This TSN describes how multiple NIC2 or NIC3 cards in a local area network can be setup so that SES software can communicate with SES products over the Internet. The method uses one external IP address with router port forwarding to NICs configured with different port numbers.

DISCLAIMER: SES offers this TSN for convenience only and cannot provide support or guarantee the relevance of the information contained in this TSN in any given situation. For 3rd party equipment questions, please contact the 3rd party manufacturer.

Overview

The method described in this TSN extends the concept of programming a single panel over the internet (described in TSN-019) to programming ***multiple*** panels over the internet.

IF you have not done so recently, please review to TSN-015 and TSN-019 to refresh the terminology and techniques described before proceeding with this TSN. TSN-015 describes how to do basic setup of a NIC2 or NIC3 card, and TSN-019 extends this by showing how to setup port forwarding to a single NIC2 or NIC3 using the public or public-static IP address over the internet.

For each NIC2 or NIC3, you will repeatedly do two things:

a) Set each NIC IP address to static and change the port number
b) Reserve the static IP address in the router
c) Setup port-forwarding
d) Test the setup

You will need the same router and PC web and browser requirements as TSN-019.

Example

It is easier to describe the setup by direct reference to an example. In this example we will assume three NIC2 or NIC3 cards (or a mixture of both).

For easier setup it is better to connect and power up the NICs, then run CPR Manager to see what IP addresses have been assigned by the router.

Procedure

Note: All NIC cards must already be connected to the network and powered up.

1) **Set each NIC IP address to static and change the port number. Run the CPR manager** software and click Search for Devices. When the search is complete, note down the IP addresses assigned to each NIC by the router against that MAC address. Below is a summary table of the addresses and port numbers for our three example NICs:

NIC2 or NIC3	CPR Manager Detected IP	Port (Currently Default)
00-20-4A-BA-BE-30	192.168.1.109	(still default at 10001)
00-20-4A-BA-A3-79	192.168.1.110	(still default at 10001)
00-20-4A-A9-48-6E	192.168.1.111	(still default at 10001)

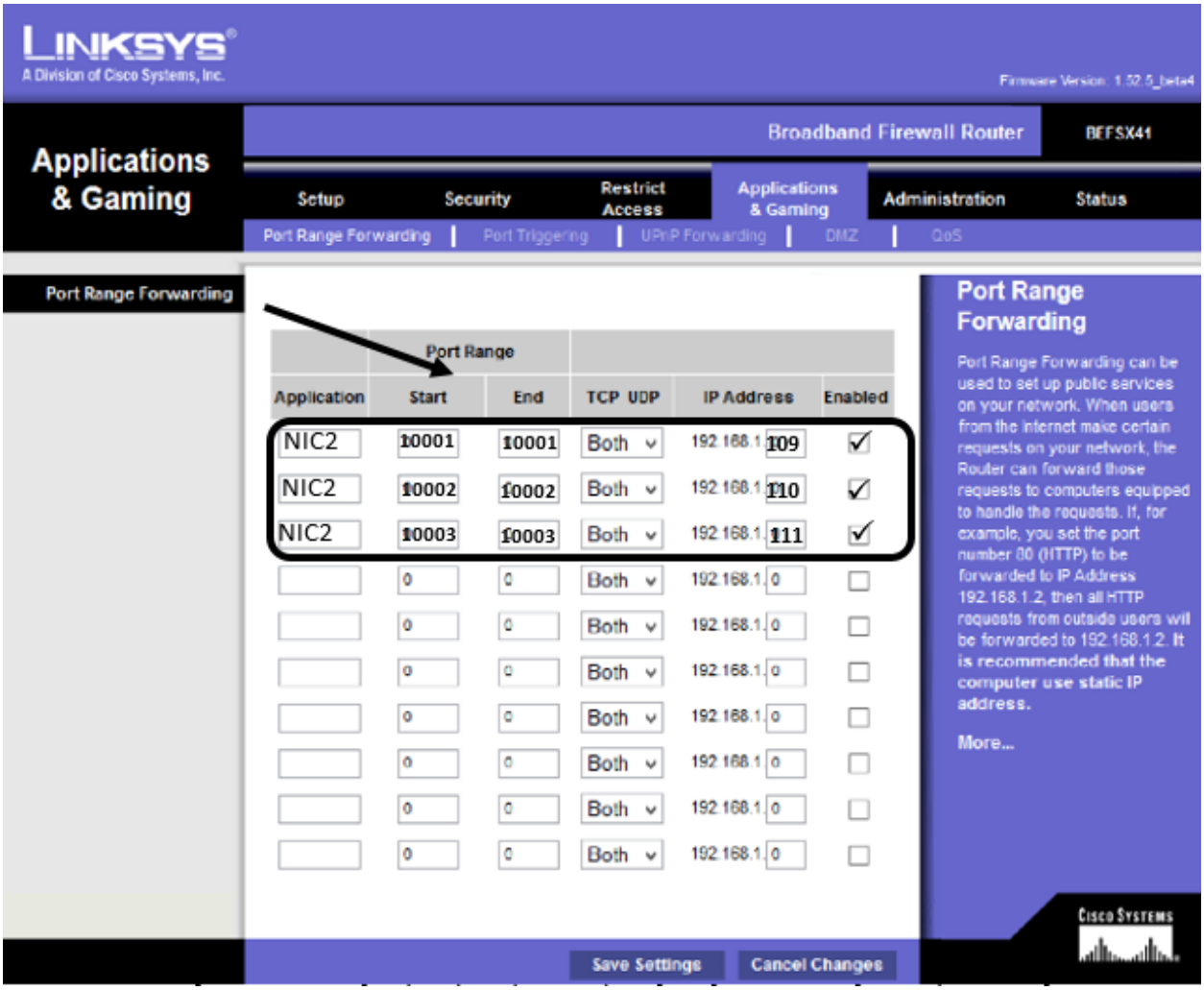
Refer to TSN-015. **For each NIC you wish to setup**, connect to each NIC in turn from CPR Manager and on the webpage click Connection to assign each port number. Refer to TSN-015 pages 4-6 also to configure the NIC2 as a static IP. Once complete for each NIC2, click Apply and allow the device to restart. The table below shows the planned changes:

NIC2 or NIC3	Set Static IP to:	Set Port to:
00-20-4A-BA-BE-30	192.168.1.109	10001
00-20-4A-BA-A3-79	192.168.1.110	10002
00-20-4A-A9-48-6E	192.168.1.111	10003

2) **Reserve the NIC2 or NIC3 Static IP addresses in your Router**
Refer to TSN-019 page 4 and reserve the IP addresses for each NIC's MAC address.

3) Setup Port Forwarding

Refer to TSN-019 for different router examples of port forwarding, but please be aware these examples are for illustration only.

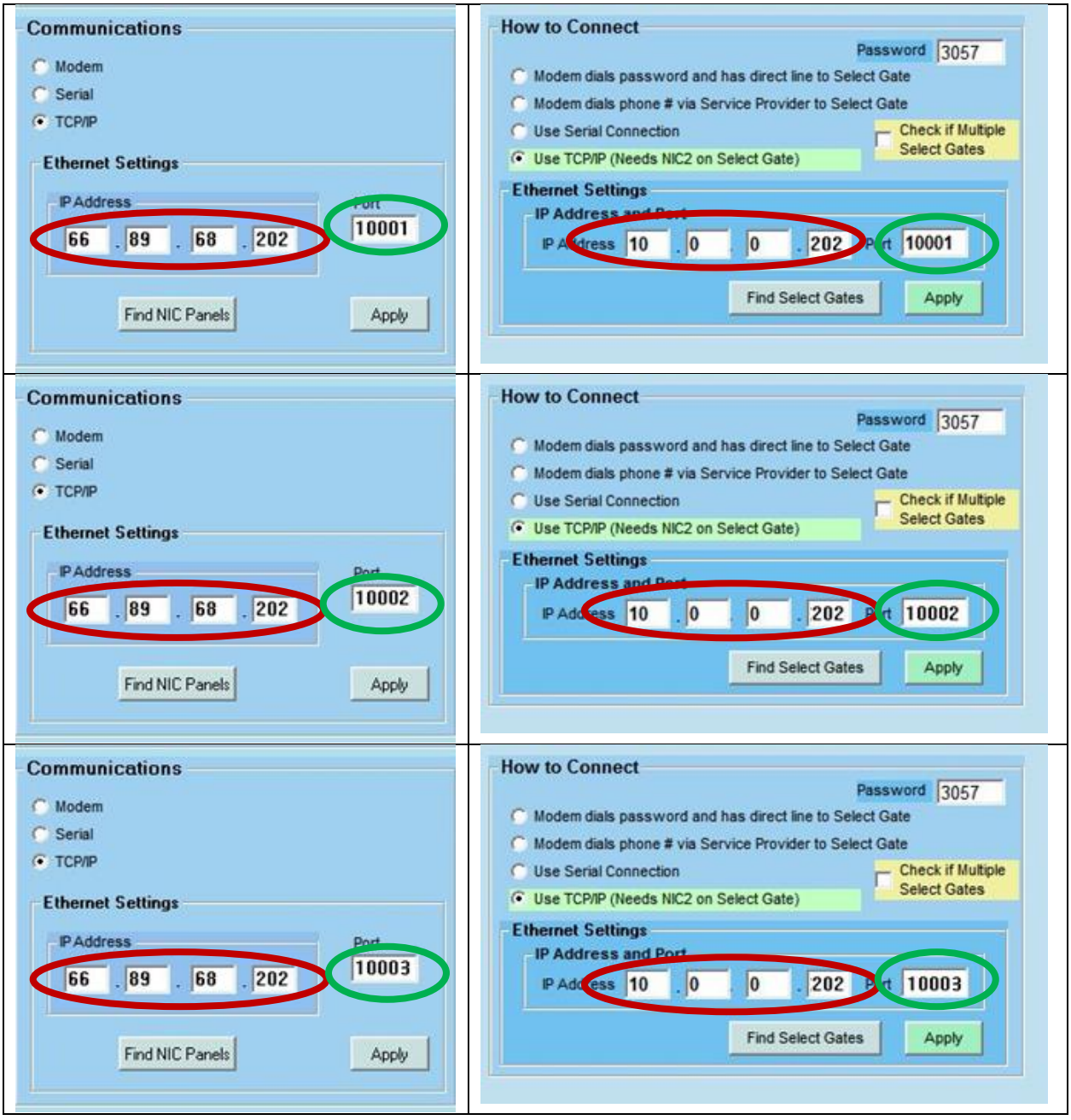


Note how the static IP addresses of our NICs are being set as the “targets” for communications.

Referring to TSN-019, you will have already obtained your static or static-public IP address e.g.:

66.89.68.202

This router table above is basically telling the router that when any communications traffic received at the external IP address (in this case 66.89.68.204) is received at port 10001, direct those communications to local IP address 192.168.1.109. Similarly, redirect traffic into port 10002 to local IP address 192.168.1.110, and so on. The router will take care of redirecting responses back out to the internet also.

4) Test the Setup

Two examples are below: one for Selcom software and one for Select Gate software. The principles are the same in both cases. To connect to each panel you will need to set the IP address (red ovals) to the static IP address of the router, and then set each individual port number (green ovals) as shown in the table below. Once ready, test the communication (Selcom Premium can use “Send Test”) to verify correct connection to each panel.