



## Cisco Networking Academy: Connecticut Profile

### Educating the Architects of the Networked Economy

Now in its second decade, Cisco® Networking Academy® has provided more than two million students worldwide with the information technology (IT) and networking skills necessary to compete in the 21st century global economy.

To prepare the Networking Academy for the decade ahead, Cisco has launched innovative new curricula including Cisco Certified Network Associate (CCNA®) Discovery and CCNA Exploration, as well as a new version of IT Essentials called PC Hardware and Software, and updates to the Cisco Certified Network Professional (CCNP®) curriculum. These new courses have been specifically designed to help students be more successful, whether they plan to be IT professionals or are simply seeking a deeper understanding of IT.

Our new courses align to industry certifications, including the recently launched Cisco Certified Entry-Level Technician (CCENT™). In addition to serving as an entry-level certification for employers, CCENT helps meet the new Carl D. Perkins Career and Technical Improvement Act funding requirements.

The new Networking Academy curricula provide seamless educational pathways between secondary and post-secondary institutions and are aligned to national and state education standards for math, science, and language arts. These courses can also help students prepare to pursue degrees related to science, technology, engineering, and math (STEM). In the United States, academies are located in high schools, technical schools, colleges, universities, and community-based organizations with more than 125,000 students enrolled at more than 2300 academies.<sup>†</sup>

As IT continues to be a high-demand job field in the United States, many educational institutions are incorporating IT into their offerings:

- Secondary schools are building pathways for students around the IT career cluster.
- Post-secondary institutions are integrating IT curriculum into degree programs ranging from computer science to networking to business.
- Community colleges and technical schools are providing existing workers with the opportunity to upgrade their skills, pursue additional education, and expand their expertise in technical fields.

Through its proven model of public-private partnerships with education, government, and business, Cisco Networking Academy is addressing the growing need for a pipeline of skilled IT professionals at a time when corporate technology leaders, public sector IT officials, and technology-service-oriented industries are concerned about the lack of a trained technical workforce to fill existing jobs.

<sup>†</sup> Source: AME/MRE FULL Package\_10 31 07 Quarterly Metrics\_v2 Date: November 28, 2007

An academy has a class currently in session or has taught a class, with at least 3 students, within the last 12 months.

A student is enrolled in a class or has taken a class within the last 12 months.

### Learn More

Table 1 lists data about academies in Connecticut. Table 2 lists information about Networking Academy curricula in Connecticut, and Table 3 shows information by student education level.

For additional information about Cisco Networking Academy, visit <http://www.cisco.com/go/netacad>

**Table 1.** Cisco Networking Academy in Connecticut

<b>Networking Academy students</b>	731
<b>Distinct cumulative academy students (having successfully completed a course)</b>	3493
<b>Academy instructors</b>	24
<b>Total estimated cumulative contribution value to Connecticut academies*</b>	\$1,973,674

Source: AME/MRE FULL Package\_10 31 07 Quarterly Metrics\_v2 Date: November 28, 2007

Cumulative students are distinct; therefore, each student is only counted once.

\*This estimate includes donations and discounts made to educational institutions implementing Cisco Networking Academy within Connecticut.

\*Sources: AME/MRE reports 1209\_190910.31.07 Date: November 30, 2007

**Table 2.** Networking Academy Curricula in Connecticut

<b>Curriculum</b>	<b>CCNA®</b>	<b>CCNP®</b>	<b>IT Essentials</b>	<b>Security</b>	<b>Wireless</b>
<b>Number of academies by curriculum</b>	17	0	4	1	0

The above curricula represent the core Networking Academy curricula. Panduit Network Infrastructure Essentials, Java, and UNIX are also available.

Academies often teach multiple curricula and may be counted more than once in this table.

Source: AME/MRE rpt 3087 Date: December 5, 2007

**Table 3.** Connecticut Academies and Students by Education Level

<b>Education Level</b>	<b>Number of Connecticut Academy Students</b>	<b>Percentage of Connecticut Students</b>	<b>Number of Connecticut Networking Academies</b>	<b>Percentage of Connecticut Academies*</b>
<b>Secondary schools</b>	409	56%	12	71%
<b>Community colleges</b>	190	26%	3	18%
<b>Universities</b>	132	18%	2	12%
<b>Other</b>	0	0%	0	0%
<b>Total by education level</b>	731	100%	17	100%

Source: AME/MRE FULL Package\_10 31 07 Quarterly Metrics\_v2 Date: November 28, 2007

Academies represented in "Other" category include the following: community-based organizations, middle schools, the military, nontraditional educational settings, and post-graduate institutions



## Cisco Networking Academy: Workforce Development

If the United States is to remain competitive in this global economy, leading experts believe we must have a trained and educated workforce. And yet the number of U.S. students pursuing careers in science, technology, engineering and math—critical areas for educating the workforce of tomorrow—continues to decline.

Cisco Networking Academy addresses this gap by providing students with the skills needed to succeed in the wide range of careers available today and tomorrow. In addition to integrating IT skills, the Networking Academy also embeds math, science, and language arts skills in the curricula.

### IT Occupational Data

Table 4 lists information about IT-related occupations in the U.S., and Table 5 lists this information for Connecticut.

**Table 4.** Selected IT-Related Occupations in the United States

Occupation	Employment		Employment Change		Average Annual Openings	Occupational Employment as of May 2006*
	2004	2014	Numeric	Percent		
Computer Support Specialists	518,370	637,560	119,190	22	18,300	514,460
Computer Systems Analysts	486,550	639,500	152,960	31	20,800	446,460
Network and Computer Systems Administrators	278,380	385,250	106,870	38	13,770	289,520
Network Systems and Data Communications Analysts	231,270	357,460	126,190	54	15,340	203,710
Computer and Information Systems Managers	280,290	352,920	72,620	25	12,350	251,210

U.S. Department of Labor, Bureau of Labor Statistics, <http://www.bls.gov/oco/oco20024.htm>, based on data availability as of December 2007

\*U.S. Department of Labor, Bureau of Labor Statistics, May 2006 State Occupational Employment and Wage Estimates (US), [http://stat.bls.gov/oes/current/oes\\_nat.htm](http://stat.bls.gov/oes/current/oes_nat.htm)

**Table 5.** Selected IT-Related Occupations in Connecticut

Occupation	Employment		Employment Change		Average Annual Openings	Occupational Employment as of May 2006^
	2004	2014	Numeric	Percent		
Computer Support Specialists	7360	8440	1090	14	200	6500
Computer Systems Analysts	9600	11,350	1750	18	280	10,280
Network and Computer Systems Administrators	4250	5310	1060	25	150	4520
Network Systems and Data Communications Analysts	3190	4440	1240	38	160	3870
Computer and Information Systems Managers	4520	5170	660	14	150	5130

U.S. Department of Labor, Bureau of Labor Statistics, <http://www.bls.gov/oco/oco20024.htm>, based on data availability as of December 2007

^ U.S. Department of Labor, Bureau of Labor Statistics, May 2006 State Occupational Employment and Wage Estimates (by state), <http://stat.bls.gov/oes/current/oesrcst.htm>





## Connecticut Student and Graduate Profile

When Tom Fox graduated from high school in 2001, he had no idea he would start his own company only two years later. Tom was always ahead academically (he graduated high school in three years), but his success at the Cisco® Networking Academy® was so transformative that in his sophomore year of college, he and his roommate were able to launch their own business, SourceAid, an e-learning company that provides research solutions to individuals and academic institutions around the world.

As CIO/CTO for SourceAid, Tom was able to apply the skills he learned through the Networking Academy, including developing networked software backboned securely through remote networks. Tom has since moved on, but he remains on the Board of Directors at the company he co-founded.

Tom’s participation in the Networking Academy came through a pilot academy at Hall High School in West Hartford, Connecticut. He had always been interested in computers and was aware of the technology certifications Cisco offered, so he was excited to be in the program. Tom thought the curriculum was comprehensive but easy to follow, and credits his instructor, Chet Bacon, with really sparking his interest in networking.

Tom maintains that he would not be as successful had it not been for his teacher: “Chet deserves most of the credit” insists Tom, “he was a leader and really challenged his students to learn.” Chet is equally complementary of his student, noting that “Tom Fox has received my respect—he got a 950+ on the final and held five Microsoft certifications graduating in his junior year of high school. He started SourceAid.com shortly after going to college—a remarkable student all around!”

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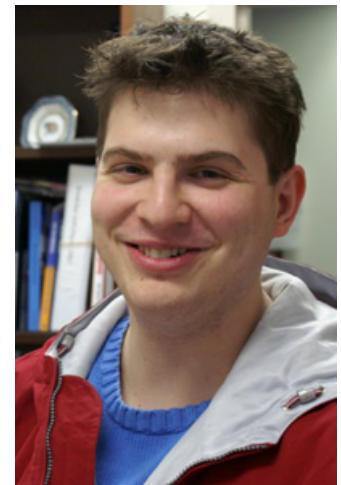
### **Chet Bacon, Hall High School academy instructor**

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Upon graduating from high school with his Cisco Certified Network Associate (CCNA®) certification, Tom worked as a senior systems engineer at a Web hosting company, supporting more than 200 private networks. Even though Tom didn’t yet have his college degree, he found that employers viewed his CCNA certification as equivalent to a college degree. Nevertheless, Tom went on to Worcester Polytechnic Institute where he graduated in 2006 with a major in management information systems and a minor in computer science.

Tom says the knowledge and experience he gained during his Networking Academy days at Hall High School have been factors in his success to date and were instrumental in the development of his leadership abilities. “The Networking Academy was different from other high school classes,” says Tom, “It was more like a college class where people broke out into teams to complete various project assignments.” Tom also appreciated the fact that “a lot of the courses were hands-on, not just theoretical problems,” and he particularly enjoyed the labs and other experiences for the real-world practice they provided. One of the real-world experiences Tom engaged in consisted of setting up networks at neighboring schools on the weekends.

On a personal level, Tom attributes his success to his resourcefulness, desire to learn, self-motivation, and skills as a team leader and team member. As he notes, “the more you learn, the more you realize how much you don’t know... and learning



how to find information is important.” In keeping with the value he places on acquiring information and real-world experience and skills, Tom has earned a number of other industry certifications in addition to his CCNA, including his MCSE, MCDBA, A+, I-Net+, Network+, and MOUS. He intends to earn his Cisco Certified Network Professional (CCNP®) and Cisco Certified Internet Expert (CCIE®) certifications and pursue his passion for network security. Currently, he is a product manager in the publishing services division of EBSCO Industries, Inc. where he develops and manages new products and technology and is responsible for collaborating with other companies and committees to establish new standards.

When asked what advice he would impart to someone interested in Networking Academy, Tom replies “It is a really good program that can set you up with the skills to lead in a cutting edge professional environment and offers great opportunities for professional networking.”

Additional information on the academy at Hall High School may be found at:

<http://www.whps.org/schools/hall/network/network.asp>



## Active Cisco Networking Academies in Connecticut

### U.S. Congressional District Database

Data for this report was gathered using the U.S. Congressional District Database. This tool was developed to communicate with congressional representatives about Cisco Networking Academy implementation in their home districts. The database maps active academies by congressional district or by all districts within a state, providing academy name, city, state, and congressional district. The listing by state is updated annually.

Table 6 lists information about academies in Connecticut congressional districts. Custom reports by congressional districts may be run upon request by contacting Melody Buchanan at [Melody.Buchanan@ciscolearning.org](mailto:Melody.Buchanan@ciscolearning.org).

**Table 6.** Networking Academies in Connecticut Congressional Districts

Number of Connecticut Congressional Districts	Number of Connecticut Congressional Districts <u>with</u> Networking Academies	Number of Connecticut Congressional Districts <u>without</u> Networking Academies	% Connecticut Congressional District Penetration
5	5	0	100%

Academies listed here have taught a class, with at least one student, within the last six months

Source: MRE/Academy Connection, U.S. Congressional District Database Date: January 3, 2008

### Active Connecticut Cisco Networking Academies by Congressional District

\* Indicates Cisco Networking Academy Training Center

Academies listed here have taught a class, with at least one student, within the last six months

Source: MRE/Academy Connection, U.S. Congressional District Database Date: December 31, 2007

#### Congressional District 1

- Hall High School (West Hartford)
- SWHS Cisco Academy (South Windsor)

#### Congressional District 2

- Stonington High School (Pawcatuck)

#### Congressional District 3

- Gateway Community College (North Haven)
- Middletown High School (Middletown)
- Stratford High School (Stratford)
- West Haven High School (West Haven)

#### Congressional District 4

- Bassick High School (Bridgeport)
- Fairfield University (Fairfield)
- Joel Barlow High School (Redding)

- \*Norwalk Community College (Norwalk)
- Norwalk Public Schools (Norwalk)
- Stamford High School Cisco Academy (Stamford)

**Congressional District 5**

- Central Connecticut State University (New Britain)
- New Fairfield (New Fairfield)
- Wilby High School (Waterbury)



## Cisco Networking Academy: Promoting IT Careers

Technology jobs will not only continue to grow, but the role of information technology (IT) workers will continue to evolve since today nearly every company in every industry relies on IT. The skills learned through Cisco Networking Academy lay a critical foundation for almost any profession, even non-IT careers. Networking Academy graduates not only build careers, but also help build businesses, communities, and countries.

If the United States is to remain competitive and continue to innovate in a global economy, we must foster student interest in pursuing technology- and engineering-related careers. A critical strategy in building a technical workforce for the 21st century is the development of seamless programs like Networking Academy that build pathways between secondary and post-secondary institutions and lead to professional career development.

Through the Cisco Promoting IT Careers initiatives, students are introduced to potential careers in IT and networking and given valuable information about pathways to advanced education, certification, and careers.

Visit the Promoting IT Careers Website, <http://www.cisco.com/go/promoteitcareers>, which is dedicated to the following:

- Increasing awareness and interest in opportunities in IT and networking
- Creating interest in IT and networking as a profession
- Helping students establish career goals
- Providing tools and resources to support success as students pursue IT careers
- Creating opportunities for students and graduates to transition from classroom to careers

### Five Ways to Promote IT Careers

The following events and activities engage students at all levels of experience. Valuable tools and resources for each event are available through the Promoting IT Careers Website.

#### 1. Host Your Own All Academy Day

**All Academy Day** is a competition that gives students the chance to show off the skills they have learned in the Networking Academy and to explore career pathways by interacting with IT professionals. Teams of students participate in a series of hands-on events selected from the following options: cable making, component identification, computer building, home networking, quiz bowl, router configuration, TAC/professionalism, and virtual computers. For more information, visit: <http://www.cisco.com/go/allacademyday>

#### 2. Help Students See Your Shadow

Job shadowing can be an important first step in pointing students toward IT careers. You can put on a full **Job Shadow Day** or offer an event as simple as a guest speaker in your classroom. Hearing first-hand about the world of work from IT professionals helps students relate their classroom experiences to the workplace and can inspire students to pursue careers in math, science, and technology. For more information, visit: <http://www.cisco.com/go/jobshadow>

### 3. Introduce Young Students to the World of IT

**Packetville** is a public e-learning portal filled with interactive and educational resources for introducing students aged 8 to 14 to the world of IT. Lesson plans, which are aligned with the standards of the International Society for Technology in Education, include community service projects and career exploration. For more information, visit:

<http://www.cisco.com/go/packetville>

### 4. Connect Students with Employers

The Networking Academy is connecting Networking Academy alumni with employers through the Career Connection job board. For more information, visit: <http://cc.netacad.net/home.do>

### 5. Explore the Landscape of IT

This series of **Virtual Field Trips** helps Networking Academy students and instructors explore and understand the landscape of IT and prepare for networking careers, all without leaving the classroom. Designed to engage students early on in their Networking Academy experience, the videos cover a range of topics that encourage students to continue their education and begin early to build their career path. A companion module that accompanies each video reinforces the content from the video. For more information, visit: <http://www.cisco.com/go/virtualfieldtrip>

## Learn More about IT and Networking Careers

- Certification Magazine, “Hot Jobs & Skills for 2007”  
[http://www.certmag.com/articles/templates/CM\\_gen\\_Article\\_template.asp?articleid=2521&zoneid=1](http://www.certmag.com/articles/templates/CM_gen_Article_template.asp?articleid=2521&zoneid=1)
- CNNMoney.com, “Skilled Worker Shortage Hurts U.S.”  
[http://money.cnn.com/2007/01/04/news/economy/jobs\\_outlook/index.htm](http://money.cnn.com/2007/01/04/news/economy/jobs_outlook/index.htm)
- Job Data Resources
  - U.S. Department of Labor Bureau of Labor Statistics, Occupational Employment Statistics  
<http://data.bls.gov/oes/search.jsp>
  - State-Level Job Projections  
<http://www.projectionscentral.com>
- John Chambers on the role of technology in education  
[http://www.forbes.com/opinions/2008/01/23/solutions-education-chambers-oped-cx\\_sli\\_0123chambers.html](http://www.forbes.com/opinions/2008/01/23/solutions-education-chambers-oped-cx_sli_0123chambers.html)
- “The Quiet Crisis,” Shirley Ann Jackson, Ph.D.; President, Rensselaer Polytechnic Institute  
<http://www.rpi.edu/homepage/quietcrisis/>



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