A+ Core 1 Online Treasure Hunt (Converted)

ASSIGNMENT DETAILS

LewisJosephFeik

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Treasure Hunt Details

Goal: Solve 10 interconnected online clues to diagnose and "repair" a failed computer system —

entirely using the web, your A+ resources, and your own knowledge.

Duration: Full lab (~1 hr 45 min)

Tools: Browser, Cengage MindTap or TestOut PC Pro, YouTube, your GitHub Playbook

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How It Works

Work solo or in pairs.

Read each clue in order — each tests an A+ Core 1 concept (hardware, networking,

virtualization, troubleshooting).

Research, verify, and record your answers in your Playbook.

When finished, submit your Playbook PDF (Treasure Hunt section) to Blackboard before

the end of lab.

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Clues

Clue 1 – The Silent Machine

The PC won't power on. You hear no fans, no lights, no beeps.

- Name two possible root causes and the first tool you'd use to test them.

(Hint: Think power supply and motherboard.)

Clue 2 – The Beeping BIOS

You finally hear 3 short beeps on startup.

Clue 3 – The Missing Drive

- What does this usually indicate, and what's your next troubleshooting step?

BIOS shows "No Boot Device Found."

Clue 4 – The Hot CPU

- List two possible hardware causes and one software fix.

The PC randomly shuts down under load.

- What component or feature could prevent overheating, and how can you monitor its

performance?

Clue 5 – The Slow LAN

Your workstation connects via Ethernet but speeds are extremely slow.

- What command would you use to test connectivity, and what physical layer issue could cause

this?

Clue 6 – The Phantom Display

A monitor powers on but shows no image.

Clue 7 – The Virtual Machine Vanishing Act

- List two possible hardware causes and one test you can run to isolate the issue.

A user reports their VM disappeared.

Clue 8 – The Peripheral Puzzle

- Explain what file type stores a virtual machine and one possible reason for VM corruption.

A USB printer is detected but won't print.

Clue 9 – The Cloud Question

● What troubleshooting tool or setting in Windows can be used to reset or reinstall the driver?

A company moves from local storage to OneDrive.

Clue 10 – The Final Fix

● Identify one advantage and one risk of cloud storage for businesses.

You've restored the system!

[Extracted from PDF page 3]

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● Take one screenshot of a working Device Manager or Command Prompt (systeminfo) and

include it in your Playbook section titled "A+ Core 1 Treasure Hunt."

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Deliverable

Create a section in your GitHub Playbook titled "A+ Core 1 Online Treasure Hunt."

Include:

All 10 numbered answers

Screenshots or command outputs where relevant

A 2–3 sentence summary of what you learned

Export to PDF and upload it to Blackboard before the end of lab.

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Grading (100 Points Total)

Category Points

Correct answers (10 × 7 pts) 70

Playbook documentation (organized, labeled, 20

uploaded)

Professionalism & participation 10

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Optional Bonus

Finish early?

Visit PCPartPicker.com and design a system for under $900 that meets the A+ performance

standards for a small business.

Add your build list and link to your Playbook for +5 bonus points.

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ANSWERS/SCREENSHOTS

[Extracted from PDF page 5]

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Treasure Hunt Answers

Clue 1 – The Silent Machine

Two possible root causes:

- Failed power supply (PSU)
- Failed or shorted motherboard

First tool to test - PSU tester or multimeter (also try a known-good outlet/power cable)

Clue 2 – The Beeping BIOS

3 short beeps usually indicate - RAM/POST memory error (common on AMI BIOS; exact

meaning varies by vendor)

Next step - Power off, reseat RAM, test one stick at a time, try different slots, and run a memory

diagnostic .

Clue 3 – The Missing Drive

Two possible hardware causes:

- Loose/failed SATA or NVMe drive (or bad data cable/port) -

Incorrect BIOS/UEFI boot order or disabled storage controller

One software fix - From WinRE, repair the boot loader (e.g., bootrec /fixmbr, bootrec /fixboot,

bootrec /rebuildbcd).

Clue 4 – The Hot CPU

Component/feature that prevents overheating - CPU thermal throttling & automatic thermal

shutdown (plus proper heatsink/fan and thermal paste)

How to monitor - UEFI/BIOS Hardware Monitor for temps; in Windows use Task Manager >

Performance (usage) and a sensor tool (e.g., HWMonitor/Open Hardware Monitor) for

temperatures.

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Clue 5 – The Slow LAN

Command to test connectivity - ping <destination> (e.g., ping -n 20 8.8.8.8)

One physical-layer issue that could cause slowness:

● Damaged or mis-terminated twisted pair

causing the link to downshift from 1 Gbps to 100/10 Mbps (e.g., a broken pair or old cable).

Clue 6 – The Phantom Display

Two possible hardware causes:

● Bad/loose video cable or wrong input source on the monitor -

GPU not seated/failed (or using the wrong output; try iGPU vs. discrete)

One isolating test:

● Swap with a known-good cable/monitor or test the monitor on another PC;

verify the monitor's self-test/OSD works.

Clue 7 – The Virtual Machine Vanishing Act

What file type stores a VM - The virtual disk file (e.g., .VHDX for Hyper-V, .VMDK for

VMware; .VDI for VirtualBox) plus a small VM config file (.vmcx/.vmx).

One reason for corruption - Power loss or abrupt host shutdown while the VM disk is being

written (also: datastore full, bad sectors).

Clue 8 – The Peripheral Puzzle

Tool/setting to reset or reinstall a USB printer driver - Windows Printer Troubleshooter

(Settings ▸ Bluetooth & devices ▸ Printers & scanners ▸ Run troubleshooter) - Or remove the

printer and reinstall; optionally restart the Print Spooler (Services ▸ Print Spooler ▸ Restart)

and/or uninstall the device/driver in Device Manager then add it back.

Clue 9 – The Cloud Question (OneDrive)

One advantage - Anywhere access + version history/restore for files and easy collaboration.

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One risk - Data exposure via misconfiguration or over-permissioned third-party apps; account

compromise or vendor outages can also impact availability.

Clue 10 – The Final Fix (Screenshot)

Include one screenshot of Device Manager or a Command Prompt running systeminfo.

Quick how-to 1. Open Device Manager (devmgmt.msc) or open Command Prompt and run

systeminfo. 2. Press Win+Shift+S (Snipping Tool) → select the window → save as PNG. 3. Add

the image to your Playbook repo (e.g., playbook/treasure-hunt/), reference it in this section.

Paste your screenshot below:Device Manager or systeminfo screenshot

Summary (2–3 sentences)

I used A+ Core 1 skills to diagnose power, POST/beep codes, storage boot

issues, cooling/throttling, cabling, display, virtualization files, printers/drivers, and cloud

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trade-offs. I practiced using built-in tools like WinRE/Bootrec, Task

Manager/Performance graphs, Device Manager, and the printer troubleshooter. The

exercise reinforced a structured troubleshoot-verify-document workflow.