SYSNET TECHNICAL ROUND INSIGHTS

1 NETWORKING (MOST IMPORTANT)

Sysnet expects **strong basics**, not deep CCNA-level knowledge.
Focus on **concept clarity + troubleshooting thinking**.

Core Topics to Master

✔ IP Address

- What is IP? Types (IPv4/IPv6), Private vs Public
- How IP is assigned (DHCP/static)
- APIPA (169.254.x.x) → indicates DHCP failure

✔ Subnet Mask

- Why we need it
- How it separates network vs host portion
- Typical masks: 255.255.255.0 / 255.255.0.0 etc.

✔ Default Gateway

- Role: Router that connects your network to the internet
- If user can ping gateway but not internet → DNS issue

✔ DNS

- Converts names → IP
- If 8.8.8.8 works but google.com fails → DNS failure
- Tools:
  - nslookup
  - ipconfig /flushdns

✔ DHCP

- Assigns IP, subnet, gateway & DNS automatically
- If user gets APIPA → DHCP not working

✔ TCP vs UDP

TCP = reliable, connection-oriented (web, mail)
UDP = fast, connectionless (video calls, games)

2 OS BASICS (Windows + Linux)

Sysnet expects practical OS usage, not theory.

Windows Essentials

✔ Basic commands:

- ipconfig
- ping
- tracert
- tasklist
- taskkill
- services.msc

- eventvwr
- msconfig

✔ Windows Concepts

- Services
- Startup programs
- Registry basics
- Device Manager
- Event Viewer (Application, System logs)

Linux Essentials

They expect **very basic** commands:

- ls
- cd
- pwd
- ps
- top
- ifconfig/ip a
- chmod
- chown
- rm, cp, mv

You only need to know:

- File permissions
- How to check running processes
- How to see memory/cpu usage

3️⃣ TROUBLESHOOTING (MOST TESTED AREA)

Sysnet LOVES practical troubleshooting scenarios.
Almost every technical interview includes **3–5 scenarios**.

Most Asked Troubleshooting Scenarios

Scenario 1: “WiFi connected but no internet”

Common reasons:

- DNS failure
- IP conflict
- Wrong gateway
- Local firewall blocking
- Proxy misconfiguration
- DHCP issue

Flow:

1. Check IP → valid or APIPA?
2. Ping gateway
3. Ping 8.8.8.8
4. Ping google.com
5. Flush DNS
6. Check adapter status
7. Restart router (if needed)

Scenario 2: DNS Fail

User can ping **8.8.8.8** but cannot open websites.

Root cause:

- DNS server not responding
- DNS misconfigured
- Hosts file altered
- Malware changing DNS

Fix:

- Set DNS to 8.8.8.8
- ipconfig /flushdns
- Check hosts file
- Restart DNS Client service

Scenario 3: Slow PC

Causes:

- High CPU process
- Startup programs
- Low RAM
- Background updates
- Malware
- Less disk space
- Corrupt OS files

Fix:

- Task Manager (CPU/RAM/Startup)
- Remove unwanted programs
- Disk cleanup
- Full antivirus scan

Scenario 4: VPN Not Connecting

Possible:

- Wrong username/password
- Internet unstable

- Firewall blocking
- DNS issue
- VPN certificate expired
- Port blocked

Scenario 5: “No LAN / Unidentified network”

Root causes:

- Wrong IP/subnet
- Gateway unreachable
- Cable issue
- Switch port down
- Static IP conflict
- DHCP disabled

Scenario 6: Email Not Receiving

Check:

- Inbox full?
- Spam folder?
- Mail server connectivity?
- Outlook configuration?
- SMTP/IMAP settings?
- Password expired?

4️⃣ COMMUNICATION & CLIENT-FACING READINESS

Sysnet values this as much as technical skills.

They want:

✔ Calm
✔ Polite
✔ Step-by-step explanation
✔ Non-technical language
✔ Empathy

FINAL SUMMARY (What Students Must Master)

Networking — *highest priority*

- IP, subnet, gateway
- DHCP, DNS
- TCP vs UDP
- Ping, traceroute
- IP conflict

OS Basics

- Commands
- Services
- Logs

- Task Manager
- Startup troubleshooting

Troubleshooting

- No internet
- DNS fail
- Slow PC
- VPN issue
- Email issue
- WiFi/LAN issue

Communication

- Calm, polite
- Clear explanation
- Empathy
- Step-by-step guidance