

How to Run Multiple Servers of Joint Operations on the Same Server

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Some people have asked me how it is that I am able to run multiple servers on Joint Operations or other NovaLogic games on the same server. In this post, I intend to show you how to do just that. I will try to stick to the step-by-step approach because many people seem to learn best that way. Keep in mind that this should work on most NovaLogic games, not just Joint Operations. Just be sure to use the correct port numbers and keep in mind that some older games may not work on Windows Server 2012, in which case you may need to get creative.

So, we will begin with the things you will need:

1. A copy of Joint Ops with a valid license/NovaWorld account. You may use the same one that you use to play. A copy of Joint Ops may be legally downloaded here if you own it:
http://files.novalogic.com/C3/kpvsh/JOCAG_Install.exe
2. A server running Windows Server 2008 or newer with at least 2 GB RAM and 30 GB disk space.
3. A notepad editor such as Notepad++ or the stock Notepad app with Windows.

Step 1: First you will need to look into server options. If you don't have a stable connection at home and any server hardware laying around, hosting your server on the "cloud" is your best option. Don't worry, this is also the most time-saving and affordable strategy. Depending on your location, I have found that OVH offers the most affordable packages, great customer support and offer great hardware choices for the money. <https://www.ovh.com/us/vps/vps-cloud.xml>

Either one of those VPS Cloud options will work, just be sure to choose Windows and not Linux! Other companies will work too, provided they are offering Windows VPS options that fit your budget.

Step 2: Once your VPS has been deployed (be patient, this may take up anywhere from a minute to a few hours before they will email you and let you know that your VPS is ready to go), you will need to use Remote Desktop Connection to remotely connect to it. Your VPS provider should have provided you with instructions on how to do this. We must always make sure that our VPS is secure and ready to go before we begin production of anything for the general public.

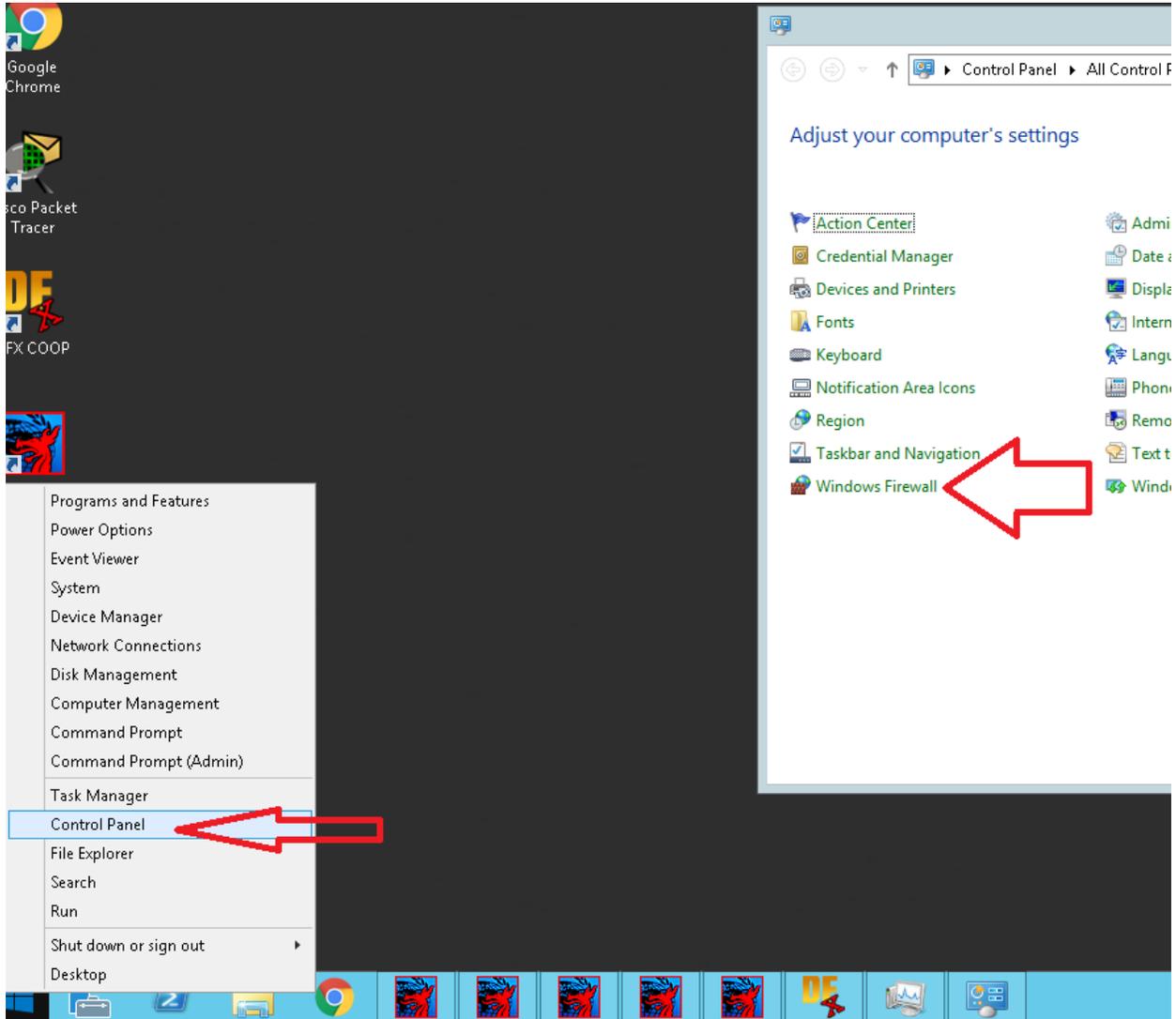
Make sure that Windows Firewall is enabled and that you've run Windows Update to let it patch security holes, etc. Most importantly, make sure that you have set a password for your server! If you were not prompted to do so, press CTRL + ALT + End and click "Change a password"!

Step 3: Once you've done that, open your internet browser in the server and download the JO executable shown above. Then run it and install it. From here, don't launch the game quite yet. Once you've enabled your Firewall, we will need to open up the appropriate ports. NovaLogic has the ports for all of their games listed here: <http://novalogic.com/router.asp>

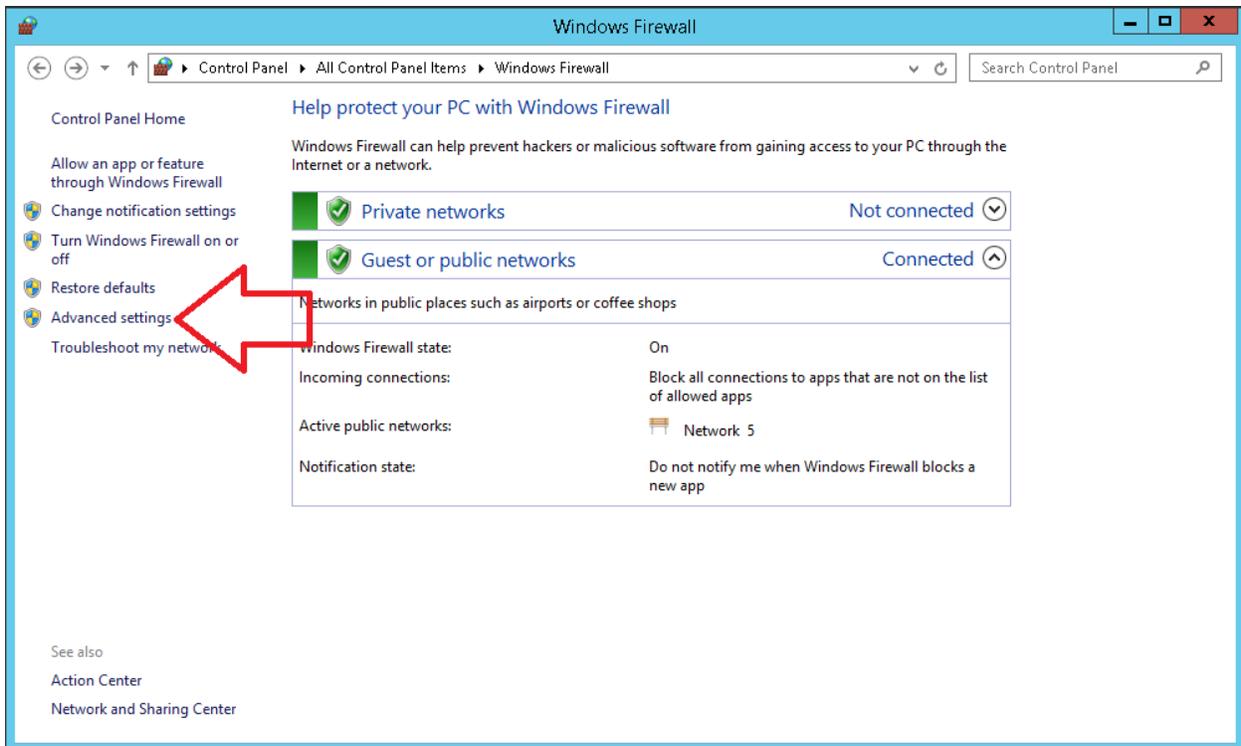
Here's where things may get a bit tricky. First, identify how many servers you will want to run. I will be running six. Since the main port is "32768", I will need to use 5 port numbers after that, one for each instance of JO. So for example, if you want to run two servers, you will need ports "32768-32769", for three servers, you will need "32768-32770" and so on.

Scroll to the bottom of that page and copy the “Joint Operations: Typhoon Rising” ports “32768, 49152, 64206, 7597”, commas included. This will work for Escalation as well.

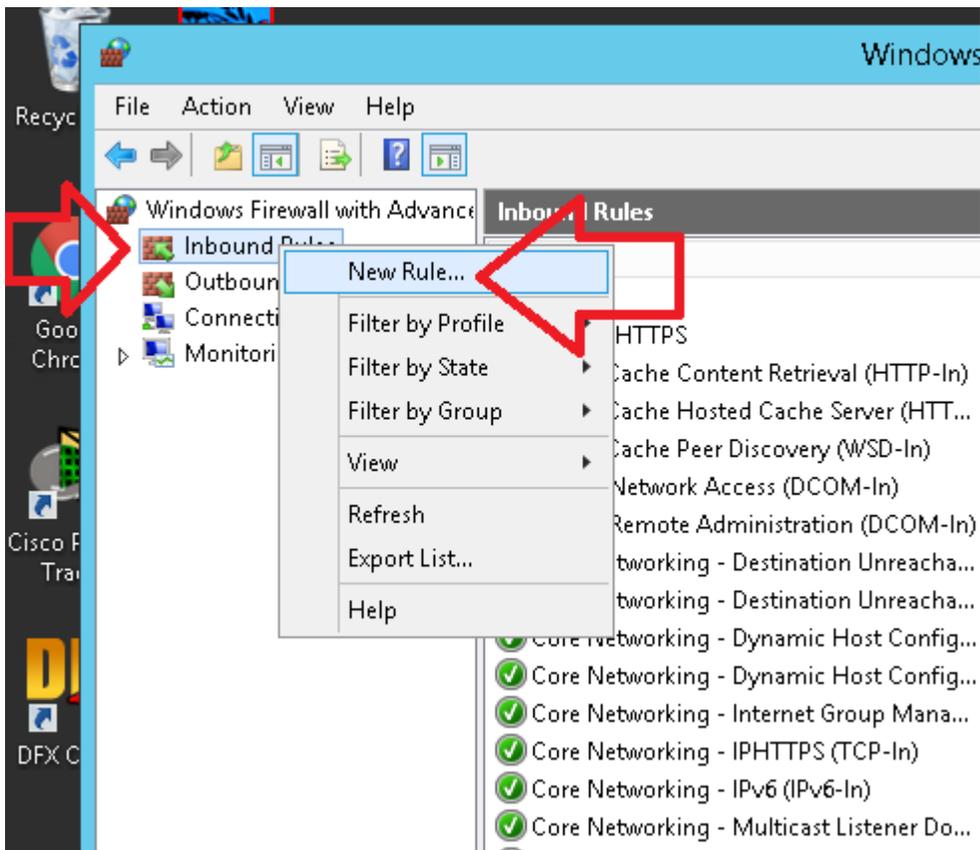
From here, right click your start menu and click “Control Panel”, then “Windows Firewall” as shown below.



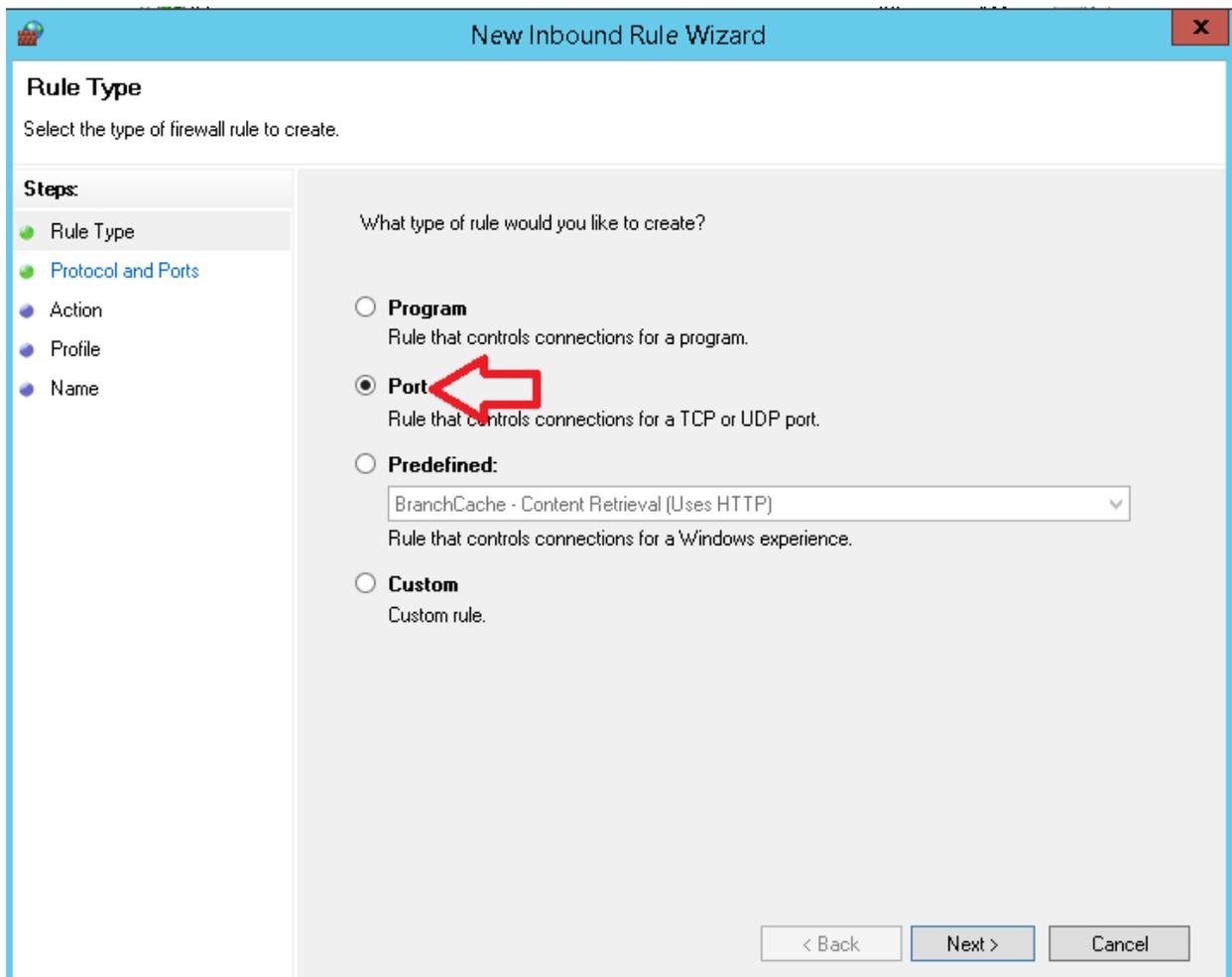
Then click “Advanced Settings” in the left pane as shown below.



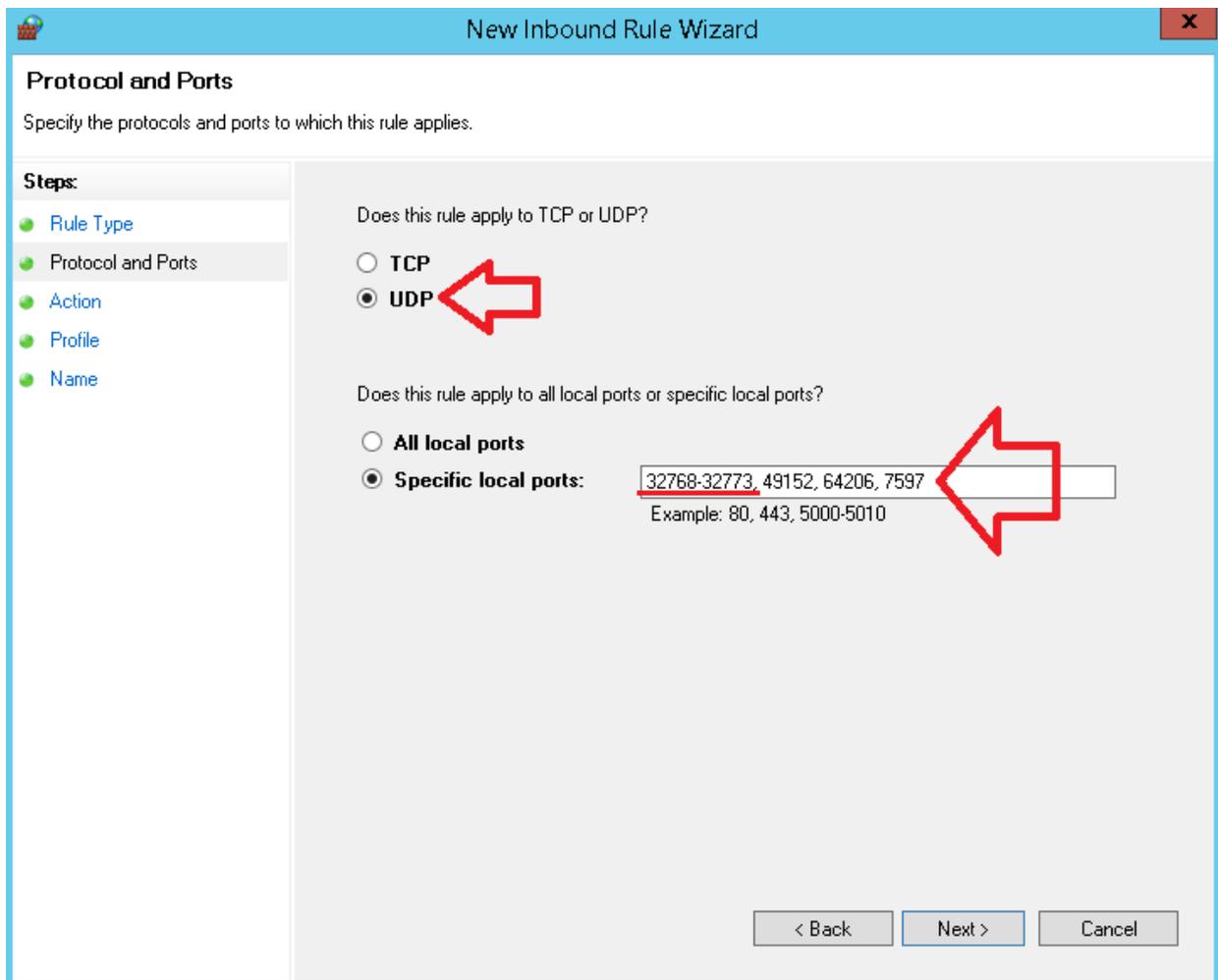
Right click "Inbound Rules" then click "New Rule..."



Click "Port.



Click "UDP" and then paste the port numbers you copied earlier. Be sure to add on your extra ports! I will show an example below. Remember, I want to host six servers.



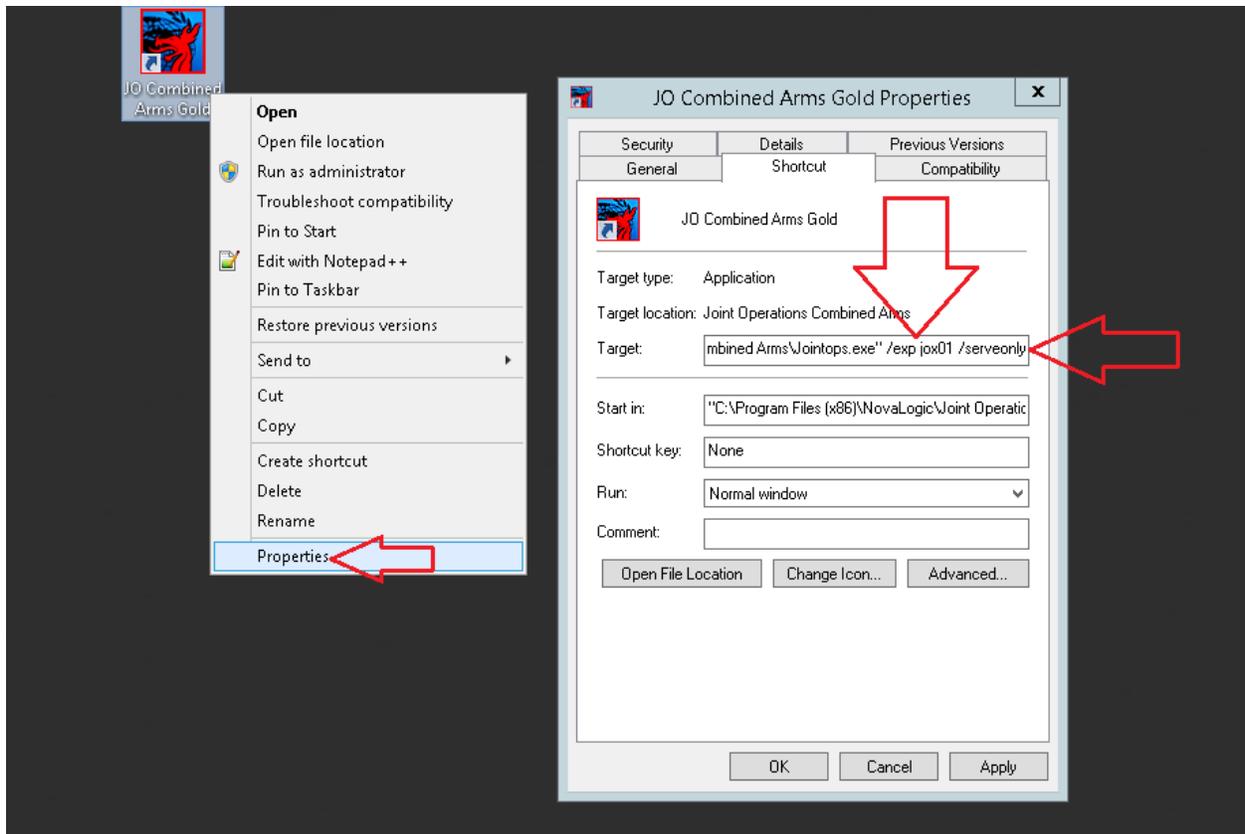
Leave the defaults and click “Next” for the remainder of the wizard. Enter a name for it, and a description if you’d like, then click “Finish”.

NOTE: If you are running a hardware firewall (wireless router, VPS control panel firewall, etc.) make sure that you open these ports in that firewall too!

Step 4:

Now we will need prepare Joint Ops for hosting multiple instances.

On your desktop, right click your “JO Combined Arms Gold” icon and at the very end of the “Target:” box, type “/serveonly”. You will also see “/exp jox01”. This indicates that you will be running an Escalation server. If you do not want an Escalation server and would like a Typhoon Rising server instead, remove that piece so that only “/serveonly” is at the end. Click “Ok” and launch the game. Then exit the game. **DO NOT UPDATE THE GAME!!!** It is already updated to the latest version and updating it is known to cause stability problems!



Next, open a File Explorer window and go to C:\Program Files (x86)\NovaLogic\Joint Operations Combined Arms and delete the following files:

- Footer.bik
- Header.bik
- Intro.bik
- Main.bik

These are movie files and are only going to slow your server down considerably. You may keep them if you'd like, but they are not necessary.

From here, go back one folder and copy and paste the Joint Operations folder x times, x being the number of servers you want. I want six servers, so I am going to copy and paste the folder five times for a total of six folders. Copying may take a while so be patient.

After they are done copying, it is a good idea to rename the folders based on the names of your servers. After you've done that, go into one of them and open "game.cfg" in Notepad++. Keep in mind the following fields that we will be editing:

- Line 12, "video_res"
- Line 59, "mpnovaworldportmin = "32768""
- Line 60, "mpnovaworldportmax = "65535""
- Line 63, "mpnovaworldlanenumsessionportmin = "32768""
- Line 64, "mpnovaworldlanenumsessionportmax = "65535""

The rest of the fields below can be used to customize other aspects of your server, i.e. scope drift, armory reuse time, etc. You may adjust those accordingly. But for now, we need to focus on the ones mentioned above.

For line 12, set your video res to "800x600" so that it is more manageable on your remote desktop session. Lines 59-60, 63-64 will have to do with your port numbers. Change all four of them to be the same port number. For example, my first server will have the following:

- Line 12, "video_res = 800x600"
- Line 59, "mpnovaworldportmin = "32768""
- Line 60, "mpnovaworldportmax = "32768""
- Line 63, "mpnovaworldlanenumsessionportmin = "32768""
- Line 64, "mpnovaworldlanenumsessionportmax = "32768""

Then my second server, which will be using port 32769, will have the following:

- Line 12, "video_res = 800x600"
- Line 59, "mpnovaworldportmin = "32769""
- Line 60, "mpnovaworldportmax = "32769""
- Line 63, "mpnovaworldlanenumsessionportmin = "32769""
- Line 64, "mpnovaworldlanenumsessionportmax = "32769""

And so on...

Continue up for the rest of your servers. Remember that you can only go as high as you defined when you opened up your ports earlier. Feel free to go back and open some more if needed.

Once you've done this for all of your servers, create a shortcut from "Jointops.exe" to the desktop from each folder that you are hosting from. I recommend that you rename those shortcuts to correspond to the server name. Remember to right click the shortcut and place the "/serveonly" at the end of the target box and the "/exp jox01" if you want to host an Escalation server.

From here, you may launch the game and begin hosting your servers. You may use the same NovaWorld account to host multiple servers as well as play on them. Have fun!