

Port Forwarding Example

In networking terminology, port forwarding or port mapping is an application of network address translation (NAT) that redirects a communication request from one address and port number combination to another while the packets are traversing a network gateway, such as a router or firewall.

This technique is most commonly used to make services on a host residing on a protected or masqueraded (internal) network available to hosts on the opposite side of the gateway (external network), by remapping the destination IP address and port number of the communication to an internal host.

It should be noted that all devices with a web interface to access the device configuration run a web server. This is almost always on the default TCP port of 80

Router Configuration

Log into the router & navigate to System > Admin Access

Management of the router is currently via http at HTTP://192.168.2.1 on port 80 as shown in figure 1. Since the remote device is also hosting a web server for administration on port 80, we need to change the router's service port. In this document, we will change this to 8080.

System	Network	Services	Firewall	QoS	VPN	Tools	Status
Admin Access							
Username / Password							
Username		<input type="text" value="adm"/>					
Old Password		<input type="text"/>					
New Password		<input type="text"/>					
Confirm New Password		<input type="text"/>					
Management							
Enable	Service Type	Service Port	Local access	Remote access	Allowed addresses from WAN (Optional)	Description	
<input checked="" type="checkbox"/>	HTTP	<input type="text" value="8080"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input type="text"/>	
<input type="checkbox"/>	HTTPS	<input type="text" value="443"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input type="text"/>	
<input checked="" type="checkbox"/>	TELNET	<input type="text" value="23"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="text"/>	<input type="text"/>	
<input checked="" type="checkbox"/>	Console					<input type="text"/>	

Setting up Port Mapping

In the router's web interface navigate to Firewall >> Port mapping.

Source is left as 0.0.0.0/0.

Service Port is the port number the router is looking for an incoming connection on.

Internal Address is the address we are accessing from.

Internal port is the port number the remote device is accepting connections on.

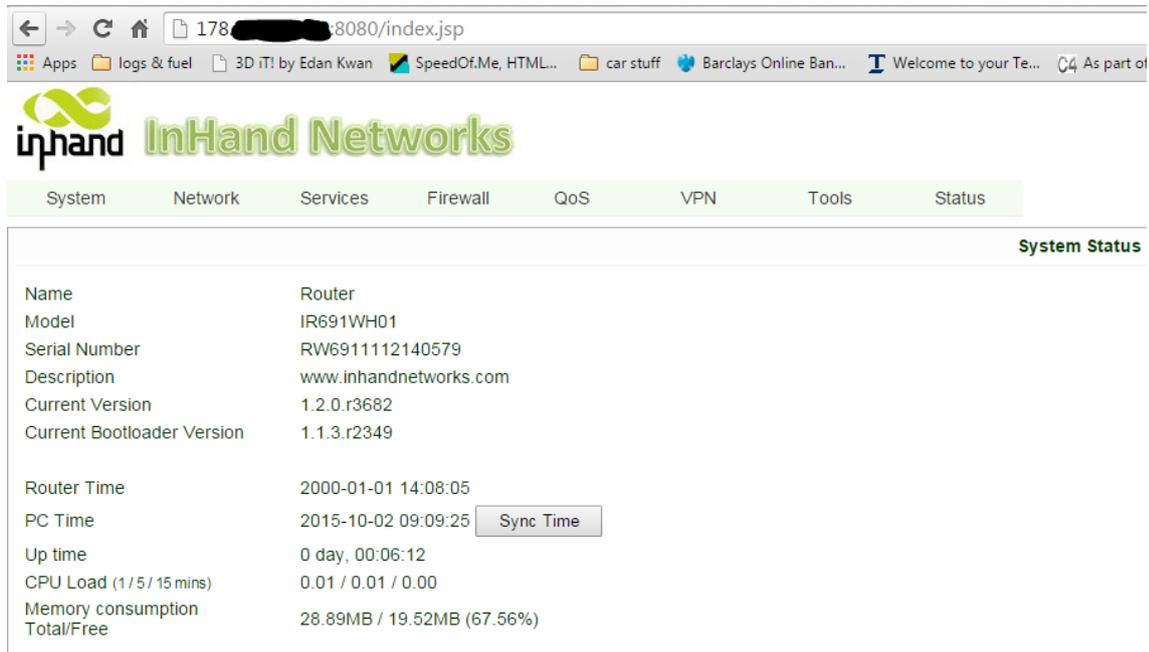
So an incoming connection on port 80 is forwarded to the IP address of the Ethernet device which is also on port 80.

System	Network	Services	Firewall	QoS	VPN	Tools	Status	
Port Mapping								
Enable	Proto	Source	Service Port	Internal Address	Internal Port	Log	External Address(Optional)	Description
Yes	TCP	0.0.0.0/0	80	192.168.2.5	80	Yes	<input type="text"/>	<input type="text"/>
<input checked="" type="checkbox"/>	TCP	0.0.0.0/0	<input type="text" value="8080"/>	<input type="text"/>	<input type="text" value="8080"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>
<input type="button" value="Add"/>								
<input type="button" value="Apply"/> <input type="button" value="Cancel"/>								

Remote Ethernet Device Configuration

The remote equipment needs to have the IP address set up in the same subnet as the router e.g. 192.168.2.5 with the default gateway as 192.168.2.1 (IP address of the router). Please refer to the manual for your device regarding the IP configuration.

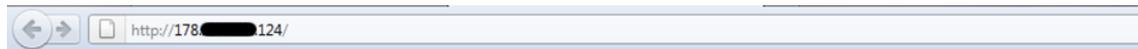
Once everything is configured, we can access the router remotely on port 8080 via the router's LAN IP or the SIM card IP as below.



The screenshot shows a web browser window with the address bar containing '178[redacted]:8080/index.jsp'. The page header features the InHand Networks logo and a navigation menu with tabs for System, Network, Services, Firewall, QoS, VPN, Tools, and Status. The 'System Status' section is active, displaying the following information:

Name	Router
Model	IR691WH01
Serial Number	RW6911112140579
Description	www.inhandnetworks.com
Current Version	1.2.0.r3682
Current Bootloader Version	1.1.3.r2349
Router Time	2000-01-01 14:08:05
PC Time	2015-10-02 09:09:25 <input type="button" value="Sync Time"/>
Up time	0 day, 00:06:12
CPU Load (1 / 5 / 15 mins)	0.01 / 0.01 / 0.00
Memory consumption Total/Free	28.89MB / 19.52MB (67.56%)

We can also access the remote device on port 80.



The screenshot shows a web browser address bar with the URL 'http://178[redacted]:124/'.

SENA *Pro series PS110 Management*

User authentication required. Login please.

User ID :
Password :

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