Networking for SDS

I know this might seem like a lot, but trust me it will be easier to do this if you learn this**!**

List of words:

Internal IP	To understand what an internal IP address is, it's important to first know the difference between internal and external IPs. An internal IP is a unique address assigned by your router to each device connected to your home network. It helps the router manage and communicate with all the devices, like computers, phones, or game consoles. You can think of it as a label that identifies each device within your home network, making sure everything stays organized.
External IP	An external IP works similarly to an internal IP, but on a much larger scale. Instead of identifying devices within your home network, an external IP identifies your entire home network (or more specifically, your router) to the internet. It's like your network's "public" address, allowing websites and online services to know where to send information, like when you stream a video or play an online game. The internet uses this external IP to keep track of routers around the world. However, we're running out of these IPv4 addresses, which is why a newer version, IPv6, was created. But for simplicity, in this guide, we'll be focusing only on IPv4 addresses.
Port Forwaring	Port forwarding might sound complicated, but it's pretty straightforward once you break it down. Think of your router like a security gate for your home network. By default, it keeps most things out unless specifically allowed in. When you're using certain programs or games (like hosting a Satisfactory server), they need to communicate with other devices on the internet, but your router doesn't automatically know where to send that information. This is where port forwarding comes in. Imagine ports as specific doors on your router. Port forwarding tells your router, "When data comes to this specific door (port), send it to this specific device inside the network." For example, if you're hosting a game server on your computer, port forwarding tells the router to direct all game-related traffic (through a specific port) to your computer, allowing others to connect to your server. Without port forwarding, your router wouldn't know which device the incoming connection is meant for, and it would be blocked. By setting up port forwarding, you're giving permission for certain traffic to come through the router and reach the correct device.

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Windows Defender Firewall	Think of Windows Defender Firewall as a security guard for your computer. Its job is to control what data goes in and out, protecting your system from potential threats on the internet. By default, the firewall blocks most unfamiliar traffic to keep your computer safe. This means if a new program tries to connect to the internet, the firewall might stop it until you give it permission. When you install or use a program that needs internet access (like a game or video call app), Windows Defender Firewall may ask you if it's okay to let it through. If you say "yes," the firewall opens a "door" (or port) for that specific program so it can communicate with the internet. If you say "no," the program won't be able to send or receive data online. The firewall helps block dangerous or suspicious connections, but it can also be adjusted if you know a program is safe. For example, if your game server isn't working, you may need to check the firewall settings and allow it to communicate through the internet.

This should help you a lot when completing the next step in the guide! Good luck!