

CCNA/CCNP 3.0

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Why CCNA/CCNP 3.0? Empower Students with Up-to-Date Skills

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- **Networking Technology has evolved since last major curriculum revisions (authored in 1999)**
 - Opportunity to take advantage of new Flash, Simulation, GUI, and Remote Lab Technologies**
 - Opportunity to have Curriculum, Online Assessment, and Certification Exams well aligned through Claims/Evidence and RIO/RLO Processes**
- **Industry and Cisco Have Reached a Consensus:**
 - Joint WWE/ILSG Industry Job Task Analysis**
 - WWE and ILSG Subject Matter Experts**
 - Cisco Engineers, Cisco TAC**
 - Cisco Technology Initiatives**
- **CCNA and CCNP Certification Exams will have notable content changes in 2003**



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CCNA Curriculum

CCNA 1

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- **Introduction to Networking**
Terminology, Binary, OSI
- **Building Simple LANs**
Media, “Interconnecting Networking Devices”, Testing
Copper, Fiber, Wireless Media Covered
- **Ethernet**
Legacy, Fast, and Gigabit
- **TCP/IP**
- **Case Study: Structured Cabling Project**
Completely Localizable (materials, standards, etc.)
External to Regular Curriculum/Assessment Flow

CCNA 1 Lab Implications

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- **Media**

Terminating copper media (Cat 5, tools, connectors)

No fiber or wireless equipment needed

- **Cisco Lab Bundle is Important in CCNA 1**

PCs, NICs, cables, hubs, switches, and routers: all useful for Layer 1 “Interconnecting Network Devices” Hands-On Labs and for demonstrations (“this is a switch, this is a router, here are interfaces and LEDs)”

- **Software**

Fluke Network and Protocol Inspector Software, or equivalent, highly recommended

Cisco Network Designer highly recommended

- **Routers as Devices**
Role, Hardware, IOS, Basic Configuration Tasks
- **Determining IP Routes**
Static and Default routes, RIP v.1, IGRP (simple)
Emphasis on Routing Tables
- **ACLs**
- **Case Study**
External to Regular Curriculum/Assessment Flow

CCNA 2 Lab Impacts

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- **2-router topologies**
Highly recommend minimum of 6 routers
- **Flexible Lab Activities**
Shorter to Setup and complete
- **New Bundle/Upgrade Bundle**
Part #s and Prices are forthcoming

- **Intermediate Routing**
 - Starts with VLSM/Classless introduction**
 - RIP v.2, Single-Area OSPF, Basic EIGRP**
- **Switches and Switching**
 - Switch Configuration from CLI (IOS)**
 - VLANs**
- **Case Study**
 - External to Regular Curriculum/Assessment Flow**

CCNA 3 Lab Impacts

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- **2-Router and 3-Router Topologies**
- **Upgrade Existing 19xx Switches for CLI Enterprise Edition Software**
- **19xx, 29xx, 2950 Switches are all Useful**
Labs will deal with IOS differences amongst these
- **Highly Recommended:**
Minimum of 3 CLI-capable switches
Have at least 1 router and 1 switch 802.1q capable
- **New Bundles/Upgrade Bundles**
Part #s and Prices are forthcoming

CCNA 4

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- **Updated WAN Terminology**
- **WAN Technologies**
- **Simple NAT, PAT, DHCP**
- **PPP, ISDN, DDR, and Frame Relay**
- **Case Study**

External to Regular Curriculum/Assessment Flow

- **Certification Exam Practice**

CCNA 4 Lab Impacts

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- **A series of hands-on WAN Labs on PPP, ISDN, and Frame Relay, some using Adtran, will be created**
- **A corresponding eLAB for EACH of these hands-on labs will be created, so that the majority of CCNA Academies (who do not have Adtrans) can still make CCNP 4 more lab-oriented**
- **New Bundles/Upgrade Bundles**
Part #s and Prices are forthcoming

Many topics added, how do we teach?

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- **CCNA 1**

FDDI, Token Ring, separate chapters for OSI: gone

Structured Cabling External to Regular Curriculum and Assessment Flow

- **CCNA 2**

More time-efficient 2-router labs, More eLABs

IP Addressing Practice Integrated into the Labs

- **CCNA 3**

IPX and Net Mgmt removed, Case Study External to Regular Curriculum/Assessment Flow

- **CCNA 4**

Net Plus → appendix, Net Mgmt Removed, Case Study External to Regular Curriculum and Assessment Flow



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CCNP Curriculum

- **IP Addressing Techniques**
- **Routing Protocols**
 - RIP v. 2, Intermediate EIGRP**
 - Multi-Area OSPF, IS-IS**
 - BGP**
- **Route Redistribution and Optimization**
- **Case Study External to Regular Curriculum/Assessment Flow**

CCNP 1 Lab Impact

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- **Memory and IOS Upgrade, for 3 2621 Routers, Needed to teach IS-IS Labs**
- **Decreasing Student-to-Router Ratio is always desirable**
- **New Bundles/Upgrade Bundles**
Part #s and Prices are forthcoming

CCNP 2

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- **WAN Components**
- **Asynchronous Connections**
- **PPP**
- **ISDN, DDR, and Dial Backup**
- **Broadband: Cable and DSL**
- **Frame-Relay and Queuing**
- **NAT and AAA**
- **VPNs**
- **Case Study External to Regular Curriculum/Assessment Flow**

CCNP 2 Lab Impacts

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- **Memory and IOS Upgrade, for 3 2621 Routers, Needed to teach VPN, QoS, and CBWFQ Labs**
- **No hands-on Cable Modem or DSL labs, so no equipment needed for these topics**
- **New Bundles/Upgrade Bundles**
Part #s and Prices are forthcoming

CCNP 3

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- **Introduction**
 - Campus Design Models; the Switch Block
 - Gigabit Ethernet
- **Core Switching Topics (IOS, not set-based)**
 - Switch Administration
 - VLANs and VTP
 - STP and PVST
 - Inter-VLAN Routing; MLS and CEF
 - HSRP; Multicasting; Security
- **QoS and High Availability Issues Throughout**
- **Case Study External to Regular Curriculum/Assessment Flow**

CCNP 3 Lab Impact

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- **Qualitative change in lab topics and preparation expected for Certification Exam Changes in 2003**
- **Switch Pod: 1 3550 EMI, 2 2950T EI, 2 GBIC**
- **Switch Block: 3 Switch Pods**
- **Basic Labs done on switch pods; intermediate and advanced labs on Switch Block**
- **Options for Existing 29xx Switches: still very useful for teaching CCNP 3 basic switching topics**
- **Options for 4006s: trade-in, upgrade, keep and teach some set-commands for industry prep, keep as non-IOS-configurable participant in Switch Block**
- **New Bundles/Upgrade Bundles**

Part #s and Prices are forthcoming

CCNP 4

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- **TAC Level 2 & 3 Troubleshooting**
- **Troubleshooting Methods**
- **OSI Layer 1 Troubleshooting**
- **OSI Layer 2 Troubleshooting**
- **OSI Layer 3 Troubleshooting**
- **OSI Layer 4-7 Troubleshooting**
- **Case Studies From TAC**

CCNP 4 Lab Impact

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- **Requires CCNP 1, 2, and 3 Equipment**
- **Test Equipment and Software (for example Fluke) will enrich Experience**
- **New CCNP Bundles/Upgrade Bundles**
Part #s and Prices are forthcoming

New topics added, how do we teach?

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- **CCNP 1**

Basic OSPF and EIGRP moved to CCNA

2 BGP Chapters Simplified into 1; More eLABs

- **CCNP 2**

Build upon PPP, ISDN, DDR, and Frame Relay from CCNA; X.25 Removed; More eLABs

- **CCNP 3**

Set-Based Commands Removed; More eLABs

- **CCNP 4**

IPX and AppleTalk Removed

“Level 1” Troubleshooting (simple mistakes) removed



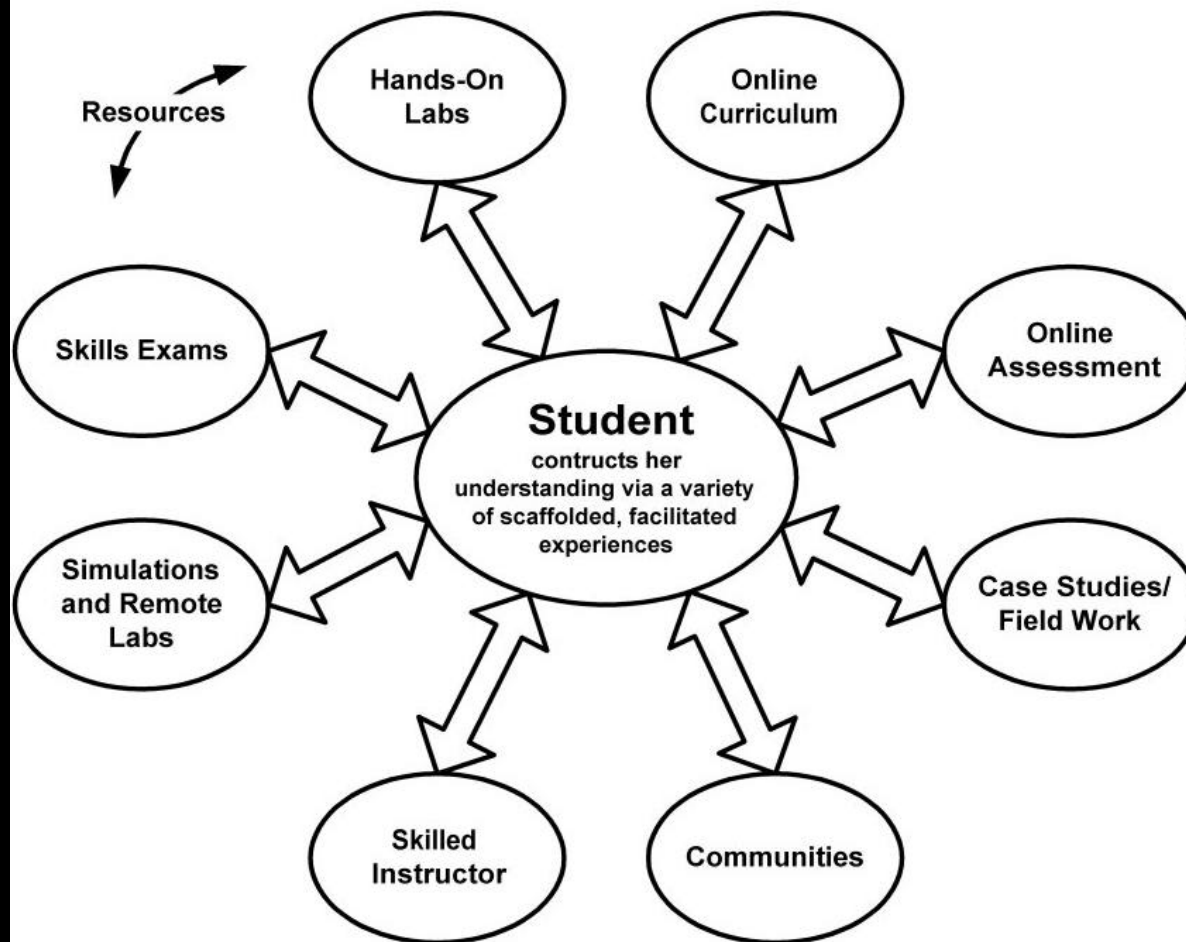
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CCNA and CCNP 3.0 Training

CCNA/CCNP 3.0 Improved Resources

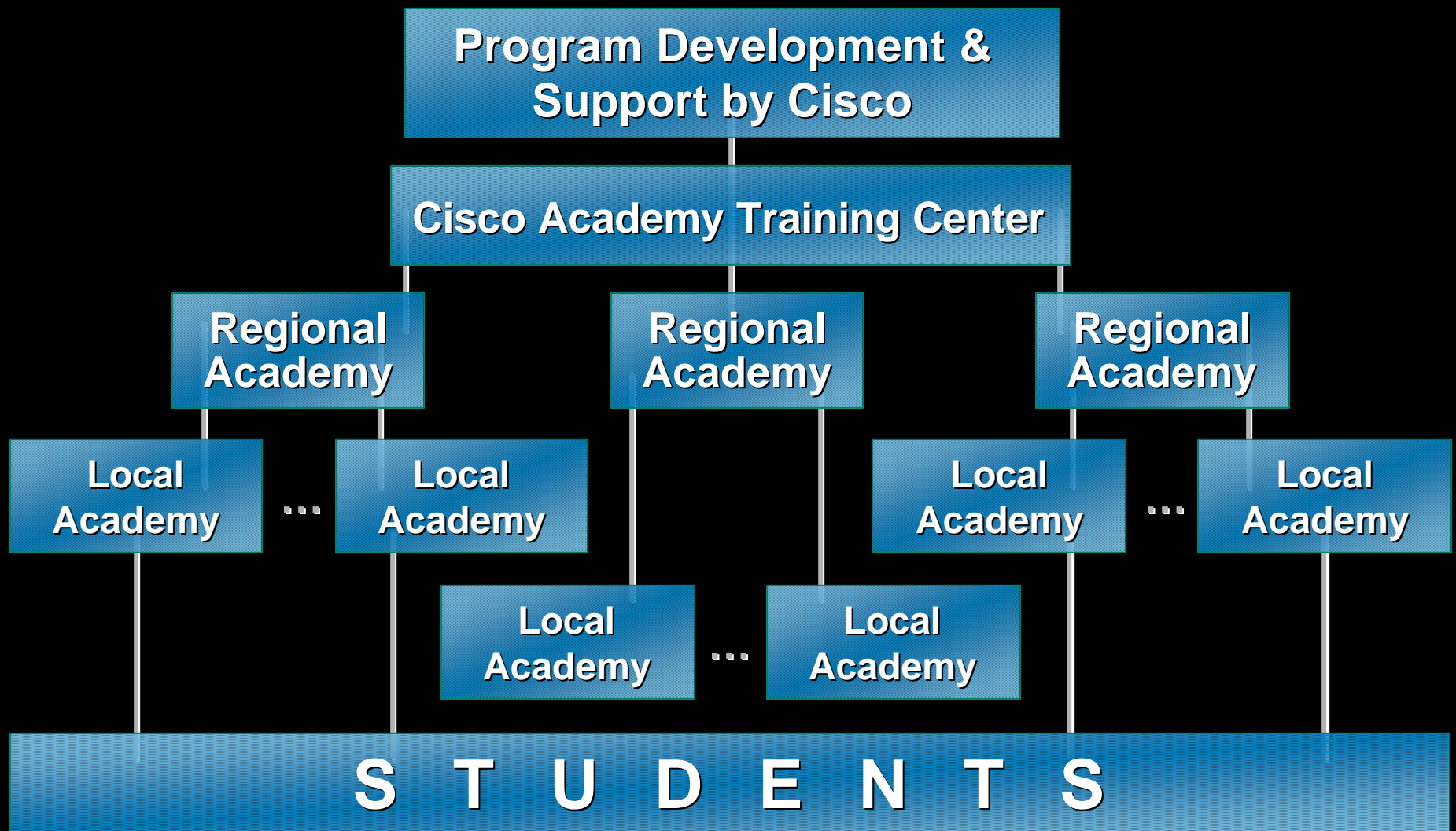
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Learner Model: Academy Student



Program Hierarchy

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Training: In-Person Synchronous

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- **WWE → CATC**
- **CATC → Regional**
- **Regional → Local**
- **Duration**

From a few hours to a few days, really up to CATCs, Regionals, and Locals to determine what best serves Instructors' Needs

Training: Remote Synchronous

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- **WWE → WWE**
- **WWE → CATC, Regional**
- **CATC → Regional**
- **Regional → Regional, Local**
- **Using a Variety of Collaboration Tools**

Training: Remote Asynchronous

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- **Online/Downloadable Instructor Materials**
- **Online Communities focused on 3.0 Issues**
Cisco Academy Connection Launch 12/29/02
- **Remote Lab Setups to assist with Trainings**
- **Instructor Update Syllabi**
Recipes for customized Delta courses
- **1:1 Mentoring Strongly Encouraged**

Training Materials

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- **Lab PDFs**
- **Content PDFs**
- **E-Learning Flash Interactives**
- **eLABs**
- **Digital Video**
- **Sharing of Remote Access?**

CCNA 3.0 Milestones

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- **10/02** **WWE/CATCs/Regionals Plan Retooling**
In-Person Synchronous, Remote Synchronous
Remote Asynchronous, Self-Study
“Delta” Update Materials: pdf, lab, eLAB,
Flash begin to be released
- **04,05/03** **CCNA Courses Available (English)**
Staggered by a few weeks from each other
- **TBD** **Certification Exam Schedule**
When will new exams be available?
When will old exams be retired?


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On the Academies' 5th Anniversary,

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Goal of CCNA/CCNP 3.0 is to empower students with skills relevant in the world of networking in the Year 2003

CISCO SYSTEMS



EMPOWERING THE
INTERNET GENERATIONSM