

Cisco CCIE Enterprise Infrastructure Cheat Sheet

One-page cram sheet for the expert path, advanced enterprise infrastructure, assurance, security, and automation.

Best for	Focus	Use with
Last review before drills or lab prep	Expert-level design + operations + troubleshooting flow	Use with ports sheet and commands sheet

1. Core path to expert level

ENCOR + lab	CCIE Enterprise Infrastructure requires the 350-401 ENCOR core exam plus the 8-hour practical lab.
Lifecycle mindset	The lab is not just configuration; it tests plan, design, operate, and optimize decisions.
Dual-stack expectation	IPv4 and IPv6 design and operations show up together, not as isolated side topics.
Scale matters	Think enterprise-wide behavior, failure domains, and operational consistency, not one-box trivia.

2. Enterprise infrastructure depth

Routing depth	OSPF, BGP, redistribution, policy, path control, convergence, and troubleshooting need to feel natural.
Advanced switching	STP behavior, EtherChannel, multicast awareness, FHRPs, and campus edge protections remain high-yield.
Services integration	QoS, NAT, DHCP, NTP, DNS dependency, and service reachability tie directly into operations questions.
Failure handling	Know how designs behave under link, node, and path loss instead of only memorizing feature purpose.

3. Software-defined enterprise

SD-WAN	Understand control plane, data plane, policy intent, segmentation, and common operational checks.
SD-Access	Think fabric roles, policy, identity, segmentation, and why overlays simplify scale.
Controllers	Centralized intent and automation improve consistency, but verification still matters.
Overlay vs underlay	This distinction is critical in both design and troubleshooting logic.

4. Security and assurance

AAA + secure management	Identity, RBAC, logs, and encrypted management are non-negotiable defaults.
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Telemetry and baselines	Streaming data, logs, flow records, and packet capture answer different questions.
Segmentation	VRF, ACL, firewall boundaries, and trust design reduce blast radius.
Methodical troubleshooting	Validate intended state, compare actual behavior, isolate the fault domain, then prove the fix.

5. Automation and programmability

APIs + models	JSON, REST, YANG/NETCONF, and controller APIs matter because expert networks are automated.
Repeatability	Templates and automation reduce drift and make rollback safer.
State validation	Automation without verification is risky; always confirm intended versus actual state.
Operate at scale	The expert level rewards answers that scale operationally, not just technically.