

# ManualEnds IP Relay Server™ User Guide

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Worldwide Technical Support and Product Information

[www.manualends.com](http://www.manualends.com)

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For further support information, see the [Technical Support Resources](#) appendix.  
To comment on the documentation, send e-mail to

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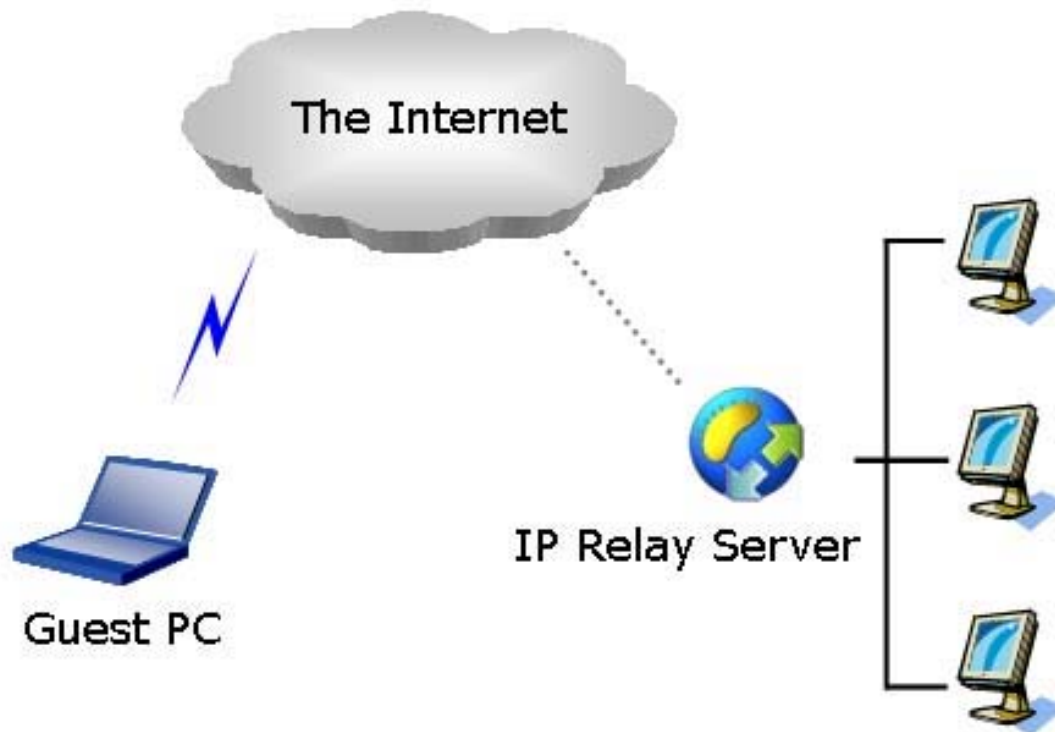
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# 1 What is ManualEnds IP Relay Server?

ManualEnds **IP Relay Server** is a program that mapping the incoming connections to a predetermined IP address at real time. This allows Guest to connect a Host PC from the outside without special configurations (Private/Public, Router/Firewall/Proxy Network).

Figure 1.1 ManualEnds (ME) IP Relay Server System



**IP Relay Server** is a software package that can be configured to provide Network Address Translation (NAT), Port Address Translation (PAT), or Proxy/Firewall services

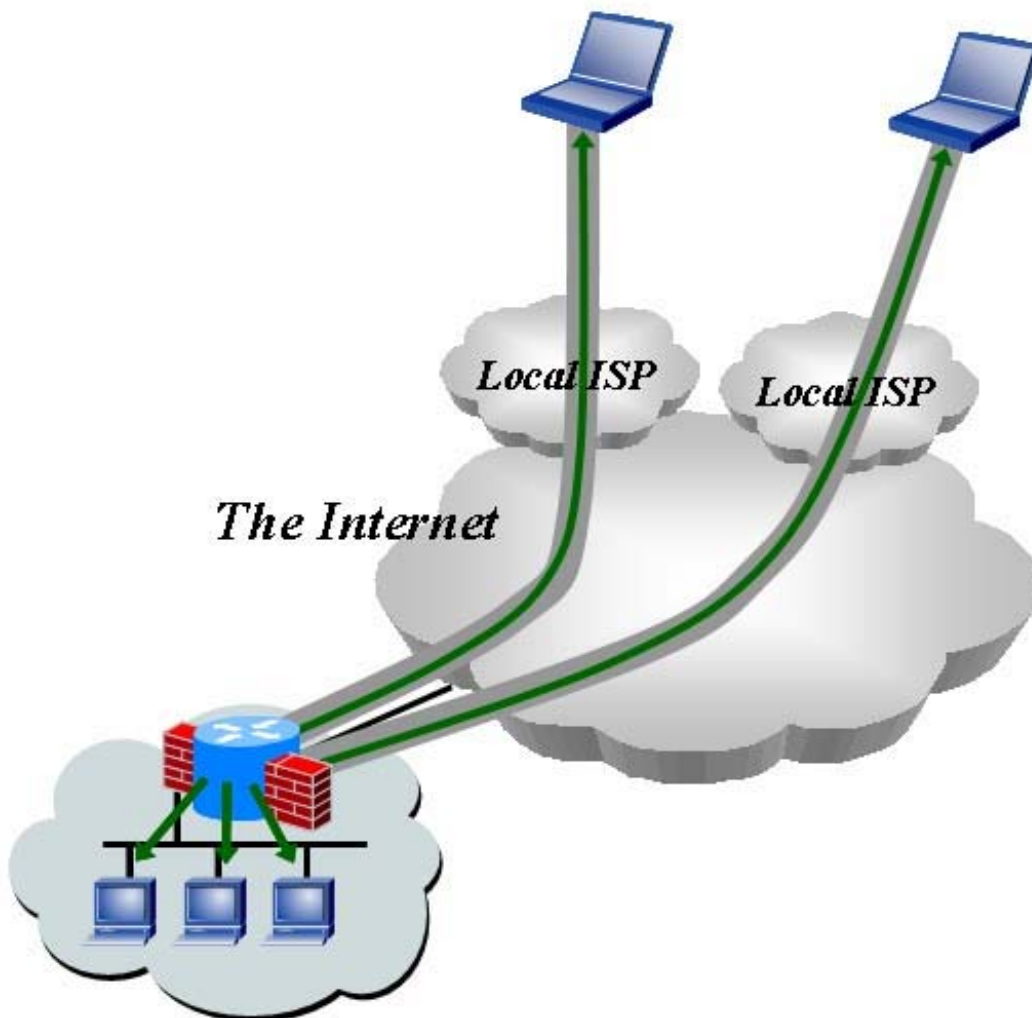
## Why Choose IP Relay Server?

**IP Relay Server** allows hosts on a Network to communicate with the rest of a network (such as the Internet) without revealing their own private IP Address. **IP Relay Server** could create four “Virtual” tunnel ports to transfer incoming data from “Real” IP address to “Virtual” IP address. General speaking, peer-to-peer file-sharing programs, chat clients such as ICQ, MSN Messenger, or Yahoo, and certain operations such as web serving and outgoing FTP require you to “forward” or “open” ports on DSL/ADSL/Modem/Proxy router to allow them to work.

When a port is forwarded, a “Virtual Tunnel” is created which allows the request directed at port number XXXX to be “Forwarded” to a port attached to an “Internal IP address” listed on one of the network’s PC.

The following diagram illustrates a basic, three-PC network connected to the Internet through an IP Relay Server.

**Figure 1.2** “NAT/PAT”, IP “Forwarding”



A small network is protected by **IP Relay Server**. All Internal PCs are assigned **private** IP addresses (e.g. 192.168.0.2, 192.168.0.3, 192.168.0.4) and access the Internet use a single shared **public** IP address (e.g. 71.144.14.150).

- IP address of **IP Relay Server** is **71.144.14.150**.
- Private IP addresses of network PCs are: 192.168.0.2, 192.168.0.3, 192.168.0.4

After the configuration of the "port forwarding" at **IP Relay Server**, to connect with 192.168.0.2:1024 from Guest PC's web browser:

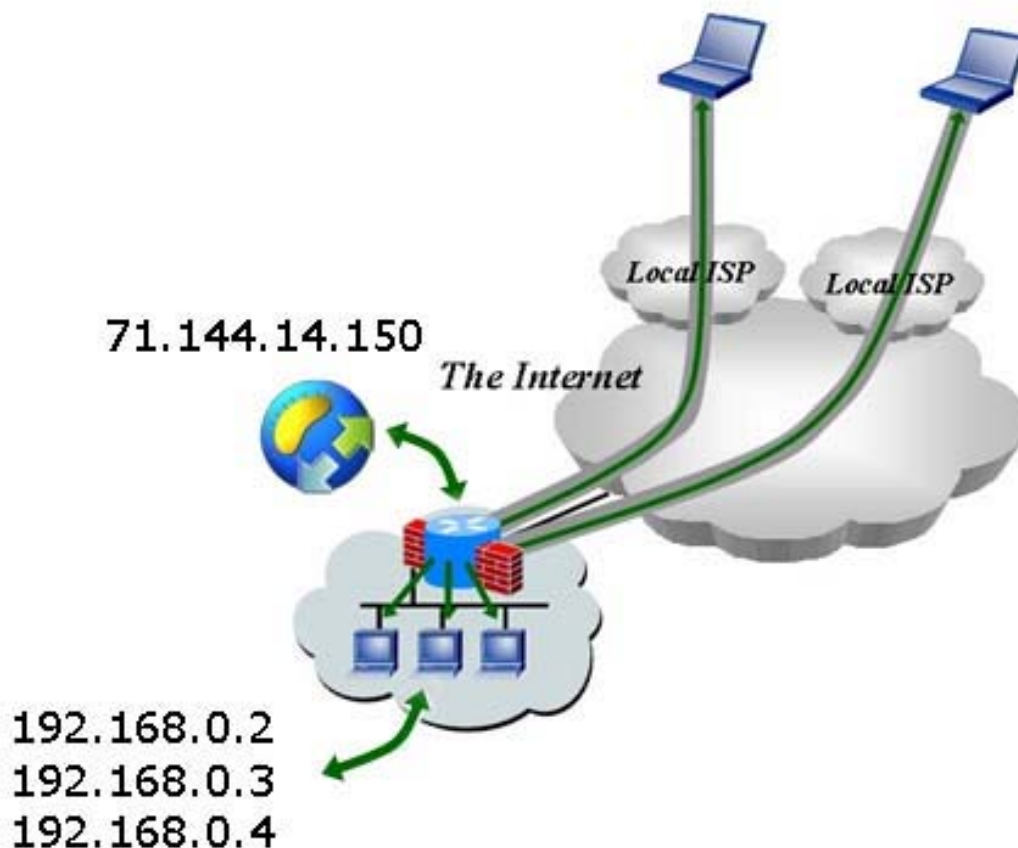
**http://71.144.14.150:81**

The next actions will take place:

- Web browser will connect to a router IP address (71.144.14.150) port (**81**)
- **IP Relay Server** will automatically forward all traffic to target machine IP address (192.168.0.2) port (**1024**).

In such way you can control machine which is located in the closed private network via Internet.

**Figure 1.3** "ME Cluster - IP Relay Server", IP "Forwarding"



## How Does IP Relay Server Work?

**IP Relay Server** has three sections, Program, Control and Info/Exit. Set server IP address, ports, and build your IP forwarding communication in just few seconds. You could also start IP Relay Server or stop it immediately at any time.

**Figure 1.4** Section-1, Program-Main

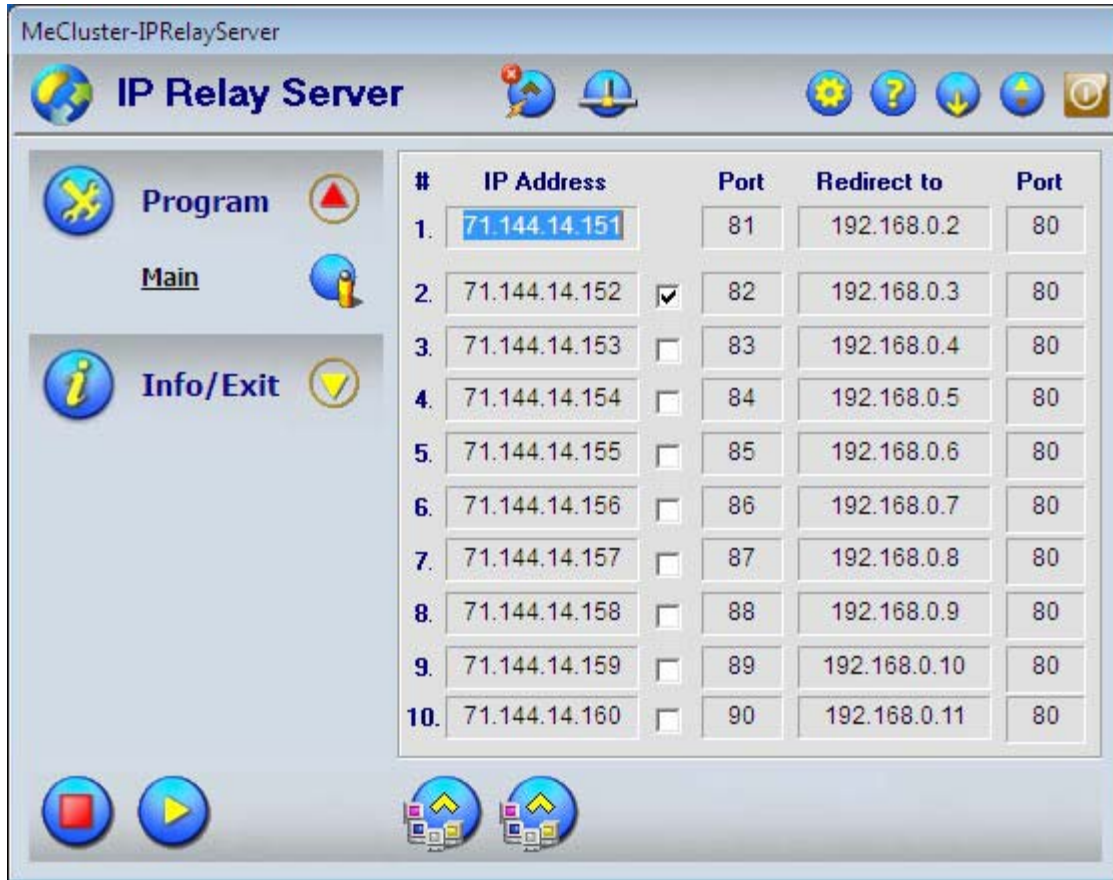
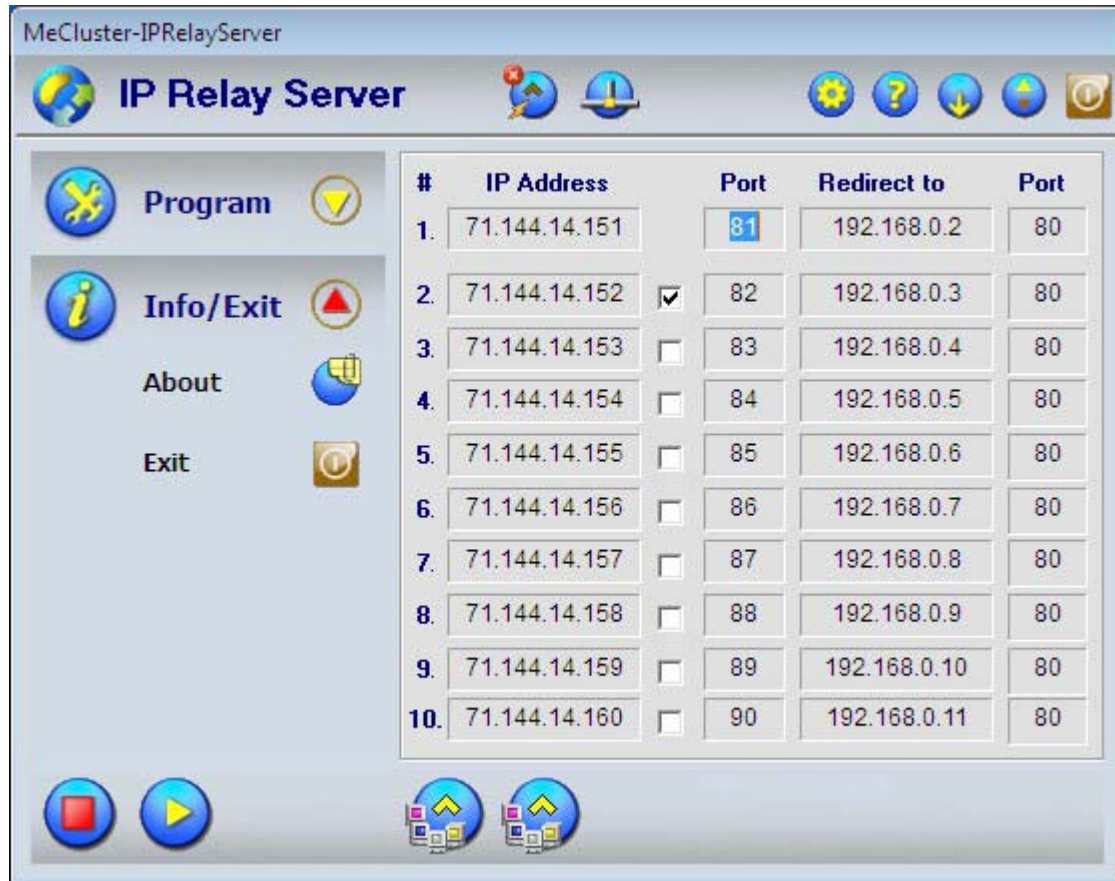


Figure 1.5 Section-2, Info/Exit–About and Info/Exit–Exit



## Auto Message Box

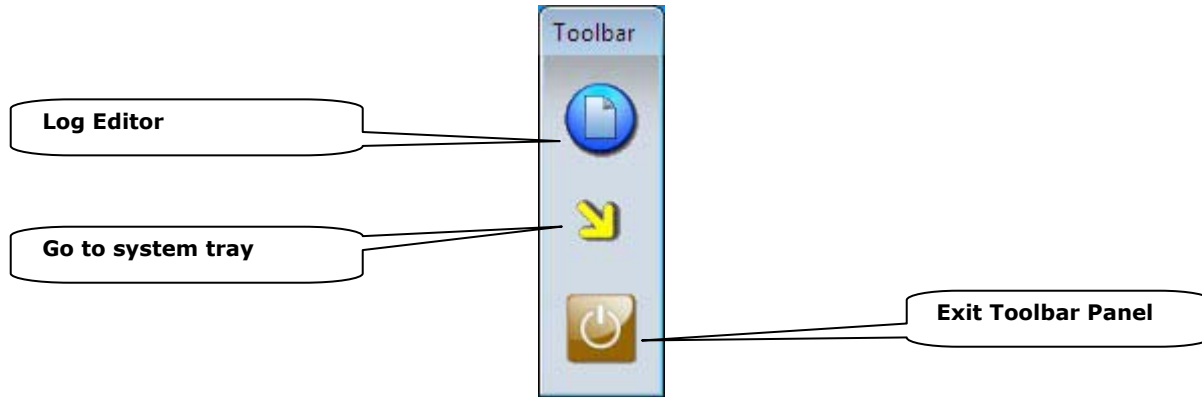
With IP Relay Server, any information will be appeared with timer message box. Message box will disappear in few seconds.

Figure 1.6 Timer message box



## Toolbar - Tools

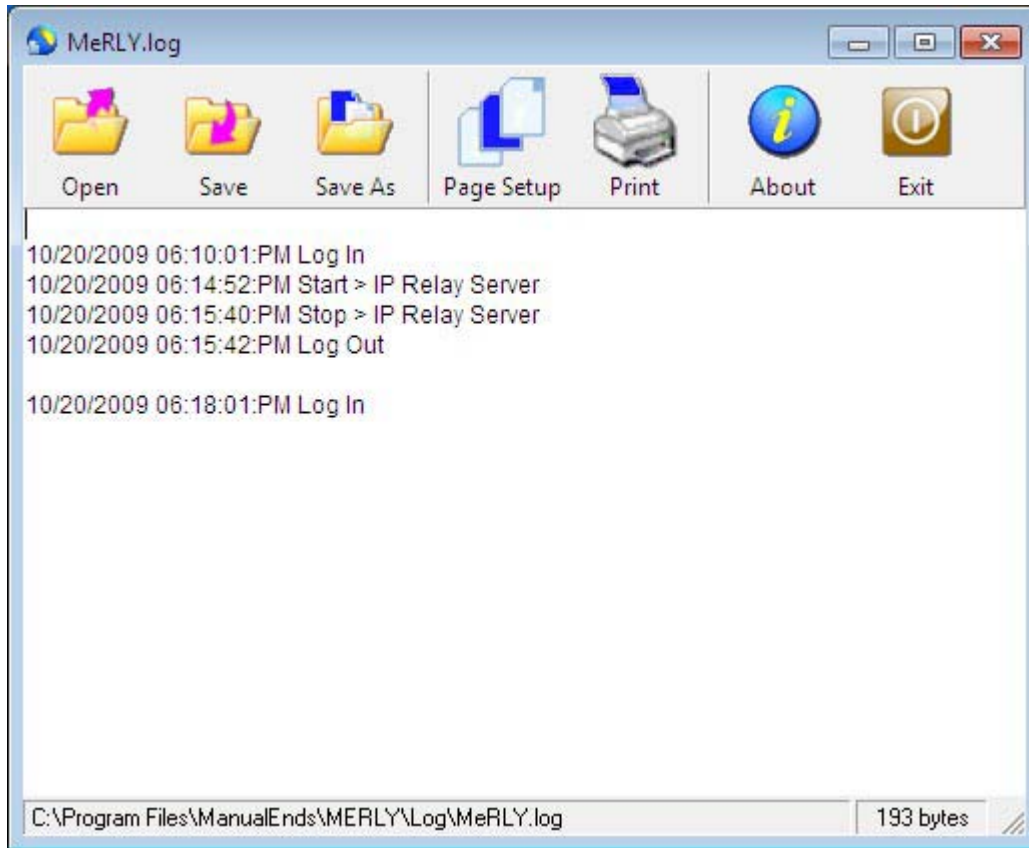
**Figure 1.7** Toolbar Panel – Tools



# Log Editor

The Log Editor tool allows you to edit .LOG file.

**Figure 1.8** Log Editor tool



# 2. Getting Started

This chapter describes the system requirements for the IP Relay Server software and contains installation instructions.

## System Requirements

Make sure you have the following minimum components in place before you attempt to install and use IP Relay Server:

- Pentium class PC running at 266 MHz or faster
- 128 MB RAM (256MB recommended)
- Windows 7/Vista/2008/2003/XP with .NET 2.0, or later
- 20 MB of local hard disk space
- Another 15 MB (or more) free disk space (depending on how much data you intend to log to the internal database)
- Your computer must have Network card and TCP/IP installed and functioning

# Install IP Relay Server

## CD

- Before you install IP Relay Server, make sure you have shut down all applications.
- Insert the IP Relay Server compact disc in the CD-ROM drive.
- Use the appropriate command in your operating environment to run the setup program, which is available in the root directory on the compact disc.
- Select Read Me for update information.
- Select **Program Installation**. (For All Windows) or **Program Installation (2003/XP/2008/Vista/7)**. (For Windows 2003/XP/2008/Vista/7).
- Follow the setup instructions on screen.

## Download from Internet ([www.manualends.com](http://www.manualends.com))

- Before you install IP Relay Server, make sure you have shut down all applications.
- Select **MERLYvr2X.exe (2003/XP/2008/Vista/7)**.
- Follow the setup instructions on screen.

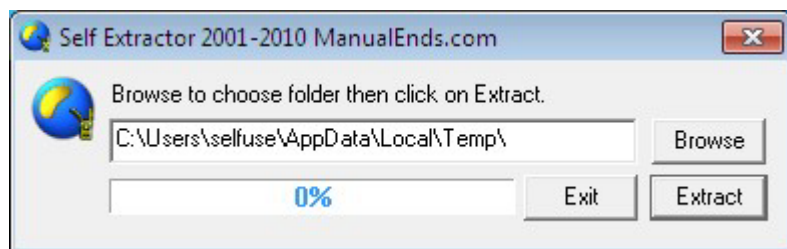
### Note:

**MERLYvr2X.exe** is for English Operation System

## Installation under Windows 2003/XP/2008/Vista/7

- The **MERLYvr2X.exe** is Self-Extracting Archive program developed by ManualEnds Technology.
- For Vista and Windows 7, please select program icon, Click on Mouse **Right** Button and select "**Run as Administrator**".

**Figure 2.1.1** ManualEnds Self-Extracting Archive program



- Click on the **Browse** path to extract setup files for Installation.
- Select the destination path or input path name as following: (Default: Temp\ directory of your Windows Operation)
- Click on the Extract button to start unzip the files.
- It will take few seconds to unzip all files to the directory.
- When completed the unzip files, the Start program screen will start automatically.

**Figure 2.1.2** ManualEnds Start program screen



- When completed loading files, the Setup program screen will start automatically.

**Figure 2.1.3** ManualEnds Setup program screen

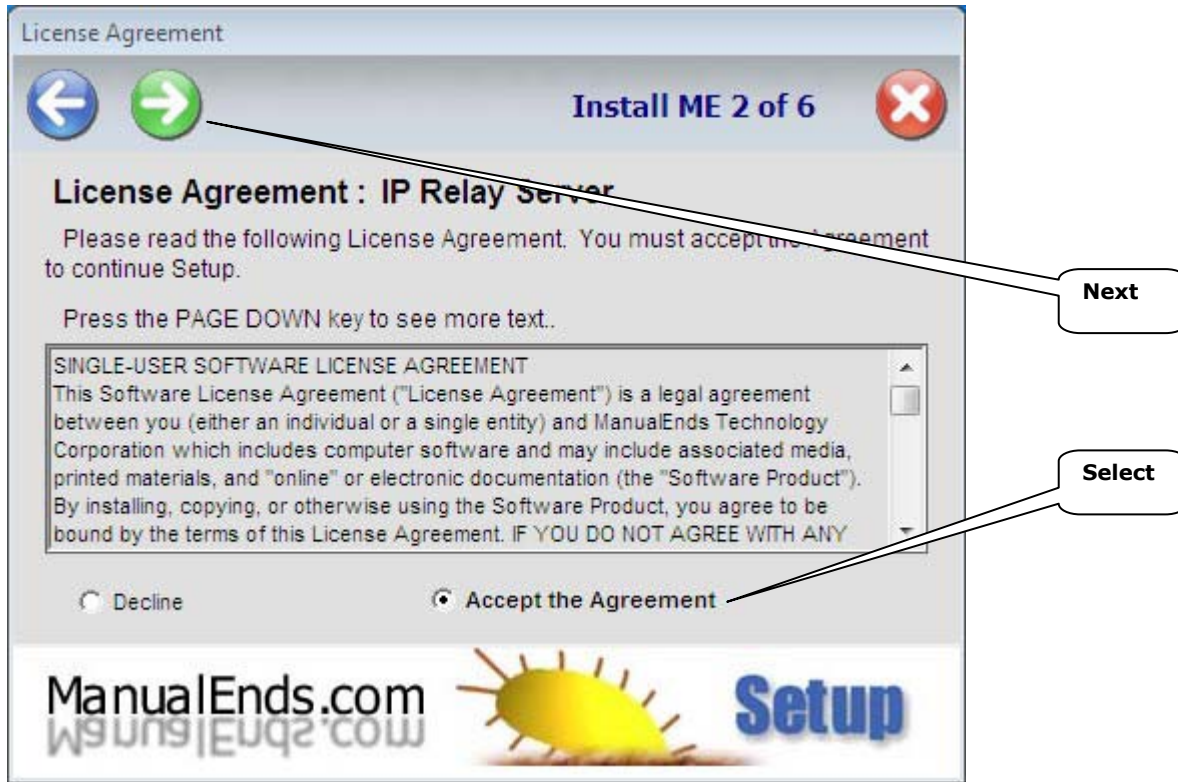


(Note: If Setup program screen could not start automatically, please close all Anti-Virus/Firewall programs and try it again.)

- Please read **ReleaseNote.htm** file for additional information about IP Relay Server.

- **Read** License Agreement and select **Accept the Agreement** for next step. The Next button will be enabled for Click on.

**Figure 2.1.4** Read and select “Accept the Agreement”



- Select the Destination Directory for IP Relay Server (Default: **Program Files\ManualEnds\MERLY\**).
- Select the destination path or input path name. The setup program will create directory automatically.
- Select the program Folder name (Default: **MERLY**)
- Confirm the data and Click on “Next” to start copy files.
- It will take few seconds to copy all files to your system.
- Please **Wait** setup program crates program group and then Click “Exit” to finish the setup program.

- The program group will contain two program files, Uninstaller.exe (Uninstall IP Relay Server) and MERLY.exe. (Check the location of MERLY.exe and Uninstaller.exe are inside the program task bar).

**Figure 2.1.5** Setup completed



# Starting IP Relay Server

When you run the Setup program, it allows you to place the program items in an existing program group or create a new program group and new program items for IP Relay Server in Windows. You are then ready to start IP Relay Server from Windows.

## To start IP Relay Server from Windows

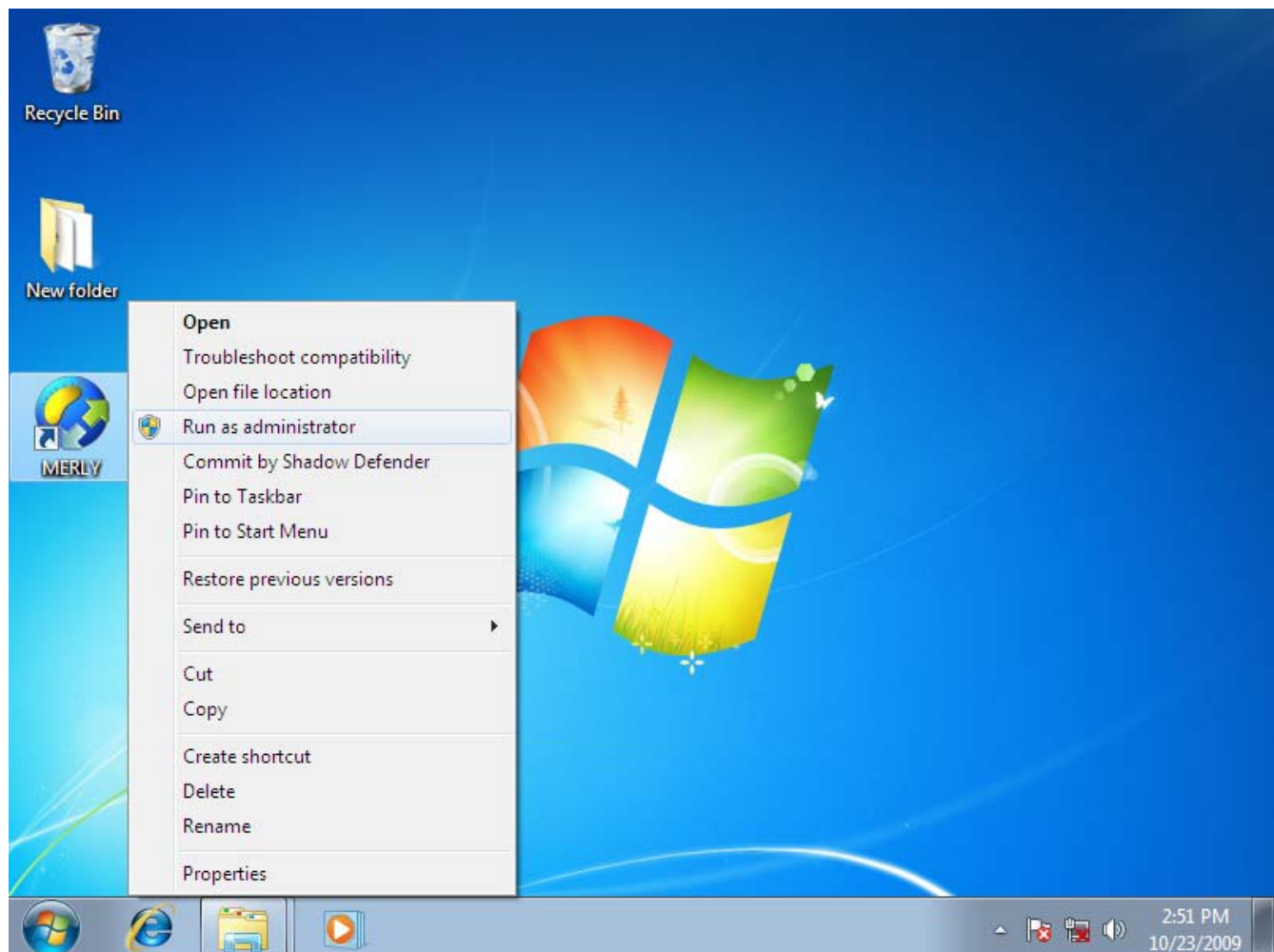
- Click **Start** on the Task bar
- Select **Programs**, and then **MERLY**.

–or–

Click **Start** on the Task bar. Select **Programs**. Use the **Windows Explorer** to find the MERLY executable file (MERLY.exe).

- Double-click the MERLY icon.
- For Vista and Windows 7, please select program icon, Click on Mouse **Right** Button and select "**Run as Administrator**".

**Figure 2.2.1** Run as Administrator

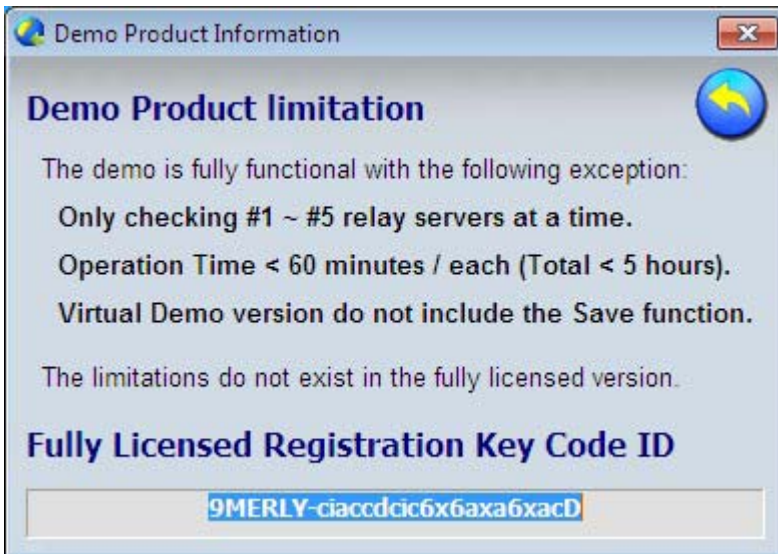


You can also create a shortcut to MERLY, and double-click the shortcut. When you first start MERLY, you see the welcome screen of ManualEnds Technology, as shown in Figure 2.2.2.

**Figure 2.2.2** The welcome screen of IP Relay Server



**Figure 2.2.3** Demo version Limitation



**Note:**

Once you have purchased a product, ManualEnds will email you a "Fully Licensed Version".

# Development Environment

The IP Relay Server integrated development environment consists of the following elements.

**Figure 2.2.4** IP Relay Server Development Environments



: "Start", to start IP Relay Server immediately.



: "Stop", to stop IP Relay Server immediately.

## Program Section – Main-System

There are Twenty (20) “Virtual Tunnel” Ports and could be set “Open one tunnel, two tunnels, three tunnels... or twenty tunnels” at same time.

IP Address:

Setup “Main IP Address” for IP Relay Server (Must be a “**Real**” IP Address)

Port:

Open ports for IP Relay Server (Such as, http://71.144.14.151:**81**)

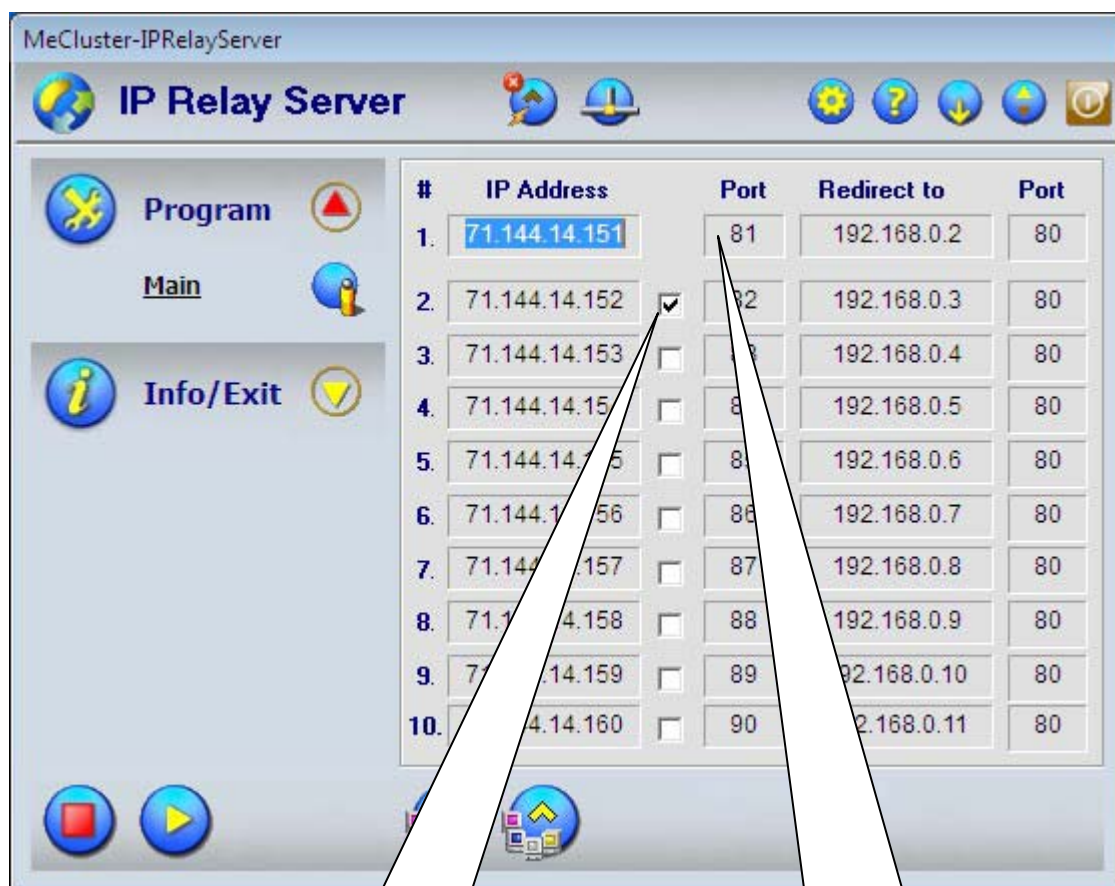
Redirect to:

Setup Virtual (Private) network PC IP Address

Port:

Mapping ports for Virtual (Private) network PC (Such as, http://192.168.0.2:**80**)

**Figure 2.2.5** IP Relay Server, Main-System Section

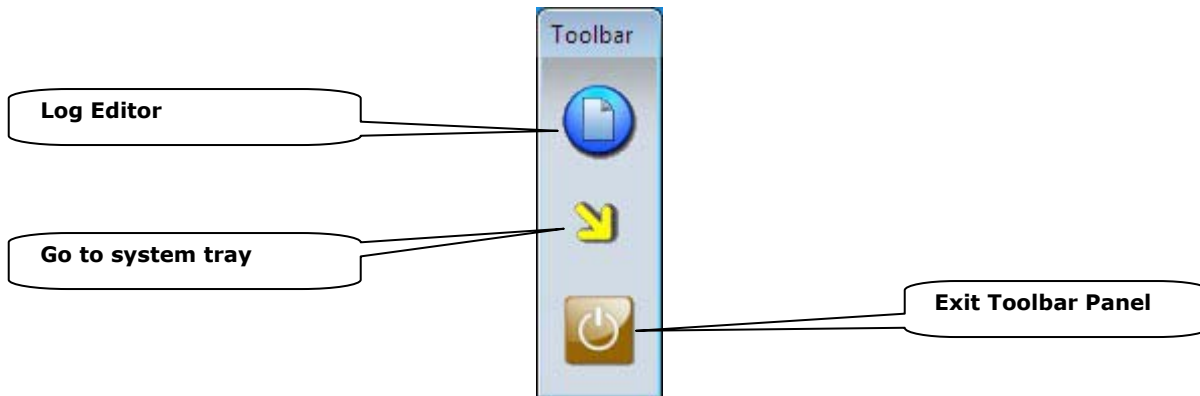


Select to enable this tunnel, #2

First tunnel #1 always Open

## Control Section – Toolbar

Figure 2.2.6 Toolbar Panel – Tools



### **Program go to system tray**

Locate IP Relay Server at system tray and restore IP Relay Server by **Right** Click on mouse button, the popup manual window will show up.

**Figure 2.2.7** IP Relay Server resides in the system tray. Press **Right** mouse button for popup windows



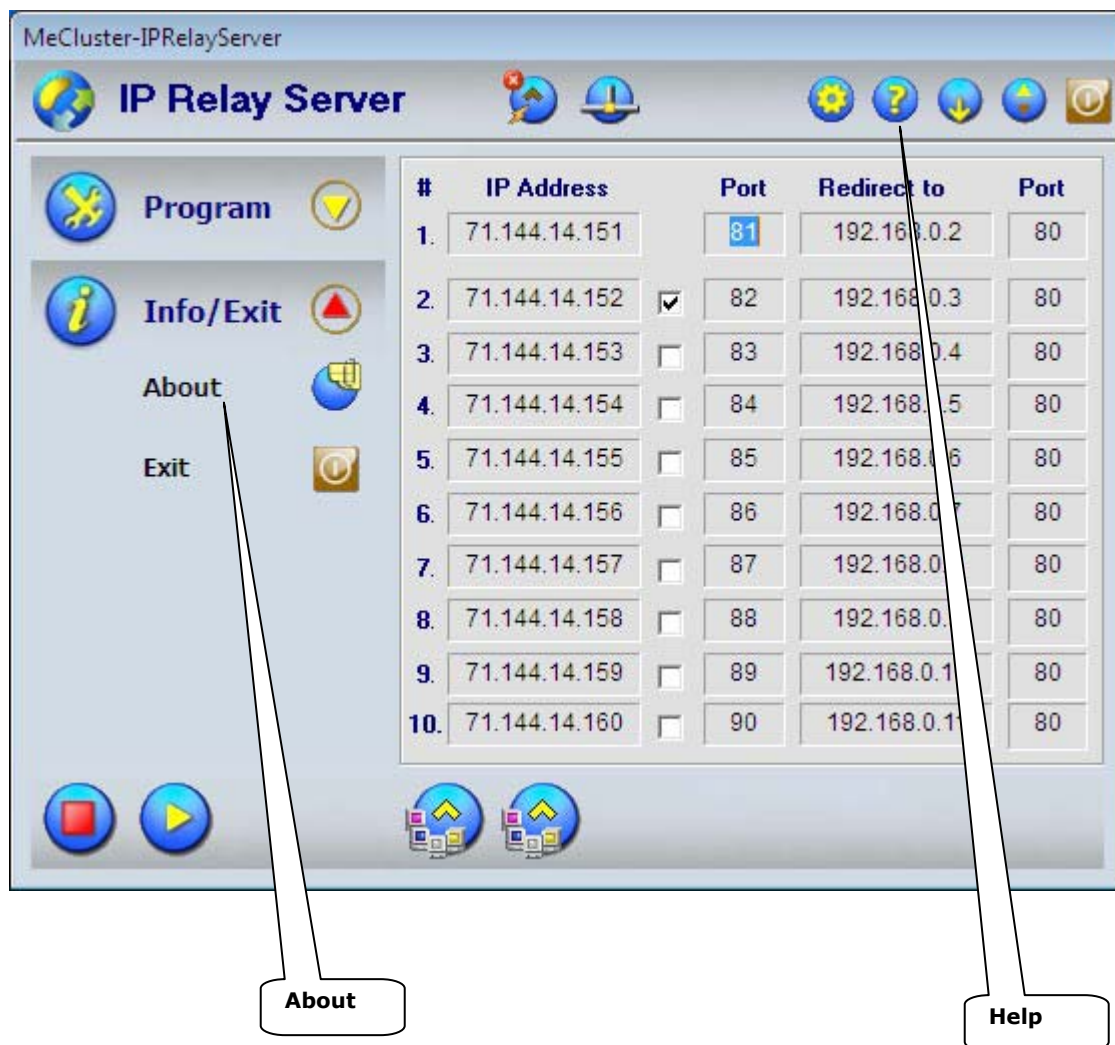
## Info/Exit Section

### Help, About

During the developing stage, just Click on Help button, you could check any rules, data limit, or error message for your reference.

The Registration Box is located at “About” button. The Registration Box will be disappeared during program start up after input your Registered Key Code which will send to you from ManualEnds Technology.

**Figure 2.2.8** Help and About



# Auto Mode

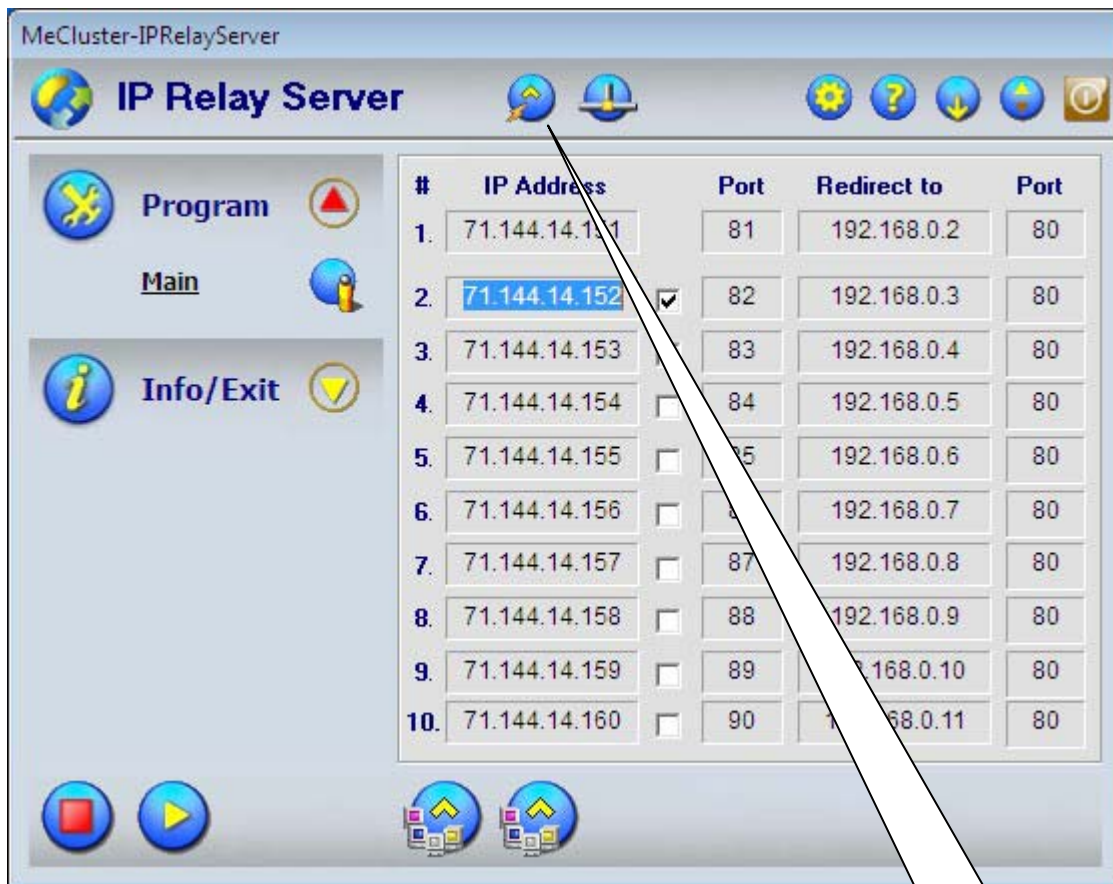


: "Enable Auto Mode"  
Enable IP Relay Server RUN automatically when computer power on.



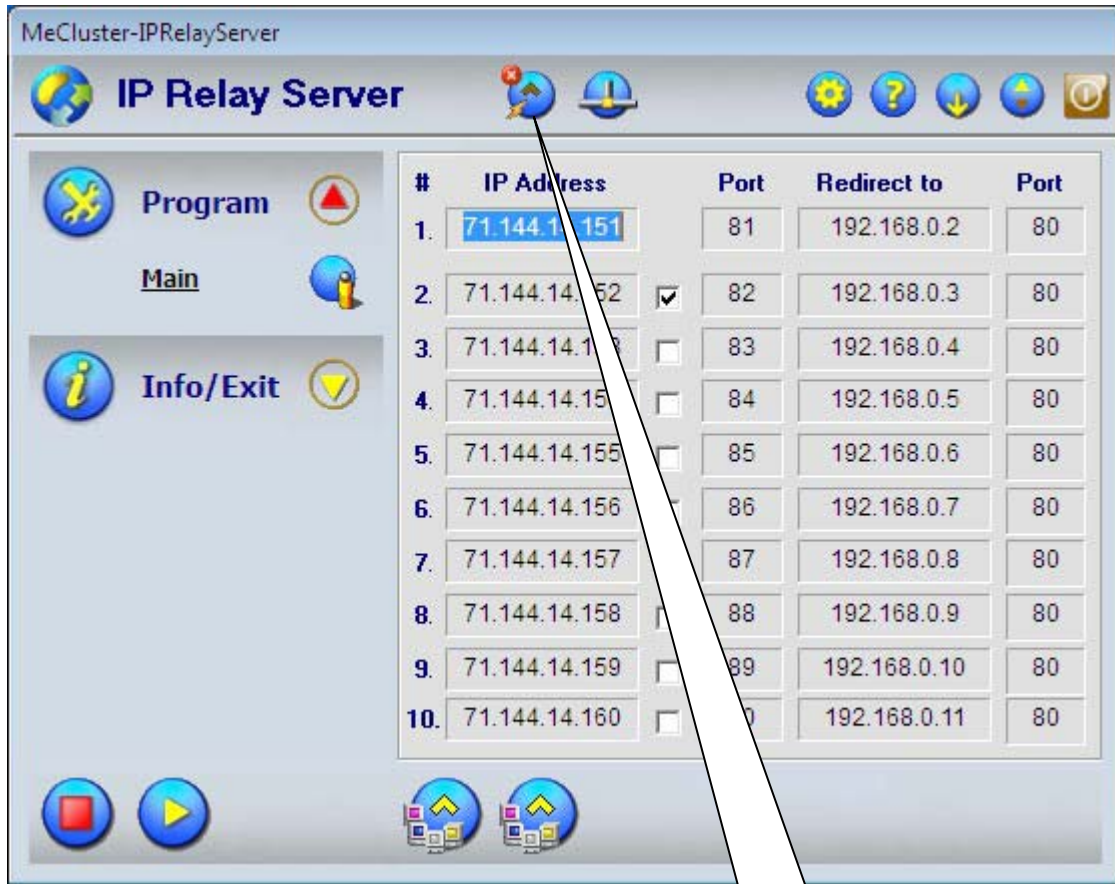
: "Disable Auto Mode"  
Disable Auto Mode (Default: Disable).

**Figure 2.2.9** Enable the Auto Mode could let **IP Relay Server** executing at start up when you power on your computer



Enable Auto Mode

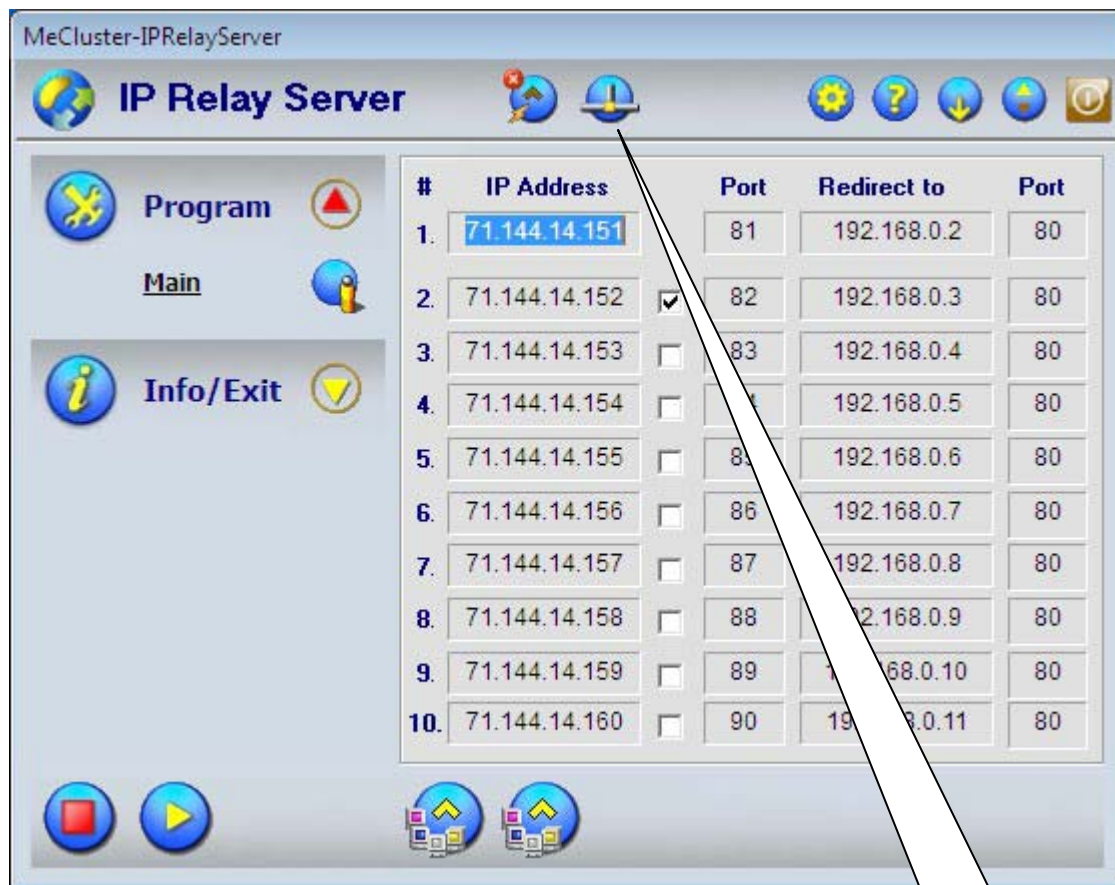
Figure 2.2.10 Disable Auto Mode



# My IP Address - TCP/IP Find IP Addresses

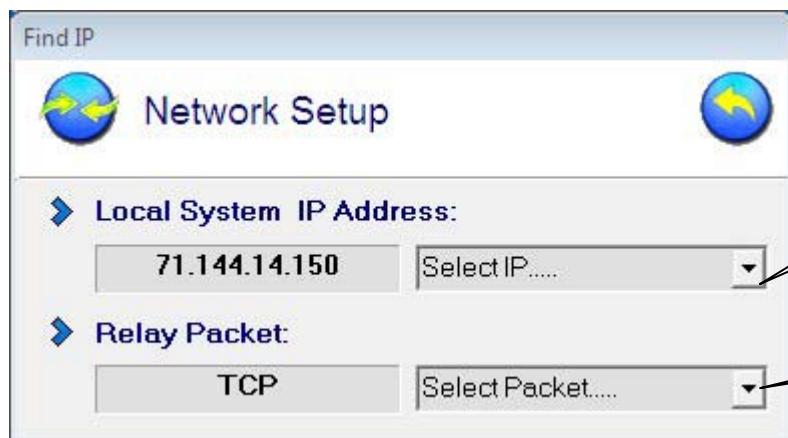
Use My IP Addresses tool window to get system IP (First tunnel).

Figure 2.2.11 Find IP address



My IP Address

Figure 2.2.12 "My IP Address" tool



Select IP Address

Select TCP or UDP Packet Relay

# Your First IP Relay Forwarding

## Step One: Check IP address

You could check your IP address at the following link:

<http://www.manualends.com/support/program/CheckIP/showip.htm>

It will find PC real internet IP address. This will work even if Host PC behind a firewall, proxy, ICS, router, network, broadband, or dial-up.

Your **IP Relay Server** "Main IP address" should **NOT** in the following range:

### **Private IP Address.**

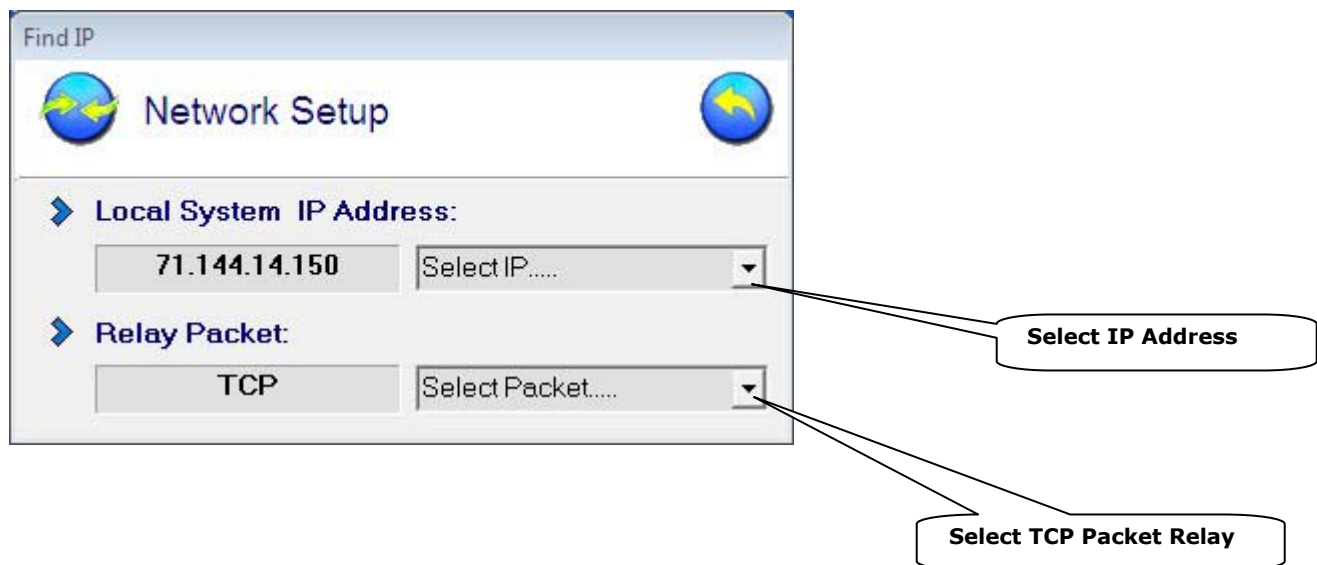
The three address ranges reserved for private address space are:

10.0.0.0 - 10.255.255.255

172.16.0.0 - 172.31.255.255

192.168.0.0 - 192.168.255.255

**Figure 2.3.1** "My IP Address" tool



## Step Two: Configuration

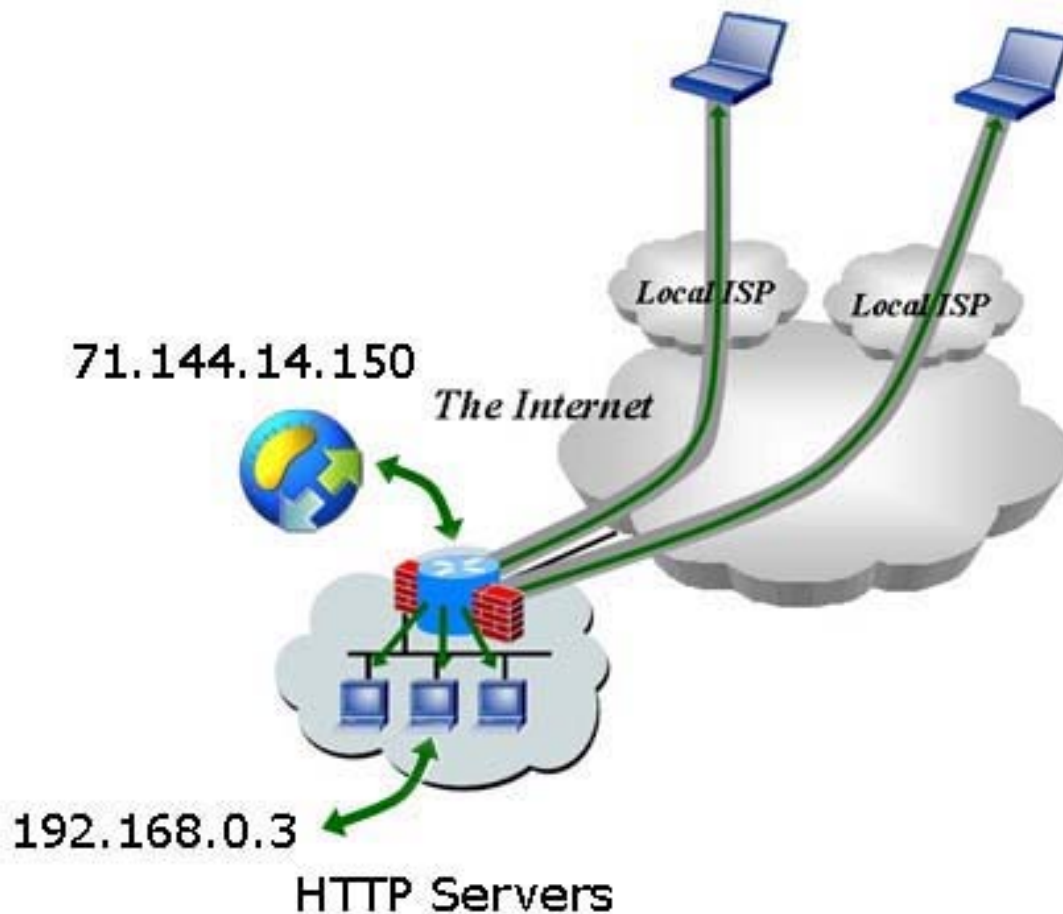
There is a local network with three *HTTP Servers* PCs and one PC with **IP Relay Server**. **IP Relay Server** will provide three "Virtual Tunnel" ports for *HTTP Servers*. Guest PCs are located anywhere in the Internet, but not in the private network.

- Public IP address of IP Relay Server is **71.144.14.150**.
- Target (Redirect to) PC with a *HTTP server PC* at **192.168.0.3** port **80** open.

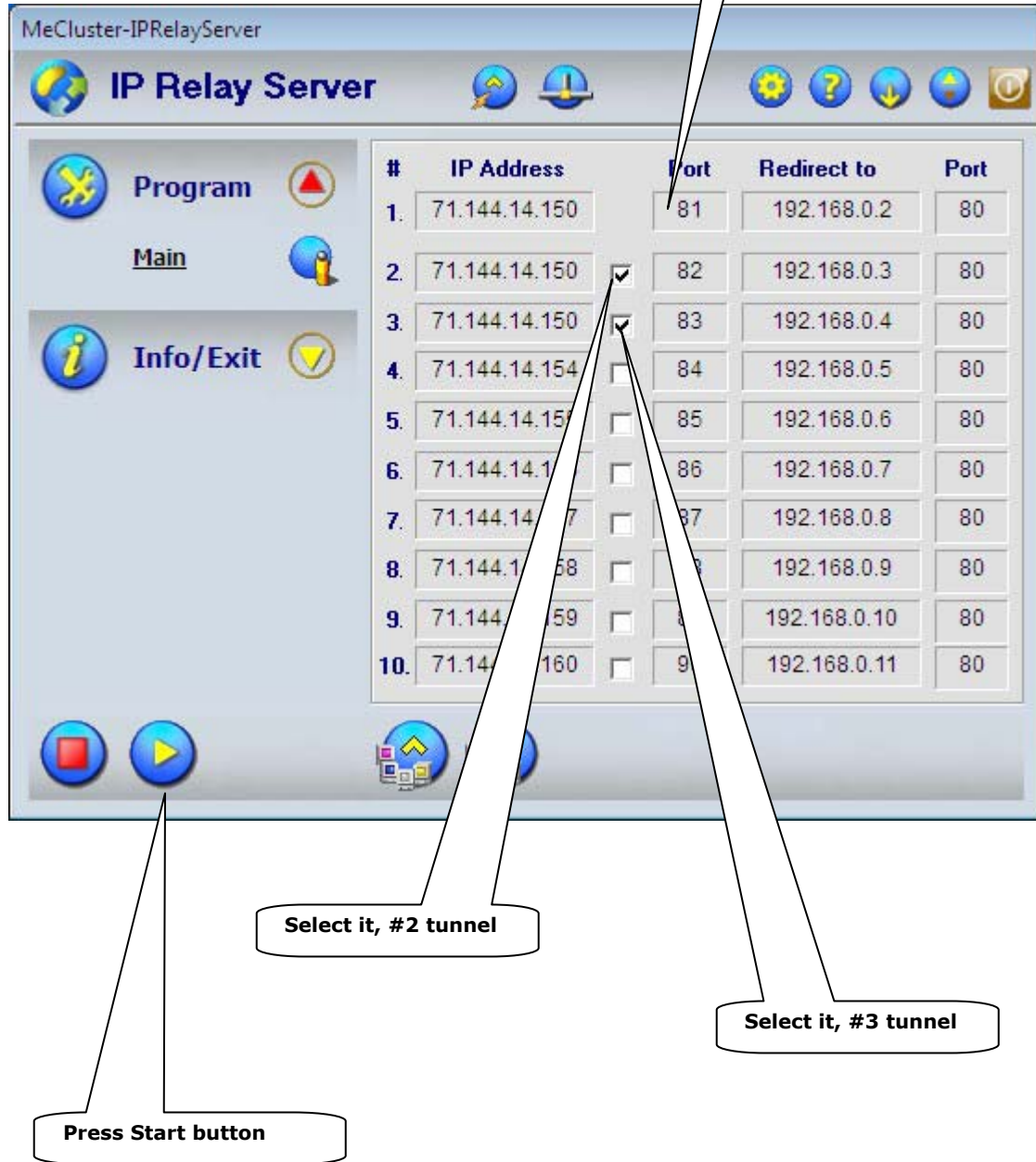
In this case the configuration of the "port forwarding" can be the following:

#1 Tunnel	71.144.14.150: <b>81</b> --> 192.168.0. <b>2</b> : <b>80</b>
#2 Tunnel	71.144.14.150: <b>82</b> --> 192.168.0. <b>3</b> : <b>80</b>
#3 Tunnel	71.144.14.150: <b>83</b> --> 192.168.0. <b>4</b> : <b>80</b>

**Figure 2.3.2** IP Relay Server, Configuration



**Figure 2.3.3** IP Relay Server, Setup for HTTP Servers



## Windows Security Alert

Allow MERelay (merelaytu1.exe, merelaytu2.exe, and merelaytu3.exe) to communicate on these networks:

Please select **Both** “Private networks,…” and “Public networks,…”..

Click on “Allow access”

**Figure 2.3.4** Windows Firewall Setting

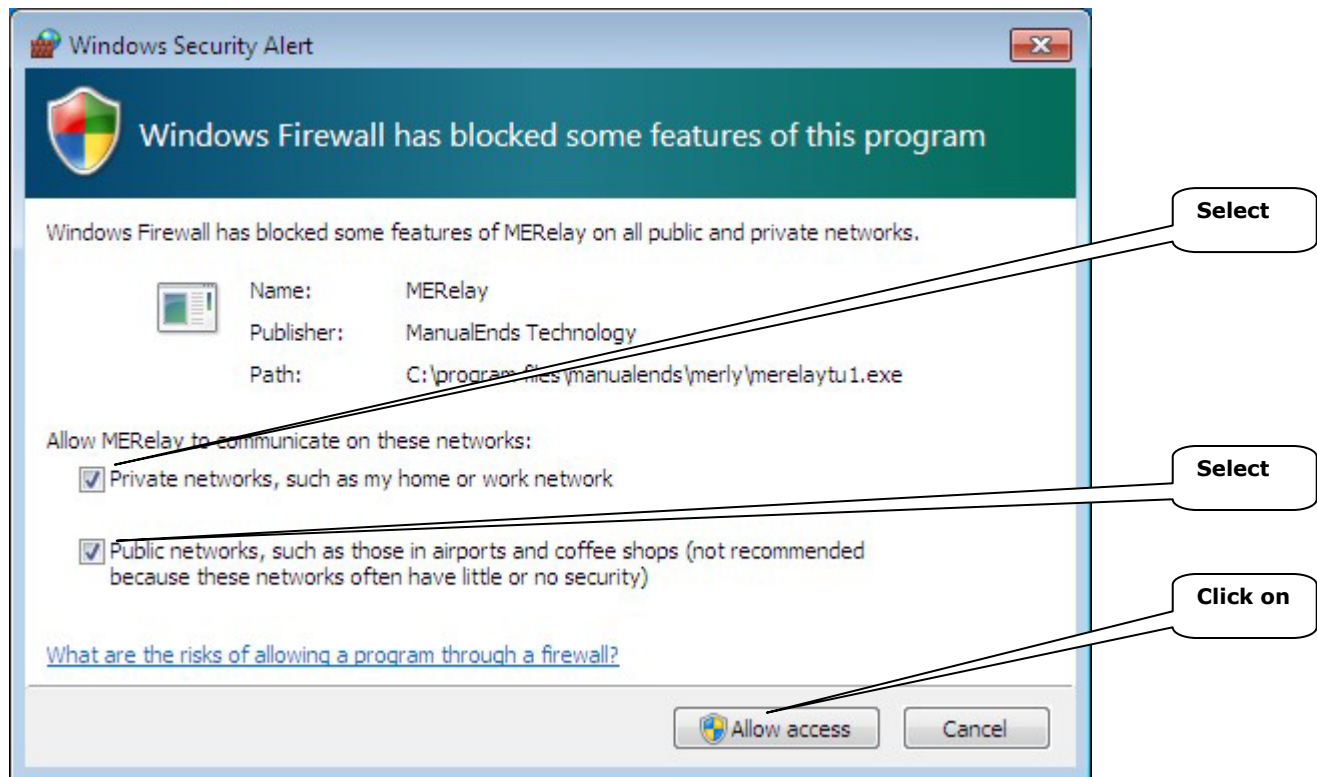


Figure 2.3.5 Windows Firewall Setting

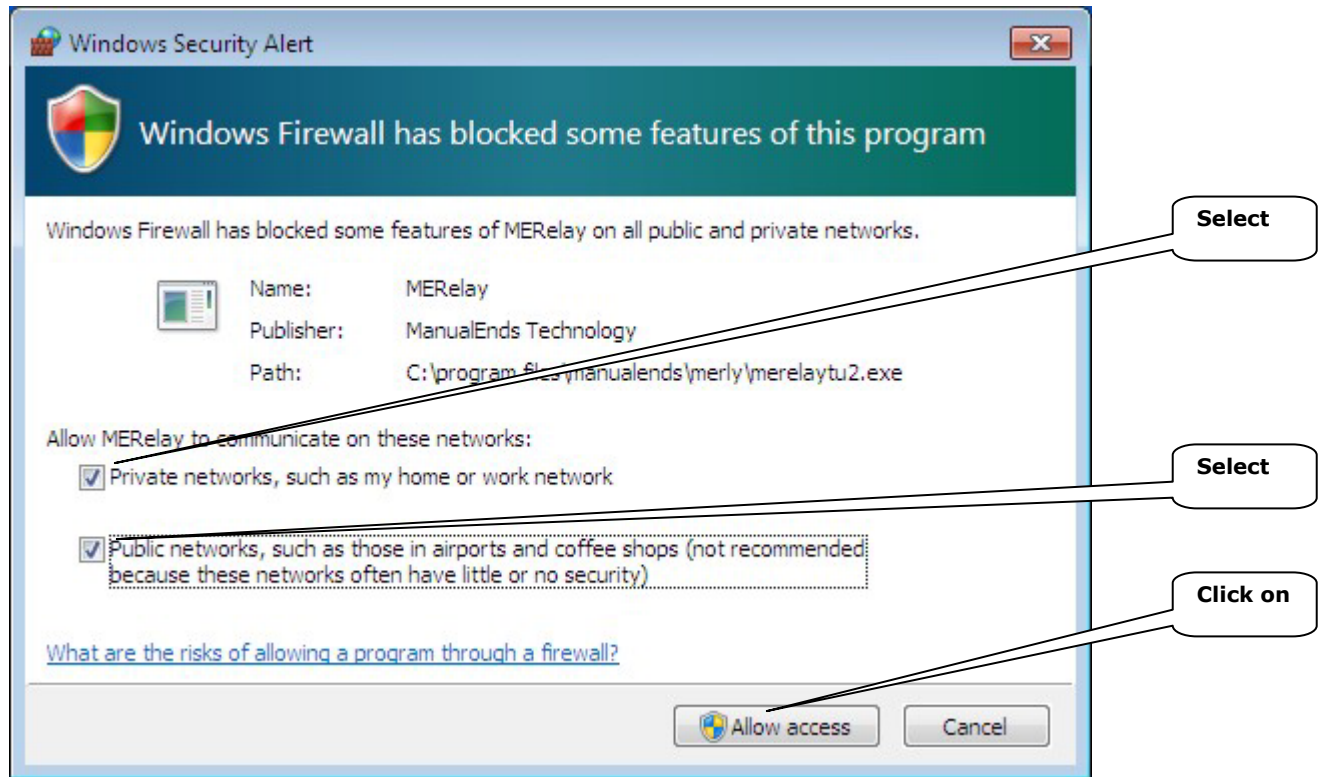
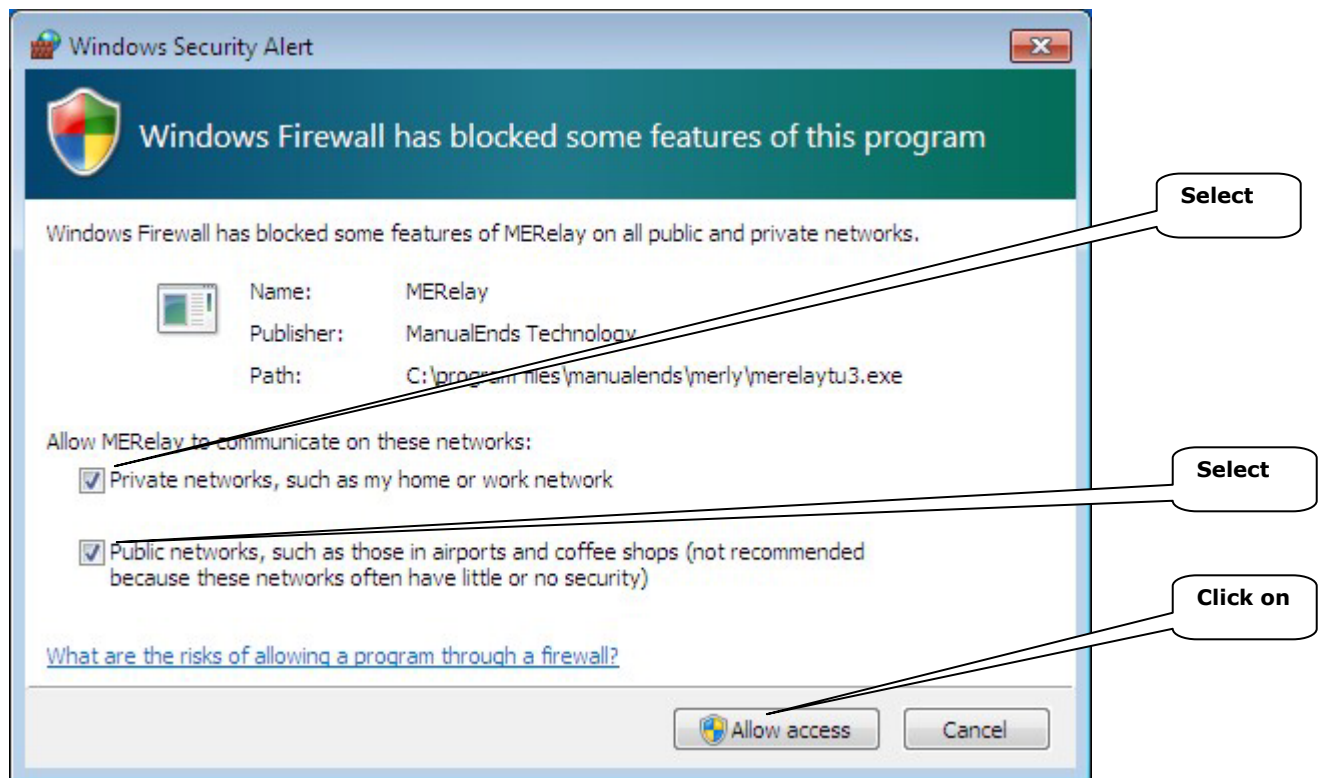


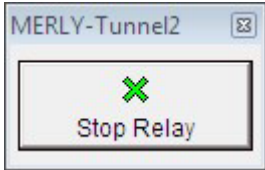
Figure 2.3.6 Windows Firewall Setting



**Figure 2.3.7** “Virtual Tunnel” #1



**Figure 2.3.8** “Virtual Tunnel” #2



**Figure 2.3.9** “Virtual Tunnel” #3



After the configuration of the "port forwarding" at IP Relay Server, to connect with 192.168.0.3:2048 from Guest PC's web browser please type:

**http://71.144.14.150:82**

The next actions will take place if everything is configured correctly:

- Web browser will connect to IP Relay Server IP address (71.144.14.150) port (**82**)
- IP Relay Server will automatically forward all traffic to target HTTP Server IP address (192.168.0.3) port (**80**).

In such way you can control machine which is located in the closed private network via Internet.

# 3 ■ Where to Go from Here

This section describes how to uninstall your IP Relay Server software, and introduces you to the demonstration processes and additional features included with your IP Relay Server software. It also includes information to help you contact ManualEnds Technology to learn more about IP Relay Server and other ManualEnds Technology Automation products.

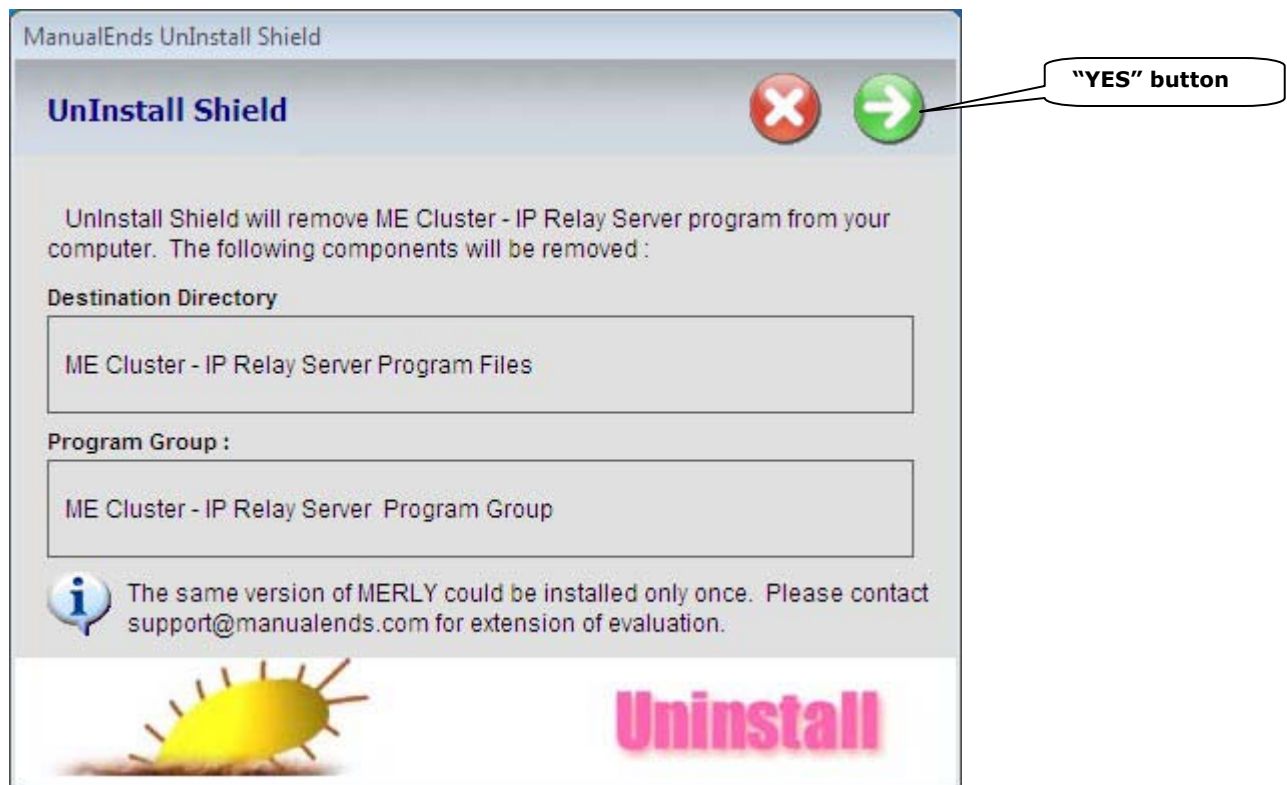
## Uninstalling ManualEnds IP Relay Server Software

To uninstall your copy of IP Relay Server, please select

**Start » Programs » MERLY » Uninstall IP Relay Server**

, and follow the on screen directions. When the uninstall process is completed, you **might** receive a message that some components could not be uninstalled. These files will be located in your IP Relay Server directory. You can delete these files manually if you choose.

**Figure 3.1** Click on **Yes** button to start “Uninstall” IP Relay Server program



## Feature on IP Relay Server

There are many more features in IP Relay Server than are addressed in this user guide. Some of the other major capabilities of IP Relay Server are the, file transfer, sequential process management, and Artificial Intelligent. Other features such as macro automation, advanced security across networks, and connectivity with other ManualEnds Technology software makes IP Relay Server very powerful software packages available on the market.

## Where to learn more about ManualEnds

### Automation Solution (Millipede PC – Supercomputer)

For more information about IP Relay Server and other ManualEnds Technology automation, and supercomputer products, visit the ManualEnds Technology web site at <http://www.manualends.com> .

You can also e-mail your questions to [support@manualends.com](mailto:support@manualends.com).

Your local ManualEnds Technology representative can supply information tailored to your needs. If you are not already in contact with a representative for your area, contact ManualEnds Technology at [support@manualends.com](mailto:support@manualends.com) to have your questions answered.

Thank you for using IP Relay Server.

### Worldwide Technical Support and Product Information

[www.manualends.com](http://www.manualends.com)



# A ■ Technical Support Resources

This appendix describes the comprehensive resources available to you in the Technical Support section of the ManualEnds Technology Web site and provides technical support telephone numbers for you to use if you have trouble connecting to our Web site or if you do not have internet access.

## ManualEnds Web Support

To provide you with immediate answers and solutions 24 hours a day, 365 days a year, ManualEnds Technology maintains extensive online technical support resources. They are available to you at no cost, are updated daily, and can be found in the Technical Support section of our Web site at

[www.manualends.com](http://www.manualends.com)

### ***Software-Related Resources***

- **Example Programs Database**—a database with numerous, non-shipping example programs for ManualEnds Technology programming environments.
- **Tested Software Library**—an IP Relay Server report lists with tested results of other application software.

### ***Hardware-Related Resources***

- **Application Database**—a database with application note for ManualEnds Technology automation and supercomputer systems.

### ***Online Problem-Solving and Diagnostic Resources***

- **Troubleshooting**—step-by-step guides lead you through common problems and answer questions about our entire product line.
- **Product Help**—a comprehensive, searchable library of the latest editions of ManualEnds Technology hardware and software product helps.
- **Application Notes**—a library addressing specific topics such as windows environment, developing your own automation solution, and applications between platforms and operating systems.

## Worldwide Support

You can access these Web sites from [www.manualends.com](http://www.manualends.com). If you have trouble connecting to our Web site, please contact the source from which you purchased your ManualEnds Technology product(s) to obtain support.

# **B. ■ Error Message**

This appendix describes the Error Message and the solution during Installation, and Uninstall program. If any unknown Error Message appears, please inform ManualEnds Technology imminently.