burningglass
CAREERS IN FOCUS

Job Market Intelligence:
Report on the Growth of Cybersecurity Jobs

Matching People & Jobs

Resume Parsing & Management

Reemployment & Education Pathways

Real-Time Labor Market Intelligence

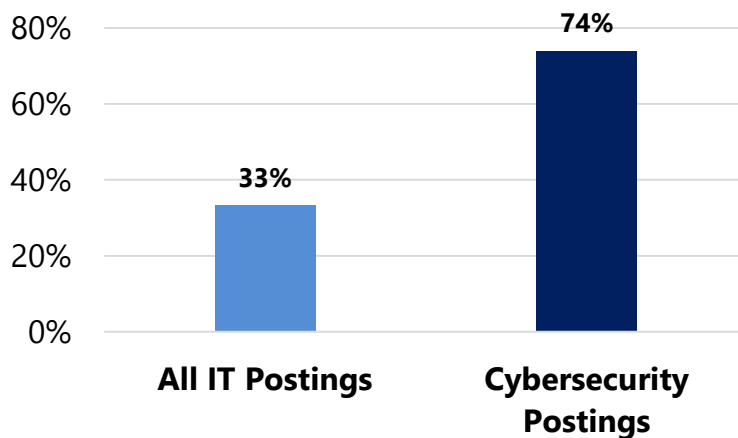# Market Overview: Cybersecurity Jobs

The Market for Cybersecurity Jobs Is Large and Growing

- In 2013, there were 209,749 postings for cybersecurity-related jobs nationally. **Cybersecurity jobs account for nearly 10% of all IT jobs.**

- Cybersecurity postings have **grown 74%** from 2007-2013. This growth rate is over 2x faster than all IT jobs.
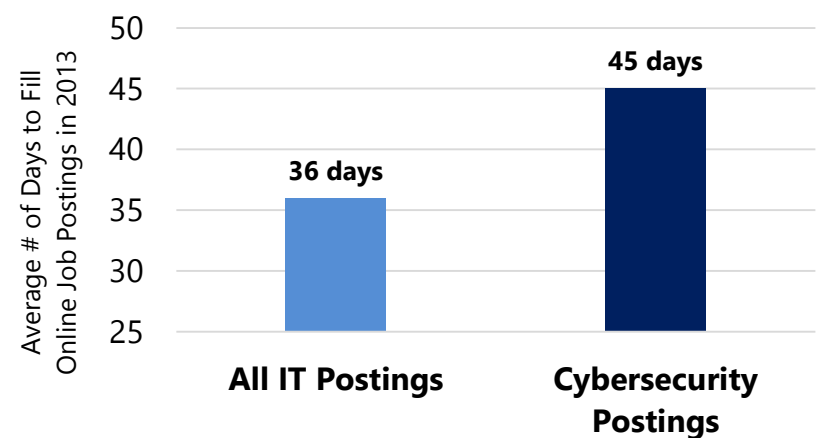
Demand for Cybersecurity Talent Is Outstripping Supply

- Cybersecurity job postings took **24% longer to fill than all IT job postings and 36% longer than all job postings.**

- The demand for cybersecurity talent appears to be outstripping supply. In the US, employers posted 50,000 jobs requesting CISSP, recruiting from a pool of only 60,000 CISSP holders.
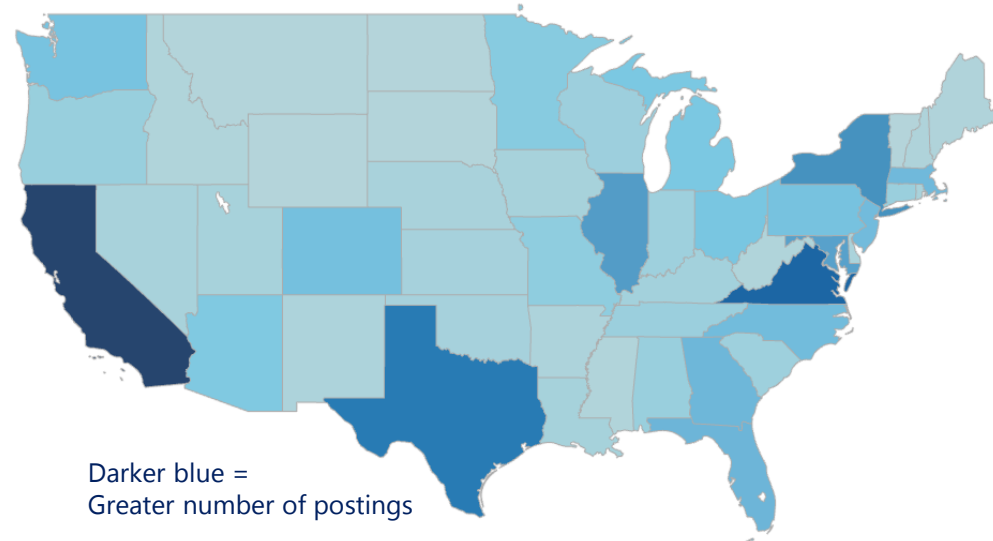
Growth in Job Postings (2007-2013)

	Growth
All IT Postings	33%
Cybersecurity Postings	74%

Posting Duration (2013)

Average # of Days to Fill Online Job Postings in 2013

	Days
All IT Postings	36 days
Cybersecurity Postings	45 days

Cybersecurity Job Postings by State

Top States by Total Postings*

	State	Total Postings	Postings/ 10,000 Residents	% Growth (2007-2013)
1	California	27,084	7.1	64%
2	Virginia	20,507	25.1	53%
3	Texas	16,376	6.3	97%
4	New York	12,405	6.3	59%
5	Illinois	11,136	8.6	116%
6	Maryland	10,627	18.1	94%
7	Florida	7,923	4.1	46%
8	Georgia	7,539	7.6	214%
9	Massachusetts	7,107	10.7	76%
10	New Jersey	6,814	7.7	12%
11	North Carolina	6,676	6.8	129%
12	Colorado	6,039	11.6	158%
13	Pennsylvania	5,630	4.4	22%
14	Washington	5,444	7.9	76%
15	Ohio	5,086	4.4	34%

Cybersecurity Job Postings in 2013 By State

Darker blue = Greater number of postings

*See Appendix 1 for state-level data tables on total postings and postings growth.

Cybersecurity Job Postings by City

Top Cities by Total Postings

	City (MSA)	Total Postings	% Growth (2007-2013)
1	Washington D.C.	23,457	35%
2	New York	15,632	38%
3	San Francisco/ San Jose	12,697	67%
4	Chicago	9,723	115%
5	Dallas	7,669	110%
6	Los Angeles	7,123	38%
7	Boston	6,336	87%
8	Atlanta	5,883	204%
9	Baltimore	4,514	116%
10	Seattle	4,470	63%

Top Cities by Growth

	City (MSA)	Total Postings	% Growth (2007-2013)
1	Atlanta	5,883	204%
2	Denver	3,482	200%
3	Austin	1,979	172%
4	Charlotte	2,410	127%
5	Portland (OR)	1,981	119%
6	Baltimore	4,514	116%
7	Chicago	9,723	115%
8	Phoenix	2,885	114%
9	San Diego	3,665	112%
10	Dallas	7,669	110%

*Top cities by growth were calculated by taking the top 25 cities by total postings, and ranking them by growth in job postigs

Cybersecurity: Demand by Industry Sector

- Professional Services, Manufacturing, and Finance are the leading industries for cybersecurity professionals.

- The share of cybersecurity jobs coming from the Manufacturing & Defense, Public Administration, and Retail Trade industries is increasing over time compared to other industries.

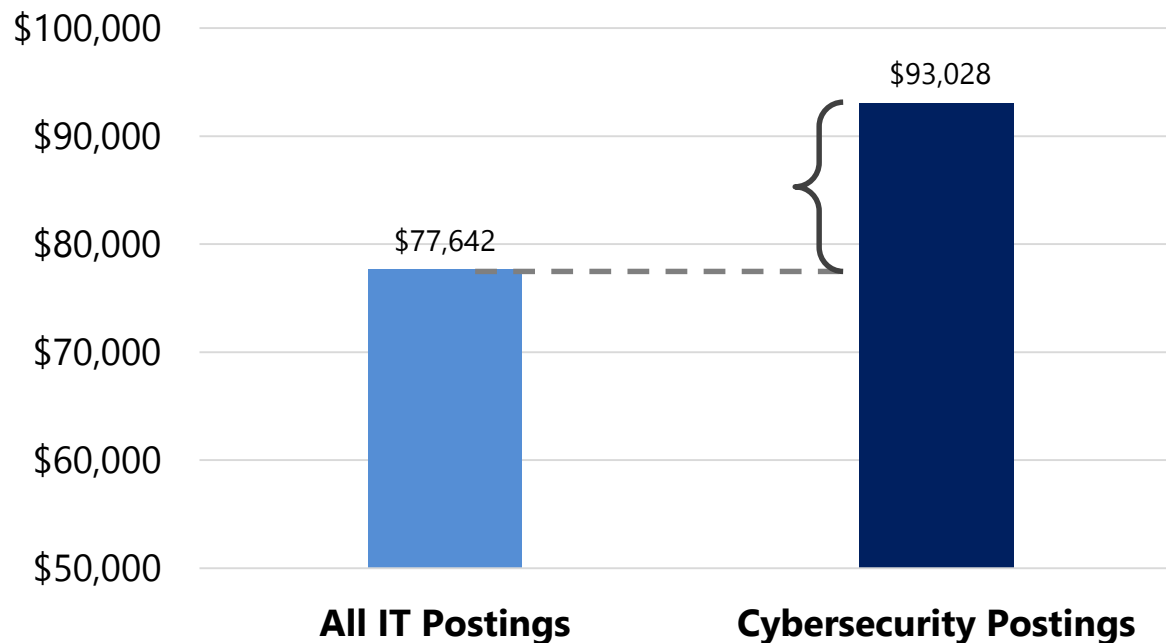| Industry Sector	% of Cybersecurity Postings	Number of Cybersecurity Postings (2013)	2010-2013 Postings Growth
Professional Services	38%	80,446	29%
Manufacturing & Defense*	14%	28,331	16%
Finance and Insurance	12%	24,145	89%
Information	8%	15,820	36%
Health Care	6%	12,257	73%
Public Administration	5%	11,204	N/A**
Retail Trade	5%	10,203	94%
Other	13%	27,384	N/A**

*Manufacturing Sector includes services divisions of a number of defense contractors (e.g. Raytheon) and computer manufacturers (e.g. Hewlett Packard).
** Industry growth rates are suppressed for the Public Administration and Other industry sectors because a significant portion of labor market demand in these industries exists offline.
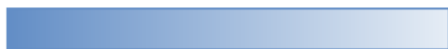
Cybersecurity Jobs Offer Increased Salaries

Cybersecurity Jobs Pay a Premium
On average, cybersecurity salaries offer a premium of over $15,000 over the salaries for IT jobs overall.

All IT Postings: $77,642
Cybersecurity Postings: $93,028

Cybersecurity: Demand by Role

Title	% of Cybersecurity Postings	Number of Cybersecurity Postings (2013)	
Engineer (e.g. Security Engineer, Information Assurance Engineer)	28%	40,898	
Manager/Administrator (e.g. Data Security Administrator, Information Security Manager)	19%	28,310	
Analyst (e.g. IT Security Analyst, Cyber Intelligence Analyst)	18%	26,219	
Specialist/Technician (e.g. IT Security Specialist, Infosec Technician)	9%	13,154	
Auditor (e.g. IT Auditor, IT Sarbanes-Oxley Auditor)	5%	7,307	
Architect (e.g. Security and Privacy Architect, Network Security Architect)	5%	6,670	
Consultant (e.g. Network Security Consultant, Infrastructure Security Consultant)	4%	6,121	

Demand for Certifications

Certification requirements are more common in cybersecurity roles than in IT generally.

- 51% of all cybersecurity positions request at least one of the certifications listed below.
- 14% of all IT positions request a certification of any kind.

Certification*	% of Cybersecurity Postings	Number of Cybersecurity Postings (2013)
CISSP Certified Information System Security Professional	24%	49,522
CISA Certified Information Systems Auditor	16%	33,290
Security+ Certified Information Security Manager	8%	17,019
CISM Certified Information Security Manager	7%	15,083
GIAC Security Essentials	3%	5,639
CIPP Certified Information Privacy Professional	2%	4,168
SSCP Systems Security Certified Practitioner	2%	4,039
GIAC GCIH GIAC Certified Incident Handler	2%	3,163

*Certification requirements are not mutually exclusive
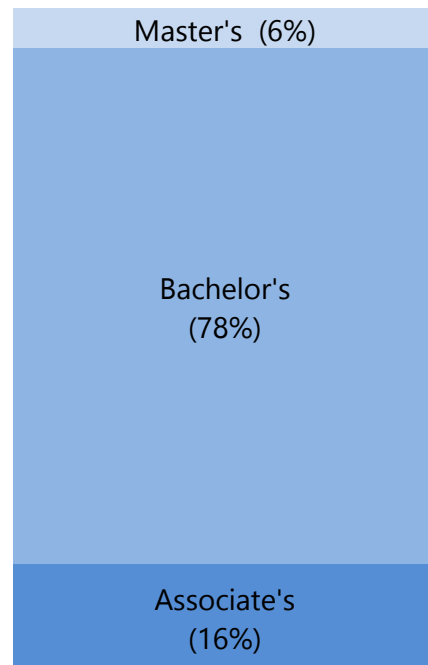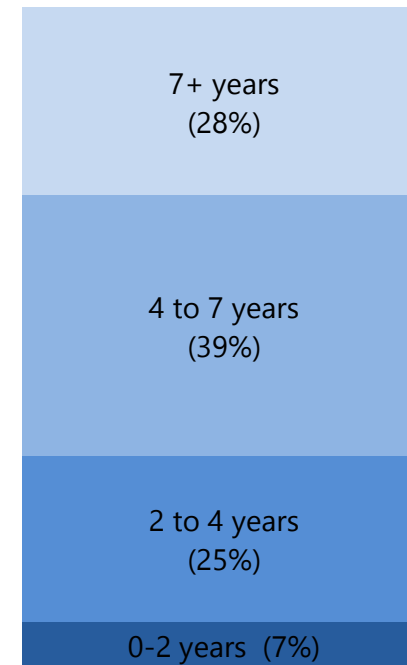
Methodology

All jobs data in this report are drawn from Burning Glass's database of online job postings, which includes nearly 100M worldwide postings collected since 2007. Each day, Burning Glass visits over 32,000 online jobs sites to collect postings. Using advanced text analytics, over 70 data fields are extracted from each posting including job title, occupation, employer, industry, required skills and credentials and salary. Postings are then deduplicated and placed in a database for further analysis.

This report classifies cybersecurity jobs as those which have a cybersecurity-related title, require a cybersecurity certification or request cybersecurity specific skills. Cybersecurity related titles used to define the roles analyzed in this report include "network security", "information security", "information assurance", and "penetration tester". Cybersecurity skills include information assurance, cryptography, computer forensics, malware analysis, 800-53, and ArcSight. The cybersecurity related certifications are listed on Slide 7.

The data in this report use a broader definition of cybersecurity roles than Burning Glass's 2012 report examining the same topic. That report looked only at those roles with cybersecurity specific titles, whereas, this update includes jobs with cybersecurity titles, certifications or skills.

About Burning Glass

Burning Glass's tools and data are playing a growing role in informing the global conversation on education and the workforce by providing researchers, policy makers, educators, and employers with detailed real-time awareness into skill gaps and labor market demand. Burning Glass's job seeker applications power several government workforce systems and have been shown to have substantive impact on reemployment outcomes and on labor market literacy.

With headquarters in Boston's historic Faneuil Hall, Burning Glass is proud to serve a client base that spans six continents, including education institutions, government workforce agencies, academic research centers, global recruitment and staffing agencies, major employers, and leading job boards.

For More Information

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Appendix 1: Top Cities Ranked By Total Postings

	City (MSA)	Total Postings	% Growth (2007-2013)
1	Washington, D.C.	23,457	35%
2	New York	15,632	38%
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5	Dallas	7,669	110%
6	Los Angeles	7,123	38%
7	Boston	6,336	87%
8	Atlanta	5,883	204%
9	Baltimore	4,514	116%
10	Seattle	4,470	63%
11	Philadelphia	4,032	-4%
12	San Diego	3,665	112%
13	Houston	3,648	67%

	City (MSA)	Total Postings	% Growth (2007-2013)
14	Denver	3,482	200%
15	Detroit	3,093	84%
16	Minneapolis	2,929	42%
17	Phoenix	2,885	114%
18	St. Louis	2,506	82%
19	Miami	2,496	29%
20	Charlotte	2,410	127%
21	Virginia Beach	2,335	74%
22	Portland (OR)	1,981	119%
23	Austin	1,979	172%
24	Tampa	1,932	58%
25	San Antonio	1,841	68%

Appendix 2: State-Level Data

	State	Total Postings	Postings/ 10,000 Residents		State	Total Postings	Postings/ 10,000 Residents		State	Total Postings	Postings/ 10,000 Residents
1	California	27,084	7.1	21	Alabama	2,266	4.7	41	Maine	489	3.7
2	Virginia	20,507	25.1	22	Connecticut	2,234	6.2	42	West Virginia	475	2.6
3	Texas	16,376	6.3	23	Tennessee	2,134	3.3	43	Idaho	434	2.7
4	New York	12,405	6.3	24	Wisconsin	1,991	3.5	44	Alaska	402	5.5
5	Illinois	11,136	8.6	25	Indiana	1,916	2.9	45	Mississippi	399	1.3
6	Maryland	10,627	18.1	26	South Carolina	1,846	3.9	46	South Dakota	234	2.8
7	Florida	7,923	4.1	27	Kentucky	1,451	3.3	47	Montana	199	2.0
8	Georgia	7,539	7.6	28	Kansas	1,261	4.4	48	North Dakota	186	2.7
9	Massachusetts	7,107	10.7	29	Oklahoma	1,253	3.3	49	Vermont	141	2.3
10	New Jersey	6,814	7.7	30	Louisiana	1,229	2.7	50	Wyoming	109	1.9
11	North Carolina	6,676	6.8	31	Utah	1,202	4.2				
12	Colorado	6,039	11.6	32	Iowa	1,182	3.8				
13	Pennsylvania	5,630	4.4	33	Hawaii	1,177	8.5				
14	Washington	5,444	7.9	34	Nevada	1,103	4.0				
15	Ohio	5,086	4.4	35	Rhode Island	1,053	10.0				
16	Michigan	4,691	4.7	36	Nebraska	1,008	5.4				
17	Arizona	4,252	6.5	37	Delaware	836	9.1				
18	Minnesota	3,718	6.9	38	New Mexico	703	3.4				
19	Missouri	3,079	5.1	39	Arkansas	679	2.3				
20	Oregon	2,349	6.0	40	New Hampshire	532	4.0				