IT Support Complete Cheat Sheet – Full Edition

Default Gateway

The default gateway allows devices inside a network to communicate outside their subnet, typically through a router.

DHCP (DORA)

DHCP assigns IP addresses using Discover, Offer, Request, Acknowledge to avoid manual configuration.

DNS

DNS converts website names to IP addresses for easy access.

VLAN

VLAN divides one physical network into multiple virtual segments for better security and efficiency.

Switch Types

Unmanaged, Managed, L2, L3, PoE, and Smart switches are used based on network needs.

WiFi Troubleshooting

Reset adapter, verify IP, check router, update drivers, test device connectivity.

BSOD

Blue screen caused by driver failure, corrupted files, RAM issues. Fix using updates and system repair.

Network Printer Setup

Add printer by IP or print server. Ensure driver installation and same network.

Active Directory

Centralized system to manage users, groups, computers, and policies.

VPN (Sophos)

Provides encrypted remote access to company network.

IP Address & Subnetting

Defines network and host portions. Subnetting divides networks into smaller parts.

OSI Model

Seven-layer model explaining network communication: Physical to Application.

TCP vs UDP

TCP is reliable and connection-oriented; UDP is faster but connectionless.

Common Ports & Protocols

HTTP-80, HTTPS-443, DNS-53, DHCP-67/68, RDP-3389, SSH-22, FTP-20/21.

Ping / Tracert / Nslookup

Ping tests connectivity, Tracert checks route, Nslookup checks DNS resolution.

Proxy Server

Acts as intermediary for security, caching, and content filtering.

NAT

Translates private IPs to public IP for internet access.

BIOS vs UEFI

BIOS is legacy firmware; UEFI is modern with secure boot and faster startup.

Windows Boot Troubleshooting

Fix using repair tools, rebuilding boot records, checking hardware.

MBR vs GPT

MBR supports 2TB and 4 partitions; GPT supports larger drives and 128 partitions.

Windows Services

Background processes controlling network, security, printing, etc.

Device Manager Troubleshooting

Used to fix drivers, hardware mismatches, and device errors.

Group Policy (GPO)

Controls settings for users and computers across domain.

Outlook Troubleshooting

Fix using profile reset, PST repair, connectivity checks.

MS Teams Troubleshooting

Clear cache, sign-out, update app, fix audio/video settings.

Ticketing Tools

JIRA, ServiceNow, Freshservice are used for issue tracking and workflow.

Firewall Summary

Filters incoming/outgoing traffic based on rules.

Antivirus & Threat Protection

Protects system from malware, phishing, ransomware.

MFA / Authentication

Adds extra layer of identity verification for security.

VPN Issue Troubleshooting

Check internet, credentials, firewall, reinstall VPN client.

Memory/HDD/SSD Issues

Slow performance, SMART errors, faulty RAM cause crashes.

Laptop Overheating Fix

Clean fans, update BIOS, change thermal paste.

BSOD Deep Summary

Critical hardware or driver crash; use diagnostics and logs.

Backup & Restore

Use cloud or local tools to ensure data recovery.

New User Onboarding

Create accounts, assign assets, provide permissions.

Asset Management

Track laptops, accessories, software licenses.

Advanced Printer Troubleshooting

Fix spooler, driver corruption, port issues, connectivity.