

CCNA 200-301 Study Checklist

Official exam domains with the topics to tick off. Print it, work top to bottom.

1 · Network Fundamentals (20%)

- OSI & TCP/IP models, encapsulation
- Switches, routers, firewalls, APs — roles
- Cabling: copper vs fibre, straight vs crossover
- IPv4 addressing & subnetting (block-size fluent)
- IPv6 addressing, SLAAC, address types
- TCP vs UDP behaviour
- Wireless fundamentals (SSIDs, bands, channels)
- Virtualisation basics

2 · Network Access (20%)

- VLANs, access vs trunk, 802.1Q
- Inter-VLAN routing (router-on-a-stick, SVI)
- EtherChannel (LACP)
- STP: root bridge, PortFast, BPDU Guard
- CDP/LLDP
- WLAN components & AP modes

3 · IP Connectivity (25%)

- Routing table: sources, AD, longest match
- Static routes (incl. default & floating)
- OSPFv2: neighbours, DR/BDR, cost
- First-hop redundancy (HSRP concept)

4 · IP Services (10%)

- NAT (static, dynamic, PAT)
- DHCP server/relay + client
- NTP · DNS · SNMP · Syslog
- SSH device management · TFTP/FTP roles
- QoS concepts (marking, queuing)

5 · Security Fundamentals (15%)

- Threats: phishing, spoofing, MITM, DDoS
- AAA concepts · local passwords · privilege levels
- ACLs (standard vs extended, placement)
- Port security · DHCP snooping · DAI
- VPN types (site-to-site, remote access)
- Wireless security: WPA2/WPA3

6 · Automation & Programmability (10%)

- ❑ Controller-based vs traditional networking
- ❑ REST APIs, JSON basics
- ❑ Configuration management (Ansible concepts)
- ❑ AI/ML impact on operations (2026 blueprint)

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