Accessing the Sysmac NJ across the Internet
Quick Start Guide

Remote PC

Internet

Plant Network

ROUTER

NJ-Series
Overview:

Allowing remote access to an Omron Sysmac NJ is a fairly straightforward process. There are a few requirements that must be met to gain access:

1. Sysmac Studio version 1.08 or higher is required.
2. The IP address of the router that attaches the factory network to the Internet must be a static IP address, or if it is Dynamic, the IP address must be known to the remote programmer.
3. The built in Ethernet port on the Sysmac NJ must be used. A CJ1W-EIP21 module connected to a Sysmac NJ cannot be used for programming

Setup:

For the purposes of this document, the example IP Addresses will be used
NJ Ethernet Port Setup:

The proper IP Address, Subnet Mask, and Default Gateway must be set in the Sysmac NJ using Sysmac Studio. The Default Gateway IP Address is the IP Address of the LAN side of the router. This configuration must be synchronized into the NJ controller.

![Configurations and Setup](image)

**TCP/IP Settings**

- **IP Address**
  - Fixed setting
  - IP address: 192.168.10.1
  - Subnet mask: 255.255.255.0
  - Default gateway: 192.168.1.10

- Obtain from BOOTP server
- Fix at the IP address obtained from BOOTP server

Router Setup

In the Router, Port Forwarding (sometimes called Rules) must be used, and the 4 ports shown must be forwarded to the Sysmac NJ. The following is shown as an example, although different routers will have different setup screens.

![Port Range Forwarding](image)

<table>
<thead>
<tr>
<th>Application</th>
<th>Start</th>
<th>to</th>
<th>End</th>
<th>Protocol</th>
<th>IP Address</th>
<th>Enable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Studio</td>
<td>2223</td>
<td>to</td>
<td>2224</td>
<td>UDP</td>
<td>192.168.1.10</td>
<td></td>
</tr>
<tr>
<td>Studio</td>
<td>9610</td>
<td>to</td>
<td>9610</td>
<td>TCP</td>
<td>192.168.1.10</td>
<td></td>
</tr>
<tr>
<td>Studio</td>
<td>80</td>
<td>to</td>
<td>80</td>
<td>TCP</td>
<td>192.168.1.10</td>
<td></td>
</tr>
</tbody>
</table>
Testing the connection:

In Sysmac Studio, specify the WAN IP Address of the router as the target IP Address.

There will be a dialog box such as the one shown below to indicate a difference between the NJs true IP Address, and the IP Address that Sysmac Studio is using for connection. Click yes to connect.

You should now be online with the Sysmac NJ. If the connection fails, verify all the steps in the procedure.