

Enabling Secure Access to Devices from the Internet using Port Forwarding

Robert Nickerson
Om Networks and DCN
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65535 Ports, thats a lot!

- Each IP you get has all of them
 - Ports Allow:
 - Diversity
 - Simultaneous Action
 - Exposure
 - QOS
- MALICIOUS ATTACKS**

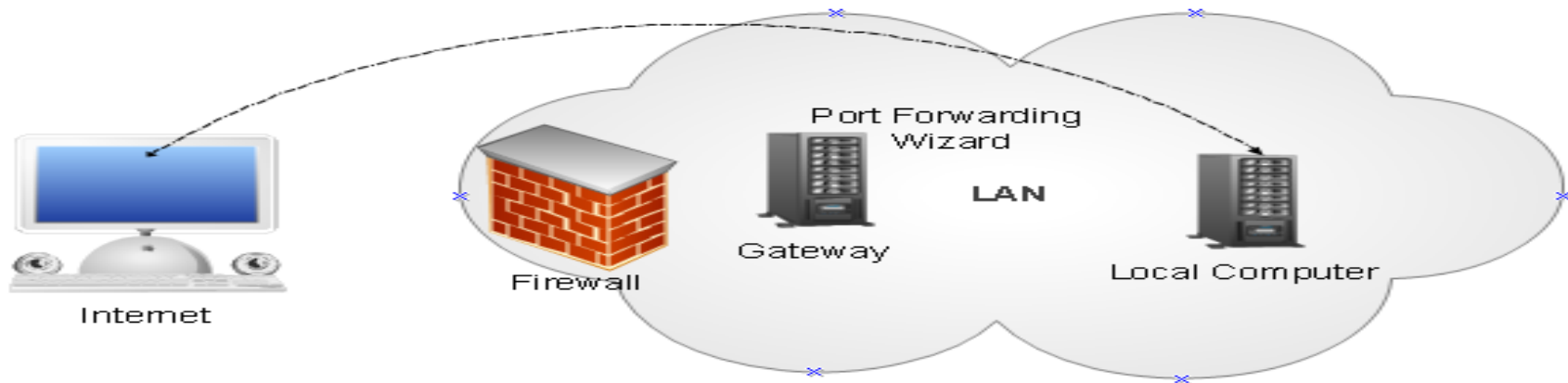


How Does Port Forwarding Work?

- Router has Port Forwarding Table
- A “hole” is opened in the firewall
- Packet is handed from outside network to inside
- Port Forwarding is mapping the outside WAN to the inside LAN
- 1 to 1 Link Out/In



What does Local Port Forwarding DO?



What Devices need Port Forwarding?



Port Forward Tasks

INVENTORY

- Cameras
- Xboxen

• Media Streamers

- Computers

Assign Static IPs

LOG and RECORD

WRITE Statements

CONFIG ROUTER

by Cisco

Wireless-G Broadba

Setup Wireless Security Access Restrictions Applications & Gaming

Port Range Forward | Port Triggering | DMZ | QoS

Port Range					
Application	Start	End	Protocol	IP Address	Enable
WebServ	80	to 81	Both	192.168.1. 2	<input checked="" type="checkbox"/>
SSH	22	to 22	TCP	192.168.1. 2	<input checked="" type="checkbox"/>
	0	to 0	Both	192.168.1. 0	<input type="checkbox"/>
	0	to 0	Both	192.168.1. 0	<input type="checkbox"/>
	0	to 0	Both	192.168.1. 0	<input type="checkbox"/>
	0	to 0	Both	192.168.1. 0	<input type="checkbox"/>
	0	to 0	Both	192.168.1. 0	<input type="checkbox"/>
	0	to 0	Both	192.168.1. 0	<input type="checkbox"/>
	0	to 0	Both	192.168.1. 0	<input type="checkbox"/>
	0	to 0	Both	192.168.1. 0	<input type="checkbox"/>

Save Settings Cancel Changes

PORT Forward TIPS



Good Port Forward Resources

The screenshot shows a web browser window titled "Conexant - Hasbani - Konqueror" displaying the "Virtual Server Configuration" page. The page has a navigation menu on the left with sections for "Status", "Configuration", and "Admin Privilege". The main content area contains a table of port forwarding rules with columns for ID, Public Port, Private Port, Port Type, and Host IP Address. Each row has a "Delete This Setting" button. At the bottom, there are input fields for ID, Public Port, Private Port, and Port Type (with radio buttons for TCP and UDP), and an "Add This Setting" button. A note at the bottom states: "Settings need to be saved to Flash and the system needs to be rebooted for changes to take effect."

ID	Public Port	Private Port	Port Type	Host IP Address	Action
1	53	53	TCP	10.0.0.3	Delete This Setting
2	53	53	UDP	10.0.0.3	Delete This Setting
3	254	254	TCP	10.0.0.3	Delete This Setting
4	255	255	TCP	10.0.0.3	Delete This Setting
5	23	23	TCP	10.0.0.3	Delete This Setting
6	64123	64123	TCP	10.0.0.4	Delete This Setting
7	22	22	TCP	10.0.0.5	Delete This Setting
8	63100	63100	TCP	10.0.0.5	Delete This Setting
9	63101	63101	TCP	10.0.0.5	Delete This Setting
10	63102	63102	TCP	10.0.0.5	Delete This Setting
11	63103	63103	TCP	10.0.0.5	Delete This Setting
12	63104	63104	TCP	10.0.0.5	Delete This Setting
13	63105	63105	TCP	10.0.0.5	Delete This Setting
14	80	80	TCP	10.0.0.5	Delete This Setting

15 TCP UDP Add This Setting

Settings need to be saved to Flash and the system needs to be rebooted for changes to take effect.

portforward.com

Wikipedia

You Tube

Manufacturer

simpleportforwarding.com

Getting there from the Net

Port forwarded devices have URLs with a colon appended with PORT number to access that forwarded resource. It becomes part of the address:

e.g 168.150.193.3:5900 or https://billadmin.omsoft.com:8081



Use a static IP with a domain name for easy use, or a dynamic DNS service if you have dynamic IP service

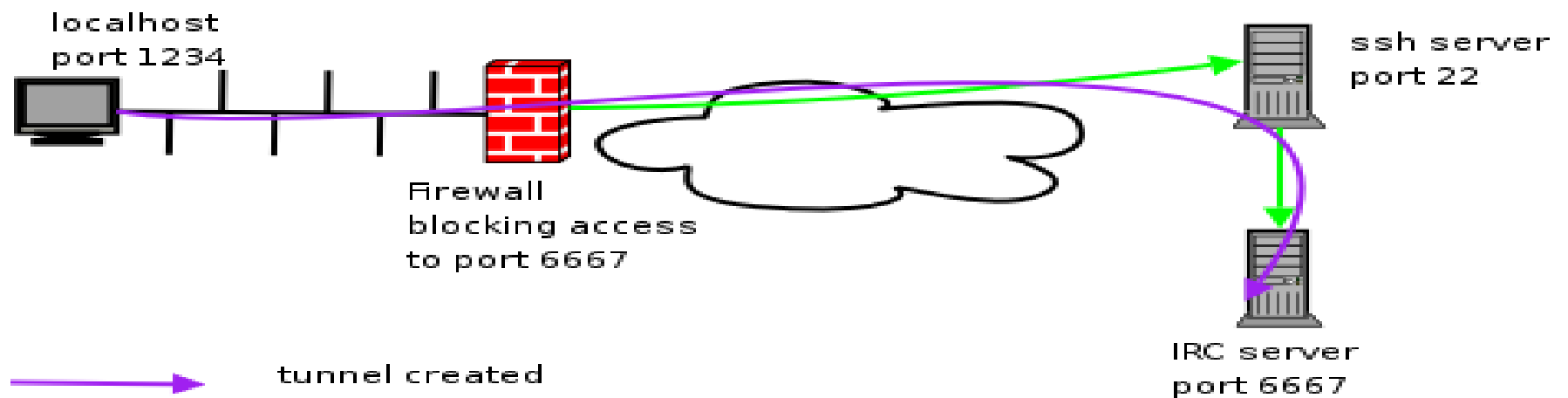
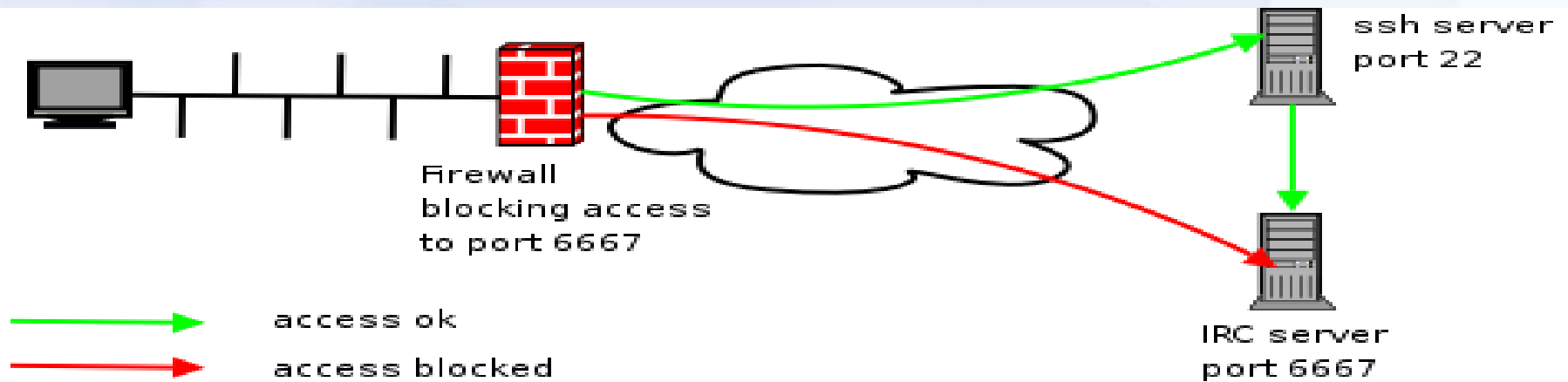
Restrict access using a usr/pas

Remote Port Forwarding with SSH

- Get around corporate firewall rules
- Ensure safe & secure communications
- Anonymous Internet browsing
- Lots of FREE tools for this



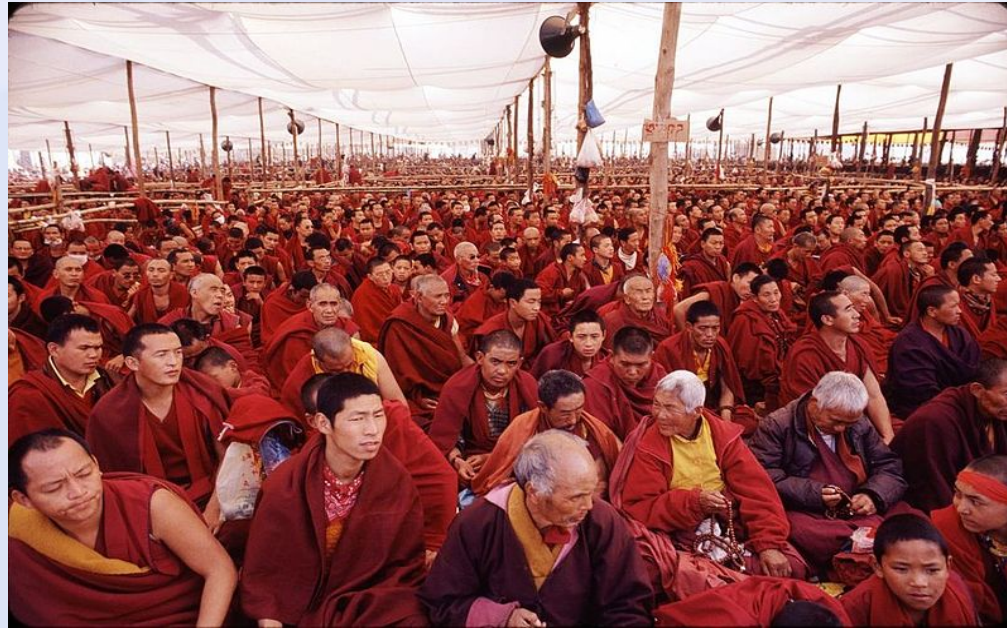
Port Forwarding on the Internet: SSH Tunneling



What else can Routers DO?

- VPN
- Multihoming
- Redirect and CAPTURE
- QOS on traffic
- QUEUE per computer





Thank you & Good Luck!