Cisco | Networking Academy®
Mind Wide Open™

Certification Information

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Cisco Networking Academy Program Certification Exams and Vouchers

- This is an overview of the different certification exams and vouchers available for exams that map to Networking Academy curricula.

	Certification & Presentation – Revision 1.0
Topic:	Cisco Networking Academy Program – Certification Exams & Vouchers
Appropriate for:	☑ Internal teams
	☑ Academy audiences
Content valid:	Valid as of September 2007
Additional info:	1. Please tailor this presentation to your goals, audience, and time constraints. 2. Notes are provided in this presentation to identify key speaking points 3. Send any feedback to your theater Networking Academy program contacts

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CCNA Revision & New CCENT Certification

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Changes to Cisco Career Certification

A Lifecycle of Learning

Updates to CCNA
A Foundation in Networking

- Greater breadth reflects today's enterprise networks
- Focus on performance-based skills and hands-on practice
- Localization addresses worldwide skills gap

Introduction of CCENT
An Accessible Entry Point

- Cisco CCENT Entry-Level Network Technician certifies skills for entry level network support
- An intermediate step toward CCNA for those with little or no work experience

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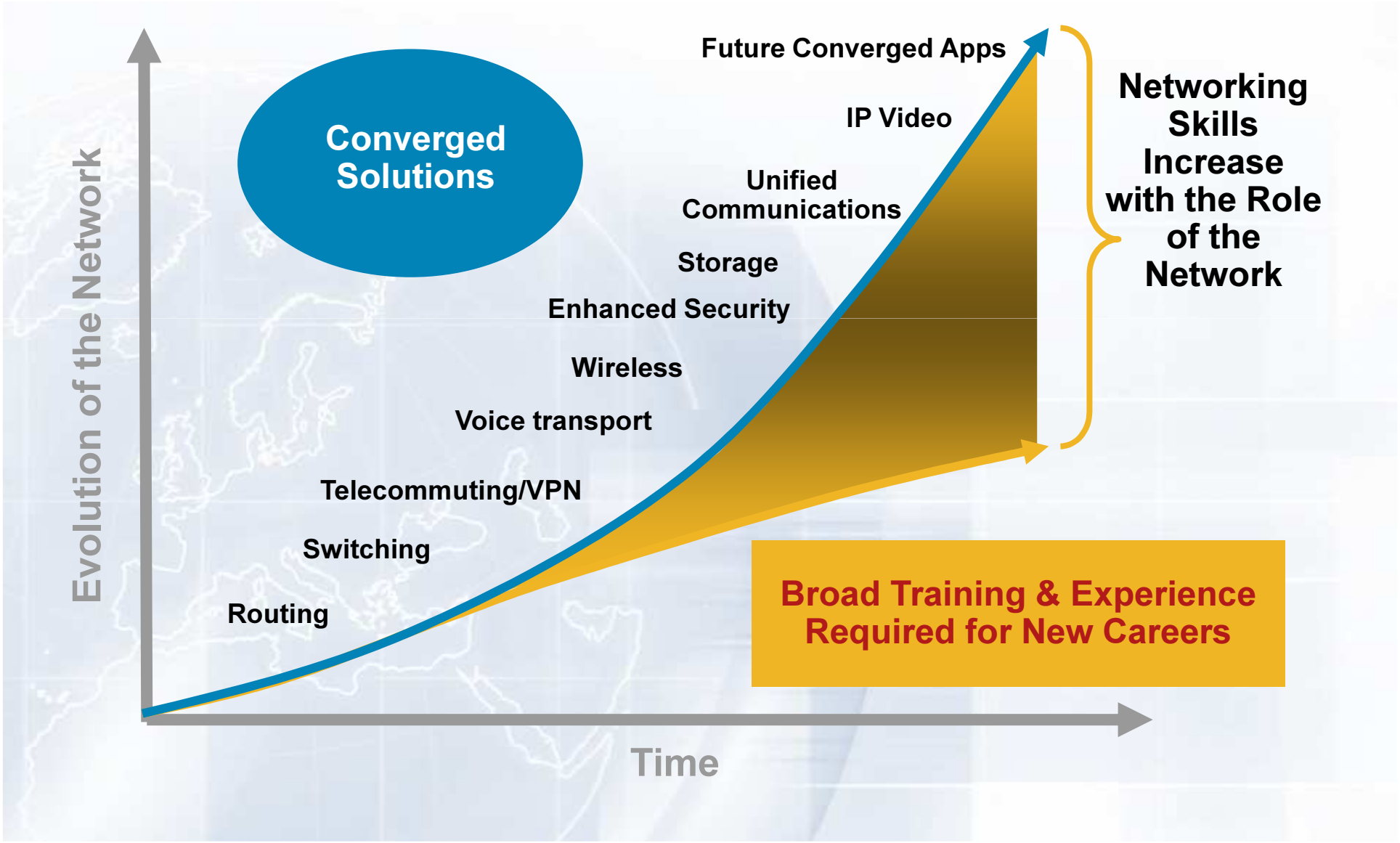
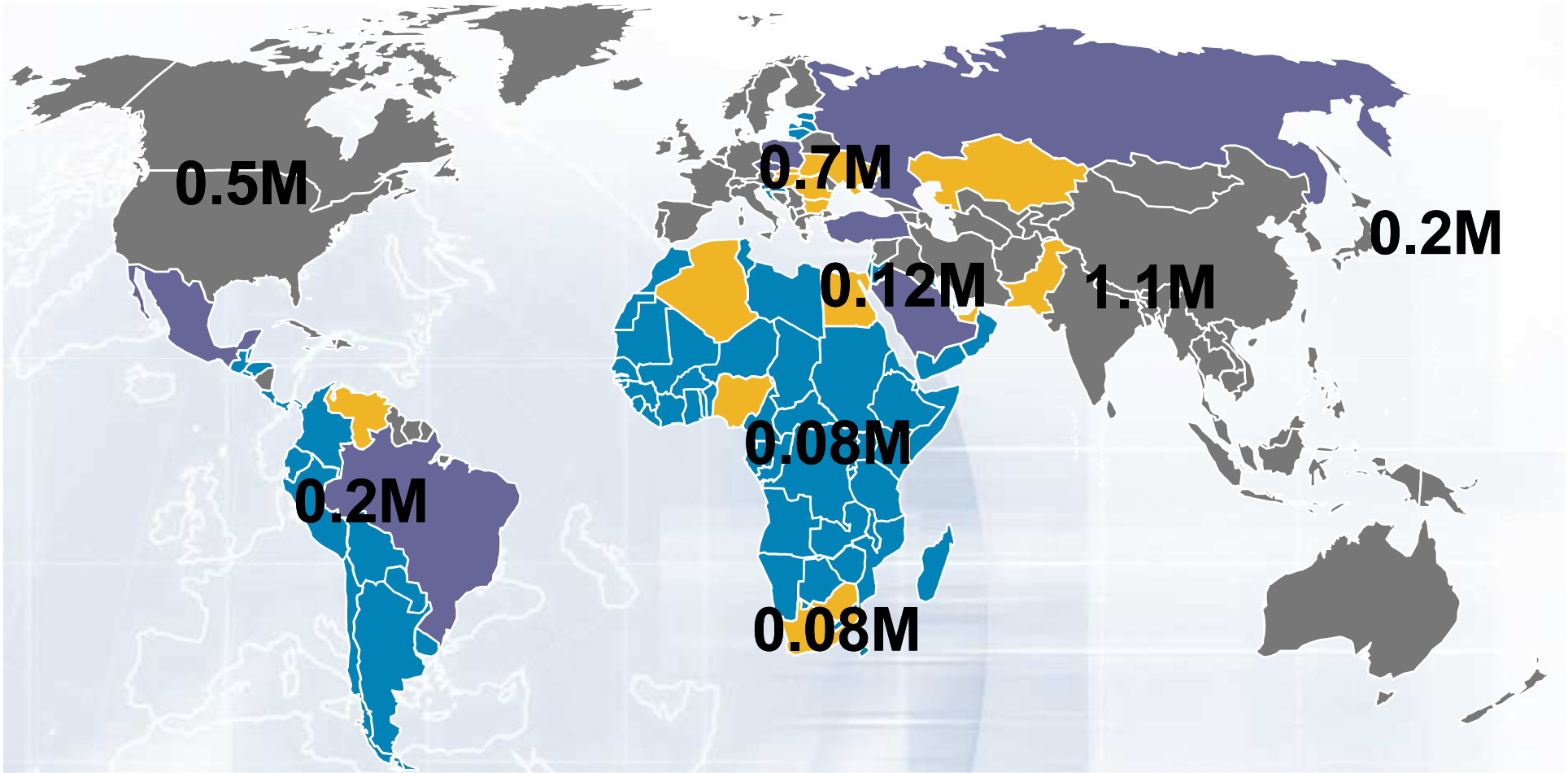
Growing Role of the Network



Networking Job Demand Estimated to Grow ~3M in 2012



Right Experts—Right Place—Right Time

Source: IDC White Papers on Networking Skills Gaps for – Europe (Sep 2005), Middle East and Pakistan (May 2006), APAC (Nov 2006), Israel (May 2006), South Africa (May 2006); Bain Analysis

Trends at the Entry Level

- CCNA is a big step for many new graduates, career-changers
- Entry level job analysis shows:
  - On average worldwide, networking job roles require 1-3 years experience
  - Many employers hiring for entry-level IT positions
- Cisco research confirmed interest in lower-level certification among the following employers:
  - VARs focused on SMB
  - Enterprise customers
  - Service providers
  - Technology/retail support organization
  - Networking Academy feedback

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Updates to Cisco Certification

- Cisco is expanding certification of entry level skills and knowledge – the foundation of a successful career in networking.
- ***New CCNA certification exam*** has greater breadth—more security, troubleshooting and basic wireless—*and* more time devoted to performance-based skills.
- Introduction of ***new CCENT*** entry level certification
  - Cisco Certified Entry Network Technician
  - Optional certification after the first two courses of CCNA Discovery curriculum
  - Aligns with entry level networking support positions

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Cisco Certification and Training - Value to Employers

Acquire:

- Pre-qualifies applicants

Develop:

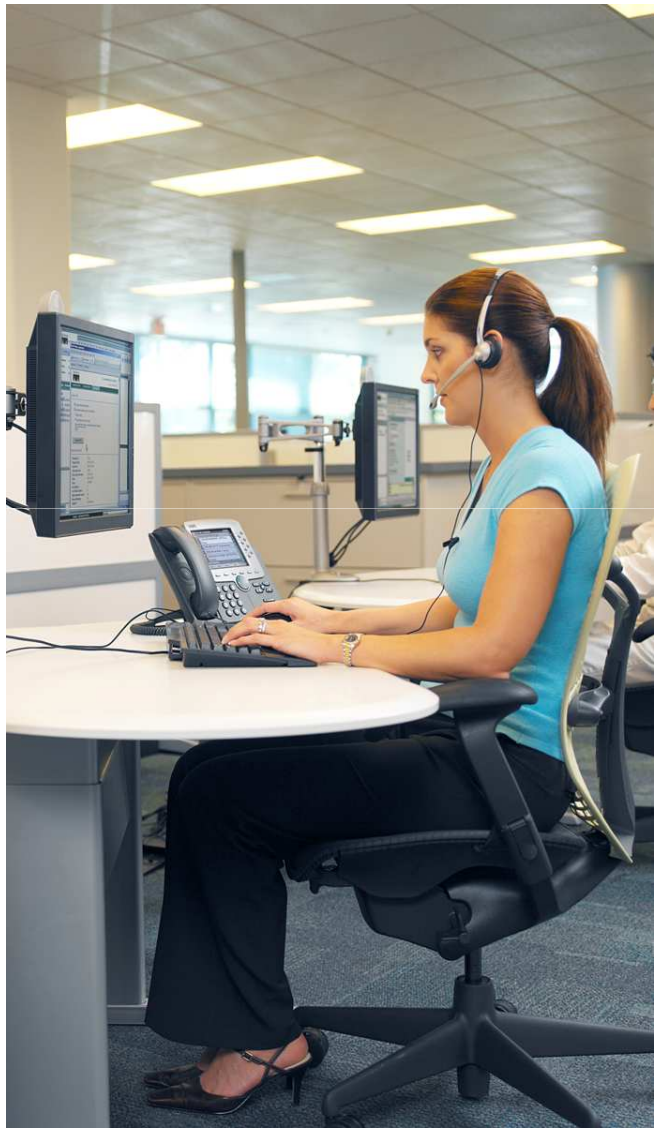
- Proficient in the latest advanced technologies

Retain:

- Supports employee career development

Productivity

- Credibility with prospective customers



"Our company's technical footprint is greatly enhanced by our expert staff of Cisco certification holders."

Carleton Jones, CEO of Multimax

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CCENT Makes Entry Level Jobs Accessible

- Students are looking for:
  - Employment with career growth
  - Interesting fields
  - Cultural alignment
  - The ability to learn and make a difference
- Employers with entry-level IT positions
  - Small and medium sized businesses
  - Enterprise customers
  - Service providers
  - Technology/retail organizations

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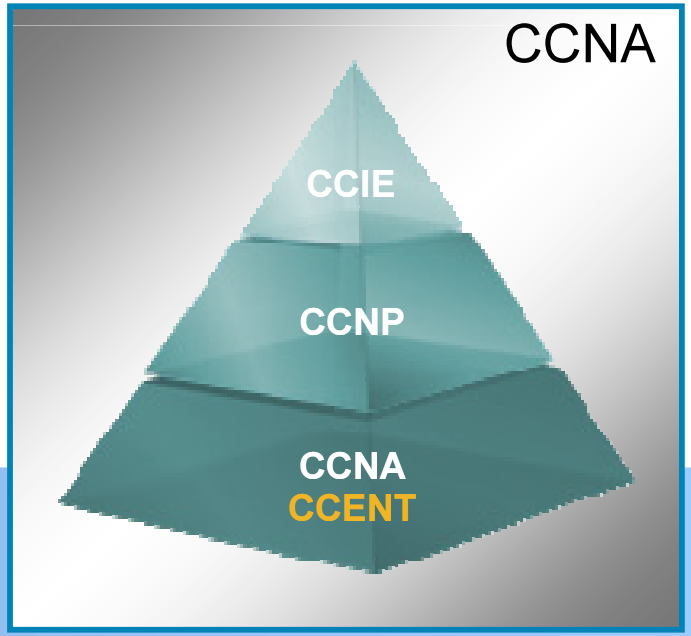
Cisco CCENT Certification

- Certifies skills required to configure, operate and troubleshoot a small enterprise branch network, under supervision
- Aligned to entry level positions in network support, such as help desk representative or technical support assistant
- Requires first of two CCNA exams (ICND 1 640-822)
- An optional, intermediate step towards certification
- Recipients gain access to Cisco Certification Community and use of CCENT logo



www.cisco.com/go/ccent

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Cisco CCNA Certification

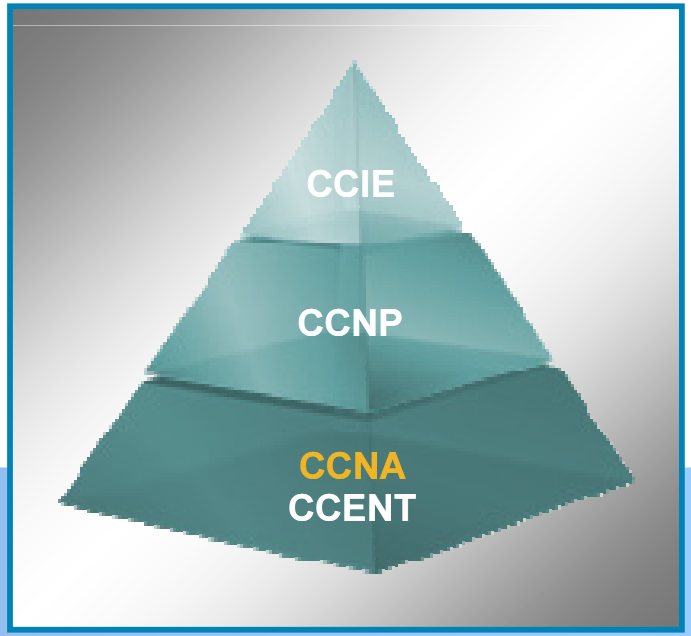
- Certifies knowledge and skills to install, operate and troubleshoot a small to medium size enterprise branch network
- Includes connecting to multiple WANs, basic security measures and wireless extension of the network
- Two options for the exams (2 exam option or one composite exam)

2 Exam option:

- ICND1 640-822 exam
- ICND2 640-816 exam

1 Composite Exam option:

- CCNA 640-802 exam



www.cisco.com/go/ccna

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Cisco Certifications

"Certifications validate your practical experience. You need Cisco certifications for any sort of networking role – it's what employers demand"

Adrian Cassar

Business Systems Engineer, Budweiser UK

"Holding a Cisco certification enabled me to enter the career of my dreams, and now I have the opportunity to work for one of the most recognized productions studios in the world."

Chris Cugno, Senior Network Engineer, DreamWorks Animation SKG

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Certification Exam Options

Interconnecting Cisco Networking Devices Part 1 (ICND1- 640-822)

Simple Networks
Connected Networks
Cisco IOS Devices
Network Management

CCENT Certification

Interconnecting Cisco Networking Devices Part 2 (ICND2- 640-816)

More Complex Networks
LANs and VLANs
IP Routing
Access Lists

CCNA Composite Exam
(640-802)

More Complex Networks
LANs and VLANs
IP Routing
Access Lists
Simple Networks
Connected Networks
Cisco IOS Devices
Network Management

CCNA Certification

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Changes to CCNA Exams

- Now certifying ability to install, operate and trouble-shoot a secure, medium-size enterprise network
- Includes configuration and verification of basic wireless and voice over IP networks
- Greater emphasis on understanding and mitigating threats to network security
- Troubleshooting extended to network maintenance

Current Exams	Revised Exams
INTRO 640-821	ICND1 640-822
ICND 640-811	ICND2 640-816
CCNA 640-801	CCNA 640-802 (composite)

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CCNA Exam Revisions

New Exams Available After August 1, 2007	
	Length/ Pricing
ICND1 640-822	90 min./ $125 USD
ICND2 640-816	75 min./ $125 USD
CCNA 640-802 (composite)	90 min./ $150 USD

- Local pricing available through worldwide testing partners
- CCENT certification requires new exam, ICND1 640-822
- Discount vouchers will be offered to eligible students for all of these exams

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ICND1 Exam

Description and Summary

The ICND1 (640-822) exam is one of the two qualifying exams available to candidates pursuing a two-exam option for CCNA certification. This exam tests content from the first two courses of CCNA Discovery.

- Network types, Network media
- Routing and Switching fundamentals
- TCP/IP and OSI
- IP addressing
- Basic WAN technologies
- Configuring and Operating Cisco IOS devices
- Basic wireless and security concepts
- Configuring simple networks

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ICND1 Exam 640-822 and Course Topics

Technology

- Describe the operation of data networks
- Implement a small switched network
- Implement an IP addressing scheme and IP services to meet network requirements for a small branch office
- Implement a small routed network
- Explain and select the appropriate administrative tasks required for a WLAN
- Identify security threats to a network and describe general methods to mitigate those threats
- Implement and verify WAN links

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ICND2 (640-816) Exam

Description and Summary

The ICND2 Exam (640-816) is the second qualifying exam available to candidates pursuing the two-exam option for CCNA certification.

- Select, connect, configure, and troubleshoot Cisco networking devices
- Extend switched networks with VLANs
- Determine IP routes
- Manage IP traffic with access lists
- Establish point-to-point connections
- Establish Frame Relay connections
- Configure, verify and troubleshoot OSPF and EIGRP
- Configure NAT and DHCP
- Configure, verify and troubleshoot RSTP, VTP, routing between VLANs in a small switched environment.

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ICND2 Exam and Course Topics

Technology

- Configure, verify and troubleshoot a switch with VLANs and interswitch communications
- Implement an IP addressing scheme and IP Services to meet network requirements in a medium-size enterprise branch office network.
- Configure and troubleshoot basic operation and routing on Cisco devices
- Implement, verify, and troubleshoot NAT and ACLs in a medium-size enterprise branch office network.
- Implement and verify WAN links

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CCNA Exam

Description and Summary

The CCNA (640-802) exam qualifies a candidate pursuing the single-exam option for CCNA certification. This exam tests content from all four courses of either CCNA Discovery or CCNA Exploration

- Describe how a network works
- Configure, verify and troubleshoot a switch with VLANs and interswitch communications
- Implement an IP addressing scheme and IP Services to meet network requirements in a medium-size enterprise branch office network.
- Configure, verify, and troubleshoot basic router operation and routing on Cisco devices
- Explain and select the appropriate administrative tasks required for a WLAN
- Identify security threats to a network and describe general methods to mitigate those threats
- Implement, verify, and troubleshoot NAT and ACLs in a medium-size enterprise branch office network.
- Implement and verify WAN links

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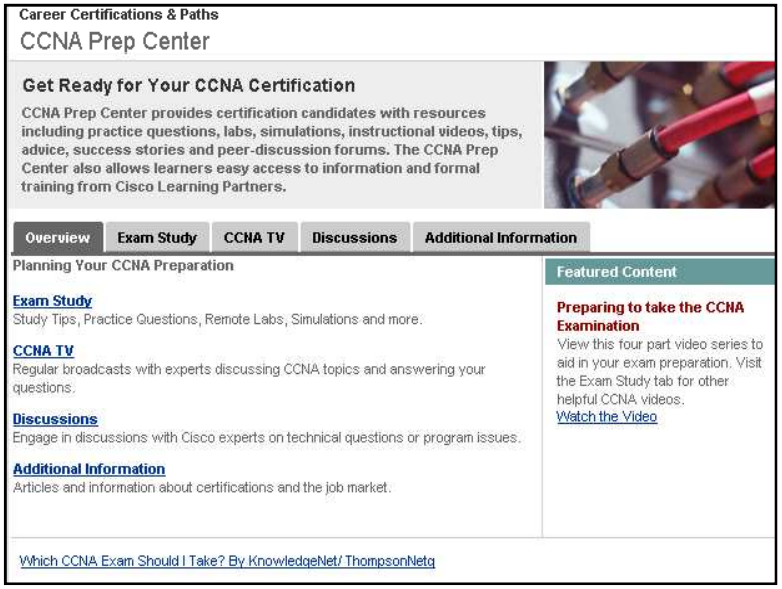
CCNA Certification Prep Center

- **Offers informational broadcasts, simulations, remote labs, expert advice, success stories, discounts, forums, and educational games**
- **Over 100,000 registered users**



www.cisco.com/go/prepcenter

Ask-the-Tutor

- Personalized assistance
- Online tutor answers content-related questions within one business day

Remote Labs

- Access to Cisco gear online for remote practice
- Hands-on exercises covering advanced technologies

Recommended Reading

- Recommended titles from Cisco Press

Practice Questions

Learning Games

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CCNP

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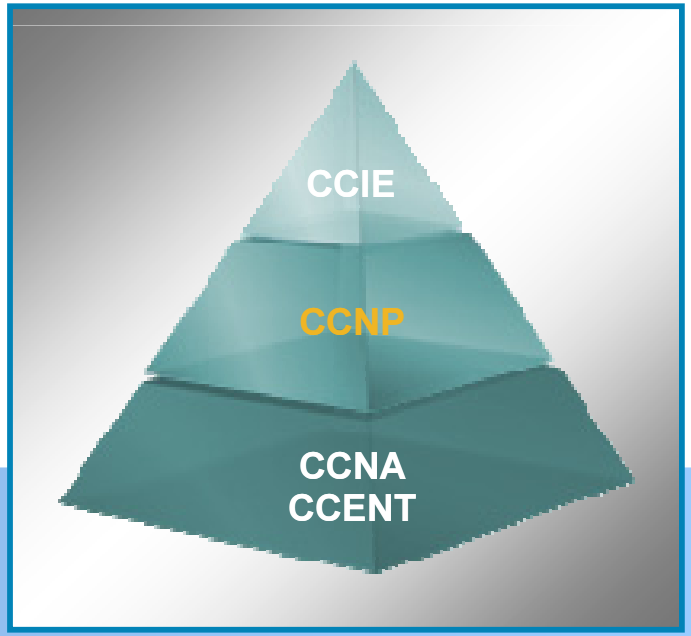
Cisco CCNP Certification

- Certifies knowledge and skills to install, configure, and troubleshoot converged local & wide area networks
- Includes skills required to manage routers & switches that form network core & integrating voice, wireless, & security into the network
- Requires four exams:
  - 642-901
  - 642-812 BCMSN
  - 642-825 ISCW
  - 642-845 ONT



www.cisco.com/go/ccent

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642-901BSCI Exam

Description and Summary

Building Scalable Cisco Internetworks (BSCI 642-901) is the first qualifying exam available for candidates pursuing their CCNP certification. The exam tests content from the course Building Scalable Internetworks, of the CCNP curriculum.

- Explain routing in the enterprise network
- Implement and verify multicast forwarding using PIM
- Implement IPv6 in an enterprise network
- Implement and verify EIGRP operations
- Build a scalable multi-area network with OSPF

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642-812 BCMSN Exam

Description and Summary

Building Converged Cisco Multilayer Switched Networks (BCMSN 642-812) is the second qualifying exam available for candidates pursuing their CCNP certification. The exam tests content from the course Building Multilayer Switched Networks, of the CCNP curriculum.

- Define VLANS to segment network traffic
- Explain Cisco hierarchy network model for campus networks
- Implement Spanning Tree Protocol and implement and verify InterVLAN routing
- Design and implement security features
- Implement high-availability technologies and techniques
- Describe and configure wireless LAN access and switch to support voice

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642-825 ISCW Exam

Description and Summary

Implementing Secure Converged Wide Area Networks (ISCW 642-825) is the third qualifying exam available for candidates pursuing their CCNP certification. The exam tests content from the course Implementing Secure Converged Wide Area Networks , of the CCNP curriculum.

- Implement secure broadband connections for teleworkers
- Describe Cisco network architecture alignment with connectivity requirements
- Describe MPLS conceptual model data and control planes
- Describe and configure a site-to-site IPSec VPN
- Describe and configure Cisco device hardening strategies to mitigate network attacks

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642-845 ONT Exam

Description and Summary

Optimizing Converged Cisco Networks (642-845 ONT) is the fourth qualifying exam available for candidates pursuing their CCNP certification. The exam tests content from the course Optimizing Converged Networks, of the CCNP curriculum.

- Describe the converged network requirements within Cisco conceptual network models, with a focus on wireless security
- Describe basic principles of VoIP network bandwidth requirements,
- VoIp packet encapsulation, and VoIp implementation• Explain the need for QoS and the methods to implement QoS
- Explain the key IP QoS mechanisms used to implement the DiffServ Qos model
- Configure Cisco AutoQoS model
- Describe and configure wireless security and basic wireless management

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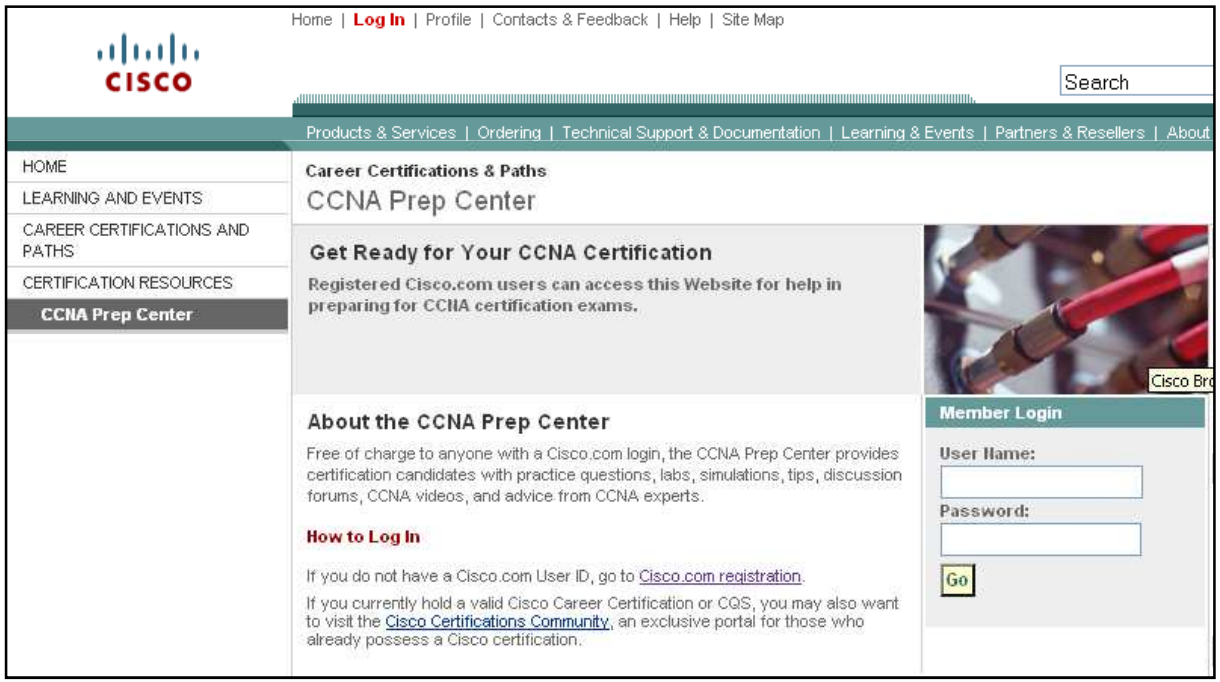
CCNP Certification Prep Center

- Provides certification candidates with practice questions, quizzes, discussion forums, quick learning modules and other preparation tools



http://forums.cisco.com/eforum/servlet/CCNP?page=main

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Cisco Certification Exam Vouchers

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Nomenclature on Vouchers

Vouchers come in multiple shapes and sizes. Please find definitions below:

Discount Vouchers: These vouchers allow a user to take the certification exam at a reduced cost

Supplemental Vouchers: These are pre-paid discount vouchers that allow a user to take the certification exam at a reduced cost

Extension Vouchers: These vouchers allow a user to take an expired CCNP certification exam for an extended period of time

Retired Exam Promotional Codes: These promotional codes allow a user to take versions of the INTRO (640-821), ICND (640-811) and CCNA (640-801) exams that will expire Nov. 6, 2007 for an extended period of time

***All vouchers can be used independently or together*

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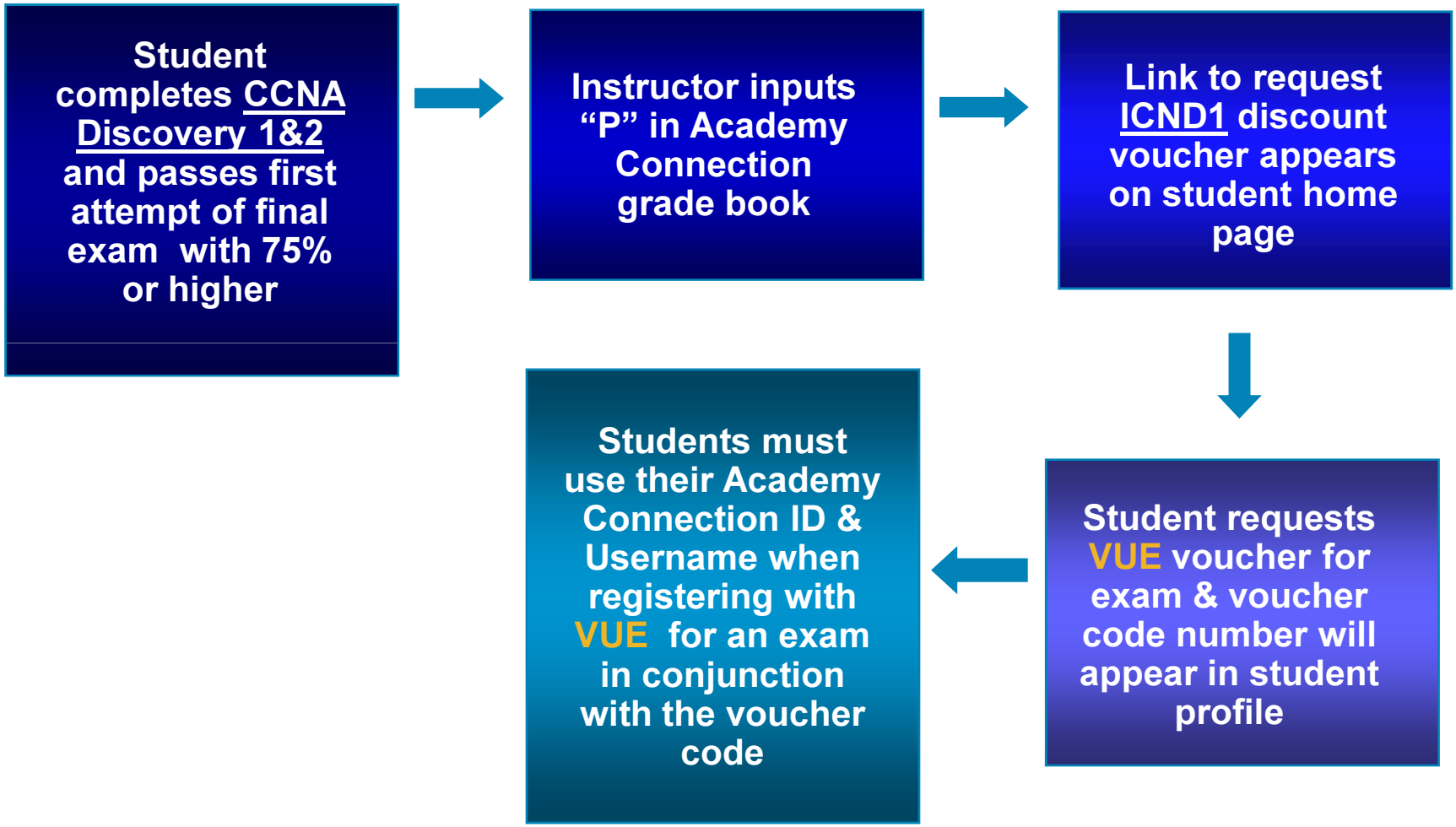
CCENT Certification Discount Voucher Process



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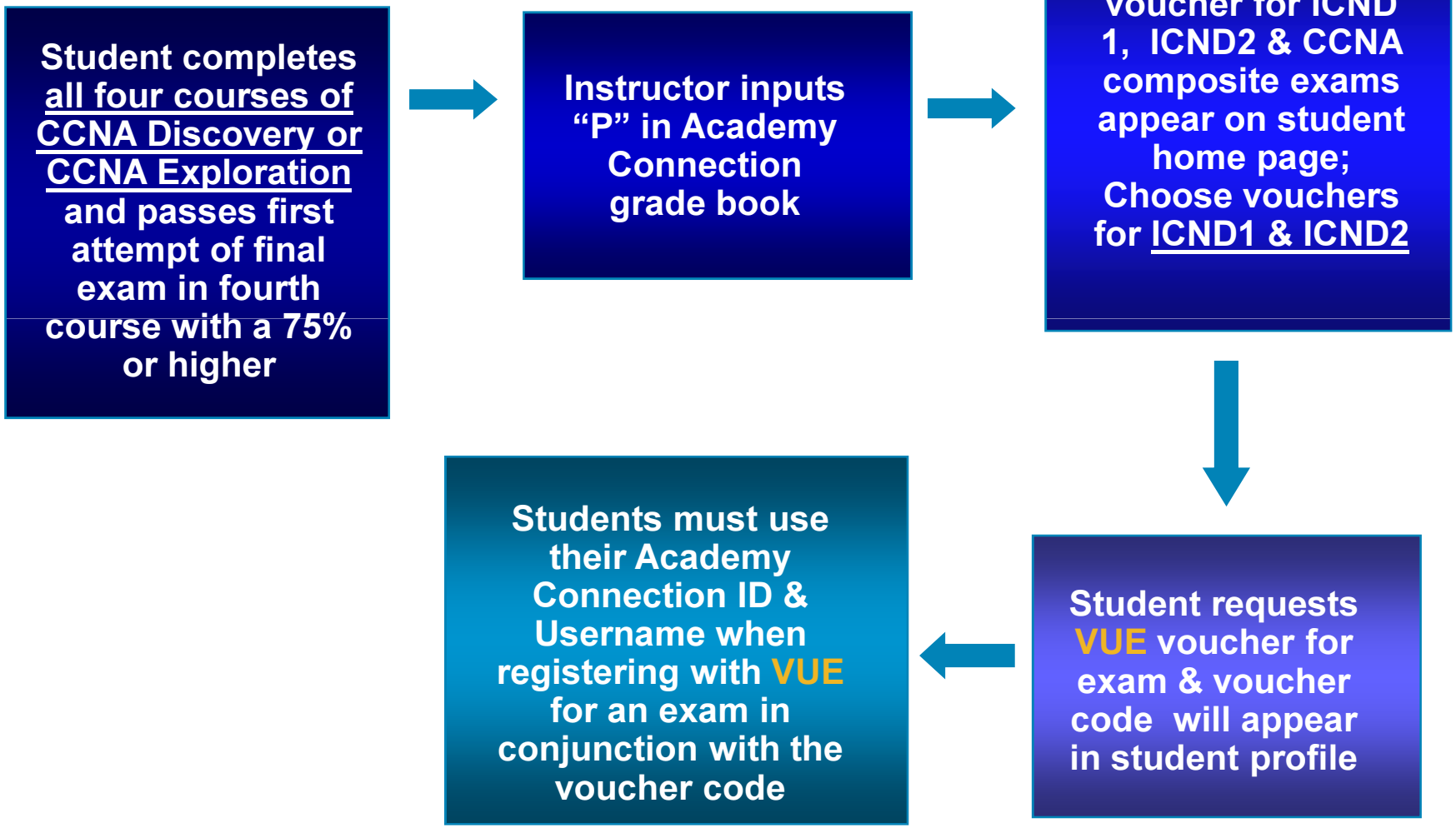
Cisco CCNA Certification Discount Voucher Process: 2 Exam Option (ICND 1 & ICND2)



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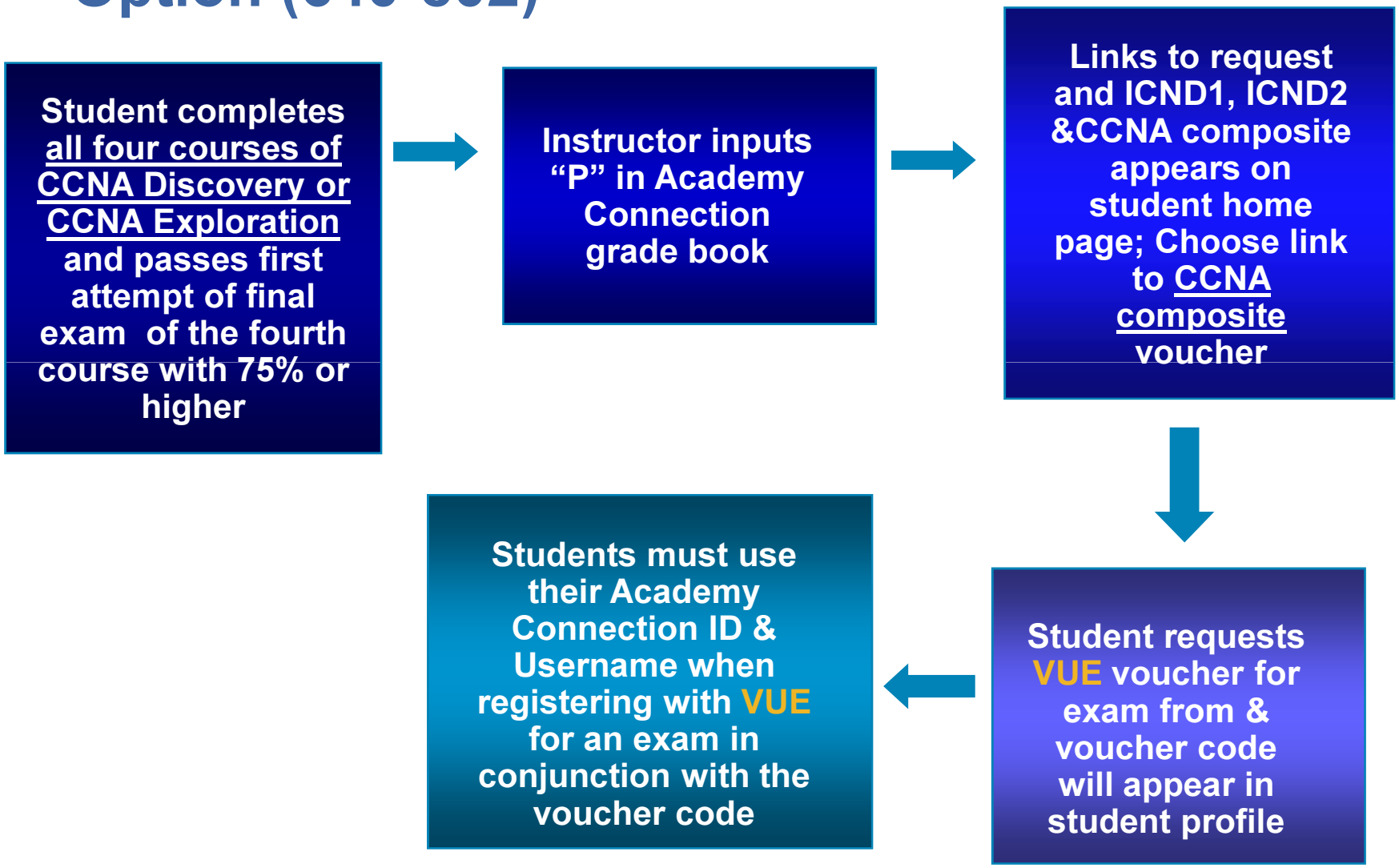
Cisco CCNA Certification Discount Voucher Process: Composite Exam Option (640-802)



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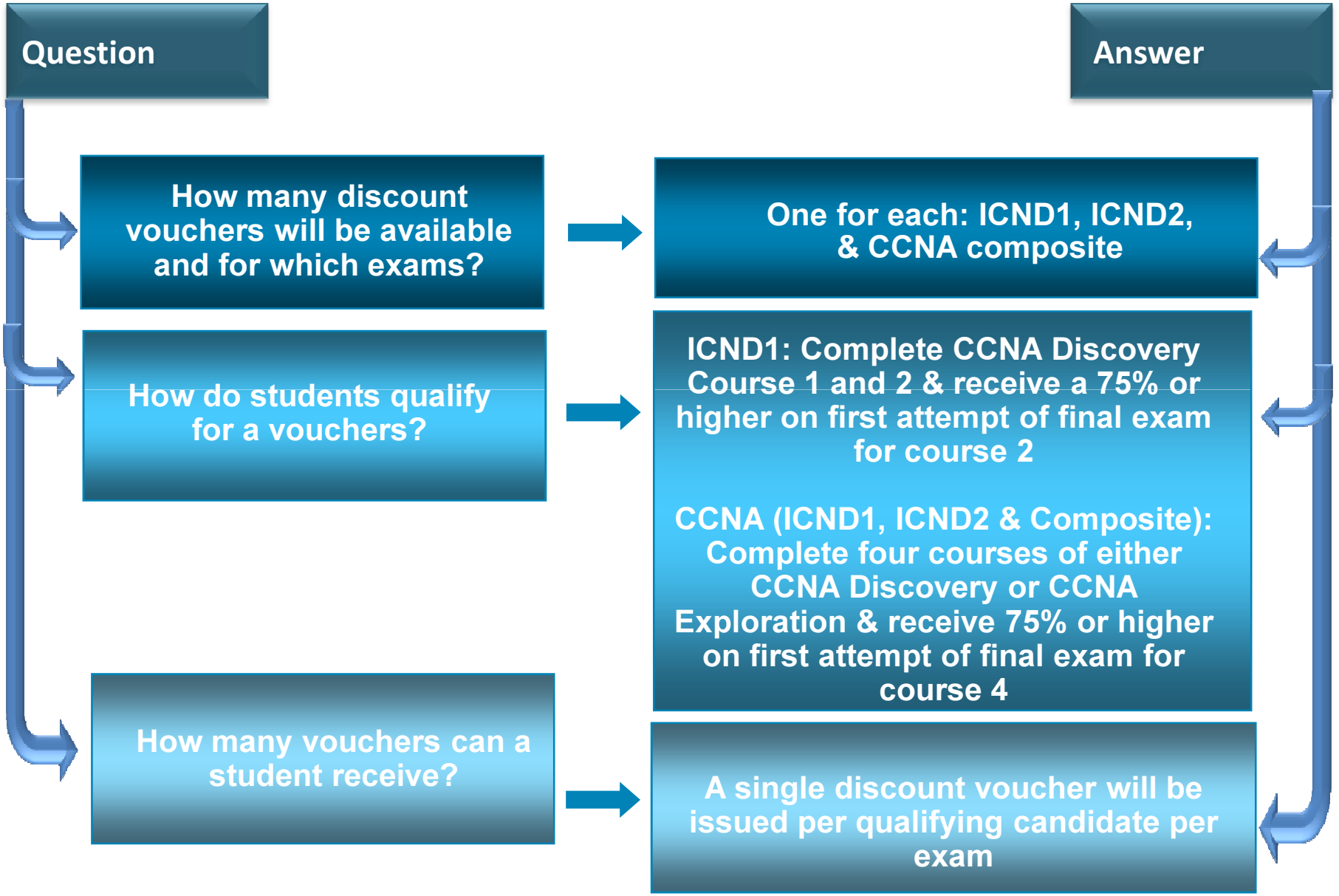
Discount Vouchers for Students



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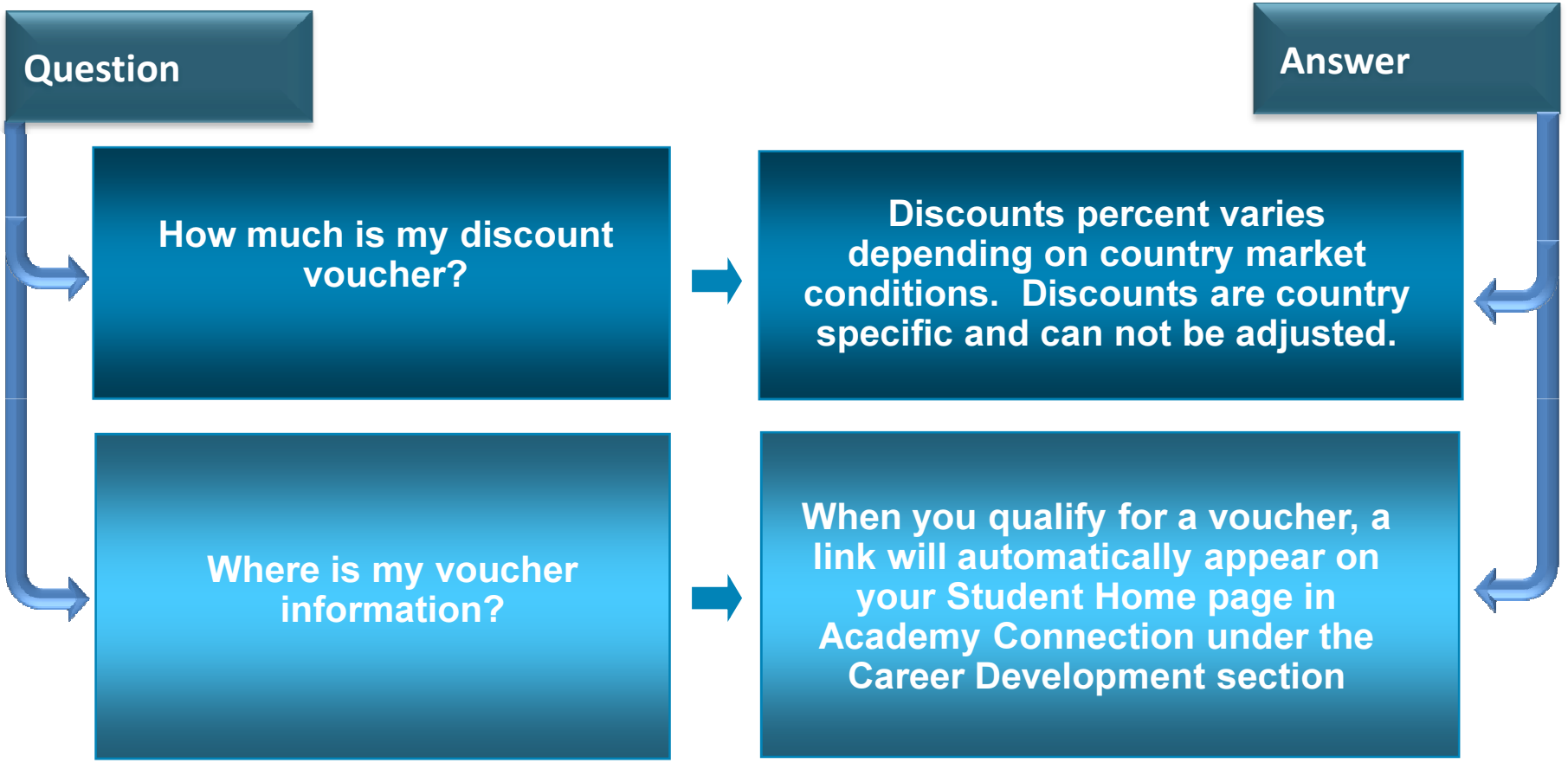
Discount Vouchers for Students



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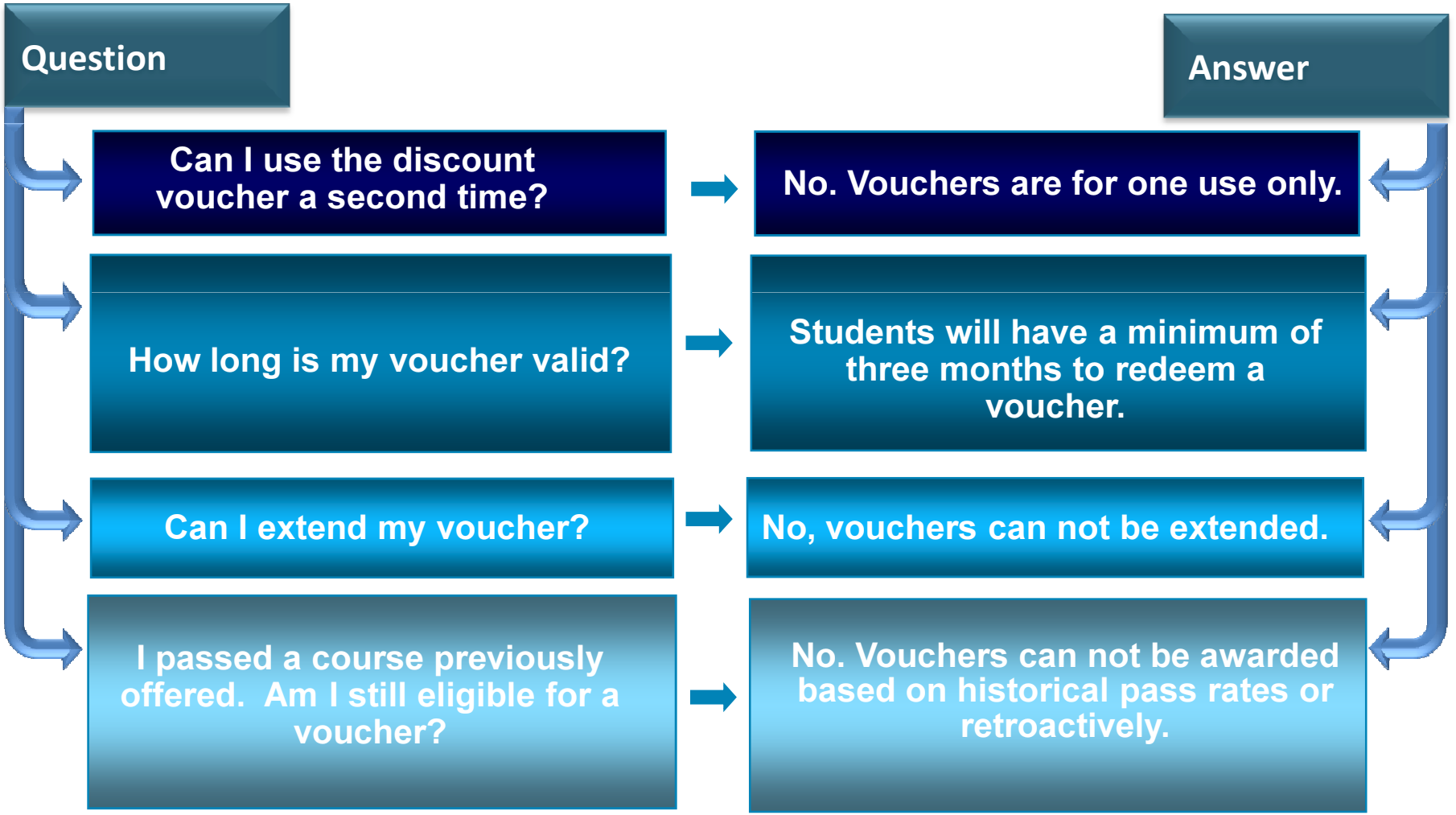
Discount Vouchers for Students



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Extension Vouchers & Expired Exam Promotional Codes

- **Extension Vouchers** are zero discount vouchers enabling qualified NetAcad students to take a retired versions of Cisco certification exams including:
  - Through December 31, 2007:
    - CCNP(642-801)
    - CCNP(642-811)
    - CCNP(642-821)
    - CCNP(642-831)
    - CCNP(642-891)
- Requested by instructors through Academy Connection Help Feature
- Instructors provide extension voucher information to students

- **Expired Exam Promotional Codes** will be available to qualified NetAcad students to take retired versions of Cisco certification exams including:
  - Starting November 6, 2007:
    - INTRO (640-821)
    - ICND (640-811)
    - CCNA (640-801)
- More information on how to request the above promotional codes will be available in mid/late October.

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Academies Purchasing Supplemental Vouchers

- Pre-paid vouchers that can be used alone or in combination with the discount vouchers provided by the NetAcad Program to qualified students
- Academies purchase directly from VUE and provide to students

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Cisco Certification Exams

- Cisco exams are only offered through Pearson VUE authorized test centers (www.pearsonvue.com)
- Pearson VUE has been a test delivery provider for Cisco's computer-based certification exams since 2000
- There are three different methods to register for an exam:
  1. Contact a Pearson VUE agent directly (http://www.pearsonvue.com/contact/vuephone/)
  2. Register via the Pearson VUE website (www.pearsonvue.com)
  3. Call or visit a test center directly; to locate a test center visit the Pearson VUE website (www.pearsonvue.com) and use the "Locate a Test Center" option

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Interested in becoming a test center?

- Pearson VUE is accepting applications to become a test center
- You will find applications at www.pearsonvue.com/pvtc/join/
- Pearson VUE will assist you in identifying the basic requirements to becoming a test center

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Are you far away from a VUE?—mobile testing

- An alias has been created exclusively for Networking Academies to accommodate emerging testing needs, atcrequest@cisco.com, and can used in the following circumstances in priority order:
  - 50 or more students are located at an Academy and the available testing center is more than two hours travel distance from that location
  - 20 or more candidates would like to reserve time at a testing center on a specific date so that students could be transported from an Academy to a particular VUE location.
  - To identify a testing need for students that do not have access to a testing center
- All requests will be reviewed on a quarterly basis and will be accommodated based on the above prioritizations.

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A+ Certification

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A+ Certification Exam Update

- 2006 Objectives exam announced in June 2006
- Different certification paths aimed at different job markets
- New topics include laptops, security, safety, and communication and professionalism
- Two exams must still be passed to obtain certification:
  1. A+ Essentials (220-601)
  2. PLUS any of the three job-skills exams:
     - 220-602 - IT Technician (Field Service Technician)
     - 220-603 - Remote Support (Help Desk Technician)
     - 220-604 - Depot Technician (Bench Technician)

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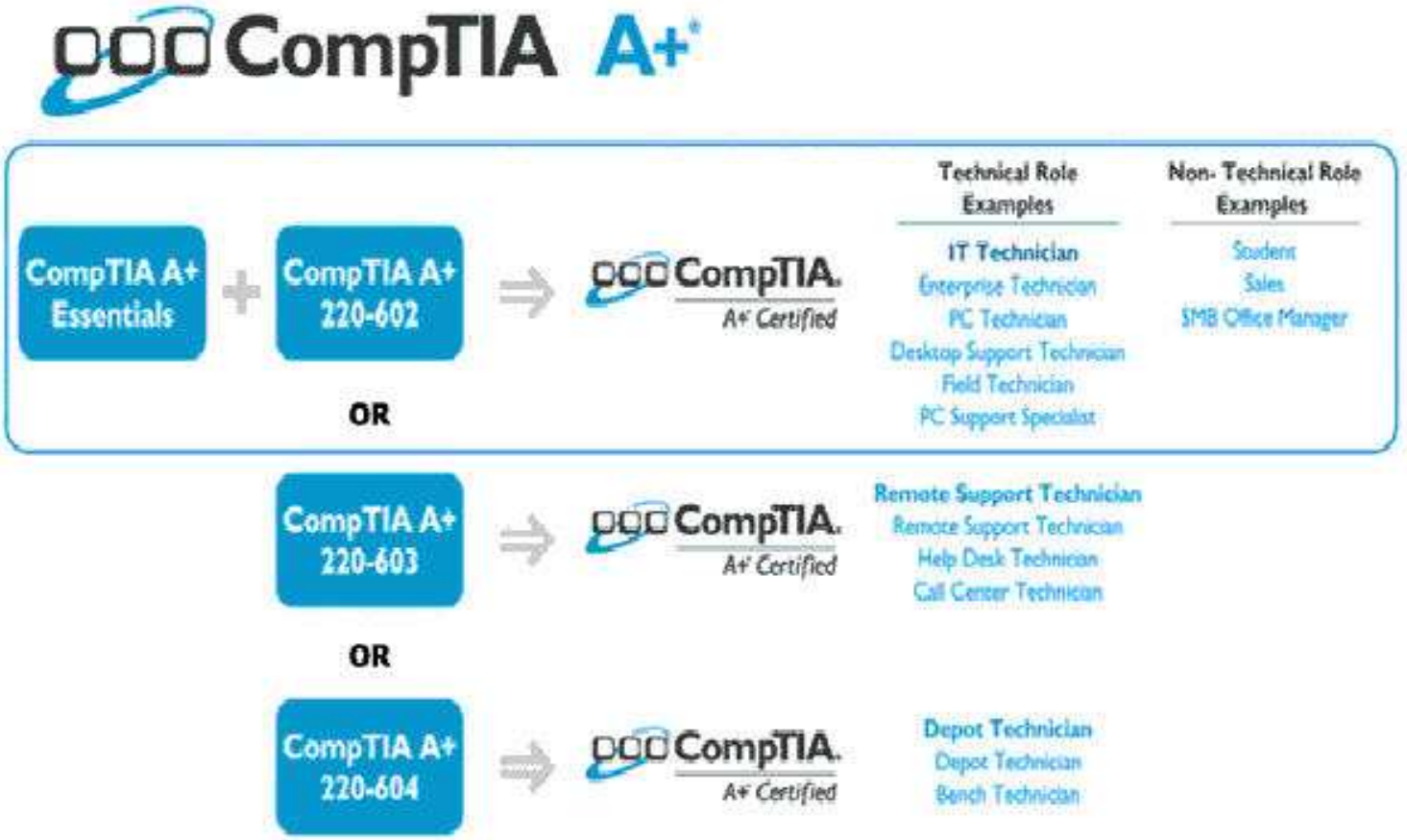
A+ Certification Exam Update

http://certification.comptia.org/a/New_A.aspx

Most resembles previous 301, 302 exams



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ITE PC Hardware and Software
Course Objectives

- Define information technology (IT) and describe the components of a personal computer
- Protect the student against accidents and injury, protect equipment from damage, protect data from loss, and protect the environment from contamination
- Perform a step by step assembly of a desktop computer tower
- Explain the purpose of preventive maintenance and identify the elements of the troubleshooting process
- Explain, install, and navigate an operating system; upgrade components based on customer needs and perform preventive maintenance and troubleshooting
- Describe, remove, and replace select components of a laptop; upgrade components based on customer needs and perform preventive maintenance and troubleshooting
- Describe, remove, and replace select components of a printer/scanner; perform preventive maintenance and troubleshooting
- Describe and install a network; upgrade components based on customer needs and perform preventive maintenance and troubleshooting
- Perform advanced installation of a desktop computer tower; select components based on customer needs and perform preventive maintenance and troubleshooting
- Upgrade security components based on customer needs and perform preventive maintenance and troubleshooting
- Apply good communication skills and professional behavior while working with customers

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Certification Mapping

- New curriculum will map to new CompTIA A+ exams and be certified as CompTIA Authorized Quality Curriculum
- Authors, technical reviewers, and assessment writers completing all four job-skills exams
- Maps to EUCIP IT Administrator certification (Europe)

  http://www.eucip.org/ → select Products > IT Administrator

  EUCIP certification Modules 1–3 covered completely; covers most of Module 4

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CompTIA Discount Vouchers

- CompTIA offers graduates of specific Cisco Networking Academy courses a 20-30% discount voucher on corresponding certification exams including:
  - IT Essentials: PC Hardware and Software = CompTIA A+ exams
  - IT Essentials: PC Hardware and Software and IT Essentials II: NOS v2.0 (need both) = CompTIA Server+ exam
  - Fundamentals of UNIX and IT Essentials II: NOS (need both) = CompTIA Linux+ exam
  - CCNA (all courses) and IT Essentials: PC (need both) = CompTIA Network+ exam
- After successful completion of the required Academy course(s), a certification voucher link will appear the student's home page
- Link will direct student to CompTIA Website where they can request their discount voucher

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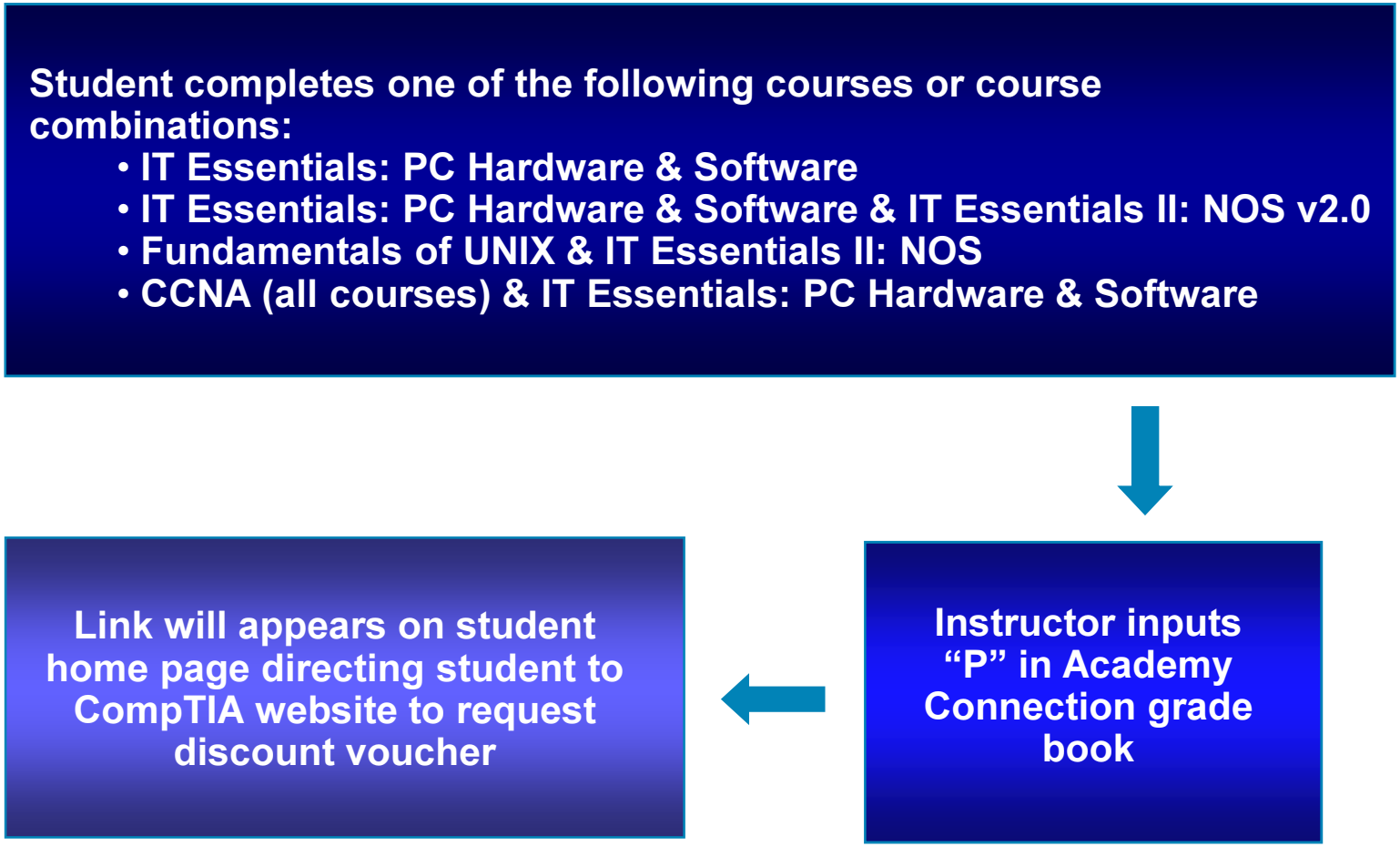
CompTIA Discount Voucher Process:



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PNIE Certification

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PANDUIT Network Infrastructure Essentials (PNIE)

- Provides overview of cabling, networking industry standards & emerging cabling technologies
- 70-hour, lab-oriented course focusing on:
  - Cable management & installation
  - Documentation
  - Design
  - Lab Safety
  - On-the-job safety
  - Working effectively in groups
- Students become familiar with cabling issues related to data voice connections, media & transmission practices, & customer support

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PNIE Course Competencies

Students will acquire competencies in the following areas:

- International cabling industry & marketplace standards
- Basic networking concepts & topologies, OSI reference model, & main functions of each layer
- Signal transmission, basics of electrical & optical transmission theory, basic wireless systems theory, & cause & effects of signal degradation
- Schematics of copper cabling in the form of twisted-pair & shielded twisted-pair, as well as the respective standards & coaxial cable schematics
- Different modes of fiber optics & implications of dispersion & attenuation
- Essential lab safety principles & local, national, & international safety codes of conduct

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PNIE Certified Technician (PCT)

http://www.panduit.com/services/106797.asp

- Career options range from cabling technician & network maintenance positions to overall network management
- Certification offers greater opportunity for employment with *PANDUIT* Certified Installer (PCI) companies
  - PCIs provide installation services for networking contractors & are required to maintain PCT employees on staff
  - For more information on PCIs visit: http://www.panduit.com/services/default.asp?id=7
- PCT certification helps match immediately employable students to available jobs within PCI companies
- Testing locations are in metropolitan areas with close proximity to PCIs
- For more information on testing centers visit or for questions regarding the exam e-mail: PCI@Panduit.com

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PCT Testing Requirements

- Students who successfully complete PNIE v2.0 are adequately prepared for online portion of PCT certification
- To attend hands-on portion of certification, student must successfully complete the appropriate online *PANDUIT* exam:
  - Copper Cabling System Installation Training
    http://www.panduit.com/Training/coppercabling/HTML/redirect.htm
  - Fiber Cabling System Installation Training
    http://www.panduit.com/Training/pcifibercabling/HTML/redirect.htm
- Students should read through all the above training modules
- To start the online exam, student fills out registration form at end of module
- Under *Title*, student must classify his/herself as student or registration is invalid
- Upon successfully passing the online exam, student is placed in queue to take hands-on portion of exam at PCT testing location
- Time to complete the hands-on exam is 3 hours 35 minutes
- **No vouchers are available for these exams**

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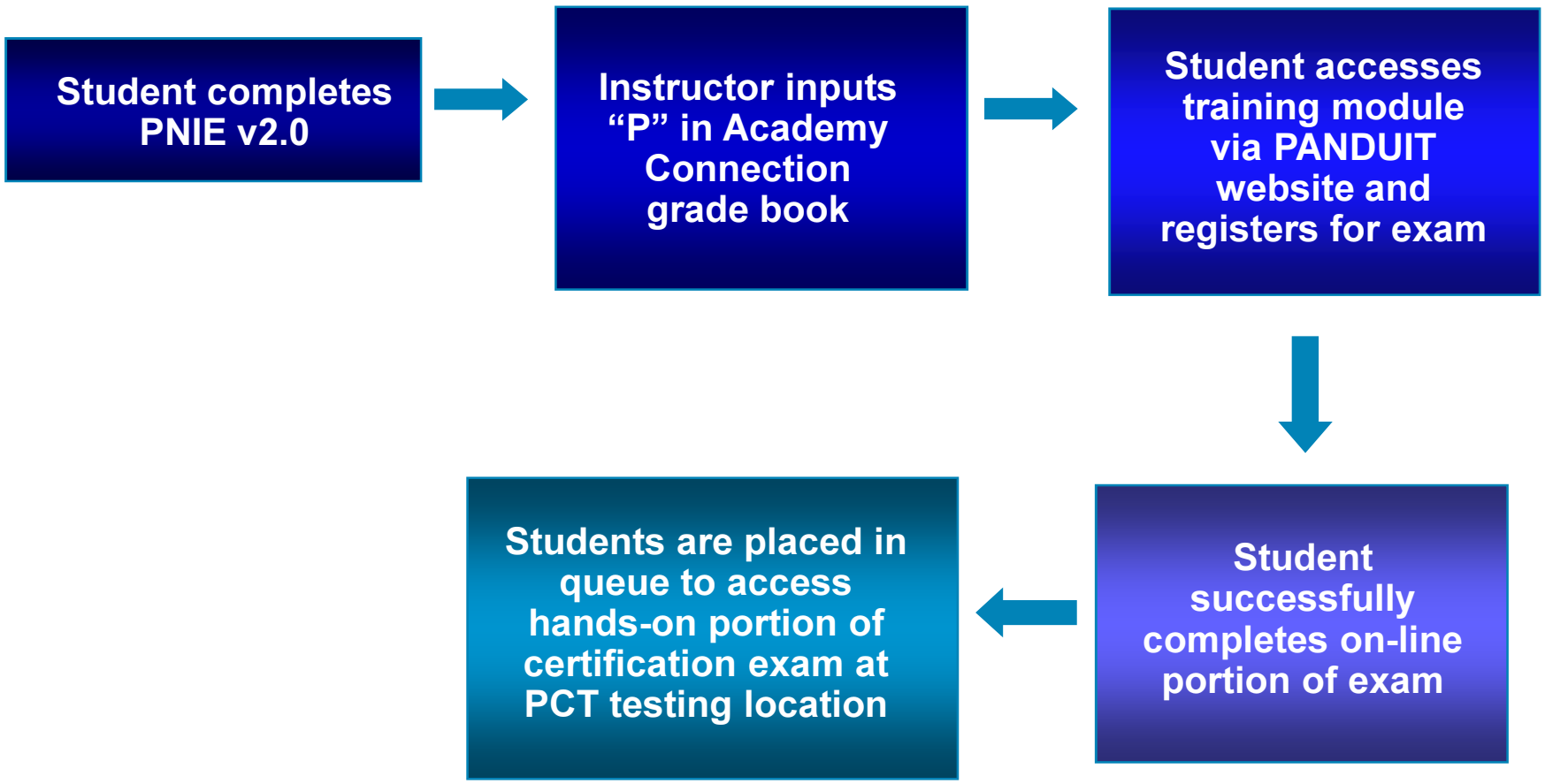
PNIE Exam Process



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