

Remote Debugging

Remote Side (Without Visual Studio):

1. Get the correct remote tool : <https://docs.microsoft.com/en-us/visualstudio/debugger/remote-debugging?view=vs-2015#get-the-remote-tools>

OR

Copy "Remote Debugger folder" from local pc to remote, folder path at local:
"C:\Program Files (x86)\Microsoft Visual Studio 14.0\Common7\IDE\Remote Debugger"

OR

Share the "remote Debugger folder" (from local pc).

2. Configure Firewall
 - a) Open the Windows Firewall page. (In the **Start** menu search box, type **Windows Firewall**).
 - b) Click **Allow an app or feature through Windows Firewall**.
 - c) In the **Allowed apps and features** list, look for **Visual Studio Remote Debugger Discovery**. If it is listed, make sure that it is selected, and that one or more network types are also selected.
 - d) If **Visual Studio Remote Debugger Discovery** is not listed, click **Allow another app**. If you still don't see it in the **Add an app** window, click **Browse** and navigate to <**Visual Studio installation directory**>\Common7\IDE\Remote Debugger. Find the appropriate folder for the application (x86, x64, Appx) and then select **msvsmon.exe**. Then click **Add**.
 - e) In the **Allowed apps and features** list, select **Visual Studio Remote Debugging Monitor**. Check one or more network types (**Domain**, **Home/Work (Private)**, **Public**) that you want the remote debugging monitor to communicate with. The types must include the network to which the Visual Studio computer is connected.



Allow apps to communicate through Windows Defender Firewall

To add, change, or remove allowed apps and ports, click Change settings.

What are the risks of allowing an app to communicate?

Change settings

Allowed apps and features:			
Name	Private	Public	
<input checked="" type="checkbox"/> Virtual Machine Monitoring	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/> VirtualBox Manager	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/> Visual Studio 2015 Remote Debugger Discovery (devenv.exe)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/> Visual Studio Remote Debugging Monitor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

3. Configure Ports in Firewall

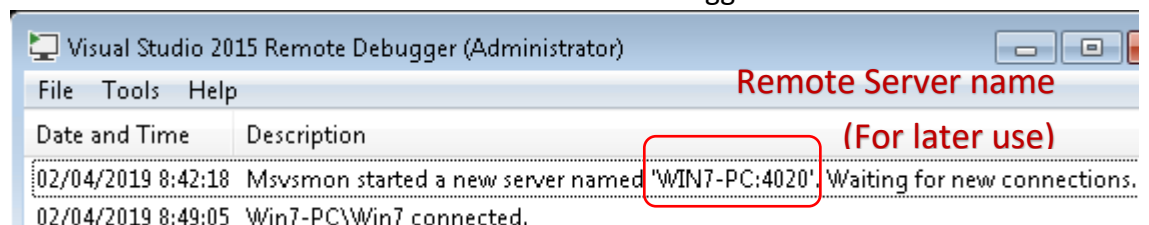
- a. On the **Start** menu, search for **Windows Firewall with Advanced Security**.
- b. Click **Inbound Rules** and then click **New Rule** in the **Actions** list.
- c. On the **Rule Type** page, select **Port** and then click **Next**.
- d. On the **Protocol and Ports** page, select the port protocol (TCP or UDP). Select **Specific local ports** and enter one or more port numbers that you want to enable for the protocol. Separate numbers with commas. Then click **Next**.

Ports	Incoming/Outgoing	Protocol	Description
135, 139, 445	Outgoing	TCP	Required.
137, 138	Outgoing	UDP	Required.

- e. On the **Action** page, select **Allow the connection** and then click **Next**.
- f. On the **Profile** page, select one or more network types to enable for the port. The type you select must include the network to which the remote computer is connected. Then click **Next**.
- g. On the **Name** page, type a name for the rule, and then click **Finish**.
- h. You should see your new rule in the **Inbound Rules** or **Outbound Rules** list.

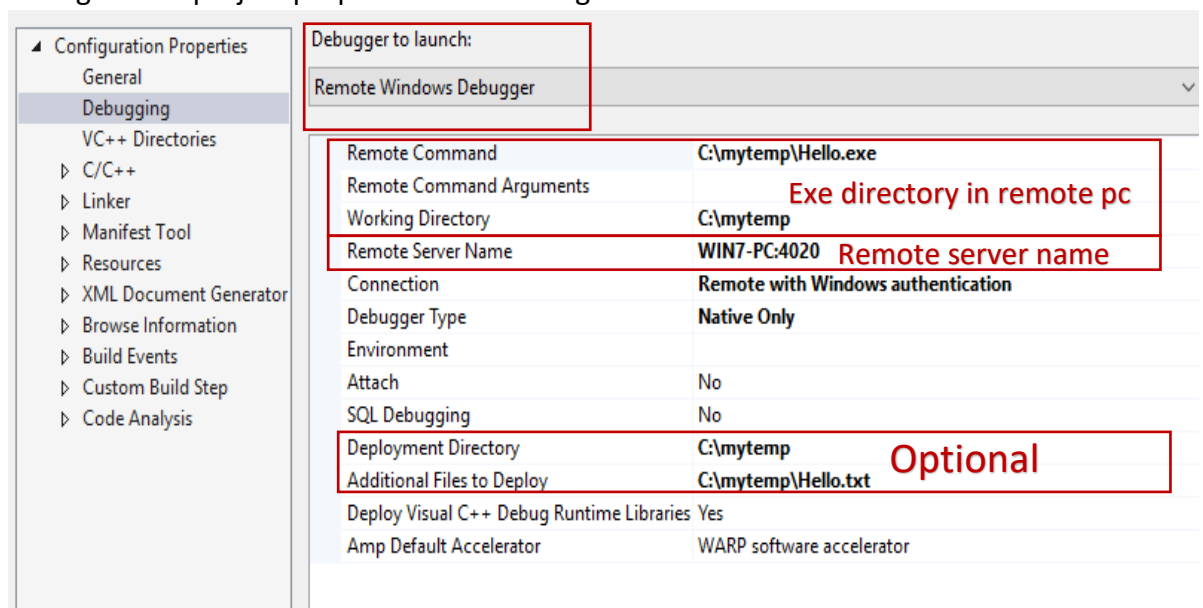
4. Run Remote Debugger server

- a. Run "msvsmon.exe" as Administrator in remote debugger folder.

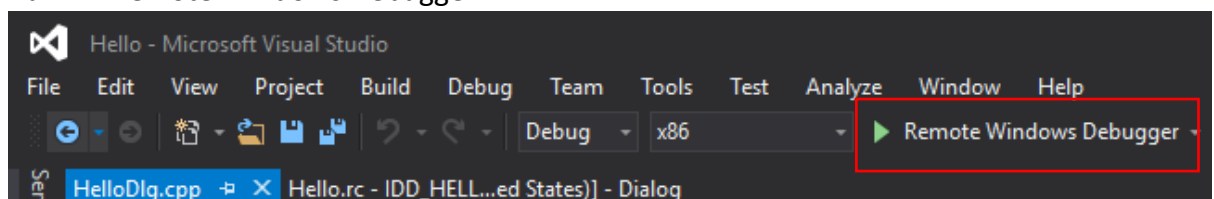


Local Side (With Visual Studio)

1. Configure Firewall
 - a. Repeat the same as in **“Remote Side: Configure firewall”**.
2. Configure ports in Firewall
 - a. Repeat the same as in **“Remote Side: Configure ports in firewall”** with ports: (TCP: 135), (UDP: 500, 4500).
3. Run Visual Studio as **“Remote Windows Debugger”**
 - a. Configure the project properties as following:



- b. Run in **“Remote Windows Debugger”**



Reference:

<https://docs.microsoft.com/en-us/visualstudio/debugger/remote-debugging?view=vs-2015>

<https://docs.microsoft.com/en-us/visualstudio/debugger/configure-the-windows-firewall-for-remote-debugging?view=vs-2015>