

AP Networking | Unit 1

1.1 A Repeatable Troubleshooting Process

Solutions

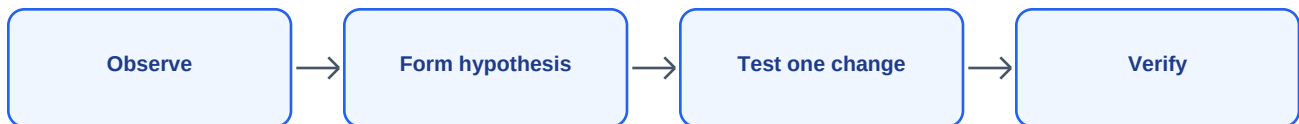
Reference scenario

A laptop stopped reaching the school portal after a wireless settings change. Other laptops on the same network still work. Choose a first investigation step.

Affected devices: 1

Change: manual wireless profile

Other devices: portal reachable



1.1.1

A tablet loses access after a profile change. Explain why rebooting every access point is a poor first action.

Only one tablet is affected and the timing points to its profile. Restarting shared equipment disrupts unrelated users without testing that hypothesis. Compare the tablet configuration with a known working device first.

1.1.2

Write a four-step investigation record for a wrong gateway discovered on that tablet.

Record the symptom and affected device; identify the configured gateway as inconsistent with the network plan; restore the approved setting or automatic configuration; verify local and remote access and document the result.

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1.2 Reading Device Performance Symptoms

Solutions

Reference scenario

A student reports slow video editing even when the laptop is disconnected. Interpret these readings before changing the network.

CPU: 18%

Memory: 97%

Free storage: 22 GB

Offline editing: still slow

1.2.1

A workstation has 98% CPU usage, 40% memory usage, and normal network latency during a slow export. Which resource should you investigate first?

Investigate processor load and the process performing the export. Compare export time and CPU load before and after a controlled application change rather than upgrading the internet connection.

1.2.2

A laptop is fast beside the access point but slow across the building, with the same application and workload. What comparison would test a wireless hypothesis?

Compare signal quality and transfer performance in both locations, and compare with a wired connection if available. Keep the workload fixed to separate location-dependent wireless effects from application processing.

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1.3 Getting and Keeping a Connection

Solutions

Reference scenario

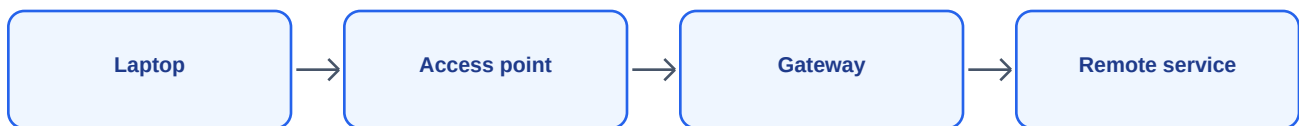
A device associates with Wi-Fi and reaches a local printer but cannot reach a remote service. Read its settings.

Address: 10.20.1.25

Mask: 255.255.255.0

Gateway: not configured

Local printer: 10.20.1.40



1.3.1

A client at 10.20.1.25/24 reaches 10.20.1.40 but not 10.20.2.40. What additional network function is needed?

It needs routing through a reachable gateway, together with an allowed route and return path between the subnets. The different /24 networks cannot communicate merely because both addresses start with 10.20.

1.3.2

List three checks after reconnecting a laptop to Wi-Fi.

Confirm association with the intended network, inspect the address/mask/gateway/DNS settings, and test a required service. Use tests appropriate to the service instead of treating signal bars as proof of connectivity.

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1.4 Securing the Device You Own

Solutions

Reference scenario

A shared laptop has pending updates, a shared administrator login, and an unused remote-access service. Prioritize a practical hardening plan.

Updates: pending

Daily account: administrator

Remote-access service: unused

1.4.1

Explain why replacing the password on a shared administrator account does not fully solve accountability problems.

The account still represents several people, so its activity cannot be reliably attributed to one user. Use individual accounts and restrict administrative privileges to approved maintenance.

1.4.2

Name a verification check after disabling an unused network service.

Confirm the service is no longer listening or accepting connections, then confirm required applications still work. Record the approved configuration and rollback option.

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1.5 Using AI Assistance Honestly

Solutions

Reference scenario

An AI assistant recommends disabling the firewall after one failed ping. Evaluate that advice using the evidence.

ping to server: no reply
HTTPS to server: works
Firewall logs: no relevant deny event

1.5.1

An AI tool says a failed name lookup proves that the cable is broken. Name evidence that would distinguish those explanations.

A working link and successful access to an approved destination by address weaken the cable hypothesis. Test the configured DNS resolver and compare name lookup results with a working client.

1.5.2

What should be removed before sharing diagnostic output with an external assistant, and who remains responsible for the final change?

Remove passwords, tokens, personal identifiers, and confidential internal details not needed for the question. The operator remains responsible for reviewing the recommendation, obtaining required authorization, testing it, and documenting the result.