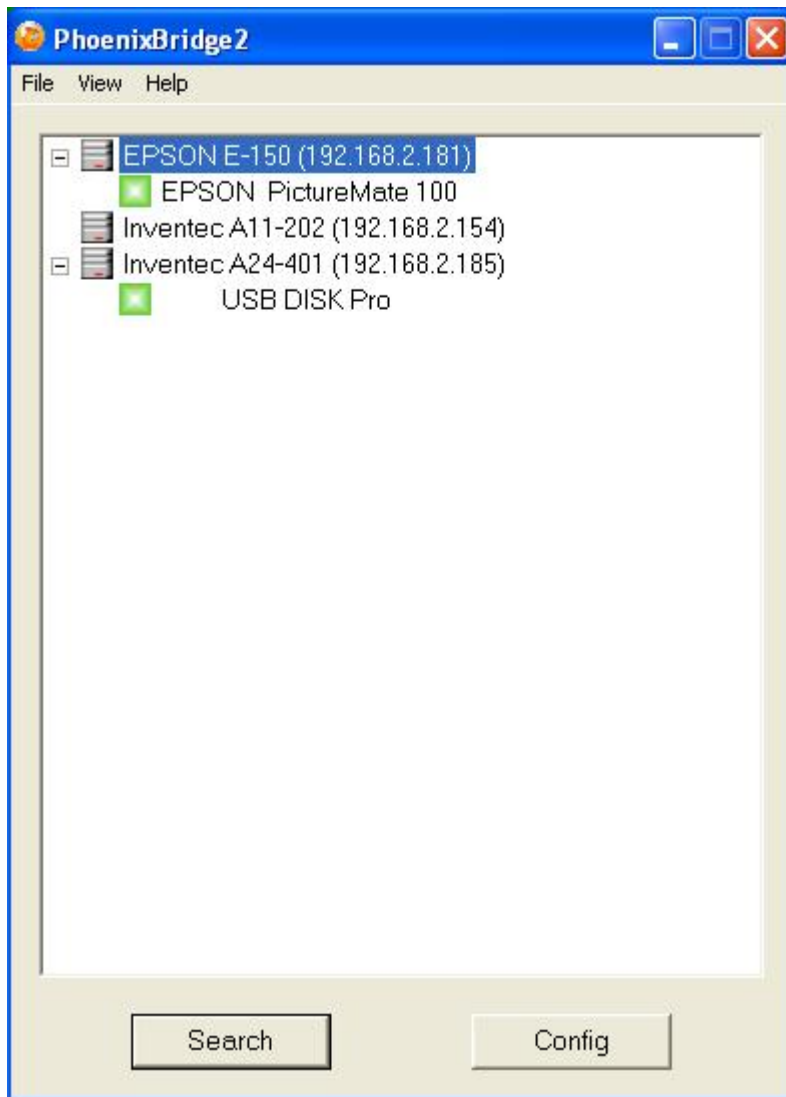


Click on “Finish” to complete the driver installation.

Please note that you will have to do this once and once only for each EST USB Server you add to your network.

**Note:** If the driver is not loaded successfully, the device will not function properly and you will not be able to use the devices connected to the servers. Therefore, if you are to provide the path to the driver yourself, please make sure you provide the correct path.

## Server Configuration



We allow the users to configure the settings of the EST USB Servers via the web-based UI. Select the target server on the tree view and then click on the “Config.” button or right click on the server and select “Config” option on menu to bring up this configuration UI.

Your default web browser will pop up and take you into the web-based configuration UI of the server.

**INVENTEC A14 - Microsoft Internet Explorer**

File Edit View Favorites Tools Help

Back Forward Stop Reload Home Search Favorites Go Google

Address http://192.168.2.197/

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## Status Information

Server Name	Manufacturer	Model	IP Address
INVENTEC A14	Printer Server Manufacturer	EST1800	192.168.2.197
Server Uptime:	0 days, 0 hours, 58 minutes, 8 seconds.		

Device Name	Link Status	Device Status	Occupied Host Name
<a href="#">JetFlash TS128MJF2A</a>	Online	Ready	
<a href="#">USB 2.0 Storage Device</a>	Online	Ready	
<a href="#">USB 2.0 Flash Disk</a>	Online	Ready	

**Status**  
**Server**

This is the main page of the configuration UI. You can see the important information about the EST USB Server and the device(s) connected to.

If you are connected to a server with occupied device, which it is occupied by you or not, you will also see it:

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## Status Information

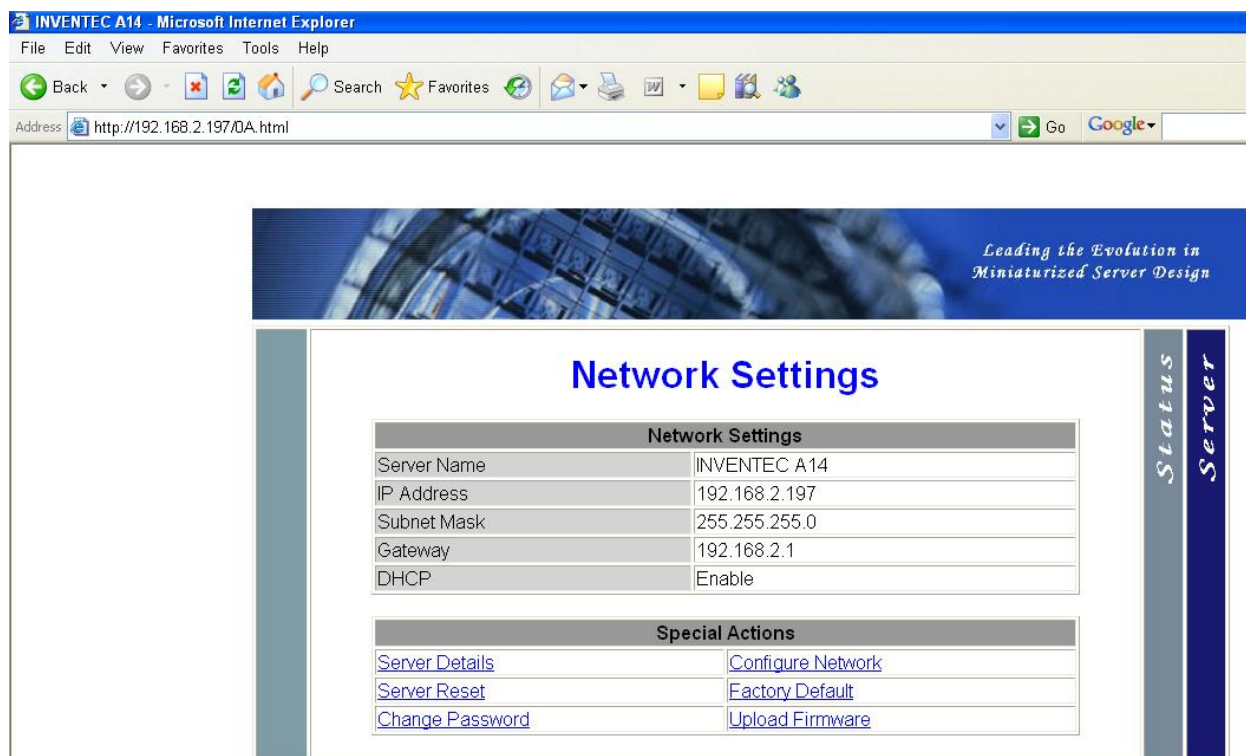
Server Name	Manufacturer	Model	IP Address
CellVision EVB	Printer Server Manufacturer	EST1800	192.168.2.252
Server Uptime:	0 days, 9 hours, 47 minutes, 56 seconds.		

Device Name	Link Status	Device Status	Occupied Host Name
<a href="#">JetFlash TS128MJF2A</a>	Busy	Ready	est-ibm

**Status**  
**Server**



There are two links at the right-hand side. Clicking on “Status” brings you back to this page, and clicking on the “Server” link takes you to the server configuration page as shown below.



This page displays the current network setting of the server and provides links to the pages where you can perform special actions:

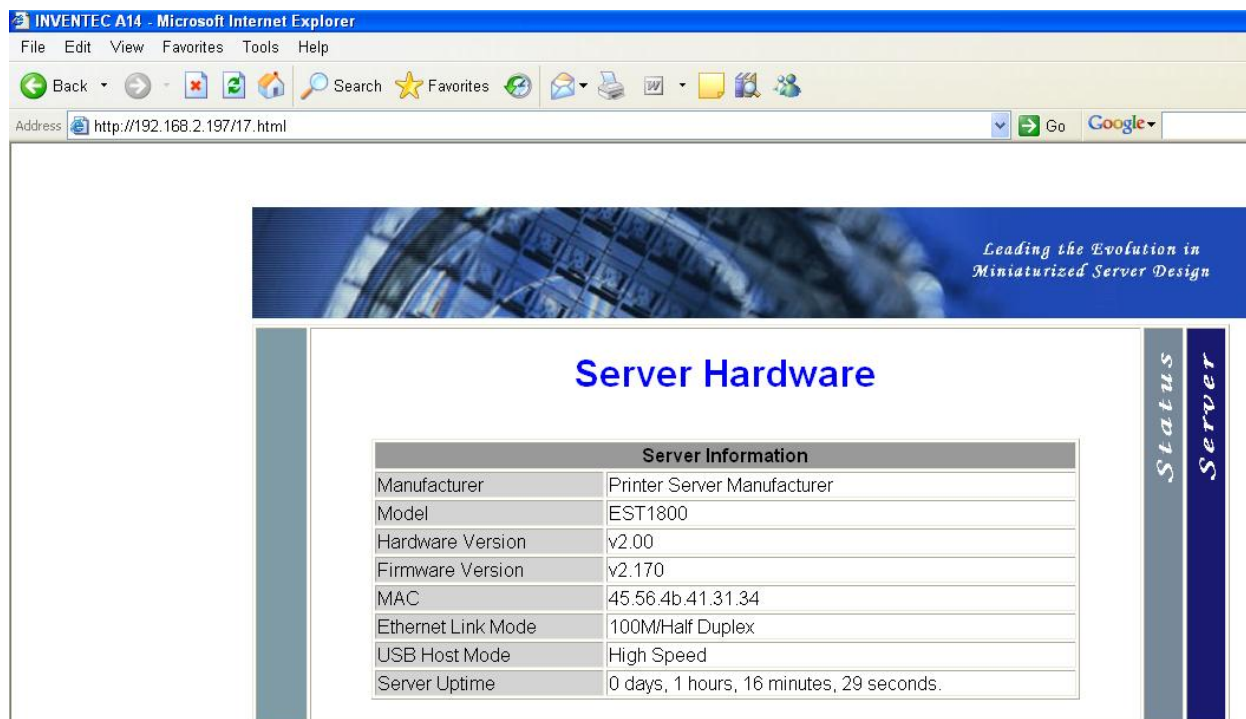
**NOTE:** A Server with busy device(s) connected is prohibited to be configured to prevent interruption of any on-going tasks. If you try to configure such server, you will see this message this message.





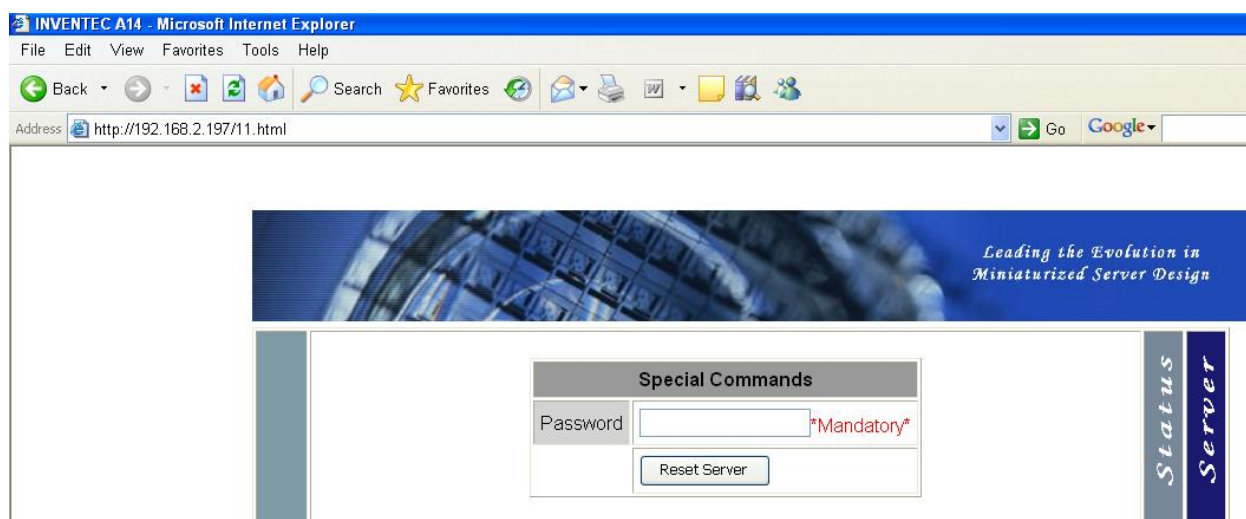
### Server Details:

This link takes you to the page that contains detailed information of the server as shown below:



### Server Reset:

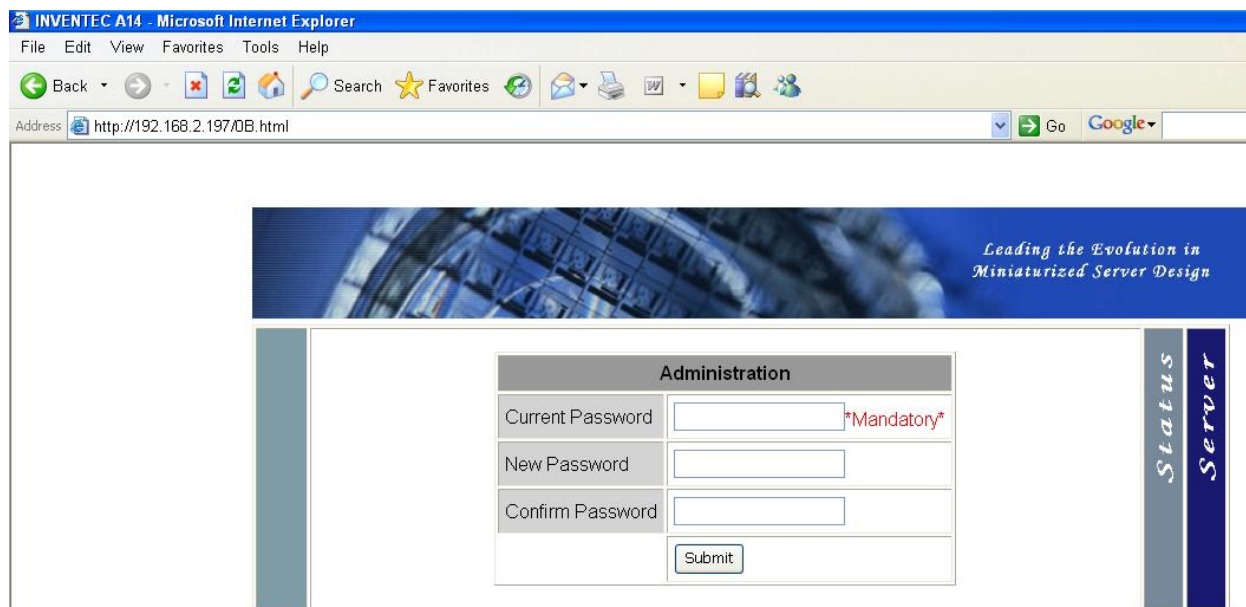
Clicking on this link takes you the page show below:



With the “Reset Server” button you can reboot the server. However, if there is a password, you must enter it for this function to work. Password is by default blank. So, unless a password is explicitly set, you do not have to enter anything for the reset function to work.

### Change Password:

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



To change the password, you must enter current password, input new password and re-input new password for confirmation and then click on “Submit”. If you are setting the password for the first time, you don’t have to provide current password.

## Network Configuration:

Clicking on this link takes you to the network configuration page:

INVENTEC A14 - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites

Address <http://192.168.2.197/10.html> Go Google

Leading the Evolution in Miniaturized Server Design

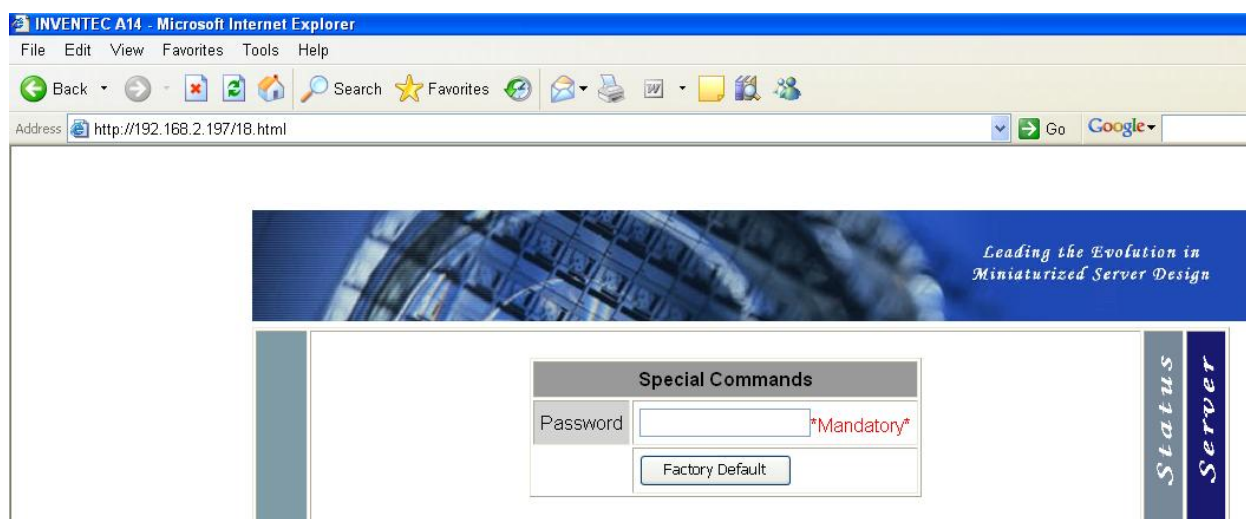
Network Settings	
Server Name	INVENTEC
IP Address	192 . 168 . 2 . 197
Subnet Mask	255 . 255 . 255 . 0
Default Gateway	192 . 168 . 2 . 1
DHCP	Enable
Password	<input type="password"/> *Mandatory*
<input type="button" value="Submit"/> <input type="button" value="Clear"/>	

Status Server

You can change the network setting according to your need. However, please note that if you would like to give this server a static IP, please disable the DHCP option. Once you are done, please click on the “Submit” button and reboot the server.

## Factory Default:

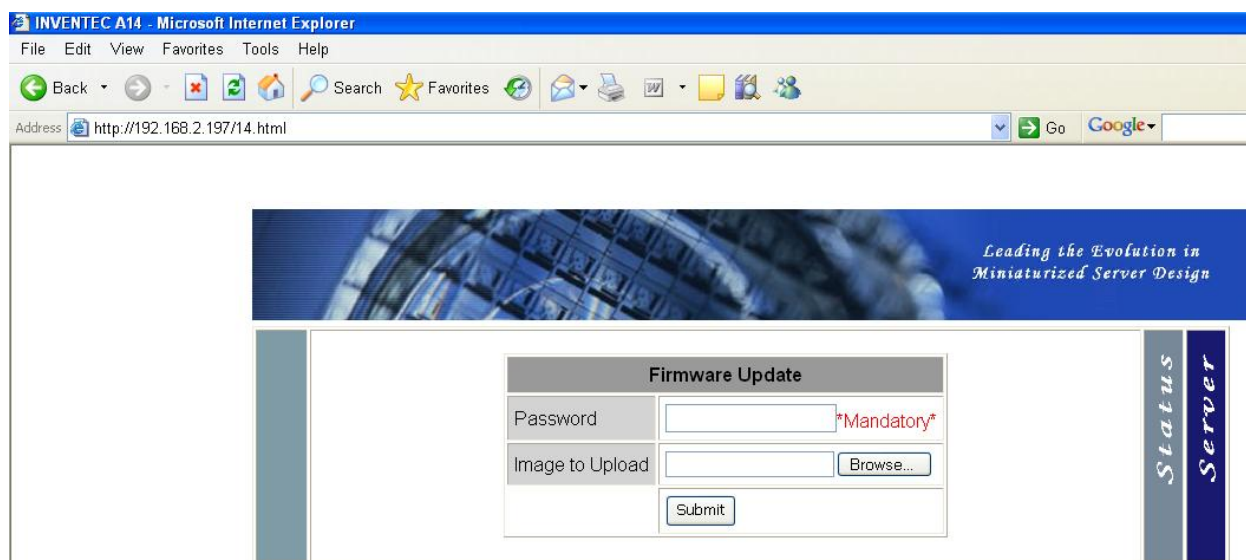
Clicking on this link takes you the page where you can restore the server’s settings back to default:



Again, the password is not necessary if no password is set. Just leave the field empty and click on the “Factory Default” button to restore the settings.

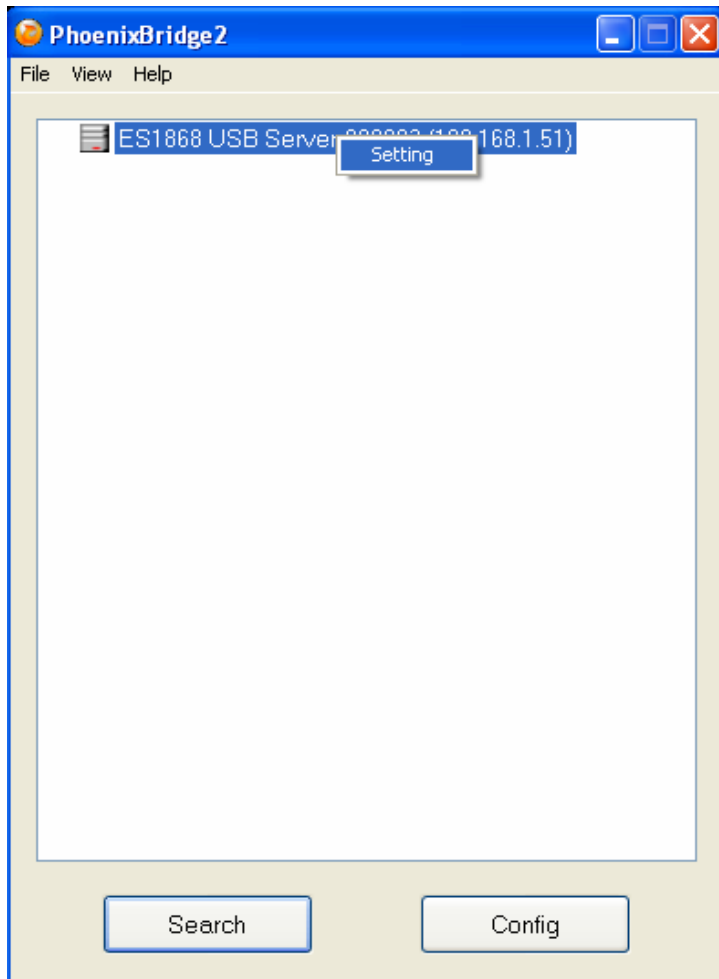
### Upload Firmware:

This link takes to the page where you will be able to upload the latest firmware for the server:



Please first click on the “Browse” button to browse to the firmware you would like to upload and then click on the “Submit” button to update the firmware. You do not need to provide a password for this operation if there is not password set. Please just leave it blank.

Another way to configure the server is via the configuration dialog of PB2. To bring up the configuration dialog, please RIGHT-CLICK on the server you would like to configure,



And select the "Setting" option. If a protective password has been set, this option brings up this dialog:



If you see this dialog box, then it means a password has been set. In order to access the configuration window, you must enter the correct password and click on "Submit" button.

If the correct password has been entered, you should see this following dialog box:

**Server Setting**

Network Settings

Server Name: PIXPORT-0005B5

☒ DHCP

IP Address: 192 . 168 . 1 . 156

Subnet: 255 . 255 . 255 . 0

Set Cancel

Backup Firmware

Update Firmware

Change Password

Reset Server

As you can see, this dialog box comes with many functions and some of these functions are similar to that you see on the web pages.

### Set Sever Name and IP Address

First thing you would see is the text filed for you to change the server name and IP address. You may have noticed the “DHCP” checkbox. When this checkbox is checked, the fields for you to enter IP address grays out. That is because checking this box meaning you want the server to get IP automatically like your PC does, so the IP address fields grays out. If you are a seasoned network device user and you would like to set the IP address by yourself, simply Uncheck this checkbox:

**Server Setting**

Network Settings

Server Name: PIXPORT-0005B5

☐ DHCP

IP Address: 192 . 168 . 1 . 156

Subnet: 255 . 255 . 255 . 0

Set Cancel

Backup Firmware

Update Firmware

Change Password

Reset Server

And you will be able to enter a Fixed IP address for your server. Once you have entered the new server name and IP address, click on “Set” button to finalize the new setting. The “Cancel” button exits this dialog box without doing any thing.

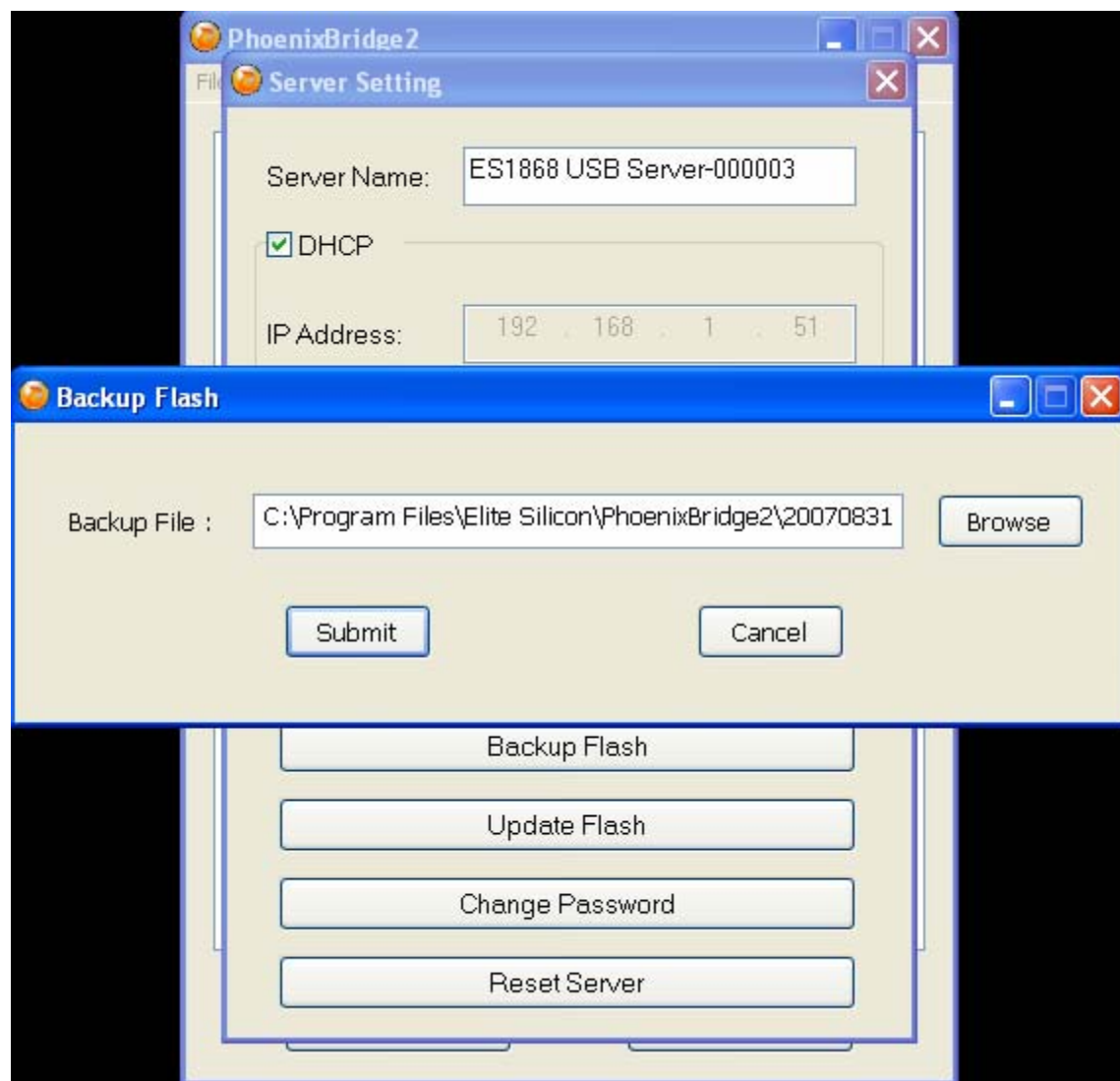
**NOTE:** You can apply this function to a server under different network segment.



## Backup Firmware

Backup firmware function is a fail-save mechanism for the Update Firmware function. You can backup the current firmware of your server and save it on your PC in case you updated the latest firmware and want to revert back for some reasons.

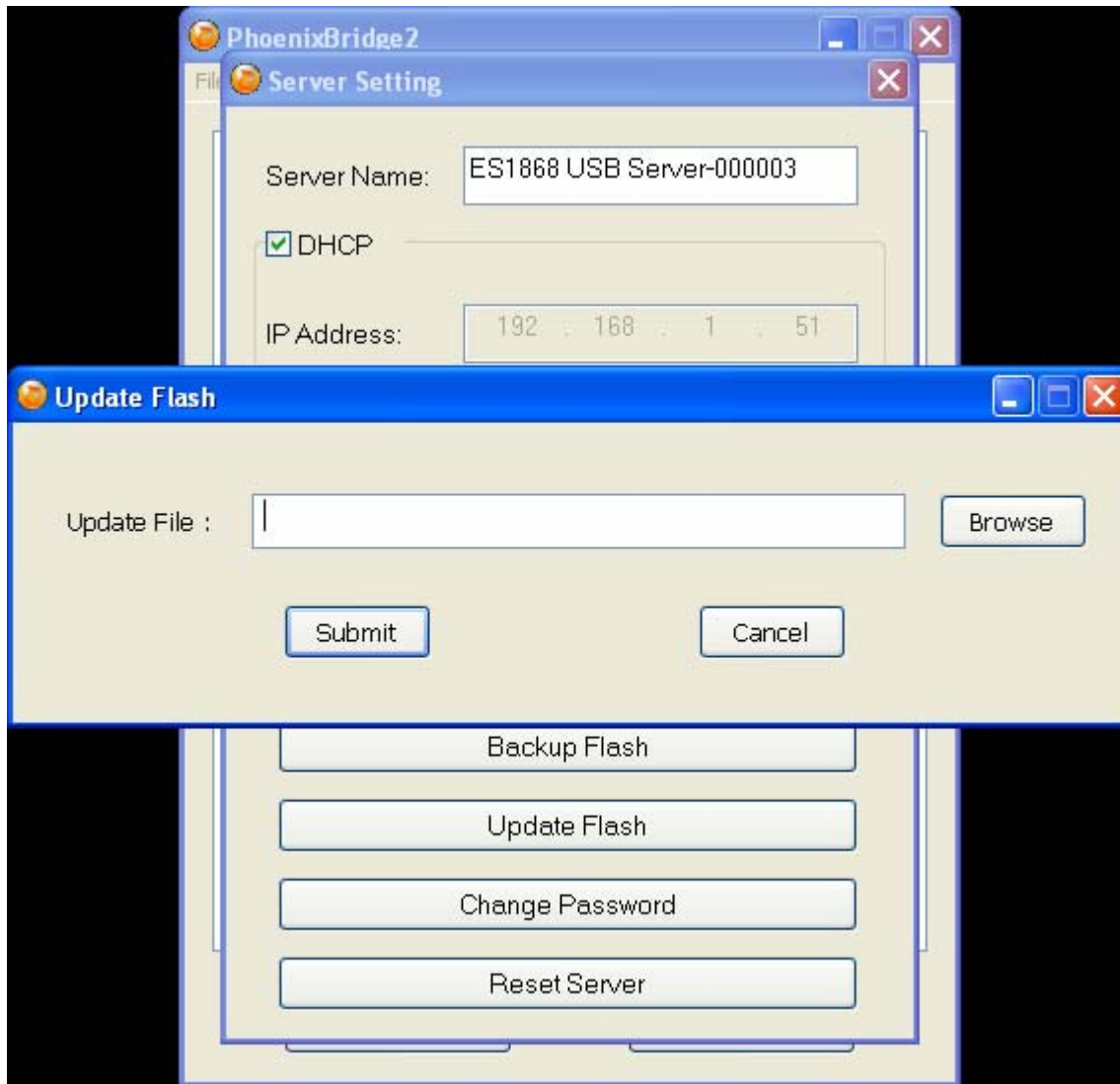
Click on the “Backup Firmware” button and you should see this dialog box:



“Browse” button allows you to choose where on your PC you would like to save the backed-up firmware. Once the save location is set, click on “Submit” to start backing up. “Cancel” button exits this dialog box without doing anything.

## Update Firmware

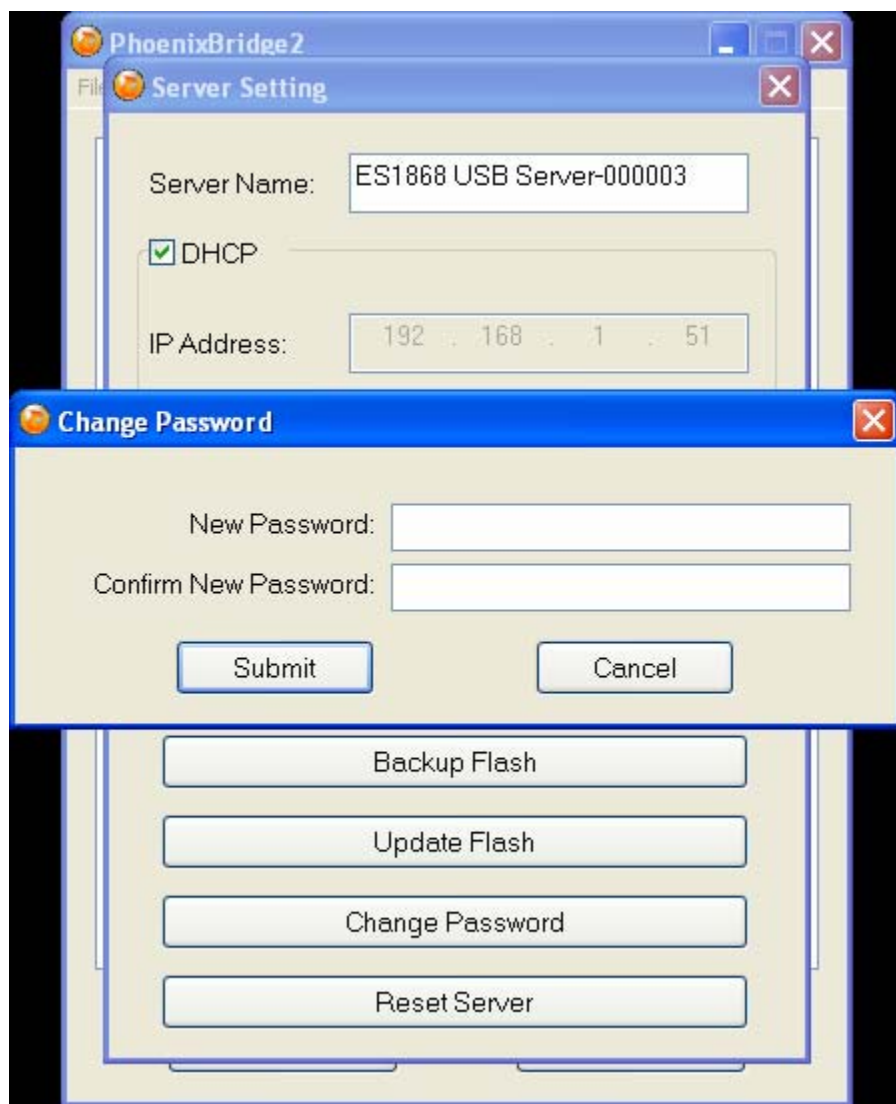
Clicking on the “Update Firmware” button brings up this dialog box:



Clicking on “Browse” to choose the latest firmware your vender provided and then click on the “Submit” to start updating. “Cancel” button exits this dialog box without doing anything.

## Change Password

This function allows you to change the current password or set a new password if none has been set. Click on the button to bring up this dialog:



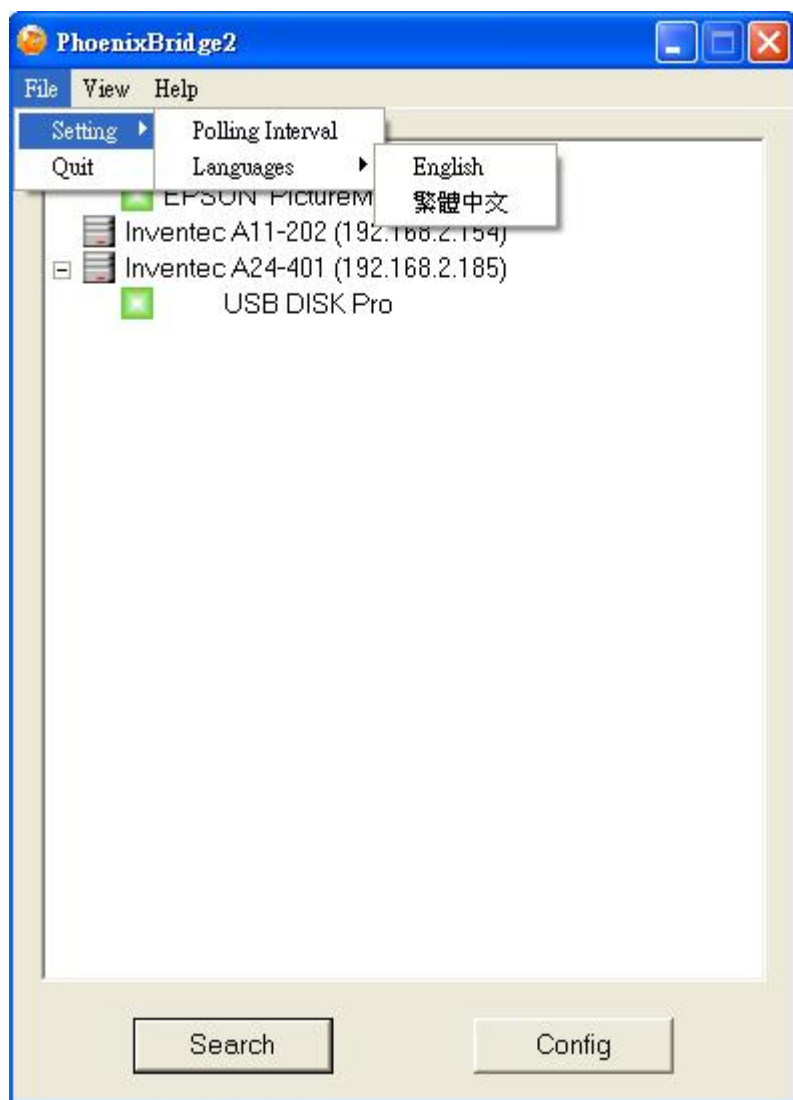
Enter the password you want to set and enter it again for confirmation, then press “Submit” button to finalize it.

## Reset Server

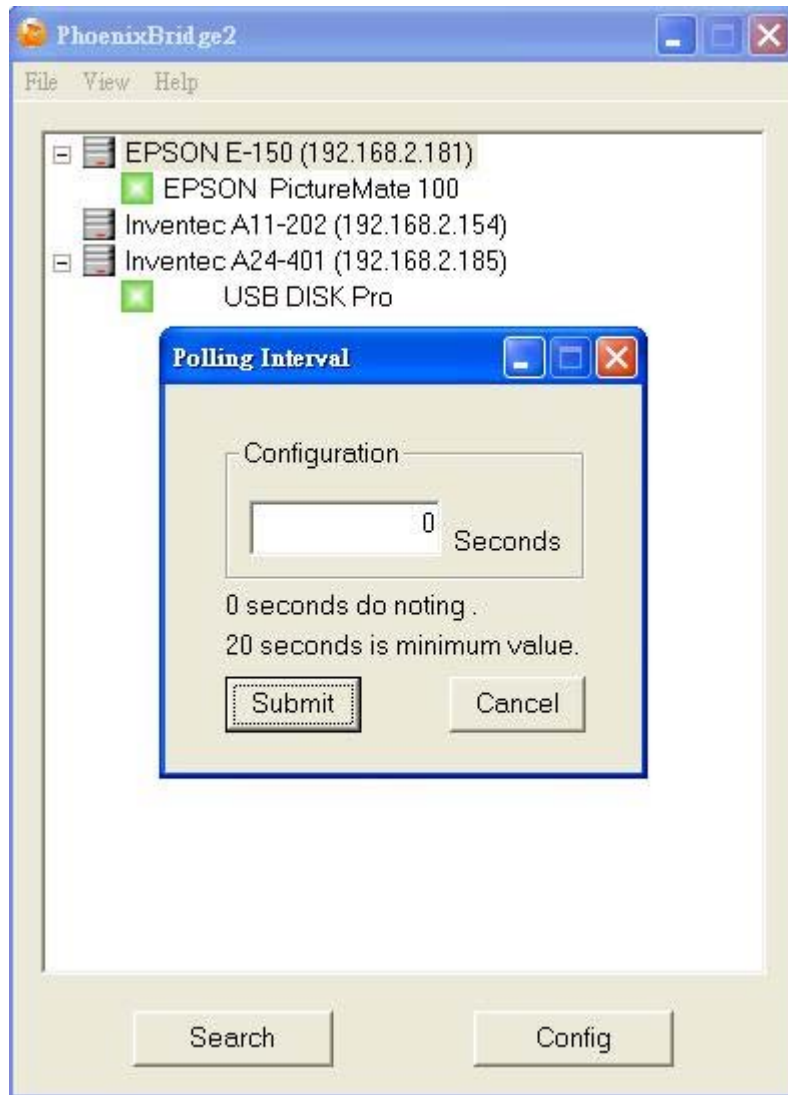
This button reboots the server. Please note that this function will not work if the server you attempt to reset has a device connected to it and the device is occupied by a user.

## Polling Interval

The **USB Server** program periodically polls your network to find out the status of all the connected servers and devices. Any change on the status of servers and devices will be updated to the tree view in the main dialog box. The default setting is that the program would perform this polling every 30 seconds. To change this polling interval, click on the **File -> Settings -> Polling Interval** option on the control menu:



Then you should see this dialog box pops up:



You can set 1 – 60 on the “minute” basis or 1 – 24 on the “hour” basis. Click on **Submit** to allow the new interval taking effect.

## Language

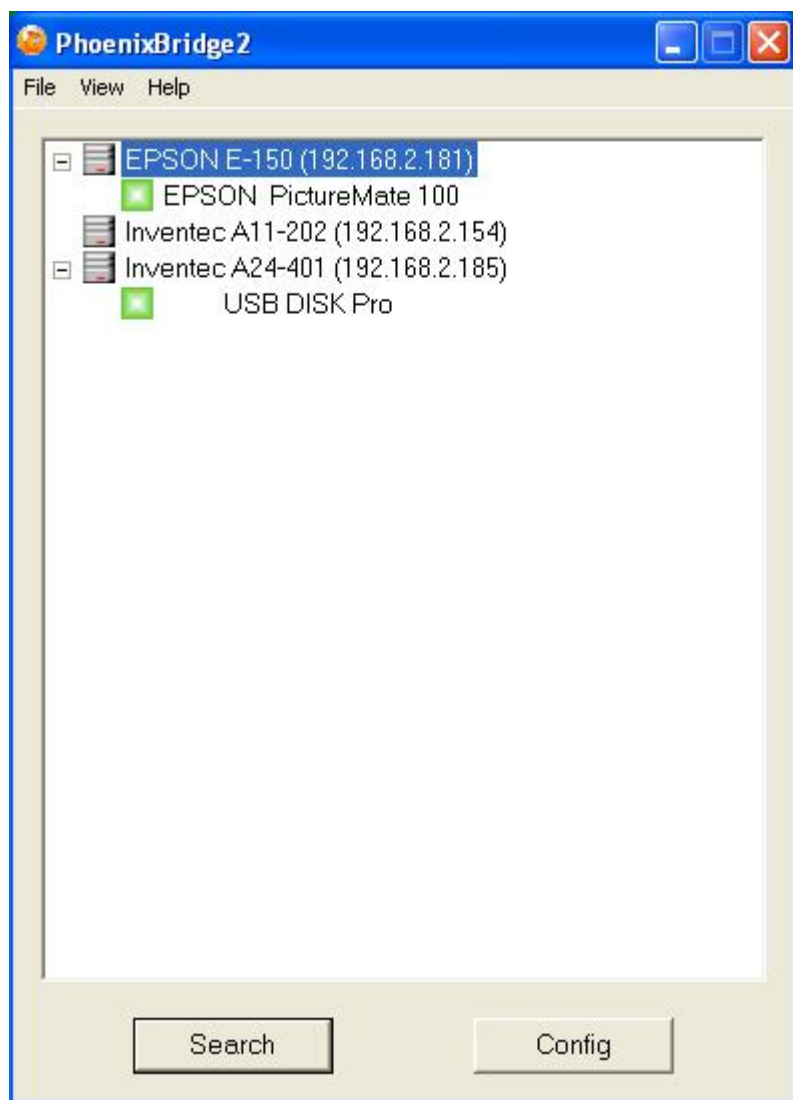
USB Server now supports two languages: English and Traditional Chinese. To toggle between the languages, please go to File -> Settings -> Languages option and select the desired language.



If you choose to change the language of the UI to Traditional Chinese, you can see that the options on the control menu, as well as the sub-options, all become Traditional Chinese.

## Search

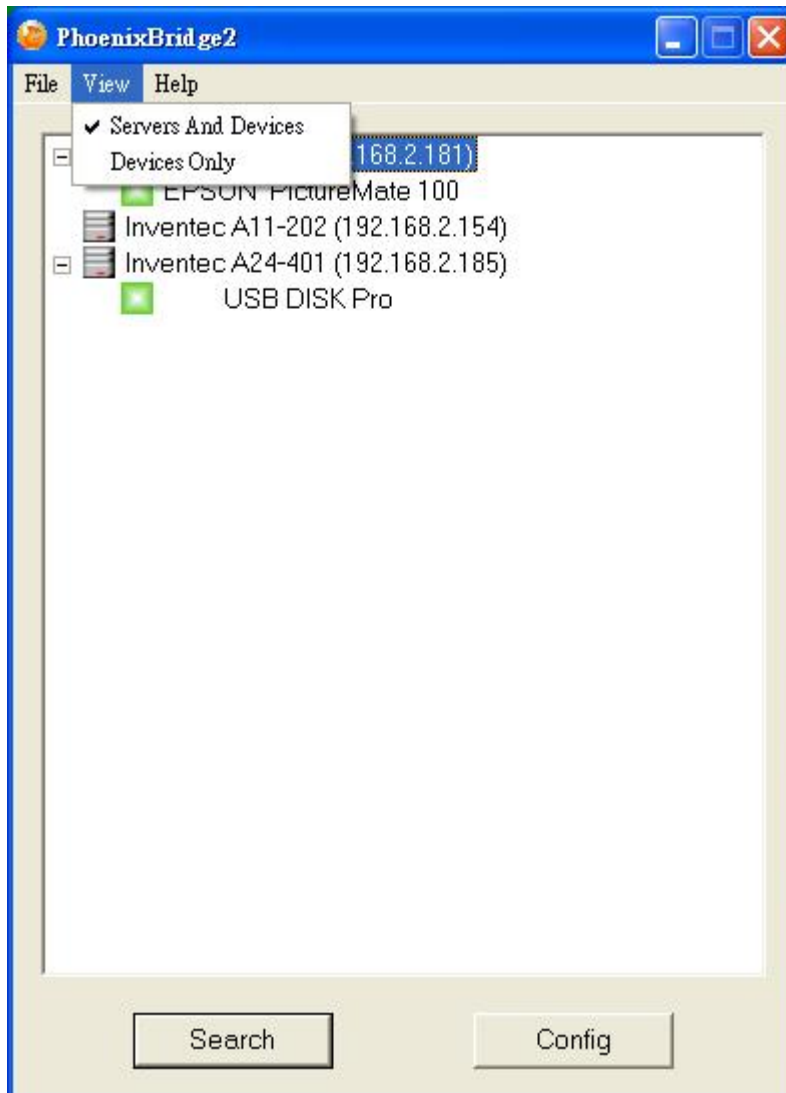
When you are in need of knowing the status of all the servers and devices immediately, use the Search function:



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

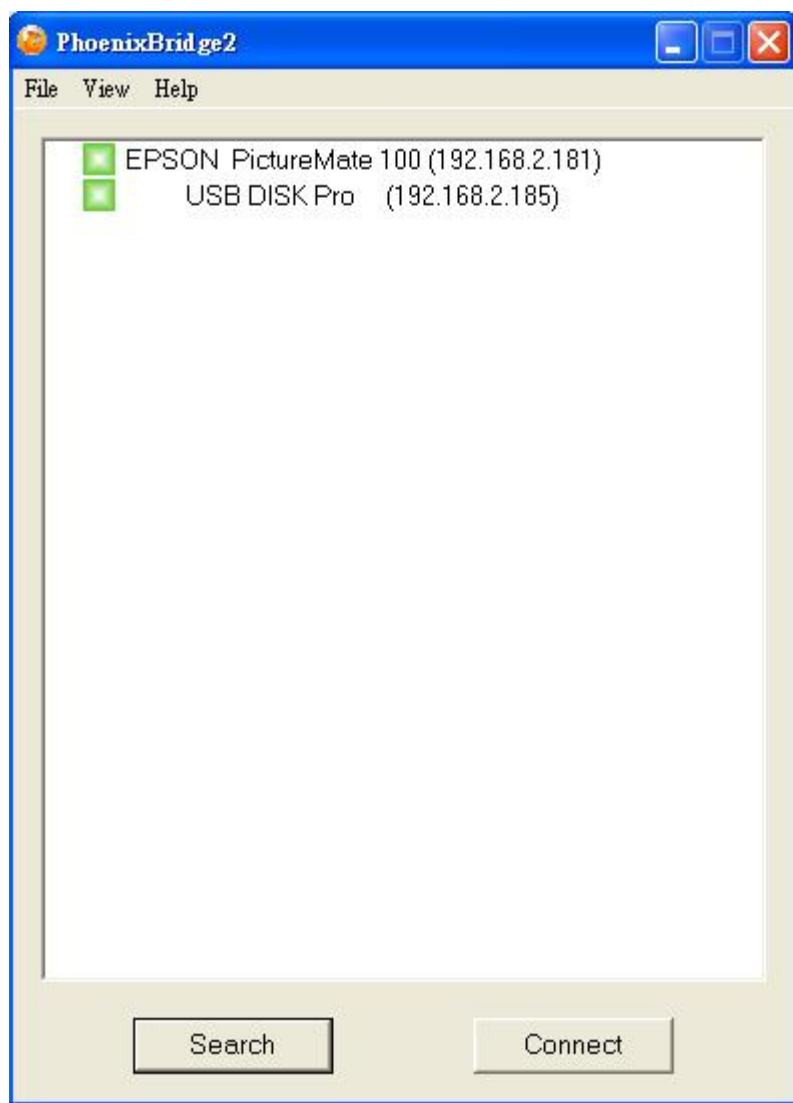
## View

The tree view in the main dialog has two display modes: “Servers 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:



The example above displays the “Servers and Devices” mode. If change it to “Devices Only” mode, the tree view would look like this where only the USB devices are displayed:

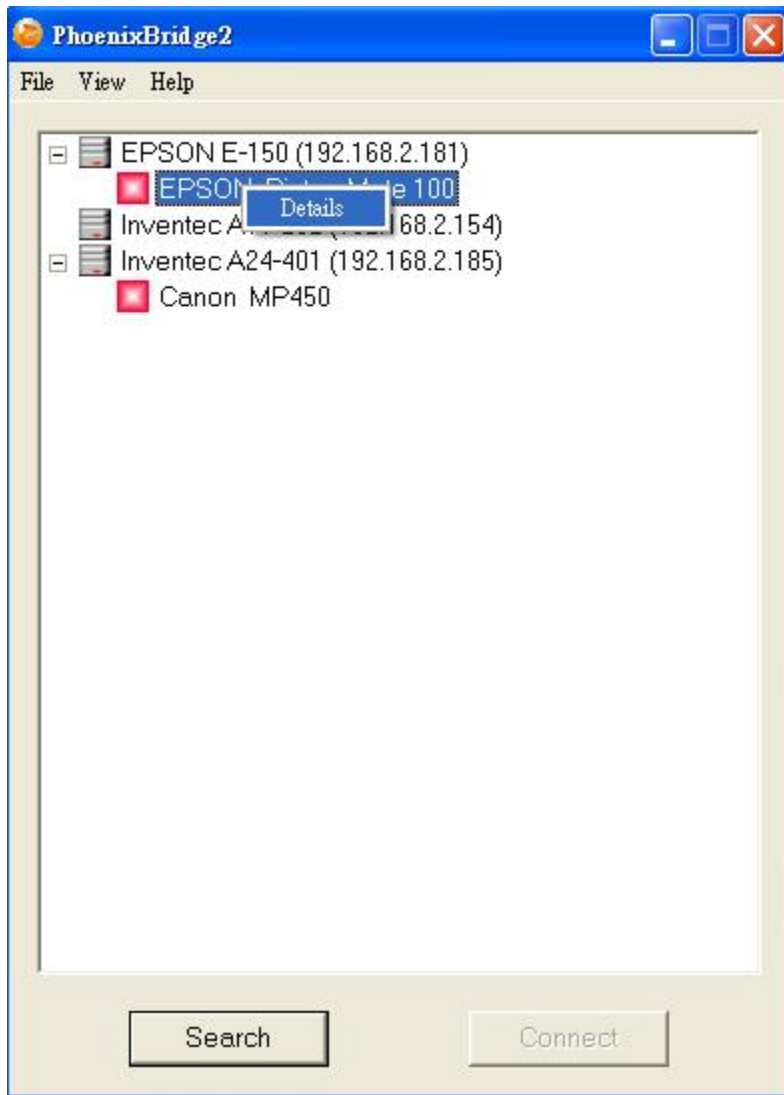




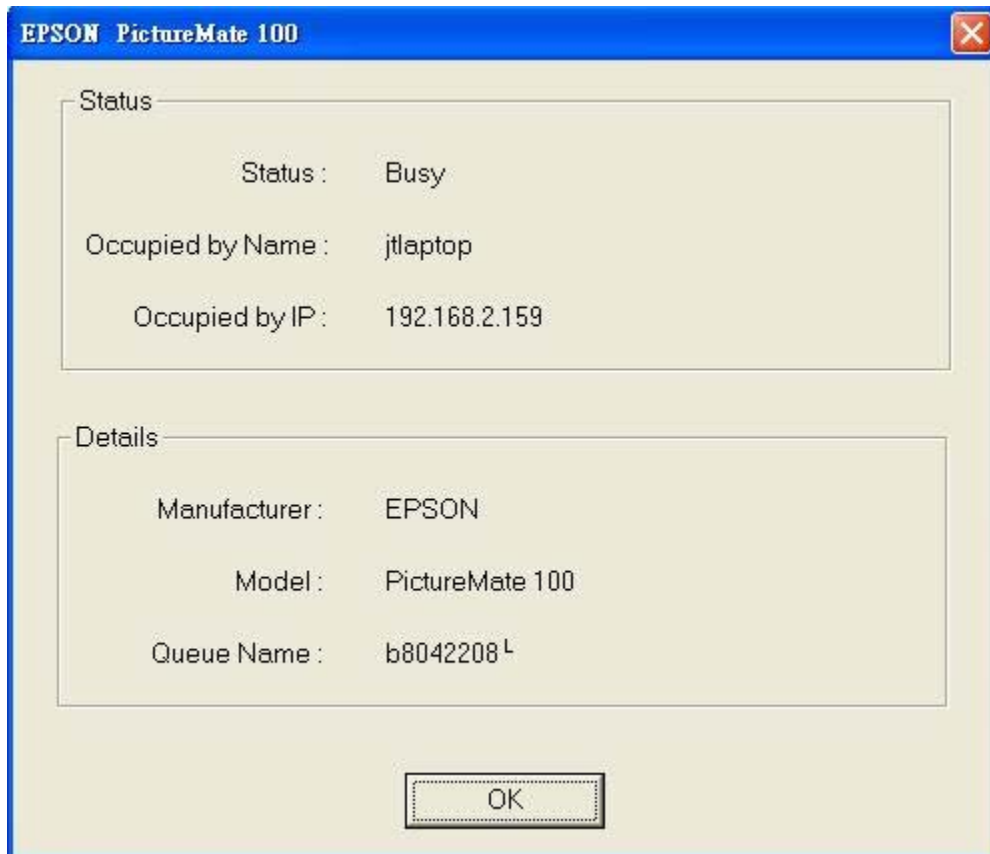
Please note that your setting for the tree view will be saved when exiting the program. The next time you launch the program, the tree view will display in the same mode as you configure it the last time.

## Device Details

When you right click on a device on the tree view, a menu will pop up:

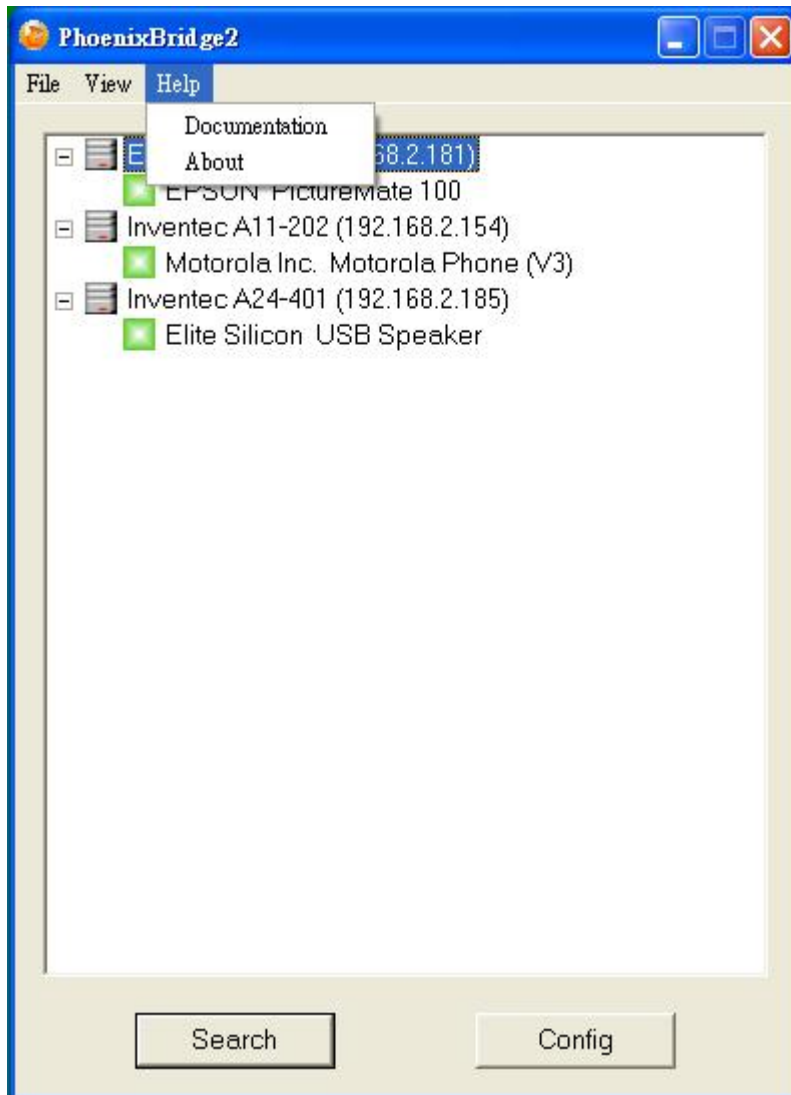


When you select the “Details” options, some detailed information about the selected server/device respectively will be displayed in another pop-up dialog box.



## Help

There are two functions under the Help option:



Clicking on "Documentation" brings up this user manual. Clicking on "About" brings up a dialog box with legal and other relative information displayed:



## Technical Support

If you have any questions that the Troubleshooting section failed to address, please visit our website at [www.elitesilicon.com](http://www.elitesilicon.com) for further help. We have Technical Support working non-stop in order to provide the best support we can for our customers.

## FAQ

### **Q. How come I don't see any USB servers on the GUI after installing it?**

**Ans.:**

Besides the obvious reason that your PC or the USB Server might not be connected to the network correctly, using a personal firewall on your PC might block the program from accessing the network. Please make sure your firewall/anti-virus software is not blocking USB Server application.

### **Q. How come I can't see any USB device on the USB Server GUI?**

**Ans.:**

First of all, of course, check and if your USB device has been correctly connected to the USB server and powered on.

Another possible reason is that, even though the USB server does support USB hub, the combination of a Full Speed Hub with a Low Speed Device (such as mouse, keyboard, etc), is NOT supported.

### **Q. How do I check the driver version?**

**Ans.:** Please go to your C:\WINDOWS\system32\drivers folder and find EST\_Bus.sys and EST\_HC.sys files. Please right click on either one of the file and select "Properties" option. On the pop-up dialog box, you will see 4 tabs. Please click on the "Version" take and the version number is shown at the very top:

