



Cyber Career Connection

July 2014



Program Overview

- » Symantec wished to create a “shared value initiative” to **address the global workforce gap in cybersecurity by training and certifying underserved young adults** to enter into long-term cyber security careers
- » Symantec is beginning with **a pilot program, launching FY2015 (August/September 2014)**
- » Addressing the cybersecurity workforce gap is a significant opportunity for Symantec to **meet the critical needs of its customers and strengthen national security**, reinforcing its position as an industry leader

Notable quotes

*"In 2012, **no more than 1,000 people had the necessary skills** to tackle tough cybersecurity tasks. The nation's companies and government agencies need at least 30,000." - James Gosler, CIA*

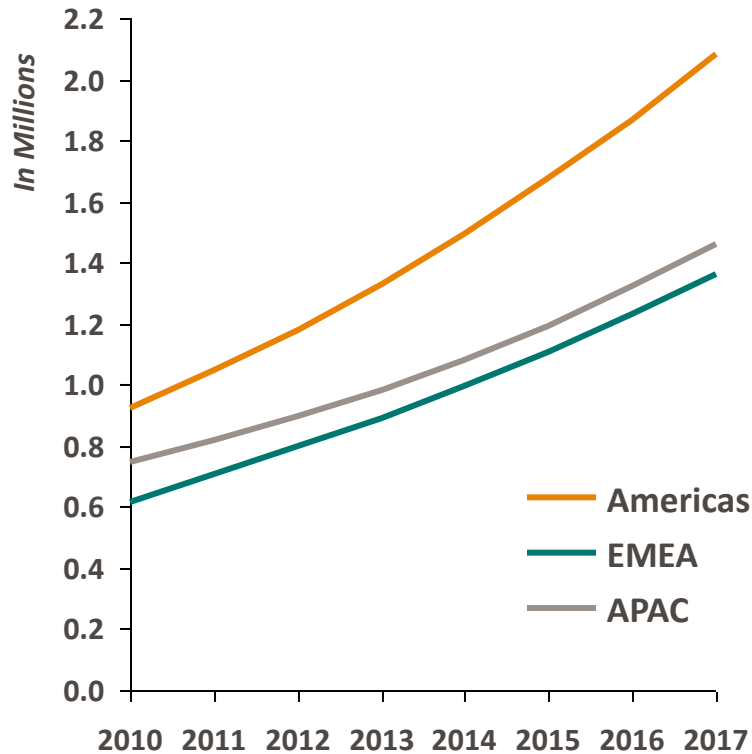
*"The situation is **so bad** that **for every 20 open security positions** at the company, **there is only one qualified candidate.**"
- Chief Technology Officer, Secure Works*

*"Employers **typically have to repost or duplicate security job posts almost 35% more often** than other IT jobs to find someone qualified." - Burning Glass Technologies*

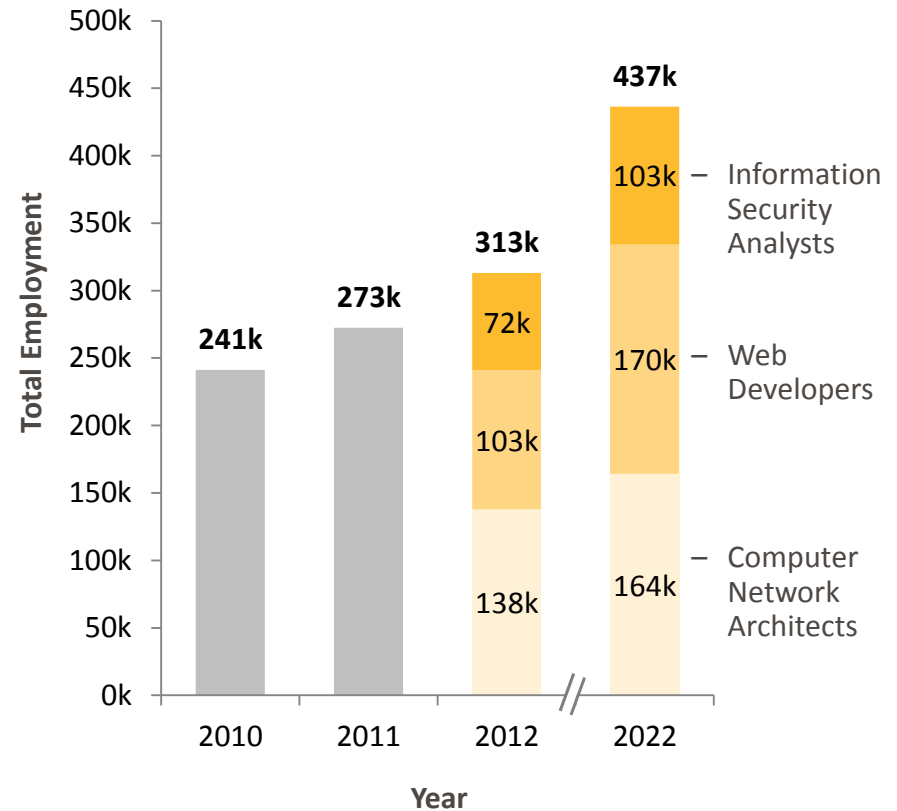
*"Today, the strategy most companies rely on is **poaching from their competitors or even inside their own organization.**"
-Chief Operating Officer, LA World Airports*

The Global Demand for a Qualified Cybersecurity Workforce Is Large and Growing

Global Forecast for Cybersecurity Professionals, 2010-2017
Based on total projected number of both managerial and operational cybersecurity positions by region.



U.S. Cybersecurity¹ Employment Growth, 2010-2022
Based on total number of Information Security Analysts, Web Developers, and Computer Network Architects in the U.S.



Notable stats

95%

Estimated portion of cybersecurity jobs that **cannot be filled by the current pool** of qualified candidates

300,000

Estimated number of open cybersecurity roles in the US in 2012

84,000

Number of **students who need to be trained each year** to fill the gap by 2017

Yet There is an Opportunity – Some Positions Can Be Filled Without a 4-Year College Degree

20%

Estimated portion of cyber jobs that **can be filled by candidates without a traditional 4-year degree**

60,000

Implied number of unfilled U.S. cybersecurity jobs that could be **filled without a college degree** in 2012

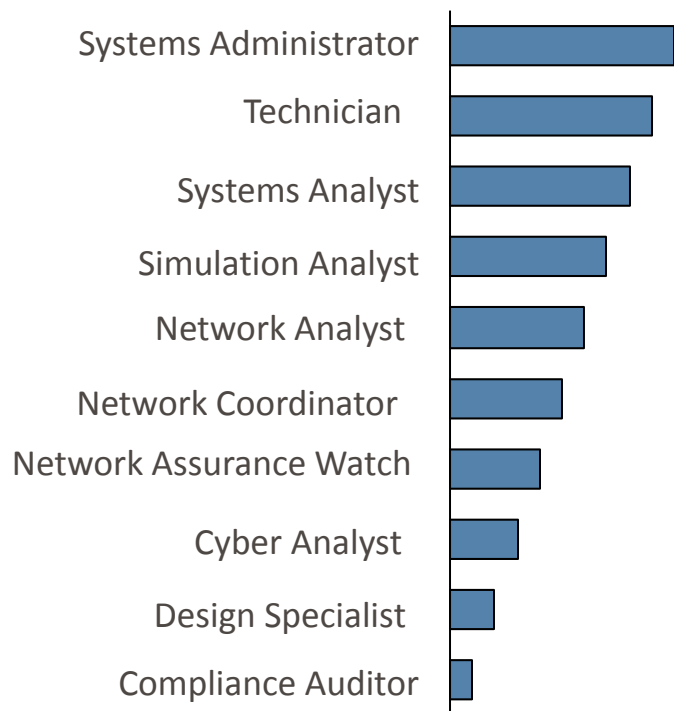
15,000

Number of **non-college students to be trained each year** to fill the gap in four years

Yet There is an Opportunity – Some Positions Can Be Filled Without a 4-Year College Degree

Top 10 Cyber Jobs That Do Not Require a College Degree

List of 10 order-ranked cybersecurity positions available in 2012 that require a high school diploma, but not a college degree, according to ISC²²⁰¹ Jobs Report



Symantec and Partners Can Help Define the Cybersecurity Career Path

Ambiguity and Evolving Definitions of Cybersecurity Careers and Paths

*“One of the most **critical reasons for gaps in the cybersecurity ranks is the lack of clearly defined roles.** ‘Cybersecurity’ covers a wide range of job functions, from analysts to hardware technicians.” - NICE*

*“Distinction between IT and cybersecurity is blurring, and **all of the IT field will eventually have a cybersecurity component to it,** rather than thinking of cybersecurity as a subspecialty within IT.” - Educator*

*“We can expect to see **more uniformity around job classification and skills requirements in the coming years.**” – Symantec CSO*

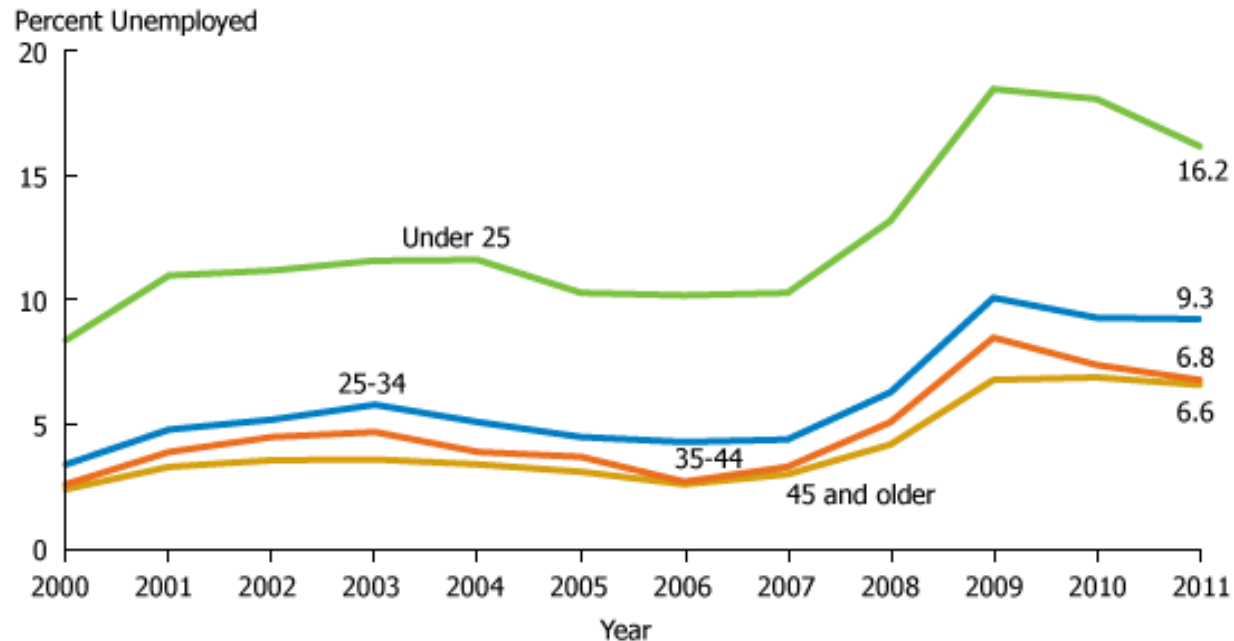
U.S. Government Efforts to Define Cybersecurity Careers

- Established reduction of the cybersecurity workforce gap as one of President Obama’s top 14 priority goals
- Launched a cybersecurity workforce taskforce to estimate existing and future cybersecurity positions by the end of 2014 (in progress)
- Codifying cybersecurity job titles, roles, knowledge, skills, and competencies to standardize cybersecurity entry points and career progressions (in progress)

Implications for Symantec’s Signature Program

- Coordinate closely with U.S. Government and other national agencies to define skills needed, training requirements, and career pathways during initiative pilot and scaling
- Consider advocacy role in helping to define the skills, training requirements, and career paths

Why focus on Underserved Youth for Pilot?



Additionally, only 11% of cybersecurity jobs are held by women – pilot aims for 30% women

Source: U.S. Bureau of Labor Statistics; IS2/Symantec report Women in the Information Security Profession.

Analysis of Current Training Programs Demonstrates Need For Hands-On, Cyber-Specific Training at Scale

- » Peer corporations, nonprofits, and industry organizations deliver a **variety of existing technology workforce development programs**
- » Training **programs that have achieved scale are not cyber-specific** and **those that are cyber-specific are not conducted at scale**
- » Several major IT and cybersecurity **certification organizations have achieved large-scale** adoption of their vendor-neutral certifications
 - Perspectives are mixed on whether new product-specific cybersecurity certifications are needed
 - Certifiers distribute training through a network of authorized third-party providers, but **do not emphasize hands-on job experience and placement**
- » **Symantec has the opportunity to enter the landscape** by forging partnerships to recruit young adults (especially young women) to the cybersecurity profession, and provide cyber-specific training, on-the-job experience, and job placement at scale

The Symantec Cyber Career Connection Addresses Four Critical Needs in the Cybersecurity Workforce Pipeline

1

Excite & Recruit

Symantec will support nonprofits and educators **raising awareness and recruiting** underserved populations into long-term cybersecurity careers



2

Train & Certify

Symantec will offer an **industry-recognized training program**, implemented through a network of partners, that prepares underserved populations for in-demand certifications



3

Prepare for the Job

Training partners will place students in cybersecurity **internships** to teach on-the-job skills and behavior



4

Place in a Career

Training partners will connect program graduates to **cybersecurity positions** through Symantec's and partner's network of customers and partners



While a number of organizations offer pieces of this model, there is no single, accessible pathway placing underserved populations into long-term careers

The Proposed Program Will Position Symantec to Help Close the Global Cybersecurity Workforce Gap

**Ultimate Vision:
Close the Cybersecurity Workforce Gap**

60,000

Number of **students that need to be trained each year** to fill the gap in 4 years

Open U.S. cybersecurity jobs (2012) that could be **filled without a 4-year college degree**

15,000

To achieve this vision, Symantec will need to **collaborate with a range of national partners**, including community colleges, non-profits, peer companies, and federal, state, and local agencies

**First Step:
Test the Model**

To test the validity of the proposed model, a small pilot program will:

1

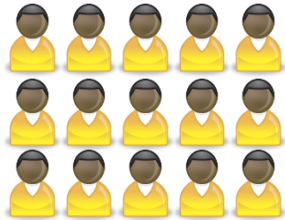
Package existing curricula to test the training and certification model for accuracy and feasibility

2

Launch partnerships with a small number of nonprofit organizations to validate the proposed pathway by exciting and training underserved young adults and placing them in internships and cybersecurity jobs

The FY2015 Pilot Will Track a Cohort of Students from Enrollment to Placement to Test the Proposed Model

45 students enrolled/ 30% women...



80% placed in an internship



75% placed in a full-time job



4-6 months of training



5-10 partners hiring certified interns



\$30-75k annual salary



Parameter	Pilot Site 1	Pilot Site 2	Pilot Site 3	Details
Partner	<ul style="list-style-type: none"> NPower 	<ul style="list-style-type: none"> YearUp 	<ul style="list-style-type: none"> YearUp 	
Location	<ul style="list-style-type: none"> Brooklyn, NY (NPower Training Center) 	<ul style="list-style-type: none"> San Jose, CA (YearUp Training Center) 	<ul style="list-style-type: none"> Baltimore, MD (Baltimore City Community College) 	<ul style="list-style-type: none"> 3 sites
Students	<ul style="list-style-type: none"> 15 total (1 cohort) 	<ul style="list-style-type: none"> 16 total (2 cohorts of 8 students) 	<ul style="list-style-type: none"> 16 total (2 cohorts of 8 students) 	<ul style="list-style-type: none"> 47 students Approx 35 to complete (75%)
Integration into existing offerings	<ul style="list-style-type: none"> Graduates of Technology Service Corps (22 week training + 7 week internship) 	<ul style="list-style-type: none"> New Cybersecurity career track, expanding on existing tracks in IT 	<ul style="list-style-type: none"> New Cybersecurity track at BCCC, pending state approval of curriculum (if no approval, will be offered via YearUp add-on supplemental learning classes) 	
Timing	<ul style="list-style-type: none"> Cohort 1: 9/14 	<ul style="list-style-type: none"> Cohort 1: 9/14 Cohort 2: 1/15 	<ul style="list-style-type: none"> Cohort 1: 8/14 Cohort 2: 1/15 	<ul style="list-style-type: none"> August 2014- January 2016
Training	<ul style="list-style-type: none"> 16 weeks of classroom training by certified contracted instructor A+, Network+, Security+, with high-level overview of CEH 	<ul style="list-style-type: none"> 21 weeks of classroom training by certified contracted instructor A+, Network+, Security+, with high-level overview of CEH 	<ul style="list-style-type: none"> 1 semester of classroom training by existing BCCC instructor A+, Network+, Security+, with high-level overview of CEH 	
Internship	<ul style="list-style-type: none"> 10 weeks, paid by Symantec 	<ul style="list-style-type: none"> 6 months, paid by Symantec 	<ul style="list-style-type: none"> 6 months, paid by Symantec 	
Grant	<ul style="list-style-type: none"> \$428,682 	<ul style="list-style-type: none"> \$1,049,023 (two sites, two classes) 		<ul style="list-style-type: none"> \$1,467,705

FSG consultants, Edelman PR, Marian Merritt, program manager

Launch 6/23/14 at CGI in Denver

Program just beginning

- We launched the Symantec Cyber Career Connection June 24th at the Clinton Global Initiative America meeting in Denver CO.
- Ex-US Secretary of State Hillary Clinton and Symantec SVP Aled Miles announced the program
- Program website:
<http://go.symantec.com/cyber-career-connection>



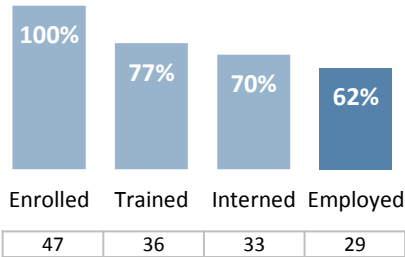
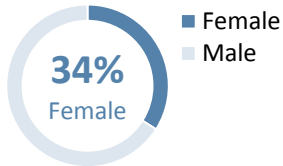
Cyber Career Connection

Short- and Long-Term Outcomes Will Track and Measure the Program's Long-term Success

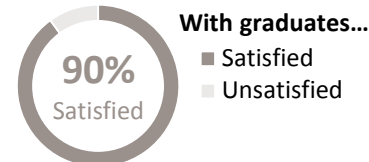
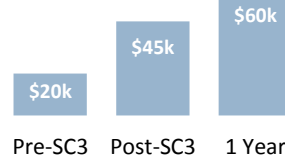
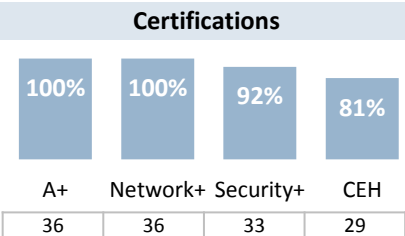
PROGRAM ACTIVITIES	OUTPUTS	SHORT-TERM OUTCOMES		LONG-TERM OUTCOMES	
		For Society	For Symantec	For Society	For Symantec
<ol style="list-style-type: none"> Excite and recruit Train and certify Place in an internship Connect to a career 	<ul style="list-style-type: none"> # of students enrolled # of students completing training # of students completing internship # of students attaining or ready to attain certifications # of students placed in cyber security jobs # of training provider sites # of employers hiring graduates 	<ul style="list-style-type: none"> Underserved students are employable Students are placed in cyber security jobs with potential for long-term career advancement 	<ul style="list-style-type: none"> Students have knowledge and positive perception of Symantec products Students are placed in organizations that use/sell Symantec products, building sales relationship Students are placed in organizations that do not yet use/sell Symantec products, helping build new sales relationships 	<ul style="list-style-type: none"> Underserved youth persist and progress in their career Increased awareness of cyber security issues Fewer major cybersecurity breaches 	<ul style="list-style-type: none"> Cadre of professionals that use, buy, and sell Symantec products Reduced barriers to business growth (e.g., decreased skills gaps in key markets) Symantec viewed as industry leader

ILLUSTRATIVE DATA

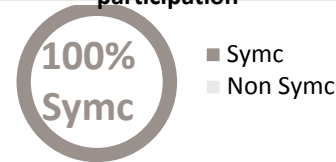
SOCIAL METRICS			BUSINESS METRICS	
Population <i>Recruit the underserved</i>	Pathway <i>Build their skills</i>	Profession <i>Connect to cyber careers</i>	External	Internal
Gender	Participants	Average Salary	Employer Satisfaction	Employee Engagement



3 Training Sites **10** Hiring Partners



Symantec Account participation



- 22** SC3 participants mentored by Symantec employees
- 10** Symantec employees mentoring SC3 participants
- 8** Speaking engagements or SC3 classroom lessons conducted by Symantec employees
- 3** Symantec site visits hosted for SC3 participants

Refining and Scaling the SC3 Pilot

1

Excite & Recruit

- Is the target demographic participant reached?
- What other groups are desired?

2

Train & Certify

- Is the education process and material correct?

3

Prepare for the Job

- Define best internship experience for both participant and employer

4

Place in a Career

- Are graduates finding success in cyber?

Support & Scale

- Defining SC3's **business benefit** to Symantec
- Where will **additional investment** deliver scale?

Next Steps and future opportunities

- Finalize curriculum and classroom assets, finalize Symantec products, role for Symantec employees
- Reviewing additional partnerships
 - Seeking community college partners with ability to place in internships
 - Evaluating use of technology based education in combination with classroom and soft skill approach (MOOC+teacher+life coaching)
- Additional target populations
 - Strong interest in returned veteran community
 - May already have or can gain security clearance

Summary

- Symantec piloting a cybersecurity job training and placement program for roles that don't require 4 year college degree
- Current pilot in three sites including one community college; two nonprofits
- Future efforts will seek to remove barriers to scaling:
 - Use of creative teaching methods that lower costs
 - Additional funding partners



Thank you!

Marian Merritt, Symantec

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