

How to use Hierarchical Network Design to Design Advanced Campus Networks

This advanced Campus Network Design training teaches learners to plan and design efficient campus networks using the hierarchical model. Master the principles of network design to ensure optimal traffic flow and avoid common pitfalls. Ideal for IT managers, this course is perfect for onboarding new network admins or as a Cisco reference for designing reliable, scalable networks.

[CBT Nuggets course material](#) →

WEEK 1

Explain the Hierarchical Network Model

160 min.

Intro	1
The Hierarchical Network Model	8
Enterprise Campus Architecture	9
The Access Layer	6
The Distribution Layer	7
The Core Layer	5
Collapsed Designs	6
Review and Quiz	4

Design High Availability in Campus Networks

Overview	1
Intro	1
Network Redundancy	12
Hot Standby Router Protocol (HSRP)	14
Virtual Router Redundancy Protocol (VRRP)	7
Gateway Load Balancing Protocol (GLBP)	8
Bidirectional Forwarding Detection (BFD)	8
FHRP Design	12
Graceful Restart, SSO, and NSF	7
Review and Quiz	5

Design Campus L2 Infrastructures

Overview	1
Intro	1
Media Types	10
L2 and L3 Access Layer Design	7
STP Modes and Features	8

STP Designs 10

WEEK 2

153 min.

Reducing STP Footprint 7

Power over Ethernet (PoE) and Wake on LAN (WoL) 8

Review and Quiz 6

Design Multicampus L3 Infrastructures

Overview 1

Intro 1

Routing Convergence, Summarization, and Filtering 10

Route Load Sharing 7

Route Redistribution 9

Virtual Routing and Forwarding (VRFs) 6

Optimal Topologies 14

Review and Quiz 5

Describe SD-Access Architecture

Overview 1

Intro 1

SD-Access Overview 12

SD-Access Architecture 8

SD-Access Device Roles 8

The SDA Control Plane - LISP 8

The SDA Data Plane - VXLAN 6

The SDA Policy Plane - CTS 7

SD-Access Wireless 6

SD-Access Automation 6

Review and Quiz 4

Design an SD-Access Fabric

Overview 1

Intro 1

Overlay and Network Segmentation Design 7

WEEK 3

54 min.

Underlay Design 6

Control Plane Design 4

Border Design 7

Hardware Selection 8

Wireless Design 7

Multicast in SD-Access 6

Fabric in a Box 4

Multisite Designs 6

Review and Quiz 5