

How to Configure an SSH Tunnel on PuTTY



YOU CAN USE A DYNAMIC TUNNEL TO ACCESS ALL REMOTE INFRASTRUCTURE.

Most of you have probably used a tunnel with an SSH connection. What you probably weren't aware of is that you can use a dynamic tunnel to access all remote infrastructure. Furthermore, you can specify a port and a destination IP to have direct access. This process is achieved through your PuTTY configuration.

In this procedure, we will use **Internet Explorer, Firefox and an RDP connection** to demonstrate the use of a tunnel with an SSH connection, as well as configuring the tunnel with several other protocol types.

LOCAL PORT FORWARDING

STEP 1 – Load the Session

In your PuTTY configuration, configure the **Host Name** and **Port** of your remote SSH computer. Enter your **Saved Sessions** name, and click **Save**. If your session already exists, **Load** it as shown below:



STEP 2 – Configure PuTTY for RDP

In the **Tunnels** section in PuTTY, configure a specific **Local** port, such as **50001**, that will redirect to **3389** of your destination server.

In the **Source Port** field, enter the local port that will be redirected. In the **Destination** field, enter the IP address as well as the destination port. Select **Local** and **Auto** to activate IPv4 and IPv6. Here is an example from my local machine I would like to go to 172.128.123.10, server port 3389.



Please note that you may configure your ports for multiple servers simultaneously. Configuring a specific **Local** port such as **50002** will redirect to **80** of your destination server. Doing so will allow you to configure PuTTY to your web browser.

Once the configuration setup is complete, open an RDP connection and enter your local IP (**127.0.0.1**), along with the local port configuration in PuTTY.

Port forwarding					
Local ports accept connections from other hosts					
Remote ports of	do the same (SSH	-2 only)			
Forwarded ports:	Remove				
L50001 172.128.123.10:3389 L50002 172.128.123.12:80 L50003 172.128.123.11:3389					
Add new forwarded port:					
Source port	50003	Add			
Destination	172.128.123.11	3389			
Local	Remote	O Dynamic			
Auto	O IPv4	O IPv6			

As illustrated above, if I enter **127.0.0.1:50001**, my connection will translate to the server 172.128.123.**10**:3389.

If I enter **127.0.0.1:50003**, my connection will translate to the server 172.128.123.**11**:3389.

Nemote Desktop Connection —					\times
	Remote Desktop Connection				
<u>C</u> omputer: User name: You will be as	127.0.0.1:50001 None specified sked for credentials when you conn	ect.	~		
Show Q	ptions	Connect		He	elp

STEP 3 – Configure the SSH Tunnel

In the Category menu, drill down to Connection --> SSH --> Tunnels. There are several ways to configure a Tunnel. We shall proceed with a browser tunnel configuration.

ADVANCED SCENARIO (DYNAMIC PORT FORWARDING)

STEP 4 – Configure PuTTY for a Web Browser Tunnel

At the **Tunnels** page, configure a **Dynamic** port between the ranges of 49152-65535. For additional information, refer to <u>https://en.wikipedia.org/wiki/List of TCP and UDP</u> <u>port_numbers</u> 49152–65535.

🕵 PuTTY Configuration		? ×
Category: 	Options controlling SSH por Port forwarding	t forwarding
Connection Data Proxy Telnet Rlogin SSH Kex Cipher Auth TTY Auth TTY X11 Tunnels Bugs Mars bugs	Local ports accept connections t Remote ports do the same (SSH-Forwarded ports: D4567 Add new forwarded port: Source port 4567 Destination O Local Remote Image: Auto IPv4	Add Dynamic IPv6
About Help	Open	Cancel

STEP 5 – Configure Your Software

Further information for Internet Explorer, Chrome or Edge can be seen in Step 5.1. For Firefox, refer to Step 5.2, and for RDP usage, refer to Step 2.

STEP 5.1 – Configure Internet Explorer to Pass Through an SSH Tunnel

As previously noted, configuring a tunnel through Internet Explorer will affect Google Chrome and Microsoft Edge.

1- Click on **Internet options** by navigating through your **Control Panel** in your **Internet Explorer** browser.



2- The following illustration displays the **Control Panel Home**.

Network and Internet	
🗧 🔶 👻 🛧 撞 > Control Pan	el > Network and Internet
Control Panel Home	Network and Sharing Center
System and Security	View network status and tasks Connect to a network View network cor
Network and Internet	• HomeGroup
Hardware and Sound	 Choose homegroup and sharing options
Programs	Internet Options
User Accounts	♀── Change your homepage Manage browser add-ons Delete browsing hi
Appearance and Personalization	Infrared Send or receive a file

4- Check the Use a proxy server for your LAN box, and click Advanced.

🐏 Local Area Network (LAN) Settings 🛛 🛛 🗙	
Automatic configuration Automatic configuration may override manual settings. To ensure the use of manual settings, disable automatic configuration. Automatically detect settings Use automatic configuration script Address	
Proxy server Use a proxy server for your LAN (These settings will not apply to dial-up or VPN connections). Address: Port: Bypass proxy server for local addresses	
OK Cancel	

3- Select the Connections tab and click on LAN settings.



5- Enter **127.0.0.1** of the host IP in the **Socks** field, with the configured **Port** of **4567**, and click **OK**.

👫 Proxy	/ Settings			\times	
Servers					
	Туре	Proxy address to use	Port		
	HTTP:		:		
	Secure:		:]	
	FTP:		:]	
	Socks:	127.0.0.1	: 4567]	
	Use the	same proxy server for all protocols			
Exception	ons				
	Do not use proxy server for addresses beginning with:				
, .			\sim		
	Use semicol	ons (;) to separate entries.			
		ОК	Cancel		

You should see a grey **Address** bar. If your remote segment IP differs from internal segment, please check the **Bypass proxy server for local addresses** box.

Proxy server				
Use a proxy server for your LAN (These settings will not apply to dial-up or VPN connections).				
Address:	Port:	Advanced		
Bypass proxy server for local addresses				

Once complete, you will be able to access Internet Explorer, Edge or Chrome to navigate onto an IIS server by entering the IP in your navigator. You may open a browser tab and visit <u>http://172.128.123.10</u> in this example. Doing so will allow you to view the service from the Destination server.

YOUR CONFIGURATION SHOULD LOOK LIKE THE FOLLOWING FIGURE.



STEP 5.2 – Configure your Firefox Browser

 In your Firefox browser, click on the Menu button in the top-right corner of the screen, and select Options. Then, navigate to the Advanced tab.

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New Window	New Private Window	Save Page	
	0	₩	
Print	History	Full Screen	
р Find	Ö Options	Add-ons	
×			
Developer	Synced Tabs		
🖸 Sign in to Sy	nc		
+ Customize		00	5

 Within the Advanced tab, select the Network tab and click on Settings in the Connection section.

 Proxy server

 Use a proxy server for your LAN (These settings will not apply to dial-up or VPN connections).

 Address:
 Port:
 Advanced

 Bypass proxy server for local addresses

Once complete, you will be able to access Internet Explorer, Edge or Chrome to navigate onto an IIS server, by entering the IP in your navigator. You may open a browser tab and visit <u>http://172.128.123.10</u> in this example. Doing so will allow you to view the service from the Destination server.