

Assignment 2 · Performance Task

The Help Desk Ticket

Name: _____ Period: _____ Date: _____

Before you start (prerequisites)

Assumes you can: identify well-known ports for HTTP, HTTPS, DNS, DHCP, SSH, RDP, SMB; tell TCP from UDP; read a one-line command output. Builds on: Lesson 2.3 Ports & Protocols (today's class) and Assignment 1 Port Matching. If you have not finished Assignment 1 yet, do that first.

The scene

It is 9:14 AM on a Tuesday. You are the new help desk technician at Ridgeline Cabinetry. Maria from the sales team comes to your desk: "Hey, I cannot get to amazon.com. But I can get to google.com just fine. Help?" You take a breath. You know ports, so you can figure this out.

This assignment asks you to use what you learned about ports to walk through a real ticket the way an actual technician would. There are no firewall rules to write. There is no trick. Read each step, think about which port could be involved, and write your answer in plain language.

Part 1 · First questions (15 points)

When a user reports a problem, your first job is to gather information. Write the FIRST question you would ask Maria for each goal.

1.1 You want to know if the problem is with amazon.com specifically or with the internet in general. What do you ask her?

1.2 You want to know if it just started happening or has been happening for days. What do you ask?

1.3 Maria says "It just started this morning, and only amazon.com is broken. Other sites work." What does that tell you?

Part 2 · Port-based detective work (30 points)

You have your port table from today. For each step below, write which PORT or SERVICE is involved and what the result tells you.

What you try	Port / Service	What it tells you
Step 1: Maria opens <code>https://amazon.com</code> in her browser. Spinner spins forever, then "can't reach this site."	_____	_____ —
Step 2: Maria tries <code>http://amazon.com</code> (no "s"). Same problem.	_____	_____ —
Step 3: You open Command Prompt. You type: <code>nslookup amazon.com</code> (nslookup asks DNS to look up an address). It returns no IP address.	_____	_____ —
Step 4: You try <code>nslookup google.com</code> . Returns 142.250.x.x just fine.	_____	_____ —
Step 5: You try a different DNS server (8.8.8.8). Now <code>nslookup amazon.com</code> works.	_____	_____ —

Hint: every step involves either port 53 (DNS, name lookup), 80 (HTTP), or 443 (HTTPS). You may use your port table.

You figured out the problem. Maria's company DNS server is not resolving amazon.com correctly. Write a short, professional message back to Maria. 3 to 5 sentences. Don't use jargon she won't understand.

Subject: Re: amazon.com not loading

[illegible]

Part 4 · Build a Port Memory Card (25 points)

Format suggestion: write each port number in big bold, the service name in smaller text below, and group them by category. Use color if you want.

WEB Port ____ : _____ Port ____ : _____ <i>(2 ports)</i>	FOUNDATION (UDP) Port ____ : _____ Port ____ : _____ <i>(2 ports — auto-config + name lookup)</i>
ADMIN TOOLS Port ____ : _____	EMAIL + FILES Port ____ : _____

Port ____ : ____ <i>(2 ports — SSH + RDP)</i>	Port ____ : ____ <i>(2 ports — pick the ones you'll see most)</i>
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Grading: all 8 ports filled in (12), correct port-service matches (8), grouped logically in the right categories (5).

Part 5 · Quick self-check (10 points)

Fill in each blank from memory if you can. Look at your Memory Card from Part 4 if you need to.

- 5.1 When a website loads with the little padlock icon in the URL bar, the browser is using port ____ which runs the ____ protocol.
- 5.2 When you connect to a coffee shop WiFi and your phone automatically gets an IP address, the protocol behind that is ____ on port ____.
- 5.3 When a tech remotely controls a Windows server from across the office, they are using port ____ which is the ____ protocol.
- 5.4 When a Linux admin opens a secure terminal to a server, they are using port ____ which runs ____.
- 5.5 When two devices on your office network share files over Windows, they are using port ____ which is the ____ protocol.

Submission

Submit per your teacher's instructions. The Memory Card from Part 4 is yours to keep - bring it back tomorrow.